

**Socio-Economic Baseline Studies in Selected Wildlife  
Management Areas under the Financial Crisis  
Initiative/Cash-for-Work Program**

**IPOLE WMA Report**



*Hippos' pool in Ipole WMA*



**USAID**  
FROM THE AMERICAN PEOPLE



**Africare**



**WWF**

*for a living planet®*



**HEALTH & DEVELOPMENT INTERNATIONAL CONSULTANTS**

*Associates in Professional Public Health and Development Consulting*

2ND FLOOR NAKIETE HOUSE, ALI HASSAN MWINYI ROAD  
P.O. BOX 33335, TEL: +255 22 27728 16, FAX: +255 22 27728 14  
DAR ES SALAAM, TANZANIA

---

**Final Report, October 2010**

## TABLE OF CONTENTS

TABLE OF CONTENTS .....	ii
LIST OF TABLES .....	v
LIST OF FIGURES.....	v
LIST OF PLATES.....	v
LIST OF ABBREVIATIONS .....	vi
ACKNOWLEDGEMENT.....	vii
EXECUTIVE SUMMARY .....	viii
CHAPTER ONE.....	1
INTRODUCTION AND THE SETTING OF THE STUDY .....	1
1.1 Introduction and the Background.....	1
1.2 Wildlife Policies and the Evolution of WMAs AND Community Based Natural Resources Management (CBNRM).....	1
1.3 The genesis of WMA and Institutional legal Framework in Tanzania.....	2
1.4 Sikonge Profile.....	5
1.5 Ipole Profile .....	5
1.5.1 Ipole WMA .....	5
1.5.2 Location .....	6
1.5.3 Population Size .....	7
1.5.4 Economic Activities.....	7
1.5.5 Transportation .....	8
1.5.6 Social Services.....	8
CHAPTER TWO.....	9
APPROACH AND METHODOLOGY.....	9
2.1 Objectives and Specific Objectives of the Baseline Survey .....	9
2.2 Area of the Study and Scope of Work .....	10
2.3 Study Design and Methodology .....	10
2.3.1 Study Population, Sampling size and Strategy .....	10
2.3.2 Methods of Data Collection.....	10
2.3.2.1 Documentary and Library .....	11
2.3.2.2 A Quick-Scan of Income Generating Activities at Village Level .....	11
2.3.2.3 Administration of a Social Survey.....	12
2.3.2.4 Administration of In-Depth Interviews.....	12
2.3.2.5 Administration of Focus Group Discussions .....	12
2.3.2.6 Non-Participant Ethnographic Observation and Assessment .....	12
2.3.2.7 Data Processing, Analysis, Quality Control and Assurance .....	13
CHAPTER THREE.....	14
SOCIO-DEMOGRAPHIC CHARATERISTICS AND ECONOMIC STATUS.....	14
3.1 Characteristics of households.....	14
3.2 Introduction.....	14
3.2.1 Housing characteristics .....	14
3.2.2 Source of energy .....	15
3.2.3 Household possession .....	17

3.3	Characteristics of respondents .....	18
3.3.1	Introduction.....	18
3.3.2	Background characteristics of respondents.....	18
3.3.3	Educational attainment of the respondents .....	19
3.3.4	Household Size .....	21
3.4	People’s socio-economic status .....	22
3.5	People’s living standards and conditions .....	22
3.6	Socio-economic activities of the households and how they perform .....	24
3.7	Sources, levels and types of income in Ipole WMA.....	26
3.8	Main economic activities existing in Ipole WMA.....	30
3.9	Availability and quality of social service infrastructure (health and education) 30	
3.10	Socio-economic threats, drivers and opportunities related to natural resources in Ipole WMA .....	32
3.11	Other resources available and their uses.....	33
	CHAPTER FOUR.....	35
	INCOME AND EXPENDITURE PATTERNS IN THE WMA.....	35
4.1	Sources and types of income in Ipole WMA.....	35
4.2	Expenditure patterns in Ipole WMA.....	35
4.3	Sources of revenue and type of investments in Ipole WMA.....	37
4.4	Economic and ecological status of Ipole WMA .....	38
4.5	Contribution of Ipole WMA on village revenues and their common expenditure.....	39
	CHAPTER FIVE .....	40
	PEOPLES KNOWLEDGE AND AWARENESS OF CBNRM PROGRAMME AND WILDLIFE MANAGEMENT AREA .....	40
5.1	People’s Knowledge, Awareness and Attitudes towards WMA.....	40
5.2	People’s Views on Community Participation in Conservation of Natural Resources .....	41
5.3	People’s Views and Perception on the Benefits of WMAs .....	42
5.4	People’s Perception and Willingness to Participate in Cash-for..... Work Programmes .....	46
	CHAPTER SIX.....	47
	SOCIO-ECONOMIC CHARACTERISTICS AT VILLAGE LEVEL.....	47
6.1	Population Characteristics of villages .....	47
6.2	Village economic status .....	49
6.2.1	Main economic activities .....	49
6.2.2	Village income levels.....	49
6.2.3	Availability of social services in villages forming Ipole WMA.....	50
6.2.4	Expenditure levels per household .....	50
6.3	Business groups.....	52
	CHAPTER SEVEN.....	55
	CONCLUSIONS AND RECOMMENDATIONS.....	55
7.1	Conclusions.....	55
7.2	Recommendations .....	56

REFERENCES .....	57
Appendix 1.....	58
Structured Questionnaire .....	58
Appendix 2.....	69
Focus Group Discussion Guide .....	69
Appendix 3.....	72
In-Depth Interview Guide .....	72
Appendix 4.....	75
Checklist for 5 WMA Studies.....	75

## LIST OF TABLES

Table 3.1: Household characteristics.....	16
Table 3.2: Household ownership .....	18
Table 3.3: Percent of respondents background characteristics by sex .....	20
Table 3.4: Main economic activity of respondents.....	25
Table 3.5: Respondents main economic activity by sex.....	25
Table 3.6: Respondents type of crop by sex .....	25
Table 3.7: Copying alternatives of the Ipole people .....	30
Table 3.8: Livestock ownership by sex of the respondents.....	34
Table 4.1: Household expenditure per day by sex of respondents.....	36
Table 4.2: Ipole ecological status by sex of respondents .....	39
Table 5.1: Respondents' awareness on WMAs .....	40
Table 6.1: Household economic activities per village .....	49
Table 6.2: Annual average income per village .....	50
Table 6.3: Household expenditure per day by villages forming Ipole WMA.....	51
Table 6.4: Average daily expenditure by villages forming Ipole WMA .....	51
Table 6.5: Entrepreneurship facility by villages forming Ipole WMA.....	53
Table 6.6: Key parameters at the village level in Ipole WMA .....	54

## LIST OF FIGURES

Figure 1.1: Map of Ipole WMA .....	7
Figure 3.1: Sex of respondents.....	19
Figure 3.2: Number of household members .....	21
Figure 3.3: House ownership .....	23
Figure 3.4: House ownership by sex.....	24
Figure 3.5: Levels of income of respondents on petty trade .....	26
Figure 3.6: Respondents' income interval on agriculture .....	27
Figure 3.7: Respondents level of income on livestock keeping.....	28
Figure 3.8: Respondents' income interval on livestock keeping by sex.....	29
Figure 4.1: Decision to spend income .....	37
Figure 6.1: Population size by villages forming Ipole WMA .....	48
Figure 6.2: Population size of the villages forming Ipole WMA by sex.....	48

## LIST OF PLATES

Plate 3.1: One of the houses in poor condition .....	17
Plate 3.2: Source of drinking water .....	31
Plate 3.3: Fire incidences in Ipole WMA.....	32
Plate 5.1: Fishing grounds in Ipole WMA .....	45

## LIST OF ABBREVIATIONS

AA	Authorized Authority
CBC	Community Based Conservation
CBNRM	Community Based Natural Resources Management
CBO	Community Based Organization
FCI	Financial Crisis Initiative
FGD	Focus Group Discussion
GCA	Game Controlled Area
JUHIWAI	Jumuiya ya Hifadhi Wanyamapori Ipole
MNRT	Ministry of Natural Resources and Tourism
NCA	National Conservation Area
NGO	Non-Governmental Organization
NRs	Natural Resources
SPSS	Statistical Package for Social Science
UNICEF	United Nations Children's Fund
URT	United Republic of Tanzania
USAID	United States Agency for International Development
WHO	World Health Organization
WMA	Wildlife Management Area
WPT	Wildlife Policy of Tanzania
WWF	World Wildlife Fund

## 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 thanks 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 of work that was of great help in carrying out this exercise.

While in the field, we benefited quite a lot from the District Natural Resources Officers and District Game Officers of Sikonge District. We also got enough support from various individuals who work in various organizations that deal with conservation in the district, like the Wildlife Conservation Society. They assisted us tirelessly and provided us with a lot of support during the whole research process. We also received a lot advice from the officials of the IPOLE Wildlife Management Area as well as from various officers of the villages that we visited during this study. Their guidance in terms of how the study should be carried out was indeed very helpful in our work. In this case their presence and their willingness to work with us is highly appreciated. Without their assistance we would not have been able to produce this report.

We also wish to convey our profound gratitude to the research subjects that participated in this study and provided us with a lot of information that appears in this report. We learnt quite a lot from their views, most of which have been incorporated in this report. They provided sufficient information and helped us learn quite a number of things. They shared with us many things some of which were probably confidential. We strongly believe that they did this because they trusted us, but more so because they understood the importance of this work. We have no doubt that without them we could not have been able to understand the dynamics of life in the WMA.

A special mention goes to the following researchers who were responsible in collecting data and writing this report. These are Mr. Emmanuel Shemaghembe, Francis Herman and Martha H. Kilunga. All these people worked tirelessly as a team in order to accomplish this task. It is very difficult to mention each person that was involved in this activity. What we would like to say is **thank you very much to everyone**. You all have been a source of inspiration in our work and we have learnt a lot from you. While many people and institutions have participated in this work in one way or another, we wish to confirm that the views expressed in this report do not necessarily represent the views of these people and their institutions. They are entirely ours; and so are any weaknesses that may occur.

## EXECUTIVE SUMMARY

The baseline survey for Ipole WMA aimed at Identifying the sources and type of income in selected villages forming WMAs; evaluating expenditure patterns in selected villages forming each WMA; assessing living conditions; evaluating existing economic activities in the selected WMAs; assessing availability and quality of infrastructure services; assessing the level of income in selected households in villages forming WMAs; and assessing population characteristics (age, sex, migration, social relationships). It further aimed at documenting various resources available, resource uses and markets; providing information on the economic and ecological status of a WMA including number of investors, visitors, poaching incidences; assessing attitudes, perception and views towards existing CBNRM program/WMA; providing information on existing investments in the selected WMAs; and assessing social economic threats, drivers and opportunities related Natural Resources (NRs) in the selected villages.

In order to accomplish the above objectives, the baseline survey encompassed participatory assessment and methodological triangulation of qualitative and quantitative research approaches. These included a household socio-economic and demographic characteristics survey, focus group discussions, in-depth interviews, a quick scan of income generating activities and non-participant observation. A total of 161 respondents were involved in the baseline study, where 67.7% (109) were men and 32.3% (52) were women. A total of 12 FGDs and 12 in-depth interviews were conducted. As its major output, the baseline in Ipole WMA established the following key indicators.

There are more male headed (67.7%) than female headed households (32.3%) in Ipole WMA. However the findings further imply that female headed household is on the increase. Majority (70.2%) of the population in the WMA have primary education while 11.8% have secondary education. Only 0.6% (1 respondent) has collage education while the remaining 17.4% have no formal education. Furthermore, 73.9% of respondents were married, out of which 60.9% had monogamous marriage while 13% had polygamous marriage.

About 5.5% of the Ipole WMA population has been divorced. Moreover, most of the households in Ipole WMA have an average of 6 to 10 people with a range of 1 and 2 income earners. More people (64.8%) are migrants who have settled in the WMA village for various reasons including the influence of family and friends (39.6%), farming (34.9), employment (9.4%), ujamaa and villagization policy (4.7%), business (4.7%) and other factors which account for about (9.4%).

As far as their living standards and conditions are concerned, majority of the population (84.4%) own a house. 78.1% of the houses are thatched while 21.9% are roofed with iron sheet/metal. About four in ten (43.8%) houses have walls made of mud and poles, 33.8% of the houses have walls made of mud bricks while

19.4% of the houses have walls made of burnt bricks. Only 3.1% of the houses have walls made of cement blocks. Moreover, three-quarter of the households (74.5%) in Ipole have earth/clay floor while one in four households (25.5%) have cement and sand floor.

About the means of transport, 99.2% own a bicycle, 6.2% own a motorcycle and 1.4% own chariot. Most (90.1%) of the households own radio and mobile phones (64.5%). The proportion of ownership is lower in items such as TV (9.9%), VCR-DVD (8.3%), satellite dish (7.4%) and refrigerator (5.0%).

In respect to sanitation, 90.6% of the households own a toilet facility. 88.1% own pit latrines while 2.5% own flush toilets. 8.8% of the households do not have a toilet facility. In addition, 73.6% depend on public well for drinking water, while 16.4% depend on reserved wells and 8.2% depend on public tap. Moreover, 1.3% depends on piped water. For energy sources 79.4% depend on firewood and 15.0% on charcoal. The remaining 5.6% depend on car battery, kerosene and generator (3.1%, 1.9% and 0.6% respectively) for energy.

On economic activities and source of income, 96.9% engage in agriculture, 46.6% engage in petty trade while 1.8% engage in livestock keeping. The major crops produced include, maize (95.9%), groundnuts (68.2%), rice (41.9%), cassava (22.3%). The rest grow sunflower, millet, beans, potatoes and sorghum. The incomes earned from petty trade, agricultural activities, livestock keeping and bee keeping per year range between less than Tshs. 100,000 and Tshs 500,000 and above. This is perceived to be insufficient for household need (83.3%). This is especially so to females (89.8%) than males (80.4%). Only 4.4% of the population in the Ipole WMA engages in wildlife ventures for wage of which 3.8% are males and 0.6% are females. 44.4% of those engaging in wildlife ventures reported an increase of earnings from wildlife ventures while 55.6% perceived a decrease of earnings. It is only 9.3% of the population in the WMA access to credit particularly from authorized associations (60.0%) and micro finance institutions (33.3%), and (6.7%) from relatives or friends.

With regard to other resources, 96.2% own a farm, where more women (98.0%) own a farm than men (95.4%). 45.3% own an average farm of 3 to 5 acres, 26.0% own an average of 6 to 10 acres and the remaining 28.6% own an average of 1 acre.

On the social relations at the household level 56.5% confirmed that men and women do not have equal decision making powers. More men (60.1%) than make decisions than women (1.3%). 38.6% perceive that men and women equally participate in decision making at the household.

Transport infrastructure in Ipole WMA is still undeveloped as echoed by all village leaders and 93.8% of respondents confirmed that their roads are in bad shape. Schools in the area are faced with shortage of teacher, housing for teachers and

teaching materials. There is only one secondary school and dispensary in the area. This health facility is also featured with acute shortage of personnel, equipment and supplies. Water, electricity and markets are among the major problems in Ipole WMA.

At the household level, 27.8% spend more than Tshs. 4000 per day for various household expenditures. More female (28.8%) than male (27.4%) headed households are in this category. 71.9% of men spend more money in education than in health (67.8%) while 81.7% of women spend more money in education than in health (72.3%).

The main sources of Ipole WMA are tourism, reserved hill, bee keeping and fishing. The WMA receives 30% as revenue from hunting tourism. The revenue collected from various sources is distributed to the four villages forming WMA namely Ipole, Msuva, Idekamiso and Utimule. In particular, Ipole WMA received a sum of eight million Tanzania shillings from the investor since he started operating in 2006. The funds have been injected into development projects such as education, health and water although there is no significant improvement so far.

People in Ipole WMA understand WMA as resources conservation 41.7%, community participation 39.1% and benefit sharing 3.8%. However 14.7% of the respondents were not aware about WMA. More female respondents (18.4%) than male 13.1% are in this category. WMA operation is discussed in village meetings. This is supported by 58.1% of respondents. The people in Ipole WMA are positive towards the WMA although some of them have not benefited from it. About 82.0% were of the opinion that the WMA is beneficial. The WMA has significantly reduced poaching as reported by respondents (41.1%). More male (84.3%) than female (76.5%) said that the WMA confirmed this while 10.2% of male and 3.9% of female said the WMA is not beneficial to them and their area. The community members in villages that form Ipole WMA are willing and ready to participate fully in cash for work programmes.

In a nutshell, the above indicators can serve to monitor progress with regard to interventions in the Ipole WMA. The WMA is performing relatively well despite a wide range of challenges that would need to be addressed if it has to improve its performance. One of the major challenges is management dynamics emanating from the interactions between AA leadership, District Council, Village governments, investors and the community members. Unless the interests of all stakeholders are harmonized, sustainability of the initiative leaves a lot to be desired.

## **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 instill 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 WMAs AND Community Based Natural Resources Management (CBNRM)**

The 1990s have witnessed a significant departure from the way natural resources had been managed in sub Saharan Africa. On vogue now are approaches (collectively referred to as Community-based Natural Resources Management (CBNRM) geared towards the devolution of natural resources management and responsibilities to local communities and the engagement of other stakeholders (including the NGOs, community and the Private sector ) in managing the resources.

CBNRM is a form of management that seeks to divert from the “garrison conservation” where the government was the sole manager of natural resources. Underlying CBNRM is the belief that communities in which natural resources occur /that surround Natural resources can be the most effective partners in the governments endeavor to attain sustainable management of natural resources. CBNRM involves practices of management and benefit sharing with the non state agents i.e. people /communities, but who, ‘by virtue of their collective location and activities are critically placed to enhance the present and future status of natural resources and their own well being.” (USAID 2003)

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 (Kessy et al 2003).

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 The genesis of WMA and Institutional legal Framework in Tanzania**

Until 1980s Tanzania wildlife management depended on “fines and fences” approach based on protected areas like National Parks and Game Reserves and restrictive laws preventing hunting of wildlife. The inadequacy of this approach was manifest in the crisis that gripped the wildlife sector in the 1970’s and 1980’s as poaching incidence for both commercial and subsistence uses of wildlife increased dramatically (Sulle et al 2006). The crisis brought the government and donor support to bear the fact that there was a need for a paradigm shift in the management of wildlife. At the center of this shift was greater participation of local communities in the new concept of community wildlife management. As part of the paradigm shift in the management of natural resources and specifically wildlife, the government of Tanzania through it’s the Wildlife Division in the Ministry of Natural Resources and Tourism started cooperating with various donors, NGOs in the implementation of community based activities in areas adjacent to core to the core wildlife protected areas. These are activities related to the utilization of wildlife and forest resources for tourism, live trade animals, trade in forest products and eco-tourism, wildlife farming, handcraft and community based ventures, small and macro enterprises. Such a shift is indicative of the government’s realization that success in CBC activities would win support and greater participation of communities in sustainable management of natural resources. Evidently CBC activities were projected as tools that would contribute to the improvement of 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 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 economic benefits that communities in wild rich areas accrue from the wildlife on village lands and to increase the responsibility and authority of local communities for wildlife management decisions in those areas”.

In the revised WPT 2007, the principle of community based management was given a central role. The overriding aim here was to ensure that wildlife compete with other forms of land use (crop and animal husbandry) that may jeopardize wildlife populations and movements. The WPT 2007 for example points out that “local communities living on village lands with viable populations of wildlife have a role of protecting and benefitting from wildlife....by setting wildlife conservation area in their land (MNRT 2007 sec. 3.1.4) The policy also sees one of the hitherto challenges facing wildlife management to be inadequate involvement and participation of the village communities in planning, management and conservation of wildlife and this has led to the unsustainable use of the resource (MNRT sec.3.2). The policy admits that wildlife has cultural values and cultural practices have facilitated sustainable management utilization and conservation of the resources.

In recognition of the wildlife’s intrinsic value including direct and indirect benefits to village communities, the WPT 2007 underscores the government commitment in its policy statement that,

*” the government will ensure that Tanzanians have right to legal access to wildlife and wetland resources. The government will also promote development of village communities living in or close to wildlife and wetland areas (except in NCA) through facilitating establishment of WMAs” (WPT 2007:27).*

Since the Wildlife Act 1974 did not directly provide for wildlife management areas, the process of formation of WMs was stalled until 2003 when new regulations on how the WMA designation process would operate were formally 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 included Ipole WMA, Uyumbu WMA, Burunge WMA, and Ngarambe-Tapika WMA 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 the WMAs is distributed to the member villages. However, owing to the ongoing worldwide financial crisis, the sustainability of steady income accruing to some of the WMAs is at risk.

The World Wildlife Fund (WWF) has rightly observed that as a result of global financial crisis, the amount of income derived from tourist arrivals is likely to decline in some WMAs. This will have some deleterious consequences on the lives of rural communities who had started benefiting from incomes from WMAs activities as their incomes will undoubtedly decline. It is envisaged that as a result of this (income) poverty, some people in the rural communities may revert to unsustainable utilization of natural resources i.e. overexploitation of the natural resources to sustain their livelihoods. This may in turn lead to further destruction of the environment. To avert such an eventuality, the WWF intends to initiate a variety of interventions including implementing a Financial Crisis Initiative (FCI) or Cash-for Work Program focusing on a range of infrastructure programs in 5 WMAs. As far as WWF is concerned, the implementation of this program among others aims at providing incomes to the rural communities within the 5 WMAs through wages and other services or goods linked infrastructure development. WWF envisage that incomes accrued from engaging in infrastructural development activities and related benefits will improve the living conditions in these rural areas and allay fears of their reverting into unsustainable utilization of natural resources.

The afore mentioned interventions aim at coming up with some positive changes and/or mitigate against the anticipated risks to the community and the natural resource base. In this regard it is important to establish some important benchmarks (with regard to the current economic and social status) on the basis of which the intervention will be built. As the implementation of the interventions proceed it is important that their performance is monitored. For monitoring to be meaningful there must be some important yardsticks in place. It is these yardsticks that can indicate change from one state to another or no change. Today monitoring has become a very effective management tool.

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, 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 Ipole (Sikonge District) WMA.

## **1.4 Sikonge Profile**

Sikonge is among the six districts in Tabora Region, Tanzania. In the North, it is bordered with Uyui District, to the South by Mbeya Region, to the West by Rukwa Region, to the Northwest by Urambo District and to the East by Singida Region. The population of Sikonge District is approximately 133,388. It consists of eleven wards namely; Chabutwa, Igigwa, Ipole, Kilolei, Kiloli, Kipanga, Kipili, Kitunda, Pangale, Sikonge and Tutuo (2002, Tanzania National Census).

## **1.5 Ipole Profile**

Ipole is a vernacular name for Nyamwezi people meaning “calm area”. It is a ward within the newly introduced Sikonge District in Tabora Region. Ipole is found in South of Sikonge township, which is the district headquarter. Ipole WMA covers an area of 2540 km<sup>2</sup>. The area is rich in wildlife, fish, fertile lands, fauna and flora. Administratively, as a ward, Ipole comprises of four villages which are within the Ipole WMA namely; Ipole, Msuva, Idekamiso and Utimule. On the East Ipole WMA borders Ipembambazi Forest Reserve, to the South is bordered by Inyonga East Game Controlled Area (GCA) and Inyonga Forest Reserve respectively, while to the west the area is bordered by Ugalla Game Reserve and Walla Forest Reserve and to the North the area is bordered by Ipole, Msuva, Idekamiso and Utimule villages (Source: Ipole Resource Management Zone Plan, 2004-2014). The four villages have the Nyamwezi vernacular meanings herein; Ipole means “calm area”, Msuva “go and return”, Idekamiso “red eyes” and Utimule “the name of settler chief” (IDI/Male/80 years/Ipole).

### **1.5.1 Ipole WMA**

Ipole WMA is found in Ugunda Game Controlled Area (GCA) in Ipole Ward, Sikonge District, in Tabora Region. It is found in South of Sikonge Township covering an area of 2540 Km<sup>2</sup>. Ugunda is a vernacular name for Nyamwezi people which means “farm inspection”. The area is rich in wildlife, fish and fertile valleys, which attracted many people to settle in the area. The procedures for establishing Ipole WMA began in 1998 where in 2004 it was named as a WMA “JUHIWAI” (Jumuiya ya Hifadhi Wanyama Pori”. However, in 2006 it obtained the status of

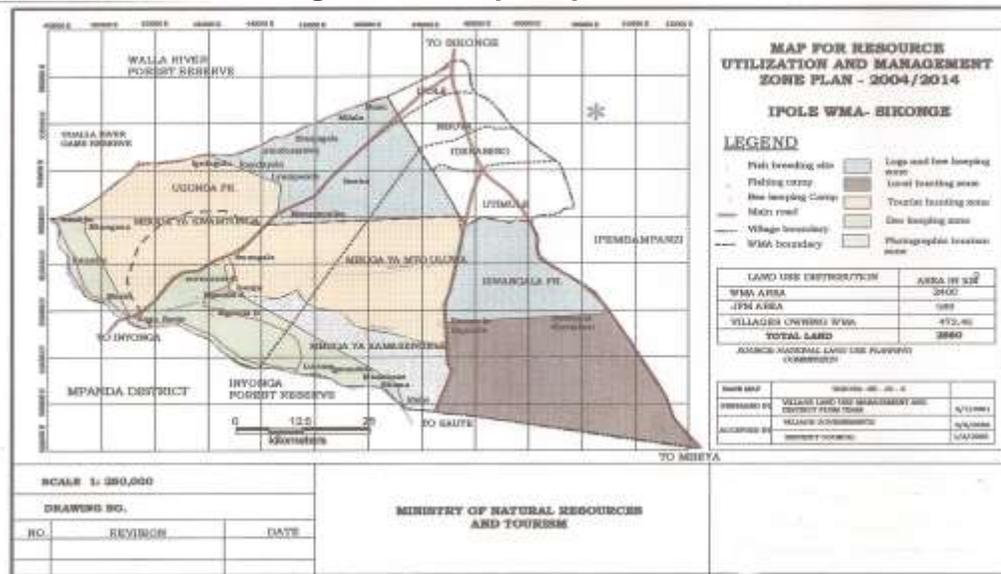
Authorized Authority (AA). All these followed the framework of Tanzania Wildlife Policy of 1998 calls for the establishment of WMAs by communities living near core protected areas. The establishment of the WMA went hand in hand with the National Land Policy of 1995 and the village land Act. No. 5 which both advocate for the devolution of power on land tenure and Management to local communities in planning and managing environment and natural resources within their jurisdiction to achieve sustainable development.

### **1.5.2 Location**

Administratively, as a ward, Ipole covers four villages which are within the Ipole WMA namely; Ipole, Msuva, Idekamiso and Utimule. On the East Ipole WMA borders Ipembambazi Forest Reserve, to the South is bordered by Inyonga East Game Controlled Area (GCA) and Inyonga Forest Reserve respectively, while to the west the area is bordered by Ugalla Game Reserve and Walla Forest Reserve and to the North the area is bordered by Ipole, Msuva, Idekamiso and Utimule villages (Source: Ipole Resource Management Zone Plan, 2004-2014).

The area is accessible by road from Tabora Municipality via Sikonge Township to Ipole. Also by road from Mbeya via Kitunda ward to Ipole and from Sumbawanga through Mpanda District via Inyonga to Ipole. The area can as well be reached by air strip located within the Ugunda Game Reserve at Koga which is only reliable during dry season. It is about 87 kilometres from Tabora to Sikonge District and 24 kilometres from Sikonge to Ipole.

**Figure 1.1: Map of Ipole WMA**



### 1.5.3 Population Size

Ipole WMA which comprises of four villages namely Ipole, Msuva, Idekamiso and Utimule has a total population of 9184 people (2009 census). 4608 are males and 4576 are females.

### 1.5.4 Economic Activities

Ipole people engage in a number of economic activities ranging from farming, bee-keeping (involves two bee-keeping zones: the first zone lies along Kululu river from Idaho fishing and honey collection camp, Mgonda A camp, Iswagala camp, Koga camp, Mtugunsu camp and Isambila camp. The second zone includes; Ipole and Msuva village, Mwanamsika camp, Ugunda Forest reserve and Uluwa River). Ipole people also engage in fishing activities conducted at Koga River, Kululu River, Mgonda A and Mgonda B fishing camps along Limbalimba River, also at Isimbila, Kaumbu and Msato camps situated at Kululu River which provide abundant Catfish and other species. Timber production also provides income to Ipole people but this is subject to the WMA timber harvesting regulations. Timber production is conducted at Igulugulu camp, Lyampande camp and Mwana-Msika camp. Hunting tourism, resident hunting and photographic tourism are also among economic activities at Ipole WMA.

### **1.5.5 Transportation**

Due to the nature of the roads within and across Ipole WMA (rough roads), there is a limited number of buses thus making the area difficult to reach. People going to Ipole have to board either a bus to Mbeya or Rukwa which go once in a day. In this regard, people depend on bicycles, motorcycles few available buses crossing to Mbeya Region and Mpanda District, also they use trucks which come to fetch agricultural products and cash crops.

### **1.5.6 Social Services**

Social services available within Ipole WMA include primary and secondary schools, dispensaries, markets and water wells. There are only two dispensaries in Ipole ward which cover the four villages and the neighboring villages. One dispensary is located at Ipole village 22 Km from Sikonge Township, and the other at Utimule 45 Km from Sikonge Township. There are seven primary schools including; Ipole, Udongo, Mihama-Kumi, Msuva, Idekamiso, Utimule and Mwamulu primary schools. With regard to water services, currently there is a water project under Africare (NGO) which drills water from the ground. During the data collection exercise the wells were not ready to be used but there is one natural well at Udongo village and one well at Idekamiso village. There is no electricity in the whole Ipole WMA. Only few individuals possess solar power equipments.

## **CHAPTER TWO**

### **APPROACH AND METHODOLOGY**

#### **2.1 Objectives and Specific Objectives of the Baseline Survey**

The main objective of the baseline survey 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 five selected WMAs were: Ipole, Sikonge District in Tabora region, Enduiment, Monduli district in Arusha region, Burunge, Babati district in Manyara region), MBOMIPA, Iringa rural district in Iringa region and Ikona, Serengeti district in Mara region.

Specifically the socio-economic baseline survey was supposed to:

1. Identify the sources and type of income in selected villages forming WMAs.
2. Evaluate expenditure patterns in selected villages forming each WMA.
3. Asses living conditions such as the status of houses, livelihood assets, land uses production trends etc.
4. Evaluate existing economic activities in the selected WMAs.
5. Assess availability and quality of infrastructure services such as health, education, transportation and communication, institutions;
6. Assess the level of income in selected households in villages forming WMAs.
7. Assess population characteristics (age, sex, migration, social relationships)
8. Document various resources available, resource uses and markets (e.g. farms/livestock and the uses)
9. Provide information on the economic and ecological status of a WMA including number of investors, visitors, poaching incidences etc.
10. Assess attitudes, perception and views towards existing CBNRM program/WMA
11. Provide information on existing investments in the selected WMAs – detailing visitor numbers, services, revenue.
12. Assess social economic threats; drivers and opportunities related NRs in the selected villages.

## **2.2 Area of the Study and Scope of Work**

This study was conducted in Ipole WMA in Ipole Ward, Sikonge District, Tabora Region. The survey covered four villages found within the Ipole WMA. Research assistants were used to collect both quantitative and qualitative data. The Research Assistant were responsible to the research field supervisor who in turn was responsible to the research team leaders. During both In-depth interviews and Focus Group discussions, respondents showed the great knowledge about the WMA. They could recall the establishment of the WMA in their area, the revenue and benefit they obtain from the WMA.

Overseeing of the whole exercise, the Research Field Supervisors were also involved in data collection

## **2.3 Study Design and Methodology**

Both qualitative and quantitative study designs were employed. The rationale for this decision was made on the fact that, qualitative study would supplement quantitative study design. This was used to access information which could not be captured in quantitative study design such as perceptions, willingness, attitude

### **2.3.1 Study Population, Sampling size and Strategy**

The study population included the population of the four villages which make the Ipole WMA namely; Ipole, Msuva, Idekamiso and Utimule. The sample size for this survey was 161 out of 9184 which is the total population. The sample size was determined using special formula stipulated in the proposal

### **2.3.2 Methods of Data Collection**

Several methods of data collection were used namely; observation, questionnaires, In-depth interviews and Focus Group Discussions. Identification of respondents for interviews was purposefully done targeting those key informants with relevant information on the WMA. Observation was used to collect information which could not be obtained in other methods. Several observations were made (in order to help researchers make own assessment of the issues involved) and pictures were taken on the schools, equipments, offices, roads, status of the health centers, distance to and from the water wells.

Questionnaires were used to collect survey data whereby a total number of 161 questionnaires were administered by the research assistants. The language used was Kiswahili. Research assistants conducted a face to face with each respondent in a place where privacy was assured.

In-depth interviews were also conducted to obtain valuable and unique information such as people's attitude towards WMA, their understanding of the WMA and willingness to participate in cash-for-work programs. In this survey three in-depth interviews were conducted on the elderly male, the chairman of JUHIWAI and Idekamiso village executive officer.

Similarly, focus group discussions were conducted in which respondents were categorized according to sex. Respondents were gathered from their locales to the nearest primary schools in all the villages using the project's vehicle. The groups were composed of males and female. To ensure equal participation, males had their own FGDs as well as females. Each group consisted of 7 – 10 participants. The breakdown for each village was as follows; Ipole village (1 male FGD, 1 female FGD, 1 Bee-keeping group FGD, 1 wild fruit processors group FGD, 1 JUHIWAI leaders FGD), Msuva (1 male FGD, 1 female FGD), Idekamiso (1 male FGD, 1 female FGD, 1 Village Scout FGD) and Utimule (1 male FGD, 1 female FGD). This makes a total of twelve (12) FGDs in Ipole WMA.

### **2.3.2.1 Documentary and Library**

Different documents were reviewed in order to supplement the primary data from the field. Documents were obtained from Sikonge District and Ipole WMA. These included; Ipole Wildlife Management Area, Resource Management Zone Plan (2004-2014), Sheria Ndogo za Jumuiya ya Hifadhi ya Wanyama Pori Ipole (JUHIWAI) za mwaka 2008, Tanzania National Census 2002 and The Ipole WMA constitution.

### **2.3.2.2 A Quick-Scan of Income Generating Activities at Village Level**

A quick scan of income generating activities was conducted at Ipole WMA. The following data was collected from JUHIWAI offices and from each village executive offices. The main economic activity is agriculture which, include maize, beans, rice, cassava, groundnuts, potatoes and tobacco. They also have groups organized under JUHIWAI for Bee-Keeping, honey selling and wild fruit processors. There are also fishing activities where fishers have to obtain fishing license from JUHIWAI offices. There are also individuals engaging in small businesses such as selling food, selling earths for roofing and also local brews from honey, locally known as "Kangara".

### **2.3.2.3 Administration of a Social Survey**

A total number of 161 were meant to be administered throughout the study. Until the end of the data collection exercise 161 social survey questionnaires were filled. All the questionnaires were written in Kiswahili language and were administered by the research assistants on a face to face interview. Respondents were free to answer the questions and they had to agree to participate in the study. However, most respondents were reluctant to fill in the consent form for the fear of being known. To solve this, research assistants had to explain to them the objectives and ethical considerations of the study. Where this was done, respondents voluntarily agreed to participate. The randomly selected Respondents were picked from their homes and brought to the nearest primary schools. This was done because most of them stay in scattered houses. Others were also interviewed at their houses (those who whose houses were near).

### **2.3.2.4 Administration of In-Depth Interviews**

In-depth interviews were conducted in privacy to ensure confidentiality. The guiding questions were used to ensure that the researcher did not get out of the subject matter. The interview was tape recorded using the digital recorder. The interviews took 30 – 45 minutes.

### **2.3.2.5 Administration of Focus Group Discussions**

The groups consisted of 7 – 12 participants who gathered in one of the primary schools. Each participant was encouraged to participate to ensure equal participation. Hence, the group facilitator encouraged participation and discouraged dominance. The facilitator used a list of guiding questions but was not limited to ask other questions that would benefit the survey. The interview was tape recorded using the digital recorder. The interviews took 30 – 45 minutes. There was a note taker who followed at a closer stance the whole exercise. Respondents were provided with transport allowance and refreshments after the discussion.

### **2.3.2.6 Non-Participant Ethnographic Observation and Assessment**

Observation was used to collect information which could not be obtained in other methods. Several observations were made and pictures were taken on the status of schools, equipments, offices, roads, status of the health centers, distance to and from the water wells.

### **2.3.2.7 Data Processing, Analysis, Quality Control and Assurance**

Data cleaning was done after each day of data collection. The team met every evening where questionnaires were cleaned and signed after the approval of the research field supervisor. Qualitative data was examined by listening to the quality in terms of clarity. For the interviews and focus group discussions, the data was transcribed and translated into English so as to suit the analysis. Quantitative data analysis was done using a computer based program herein Statistical Package for Social Sciences (SPSS) while Qualitative data analysis was done basing on the content analysis.

## **CHAPTER THREE**

### **SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ECONOMIC STATUS**

#### **3.1 Characteristics of households**

#### **3.2 Introduction**

This chapter provides a brief description of various demographic and socio-economic characteristics of the sampled households and individual respondents interviewed. Included is information on the age, sex, marital status, education level and economic status of the respondents. The demographic and socio-economic characteristics of both households and individual respondents are essential for interpreting the survey findings and helps in assessing the representativeness of the survey sample.

In this baseline survey, a household is defined as a person or a group of persons who live together and share a common cooking pot. Given the nature of Tanzanian communities, this group of people can occupy part of, or all of a building, or may not necessarily live in the same building. To capture all the necessary information about households and individuals, a questionnaire inquiring about both kinds of information was administered. The administered questionnaires were used to capture detailed information about male and female respondents within the age range 20 – 70 years.

##### **3.2.1 Housing characteristics**

The housing characteristics of the respondents can be used as indicators of their livelihoods and socio-economic status. Respondents in the household interview were asked a number of questions about their household environment including questions on their source of drinking water, energy for cooking fuel, type of toilet facility, and type of flooring, walls and roof. Information on their source of drinking water is an important indicator of availability of services and the health status of the household.

Results of the survey showed that the main source of drinking water in Ipole is the public well which accounts for 73.6% of all the sources followed by reserved wells or yards which accounted for 16.4%. The remaining 10% of the households accessed drinking water from piped water, the public tap and pond (1.3%, 8.2% and 0.6% respectively)

The Millennium Development Goals require that all countries worldwide (including Tanzania) should ensure adequate sanitation facilities for all. According to the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (2004), a household is classified as having an improved toilet if the facility is not shared but used only by members of that household and if the facility separates waste from human contact. Proper sanitation facilities lead to improved hygiene practices and ultimately better health and welfare. Results of this survey show that over three-quarters of households in Ipole use the traditional pit latrine (88.1%) while 2.5% use flush toilets 8.8% of the households have no toilet facility and therefore either share a toilet with the neighbor (7.4%) or used bushes.

### **3.2.2 Source of energy**

The type of fuel used for cooking serves as an indicator of the socio-economic status of the household. Firewood is the most common fuel used for cooking in Ipole (79.4%), and then 15.0% of the households use charcoal. However both fuels have a negative impact on the environment because they involve cutting down trees.

The type of material used for flooring, quality of wall, and roofing are also important indicators of socio-economic status and to some extent determine the household vulnerability to hazardous environments. The table below shows that three-quarters (74.5%) of the sampled households in Ipole have earthen floors (made of earth or clay). The remaining quarter (24.5%) have floors made of cement and sand. These results show that earth flooring is most common in rural areas.

The quality of wall materials ensures that household members are protected from hazardous conditions. Mud and wood poles are the most common type of wall materials in Ipole (43.8%) followed by mud bricks (33.8%). About a quarter of the sampled households in Ipole have structures made of cement blocks and burnt bricks (3.1% and 19.4% respectively).

The most common form of roofing in Ipole is thatch (78.1%) followed by metal (21.9%).

**Table 3.1: Household characteristics**

<b>Housing characteristics</b>	<b>Household (%)</b>	<b>Number</b>
<b>Source of drinking water</b>		
Piped	1.3	2
Public tap	8.2	13
Well reserved or yard	16.4	26
Public	73.6	117
Pond	0.6	1
Total	100.0	159
<b>Toilet facility</b>		
Flush	2.5	4
Pit latrine	88.1	141
None	8.8	14
Other	0.6	1
Total	100.0	160
<b>Source of energy</b>		
Generator	0.6	1
Car battery	3.1	5
Charcoal	15.0	24
Firewood	79.4	127
Kerosene	1.9	3
Total	100.0	160
<b>Flooring material</b>		
Cement and sand	25.5	41
Earth/clay	74.5	120
Total	100.0	161
<b>Wall material</b>		
Cement block	3.1	5
Burnt bricks	19.4	31
Mud and poles	43.8	70
Mud bricks	33.8	54
Total	100.0	160
<b>Roofing material</b>		
Thatch	78.1	125
Metal	21.9	35
Total	100.0	160

**Plate 3.1: One of the houses in poor condition at Msuva Vilage**



### **3.2.3 Household possession**

Another indication of the household's socio-economic status is the durability of ownership of the household. Indications of this are the ownership of selected durable household items that can show a strong correlation with the economic status of the household, and each item has specific benefits. For instance having ownership of a radio or a television exposes household members to innovative ideas; a means of transport allows greater access to services further away from the local area etc... The results of this survey show that most (90.1%) households own a radio, followed by mobile phones (64.5%). The proportion of ownership is lower in items such as TV (9.9%), VCR-DVD (8.3%), satellite dish (7.4%) and refrigerator (5.0%). 99.2% of households own a bicycle and 6.2% own a motorcycle while 14.0% own a chariot. This is probably because the bicycles are cheaper than motorcycles and chariots. The following table represents the proportion of ownership among the respondents:

**Table 3.2: Household ownership**

possession	Households	
	Percent of response	Percent of cases
Electronic assets		
Television	5.4	9.9
VCR-DVD	4.5	8.3
Satellite Dish	4.0	7.4
Radio	48.7	90.1
Refrigerator	2.7	5.0
Mobile phone	34.8	64.5
Total	100.0	185.1
Transport facility		
Bicycle	83.1	99.2
Motorcycle	5.2	6.2
Chariot	11.7	14.0
Total	100.0	119.4

### **3.3 Characteristics of respondents**

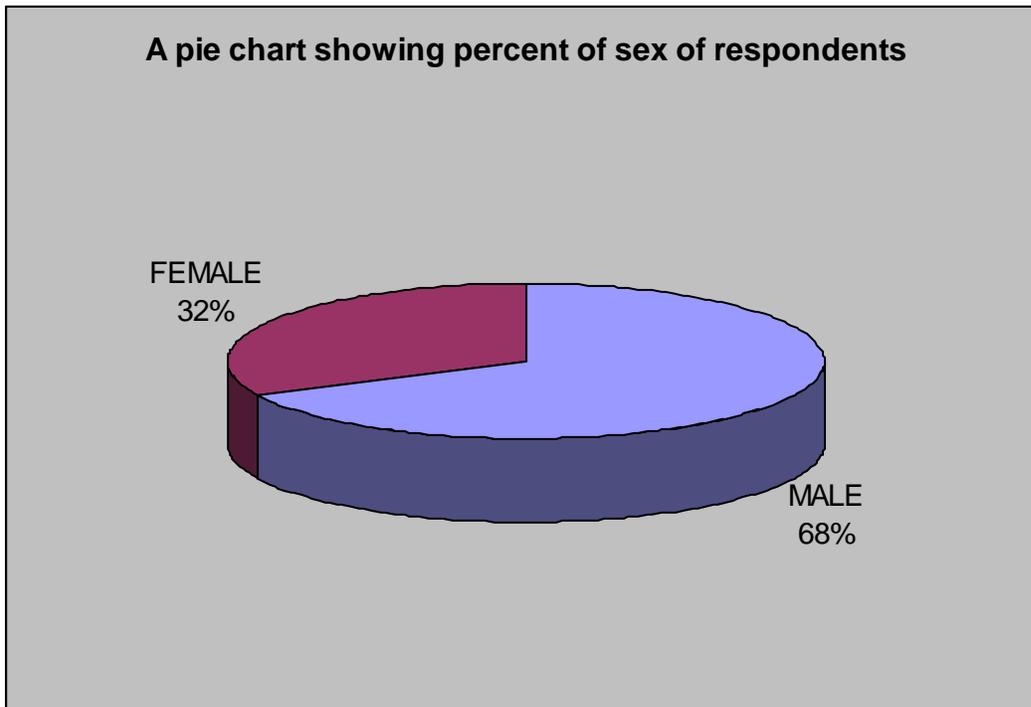
#### **3.3.1 Introduction**

This section provides a brief description of selected demographic and socio-economic characteristics of the respondents from the socio-economic baseline study including age, sex, education and marital status. Age and sex are important demographic variables and are the primary basis of demographic classification. Needs and services for a given population depend to a large extent on the age and sex of the population.

#### **3.3.2 Background characteristics of respondents**

The table below shows the distribution of women and men aged between 20 -70+ by background characteristics. The numbers reflect the actual observations during enumeration. A total of 109 (67.7%) men and 52 (32.3%) women were interviewed in this survey. The chart below shows the distribution of respondents by sex.

**Figure 3:1. Sex of respondents**



In terms of marital status, this survey had five categories namely single, married monogamy, married polygamy, divorced and widowed. The results show that 73.9% of respondents were married. Most of those who were interviewed were married in a monogamous relationship (about 98 respondents- 60.9%), followed by those who were single (33 respondents- 20.5%), and then those who were in a polygamous marriage (21 respondents- 13%), and 5.5% had been married previously (i.e., divorced or widowed)

### **3.3.3 Educational attainment of the respondents**

Education provides people with knowledge and skills that can lead them to a better quality of life. The results of this survey show that 70.2% of the total respondents (equivalent to 113 respondents) had primary level education in which 67.9% were males and 75.0% females. 11.8% of the respondents (19 respondents) had secondary education while only 0.6% (1 respondent) had college education. The findings also show that a total of 17.4% (28 respondents) had no formal education although there seems to be a minor difference between men and women who had no formal education which is 18.3% and 15.4% respectively.

This survey involved a total of 161 respondents. Of all the respondents, only 35.2% (56) had been born in Ipole with the remaining 64.8% (103) coming from outside. The findings show that most of these respondents had migrated to Ipole due to several factors which include but are not limited to the influence of family and

friends (39.6%), farming (34.9%), employment (9.4%), Ujamaa and villagization Policy (4.7%), business (1.9%) and other factors which account for about (9.4%). It is clear that most of the residents (64.8%) of Ipole are migrants from other places. Migration patterns show that over 50% of females i.e.(52.8%) had migrated because of family and friends who lived in Ipole while (40.0%) of men migrated due to farming although generally men migrated more (66.0%) than women (34.0%). The following table summarizes respondent's background characteristics by sex:

**Table 3.3: Percent of respondents background characteristics by sex**

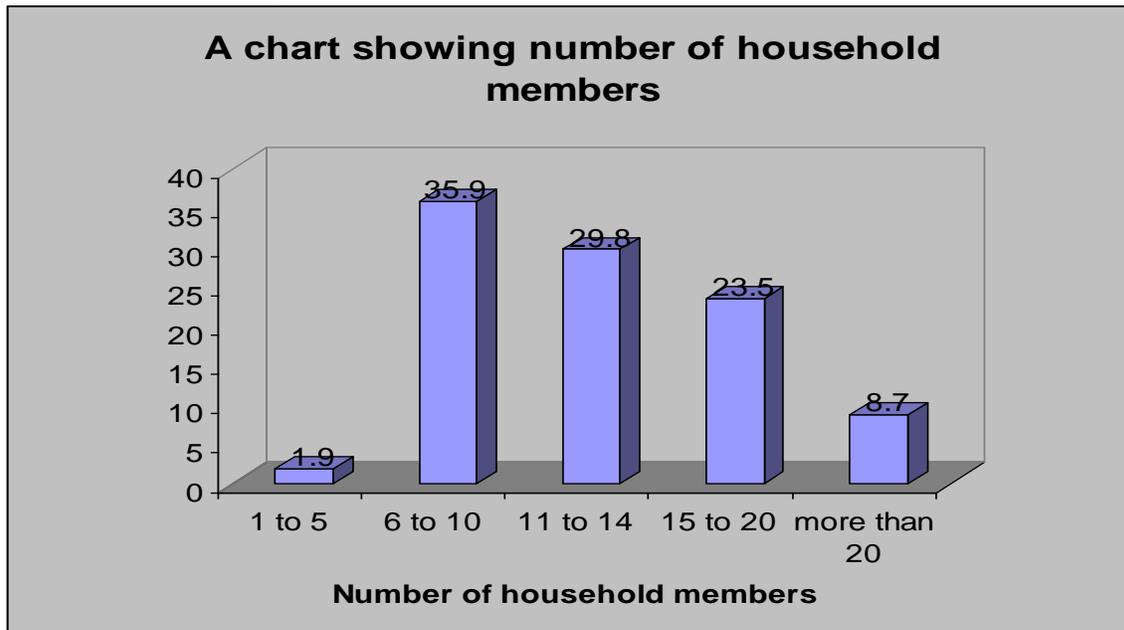
<b>Background Characteristics</b>				
<b>Age group</b>	Male (%)	Total (Number)	Female (%)	Total (Number)
Under 20	0.0	0	6.0	3
20-24	11.1	12	8.0	4
25-29	15.7	17	12.0	6
30-34	20.4	22	10.0	5
35-39	10.2	11	8.0	4
40-44	7.4	8	10.0	5
45-49	3.7	4	4.0	2
50-54	5.6	6	20.0	10
55-59	8.3	9	12.0	6
60-64	1.9	2	2.0	1
65-69	4.6	5	6.0	3
70 +	11.1	12	2.0	1
<b>TOTAL</b>	<b>100.0</b>	<b>108</b>	<b>100.0</b>	<b>50</b>
<b>Marital status</b>				
Single	18.3	20	25.0	13
Married monogamy	63.3	69	55.8	29
Married polygamy	15.6	17	7.7	4
Divorced	0.0	0	3.8	2
Widowed	2.8	3	7.7	4
<b>TOTAL</b>	<b>100.0</b>	<b>109</b>	<b>100.0</b>	<b>52</b>
<b>Education level</b>				
No formal education	18.3	20	15.4	8
Primary	67.9	74	75.0	39
Secondary	12.8	14	9.6	5
College	0.9	1	0.0	0
<b>TOTAL</b>	<b>100.0</b>	<b>109</b>	<b>100.0</b>	<b>52</b>

Reasons for migration				
Farming	40.0	28	25.0	9
Business	2.9	2	0.0	0
Employment	11.4	8	5.6	2
Family and friends	32.9	23	52.8	19
Policy	4.3	3	5.6	2
Other	8.6	6	11.1	4
TOTAL	100.0	70	100.0	36

### 3.3.4 Household Size

Household size is one of the determinants of people’s livelihoods as it determines the production and consumption pattern. One of the objectives of this baseline study was to determine the size of households where the respondents came from. The results from the study show that 35.9% of all households had a number of people ranging between 6-10, this was followed by households with people ranging between 11-14 which was over a quarter (29.8%). 23.5% of the households had people between 15-20 while households with more than 20 people were only (8.7%). Moreover very few households had 1-5 people (1.9%). This is summarized in the following table.

**Figure 3.2: Number of household members**



### 3.4 People's socio-economic status

The qualitative information gathered through in-depth interviews and FGDs show that people in Ipole WMA do not consider themselves better off despite the presence of the WMA, and don't feel that their socio-economic status has improved. Some of them blame the presence of the WMA saying that it has narrowed their opportunities to use the available natural resources such as wild animals, forests and fish in their locale. The cost to use the said resources has financial implications to them as they are supposed to pay for the license which allows them to access and use such resources. This is contrary to what they were used to previously i.e. free access to resources. This was evident in one of the interviews as one of the respondents claimed:

*"We have not seen changes yet; we have been denied the freedom to utilize our natural resources. We are forced to pay whenever we want to use our resources –they are our resources, surprisingly yet we ought to pay to use them".*

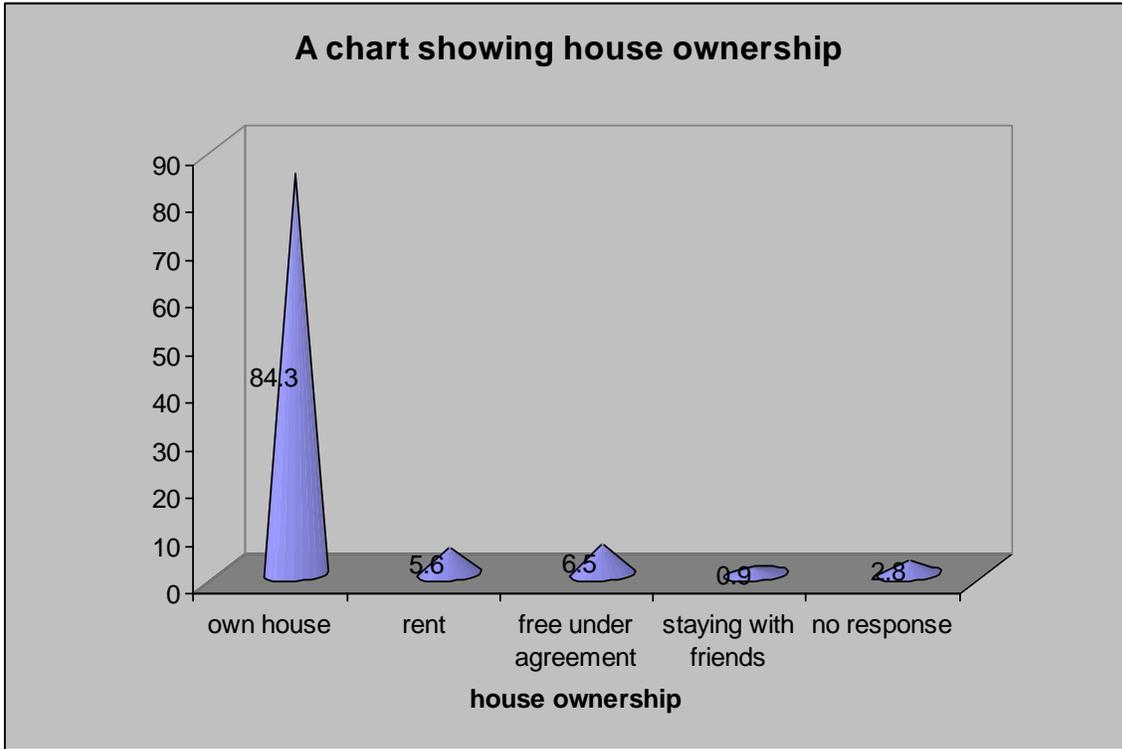
The people's living standards and conditions is also a reflection of the sentiments above as will be discussed further in the next section.

### 3.5 People's living standards and conditions

Over three-quarters of the respondents in Ipole live in their own houses (84.4%) while only 6.3% live in rented houses, and 6.9% live free under agreement. 0.6% of respondents lived with their friends while 1.9% of respondents did not respond to this question. Overall, the findings show that there is no major variation between males and females who own houses (84.3% males and 84.6% females). On the other hand 5.6% of males lived in rented houses while 7.7% of females live in rented house. So the proportion of those who live in rented houses is slightly higher among females than males. 0.9% of male respondents lived with their friends while no females lived with friends.

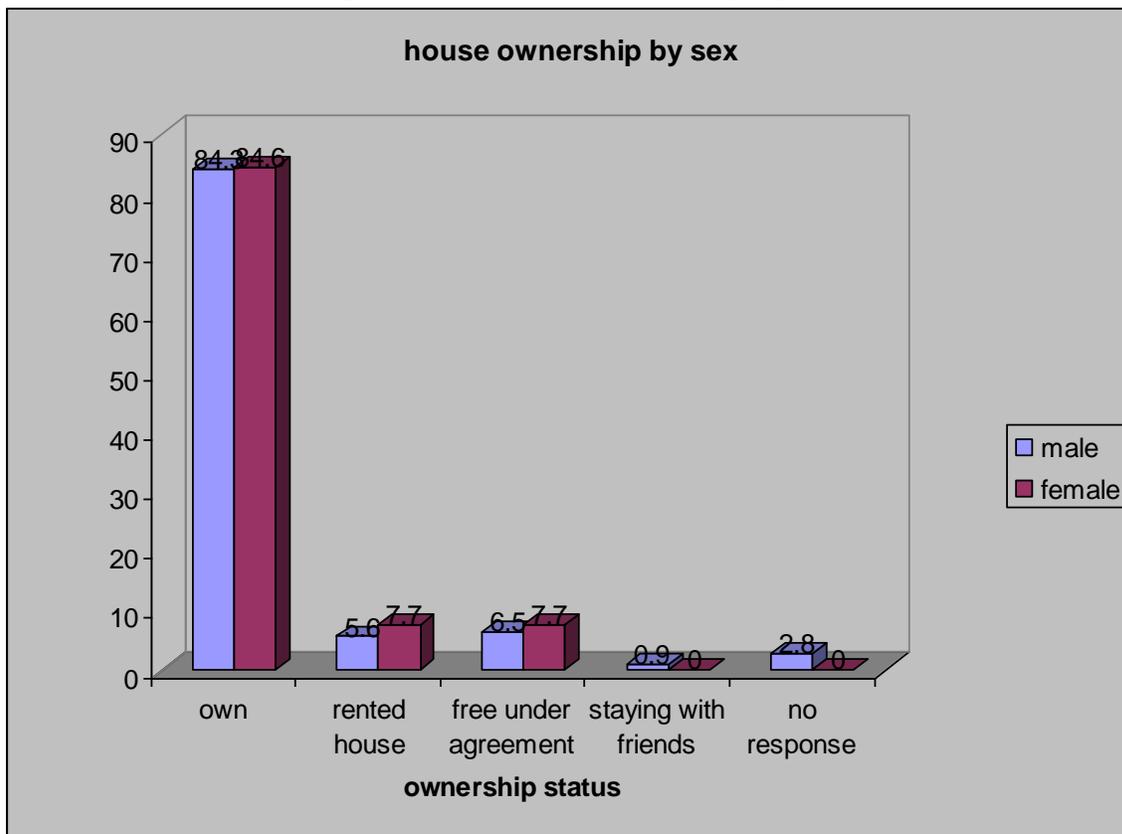
These findings are shown in the graph below.

**Figure 3.3: House ownership**



Overall, the findings show that there is no major variation between male and female respondents who own houses (84.3% males and 84.6% females). This shows that women increasingly own property as opposed to previous times when they had no opportunity for owning property. On the other hand the proportion of those who lived in rented houses is slightly higher among females than males.

**Figure 3.4: House ownership by sex**



### 3.6 Socio-economic activities of the households and how they perform

As in many other societies, the people of Ipole are involved in various livelihood activities. The results show that most people are engaged in more than one activity, an overwhelming majority engage in agriculture (96.9%) followed by petty trade (46.6%). The proportion of men who engage in agriculture is twice that of women (67.9% and 32.1% respectively). It is only 1.8% of respondents who practice livestock keeping. The table below is illustrative:

**Table 3.4: Main economic activity of respondents**

Main economic activity	Percent of response	Percent of cases
Petty trade	26.6	46.6
Agriculture	55.3	96.9
Livestock keeping	1.8	3.1
Other	16.3	28.6
Total	100.0	175.2

Those who practiced agriculture were found to grow several crops. Most of the respondents grew maize (95.9%); while 68.2 % grew groundnuts; 41.9% grew rice; and 22.3% grew cassava. Only a smaller proportion of respondents were found to grow sunflower, millet, beans, potatoes and sorghum (21.6%, 12.2%, 11.5%, 7.4% and 0.7% respectively). Proportionally more men and women were involved in agriculture (i.e. 65.8% and 31.1% respectively), and shows that there is an increasing number of men engaging in agriculture that has previously been dominated by women, especially in rural areas. The following table shows the results:

**Table 3.5: Respondents main economic activity by sex**

Main economic activity	Sex of respondents			
	Male (%)	number	Female (%)	number
Petty trade	28.6	46	18.0	29
Agriculture	65.8	106	31.1	50
Livestock keeping	2.5	4	0.6	1
Other	21.1	34	7.5	12
Total	67.7	109	32.3	52

Variation is also seen in the types of crops grown by men and women.. The table below is indicative:

**Table 3.6: Respondents type of crop by sex**

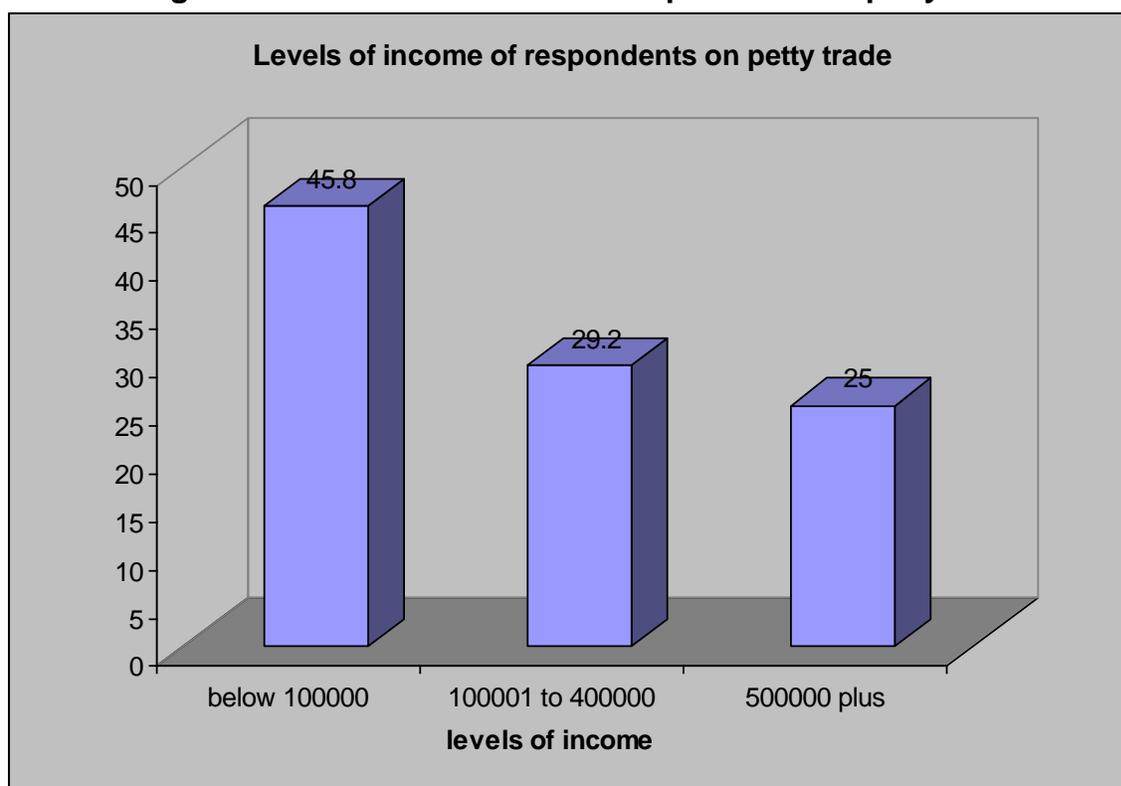
Type of crop	Sex of respondents			
	Male (%)	Number	Female (%)	Number
Maize	67.6	100	28.4	42
Rice	27.7	41	14.2	21
Beans	6.1	9	5.4	8
Millet	9.5	14	2.7	4
Sorghum	0.7	0	0.0	0
Cassava	16.9	25	5.4	8
Total	68.2	101	31.8	47

### 3.7 Sources, levels and types of income in Ipole WMA

Income generation in Ipole is based on four main economic activities: petty trade, agriculture, livestock-keeping and bee-keeping. The annual income obtained from these activities differs significantly ranging from 100000 to 500000/- plus.

In petty business a large proportion of people (45.8%) earn below or equal to 100000/-. About a quarter (25.0%) of respondents earn 500000/- and above while the remaining respondents earn between 100001 and 400000/-. This is summarized in the graph below:

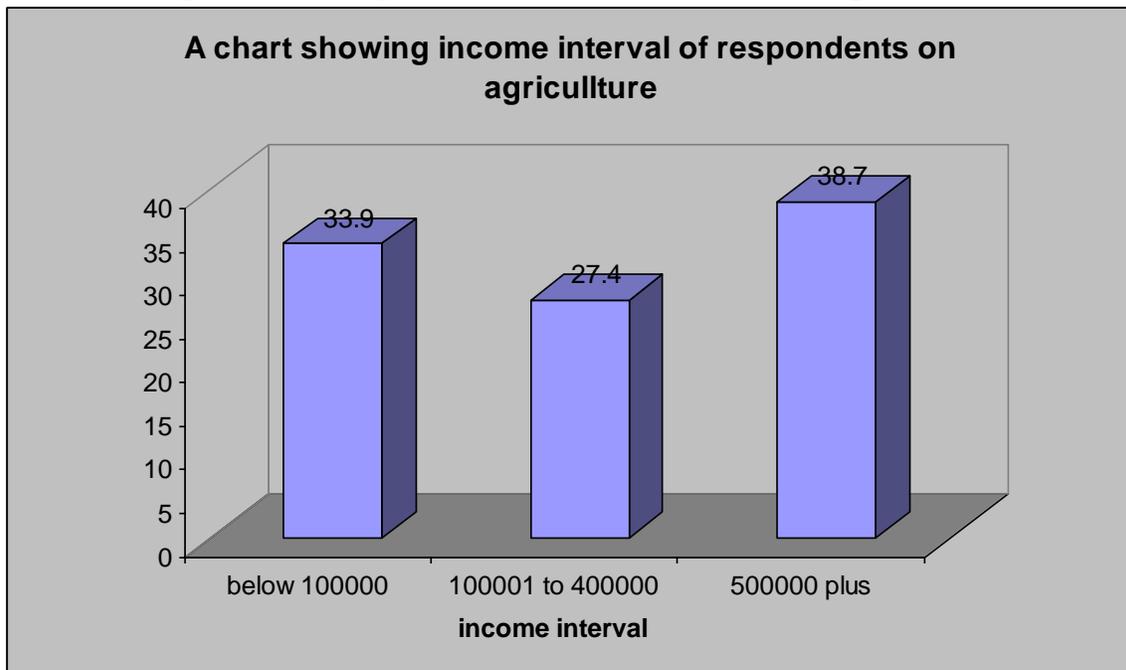
**Figure 3.5: Levels of income of respondents on petty trade**



There is no major difference between men and women who earn lower incomes (1-100000) in Ipole (40.7% and 52.4% respectively), however there are more women (33.3%) earning more than 500000 annually than men (18.5%).

In agriculture a relatively large number of people (48) earn more than 500000/- (i.e. 38.7%), followed by those who earn between 1 and 100000/- (42 respondents-33.9%). The rest earn between 100001 and 400000/- as shown in Figure 3.6 below.

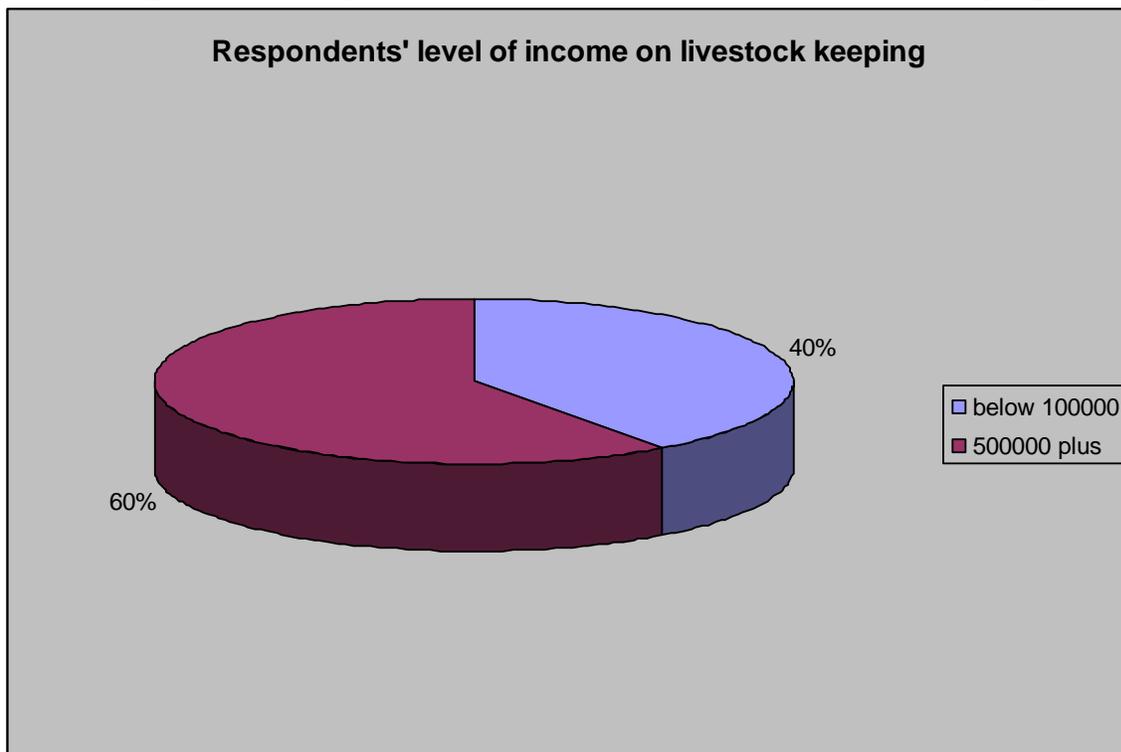
**Figure 3.6: Respondents' income interval on agriculture**



The results show that there is a difference between the amount of money which men and women earn annually. While 42.9% of women earn low incomes of up to 100000/-, 42.7% of men earn above 500000/- from agriculture.

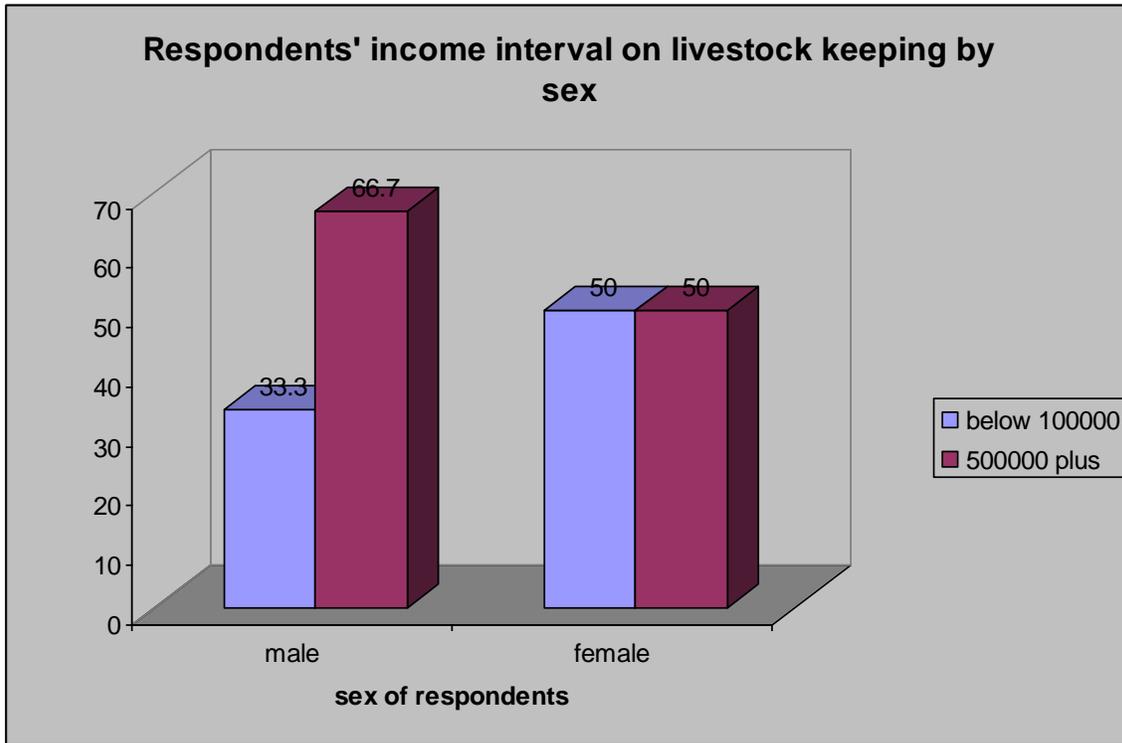
For those who have livestock 60.0% earn more than 500000/- and the remaining 40.0% earn up to 100000/-.

**Figure 3.7: Respondents level of income on livestock keeping**



It is also interesting to note that where the earnings obtained were very little, women dominated (50.0%) while those high incomes were dominated by men (66.7%). This is shown in the graph below.

**Figure 3.8: Respondents' income interval on livestock keeping by sex**



71.4% of the respondents earned between 200001 and 300000/- from beekeeping while 28.6% earned between 100001 and 200000/-. Almost 100.0% of the female respondents earned between 100001 and 200000/- from beekeeping while 83.3% of men earned between 200001 and 300000/-

Respondents were also asked whether the income they earned was enough. The results show that although many people were involved in more than one income generating activity, such incomes were still insufficient to support their families (83.3%). Proportionally more women (89.8%) said that their income was not enough compared to men (80.4%) though the difference is very minor. Such a difference between men and women could be explained by the fact that often women take on the role of budgeting for the family.

Although incomes are not enough, the people of Ipole do have alternative options for generating income. These include agriculture, petty trade, casual labor and beekeeping. Of all these activities, petty trade (39.1%) is seen to be the most common activity followed by agriculture (35.5%). One out of four respondents (25.4%) opted for either casual labor or beekeeping. The results also show that most of these activities are gendered with more men (64.5%) being involved in these than women (35.5%), and no women were found to be involved in beekeeping (0.0%). This is possibly because beekeeping is done far away from the villages, requiring the person to walk for a day or two to the beekeeping zone. The table below describes these proportions:

**Table 3.7: Copying alternatives of the Ipole people**

Copying alternative	Sex of respondents			
	Male (%)	Number	Female (%)	Number
Agriculture	22.7	25	12.7	14
Petty trade	22.7	25	16.4	18
Casual labour	17.3	19	6.4	7
Bee keeping	1.8	2	0.0	0
Other	5.5	6	1.8	2
Total	65.5	72	34.5	38

### **3.8 Main economic activities existing in Ipole WMA**

There are several economic activities that exist in Ipole WMA. As pointed out earlier people in Ipole are often involved in more than one activity in order to earn a living. These include agriculture, petty trade, livestock keeping and beekeeping. The most dominant economic activity is agriculture. About nine out of ten respondents (96.9%) are engaged in agriculture. Only 3.1% of respondents were found to be primarily involved in petty trade, beekeeping and livestock keeping.

### **3.9 Availability and quality of social service infrastructure (health and education)**

The social services infrastructure is an important aspect and determinant of people's welfare. It ensures social protection for the community and drives social progress. One of the objectives of this baseline study was to assess the availability and quality of social services infrastructure such as health and education in Ipole. The results show that there are few dispensaries, primary schools and secondary schools. It was noted during the quick scan that Utimule, Mwamulu and Idekamiso primary schools have three teachers each. There is only one secondary school in Ipole ward. There is one dispensary in Ipole with only one medical attendant and a volunteer who is not well trained.

Accessing social services such as education and health services in Ipole WMA is very difficult, especially for villages such as Msuva and Idekamiso where there is no dispensary. People have to walk or ride a bicycle to Ipole for treatment when they get sick.

Water service is also a problem in Ipole WMA as pointed out earlier in the sources of drinking water, with most people not having access to safe and clean water, instead using water from public wells and ponds which are not safe.

**Plate 3.2: Source of drinking water at Ipole Village**



The survey showed that 77.8% of the respondents pointed out that the dispensary was in bad quality, and 93.8% of respondents pointed out that roads were a serious problem being in a very bad condition. The results further show that 67.3% of the respondents mentioned schools as one of the major problems with 19.1% claiming that there was a deficiency of teachers, and 13.6% claiming that there were not enough secondary schools. Additionally respondents through interviews and FGDs also stated that they are faced with the problem of lack of houses for teachers and teaching materials. This is evident in the following script by one of the key informants during the interview who said:

*“Frankly speaking, we have so many problems but major ones are about education and health. We have got only one secondary school for all villages in Ipole WMA. Our schools have no enough desks, teachers or books. Our dispensary has too few medical personnel to serve all people of Ipole.”*

Another problem which was described was the lack of a market where people could sell their products. 70.7% of the respondents complained that there are no places where they can sell their products while 29.3% said that the markets are not good.

### 3.10 Socio-economic threats, drivers and opportunities related to natural resources in Ipole WMA

There are several socio-economic threats, drivers and opportunities in Ipole WMA. Over half of the respondents (52.3%) revealed that there were problems in Ipole that were socio-economic threats. The dominant threats (59.1%) were wild animals destroying their crops followed by attacks by wild animals (23.9%). The remaining 27% of the respondents described socio-economic threats such as conflicts caused by either unclear village boundaries, misunderstandings between villagers and investors, disagreements over benefits or sharing mechanisms of the profit that was obtained from the WMA.

Another threat is that of inadequate social services and infrastructure which include water services, education, healthcare, markets and transportation. Respondents complained of a lack of safe and clean water, lack of primary and secondary teachers, lack of medical personnel, lack of markets to sell their agricultural products and poor road infrastructure.

Fire outbreaks are another serious socio-economic threat in Ipole WMA. These do not only threaten human beings but also the whole ecosystem. Poaching is also a threat in Ipole WMA though the incidences of poaching seem to have declined.

**Plate 3.3: Fire incidences at Utimule Village in Ipole WMA**



Illegal timber harvesting is also another threat as it does not only affect the land but also the entire ecosystem of Ipole. Illegal timber harvesting is done by people within the WMA.

The investor who has invested in Ipole WMA (Northern Hunting and Camping Safari) also pose a threat to peoples' socio-economic situation. This investor does not cooperate with the people of Ipole and contributes very little to the revenue of Ipole.

Despite these threats there are also opportunities related to the natural resources in Ipole WMA. Ipole WMA has a vast area of forest which if managed properly could foster socio-economic development for the people of Ipole. The WMA has provided opportunities for wage employment especially to village game scouts and game wardens. 46.8% of respondents described having had improvements in their livelihoods (46.8%). Furthermore, Ipole WMA has also offered business opportunities to the people of Ipole, especially to those who are involved in beekeeping. The results show that three-quarters of respondents (75.0%) view WMA as good for business.

### **3.11 Other resources available and their uses**

In addition to the assets as previously mentioned that Ipole people own, there are several other resources which they depend on. Land and livestock resources were very common in Ipole. The results show that 96.2% of respondents own a farm, and more women (98.0%) were actually found to own farm than men (95.4%). Most of those who owned farms (45.3%) had an average farm of 3 to 5 acres and 26.0% an average of 6 to 10 acres. The remaining 28.6% owned an average farm of up to 1 acre, between 1 and 2 acres and 10 acres and above. These farms cultivated for household needs a variety of crops including maize, beans, rice, cassava, potatoes, millet, sorghum, etc. Over a half (51.3%) agreed that their farm size was sufficient for their household needs.

Apart from the farm resources, 58.2% of the respondents had livestock, women owning 60.0% and men 57.4% of all livestock. The table below shows ownership of livestock by sex:

**Table 3.8: Livestock ownership by sex of the respondents**

Livestock	Sex of respondents			
Cattle	Mal (%)	Number	Female (%)	Number
1-50	93.9	31	100.0	5
51-100	6.1	2	0.0	0
Total	100.0	33	100.0	5
Sheep				
1-50	100.0	13	100.0	5
Total	100.0	13	100.0	5
Goats				
1-50	100.0	31	100.0	9
Total	100.0	31	100.0	9
Pigs				
1-50	100.0	3	100.0	3
Total	100.0	3	100.0	3
Rabbits				
1-50	100.0	4	100.0	2
Total	100.0	4	100.0	2
Poultry				
1-50	96.6	57	96.4	27
51-100	3.4	2	0.0	0
101-150	0.0	0	1.1	1
Total	100.0	59	100.0	28
Donkey				
1-50	100.0	5	100.0	2
Total	100.0	5	100.0	2

## CHAPTER FOUR

### INCOME AND EXPENDITURE PATTERNS IN THE WMA

#### 4.1 Sources and types of income in Ipole WMA

As discussed in the previous chapter, the main sources and types of income in Ipole are agriculture, petty business, livestock keeping, fishing and beekeeping. When incomes are not enough, Ipole people are accustomed to supplementing their income through casual labor, and game scouting activities, doing patrols in the WMA area, with 4.4% of the respondents engaging in wildlife ventures for wages, 3.8% being men and 0.6% women.

Apart from the usual activities that people undertake to earn an income, financial institutions- both macro (such as the bank) and micro (such as SACCOS)- can also help people get money through credit. The people of Ipole are not accustomed to considering such institutions as alternative sources of income. Out of all the respondents, only 9.3% said that they could access credit in Ipole. This is because of two major reasons: firstly, there are financial institutions only in Sikonge and therefore only those that are able to travel there are able to access credit; and secondly, there are strong conditions for one to be able to access credit. These include having an asset which has to act as mortgage. There is no major difference between men and women in accessing credit. The results show that 10.1% of men access credit while 7.7% of women access credit. The main sources of credit are authorized associations (60.0%) and micro-finance institutions (33.3%). 6.7% of the respondents mentioned accessing credit from their relatives.

Almost three-quarters of male respondents (72.7%) spoke of accessing credit from authorized associations while half of the female respondents (50.0%) spoke of accessing credit from micro-finance institutions. The results also show that one out of four women (25.0%) access credit from relatives and friends.

#### 4.2 Expenditure patterns in Ipole WMA

Expenditure patterns can be used as a socio-economic determinant in any society in the way that they demonstrate the ability of people to access various services necessary for their survival and wellbeing. In terms of daily expenditure, a large number of people in Ipole WMA (27.8%) spend over 4000 shillings; 19.0% of respondents were found to spend between 1000 and 1500 shillings per day; 17.1% mentioned spending between 1501 and 2000 shillings per day; 2.5% between 2001 and 2500; 14.6% were found to spend between 2501 and 3000 shillings; and the remaining 7.6% between 3001 and 4000 shillings.

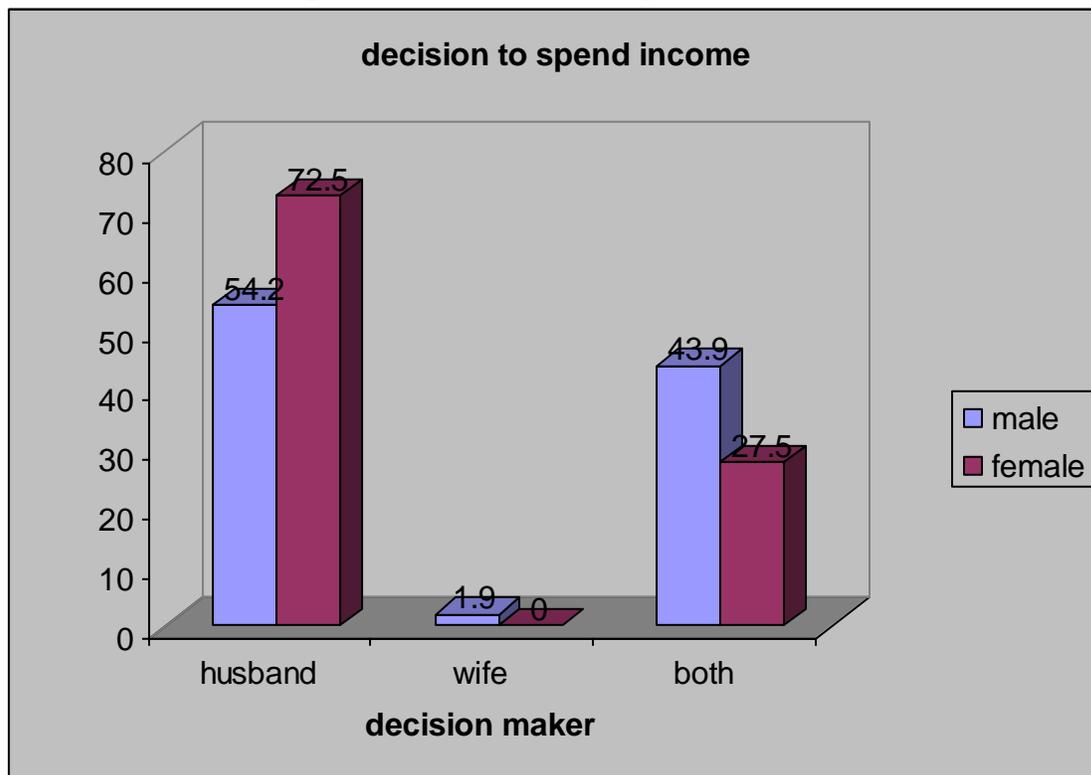
Across all income levels, major variation is found between the amount of money spent each day by men and by women. Proportionally, men spend more money than women. See the table below:

**Table 4.1: Household expenditure per day by sex of respondents**

Daily expenditure (Tshs)	Sex of respondents			
	Male (%)	Number	Female (%)	Number
Below 1000	10.4	11	13.5	7
1000-1500	20.8	22	15.4	8
1501-2000	17.9	19	15.4	8
2001-2500	2.8	3	1.9	1
2501-3000	12.3	13	19.2	10
3001-3500	1.9	2	0.0	0
3501-4000	6.6	7	5.8	3
4001+	27.4	29	28.8	15
Total	100.0	106	100.0	52

The results further show that 56.5% of the respondents confirmed that men and women do not have equal decision making power as husbands (60.1%) make most of the decisions compared with wives at 1.3%. This was especially found to be the case on how to spend the income with only 38.6% of the respondents reporting that both husbands and wives made decisions on how to spend the income. This is evident in the following figure:

**Figure 4.1: Decision to spend income**



Generally, people in Ipole spend most money on education and health. The results show that 71.9% of men spend more money in education as compared to 67.8% which they spend on health. For women, 81.7% were found to spend more money on education as compared to 72.3% which they spend on health. This shows that both men and women assign first priority to education as compared to other services.

### **4.3 Sources of revenue and type of investments in Ipole WMA**

For the sustainable development of any community, revenue collection and investments are necessary. The information obtained from interviews and Focus Group Discussions indicate that the main source of revenue in Ipole is tourism, beekeeping, and fishing. There are two types of tourism in Ipole WMA: photographic tourism (though the respondents claimed that it rarely happened); and hunting tourism which is common in Ipole WMA. Ipole WMA receives about 30% of its revenue from hunting tourism. Also, people who partake in various activities such as beekeeping and fishing carried out within the WMA area contribute to revenue generation through their license fee. Each license for honey harvesting costs 3000 Tanzania shillings, while fishing costs 16,000 Tanzania shillings per year. All middle men pay 7600 Tanzania shillings per year. All of these

licenses are renewed annually. Another source of revenue which was pointed out is the protected hill in Ipole that people use for stones and moram for construction purposes and contribute a fee to the village government.

There is only one type of investment in Ipole- tourism. The sole investor, namely Northern Hunting and Camping Safari Company, contributes about 30% annually to the revenue of Ipole WMA. In total, Ipole WMA received only eight million Tanzania shillings (equivalent to 30%) from the time that the investor was introduced in 2006. This amount does not go straight to individuals but goes to JUHIWAI (Jumuiya ya Hifadhi Wanyamapori Ipole) that then distributes the money to the four villages, namely Ipole, Msuva, Idekamiso and Utimule (all of which form Ipole WMA). Villagers have showed their concern and complaints about this contribution rate of 30% as will be discussed in the next chapter.

#### **4.4 Economic and ecological status of Ipole WMA**

To understand the economic and ecological status of Ipole WMA some questions were asked related to income sustainability, fire, and poaching incidence. The status of economic activities is low as indicated in the expenditure patterns in section 4.2. Also the earnings of most of people are not stable, and in tracing the trend of earnings, 44.4% of respondents pointed out that there has been a change. The results show that 1.9% observed an increasing change. Most of the respondents (66.7%) pointed out that the changes began from 2006 to 2008, while the remaining 33.3% observed changes from 2009 to date (the time when the baseline study was carried out). There are two different scenarios in which the causes for these changes are explained: first, is income obtained from the WMA (80.0%) and second the practice of wildlife conservation (20.0%). Therefore most of the respondents relate the existing change to income from the WMA.

In order to capture and understand the ecological status of the Ipole WMA, the researchers assessed the WMA environment using both a quick scan method and questionnaires. Through this method the researchers realized that the incidence of fire in the WMA was high, and was even present at the time of the study (see the picture). Although the quick scan revealed fire incidences to be common in different parts of the WMA, 65.7% had seen fire outbreaks in the last year while 34.2% indicated that such events had never happened in the said timeframe. Information from qualitative methods shows that those who had never seen the fire outbreak was because such practice is done far away from the community residents because the offenders are afraid of being arrested. So it was only those who were involved in harvesting honey, fishing and patrol who could easily see such incidences. This was evident in the following excerpt from one of the respondents:

*“you know those who start fire do not do that near the people’s residence where they can be seen, they do that far away in the forests, it therefore becomes very difficult for us to see” (IDI)*

With regards to poaching, 31.7% of respondents reported that there had been poaching incidences in Ipole while 32.9% said that they did not know anything about poaching. Awareness on poaching was relatively higher among men (34.9%) than women (25.0%), possibly because of the nature of work that men do in the WMA which includes fishing and beekeeping.

The results of this baseline study also show that respondents had varying views on the state of wildlife. 44.9% of respondents indicated that there is an increased abundance, 37.0% indicated that there has been a stoppage of destruction of habitat, 12.6% the return of species and 5.5% the generation of mating grounds; all of which are products of the WMA. The table below shows the ecological status of Ipole by sex:

**Table 4.2: Ipole ecological status by sex of respondents**

Ecological status	Sex of respondents			
	Male	number	female	number
Increase abundance	43.5	40	48.6	17
Provision of reproductive grounds	5.4	5	5.7	2
Stop destruction of habitat	38.0	35	34.3	12
Return of species	13.0	12	11.4	4
Total	100.0	92	100.0	35

#### **4.5 Contribution of Ipole WMA on village revenues and their common expenditure**

Ipole WMA gets revenue from various sources as has been discussed. These sources contribute significantly (though not enough) to the village revenue. Most of the contributions come from hunting tourism, beekeeping and fishing in terms of licensing, as noted earlier. Through qualitative methods of data collection it was revealed that Ipole villagers spend their revenue on building village executive offices and buying school facilities such as desks. As will be discussed in the next chapter, three-quarters of the respondents (75.0%) mentioned school construction projects as the most beneficiary, with others including building village offices (25.0%) and water projects (16.7%). This distribution of essential projects reflects the pattern of common expenditure of revenue obtained from Ipole WMA.

## CHAPTER FIVE

### PEOPLES KNOWLEDGE AND AWARENESS OF CBNRM PROGRAMME AND WILDLIFE MANAGEMENT AREA

#### 5.1 People's Knowledge, Awareness and Attitudes towards WMA

Understanding people's knowledge about WMA was also central to this study. The study examined whether or not people have any knowledge about WMA. The results show that 85.3% of the respondents understand about WMAs. Understanding of WMAs is high among those who understand it as a resource conservation (41.7%) followed by those who understand it as community participation (39.1%). Their understanding differs across sex with men having a greater understanding than women, probably because it is they who engage more in wildlife activities than women. The table below illustrates the findings:

**Table 5.1: Respondents' awareness on WMAs**

Understanding about WMAs	Sex of respondents			
	Male (%)	number	Female (%)	Number
Community participation	43.0	46	30.6	15
Benefit sharing	3.7	4	4.1	2
Resource conservation	39.3	42	46.9	23
Others	0.9	1	0.0	0
Don't know	13.1	14	18.4	9
Total	100.0	107	100.0	49

During both in-depth interviews and focus group discussions, respondents showed their knowledge about the WMA. They could recall the establishment of the WMA in their area, the revenue, and the benefit that they obtain from the WMA operations. Similarly, they discussed the disadvantages of WMA, its weaknesses and even gave recommendations. The following excerpt explains more;

*“We all know about the WMA and I remember it was established in 1998. I know it as JUHIWAI. I understand it as an organization which aims at conserving wildlife and benefit the communities which surround it...it also means sensitizing the communities to participate in conservation by the use of Village Game Scouts”. (FGD).*

## **5.2 People’s Views on Community Participation in Conservation of Natural Resources**

This survey also investigated the community participation in the conservation of natural resources in their respective WMA. The levels of their participation ranged from individual to community, and was seen as something that has enabled the sustainability of the concerned WMA and the resources in it. It was noted that individuals were willing to provide security on the available resources like timber, honey, animals and so forth. During FGDs, participants commented that they would inform the police, game officers and WMA officials of anyone who conducted any illegal activities such as harvesting timber without special permission. For instance, it was recorded that;

*“Although we are not paid anything or getting any security assurance, people have been reporting illegal timber harvesting. Before the establishment of JUHIWAI people were cutting down trees and we could see them passing with bicycles loaded with timber. But if I see them today I directly report them to the village executive or JUHIWAI officials. But I would do this with caution because you might get harmed by the culprits since there is no security assured to the information provider. I have already reported one person whom I saw with a bicycle full of timber” (FGD).*

In Ipole WMA, the community has succeeded in organizing Village Game Scouts (VGS), a group that make patrols within their WMA. The group is comprised of males and females from the four villages forming the Ipole WMA. Among the activities include: assuring the safety of the resources available in the WMA; making sure that those who harvest from the WMA have special permission and that they have their licenses; questioning anyone found with natural resources; to collaborate with the police and game officials in making patrols and daily reporting to the JUHIWAI officials. However, it was found that the VGSs are mainly volunteers, not paid being unless funds are available, and they are not well equipped in terms of weapons, cars, uniforms and other equipments like radio-

calls; all things that limit their performance. It can be explained more in the following quote;

*“We as VGS have played a great role. We were selected by the villagers in the village meeting. We have been patrolling in all the WMA making sure that there are no illegal activities. Also we have been informing the police of the people conducting illegal activities and those with no license...a bad thing is that we do not have weapons, we only use traditional weapons such as pangas, bows and arrows and one old rifle which belongs to JUHIWAI. In this case we cannot fight with our enemies who possess high technological weapons. We also do not have a car, we walk in and out our WMA on foot. Moreover, we are not paid although we do a lot for our community” (FGD for VGS).*

Despite the fact that people are willing to participate in conserving the natural resources they are still faced with lack of cooperation from the government. For instance, they were not involved in the contract extension of the investor from 2009 – 2013. This has made them feel that they have been neglected. Refer the quote below;

*“We have not been informed of this extension which was to end in 2009. This is outrageous because we are responsible for the conservation of this WMA. Now you see the major decisions are made without the concern of the major stakeholders. We are like orphans who are left to die helplessly. This retards our motivation to conserve the area” (IDI).*

### **5.3 People’s Views and Perception on the Benefits of WMAs**

During the survey, different views were given out by respondents concerning the benefits of the WMA. These were captured through both quantitative and qualitative methods of data collection with in-depth interviews, questionnaires and focus group discussions. The results show that 81.8% of the respondents benefited from the WMA while only 8.2% had not. Another 8.2% did not know if the WMA had been beneficial to them. 84.3% of the men were of the opinion that the WMA was beneficial as opposed to women at 76.5%. The major benefit they saw was reduced poaching (41.1%).

Respondents were both positive and negative which shows that there are different views on the matter. Respondents reported that since the establishment of the WMA, resources had been conserved and they could see animals and tree species

that had been close to extinction, now more abundant., People also mentioned benefits of being organized into groups so that they could harvest honey, and work other seasonal income generation activities like porters and guides during photographic and hunting tourism. Different quotes were recorded during in-depth interviews and FGD as put forth below;

*“Establishment of WMA has been of great achievement since we can now see the animals showing back again. Actually there is no wild meat sold in the village nowadays compared to the old times. People were just cutting trees, fishing and hunting. But with WMA we see that everything is in order. We are happy that our resources are becoming sustainable. If there could not be WMA, animals could be a history for our children because they could be finished by now.” (FGD).*

Although some of them could not see the tangible benefits, others argued that they had been able to accomplish some community projects such as schools and village executive offices. They had been able to buy desks such as those found at Idekamiso and Msuva primary schools. It was recorded that;

*“At least we can say that, we have been able to buy few desks, few wooden window frames, iron sheets and cement” (IDI).*

Respondents appreciated the establishment of the WMA but they were also skeptical about its operations. They claimed that the profit they got in return was not equivalent to their contribution in terms of conserving the resources. Their major grievance was with the investor who operates his activities within the WMA. Since the establishment of the WMA they had received 30% of the revenue from the investor owning The Northern Hunting and Camping Safari who remains with 70% of the total income. Up until the time the survey was conducted in Ipole, only 8 million TZS had been given to be shared among the four villages. Each village got a share of at least 1.5mil TZS to assist in socio-economic activities. The respondents were not happy about this thus they recommended that they should be given 50%-70% of the total income. This was reported in all FGDs and in-depth interviews but the following caption was found to be interesting;

*“What I am telling you is that, we have been undermined and our resources are being used to benefit investors. The investor visited us once and he never showed up again. We see a lot of aircrafts landing with white men who come for hunting but we as community have received very little of what is gained out of these activities. We want that percent benefit to be turned upside-down that is, we as community get 70% and he get 30%. Because without us there are no resources which would attract his tourists” (FGD).*

Others commented that the establishment of the WMA has limited their rights to access resources that they had inherited from their ancestors. They were also of the opinion that the establishment had increased a burden and loss of human dignity as a result of punishments from the game officials. In one of the in-depth interviews it was disclosed that corporal punishments were given to villagers who conducted ‘illegal use of natural resources’. One was to eat a raw catfish together with unroasted groundnuts while another was to hop “frog style” until the person would vomit from dehydration and then be fined. As a result of these punishments people would seek to escape and sometimes would die attempting. For instance during the survey, two individuals who were fishing without a license threw themselves into the Koga River where they drowned to death. The following quote explains;

*“I am telling you there is nothing here with this WMA. We do not see anything other than people being grabbed off their resources. I was born 80 years ago in this village and have always enjoyed the fruits of my land. But today, we are told not to cultivate, not to cut trees, no honey harvesting and no hunting. What they tell us is to have a license, is that practical? An animal shows up in my house instead of killing it for consumption I have to seek for permission. Do you think when I return with my license the animal will still be waiting for me? What I am saying is that, there are few people who benefit from our resources - the government and the investor” (IDI).*

**Plate 5.1: Fishing grounds at Ipole Village in Ipole WMA**



Benefits were seen to include temporary/seasonal employment where youths had gained employment as tour guides, porters and camp builders during photographic and hunting tourism. Although this work was not regular, they acknowledged that it had increased their income. Also VGSs were seen to benefit from their daily allowances paid to them when the funds were available. A total amount of 5,000 TZS is normally paid to them as allowance when they go for patrol but this is subject to the availability of the funds. This was captured in the following excerpt;

*“Only few times our youths have been temporary employed as porters and camp builders during hunting and photographic tourism. Also our VGS they get something out of their patrols although very little” (FGD).*

The major benefit of the WMA in Ipole was seen to be conservation of the natural resources.

## 5.4 People's Perception and Willingness to Participate in Cash-for Work Programmes

This survey explored the willingness of the people to participate in the cash-for work programs. Interestingly, in all FGDs conducted in each village, participants responded that they were ready to participate in the programs. However, their participation should be in line with their needs. For instance, their first and foremost need was the grain reserve, water wells, health centers/dispensaries, markets to sell their products, and roads. These were the needs mentioned as most urgent. Their participation ranged from fetching water, cooking for volunteers, providing food for volunteers, making bricks, foremen and forewomen, manual work, and all that they were needed for do. The following response from one of the FGDs seems to represent well people's willingness to participate in cash-for work activities.

*"In all the villages, we do not think if there is anyone who would not like to participate. We all want development for example more schools, water, roads, Go-down etc. May be those who are old and sick can stay at home. But those who are physically fit it will not be a problem. We are all ready to participate" (FGD).*

## CHAPTER SIX

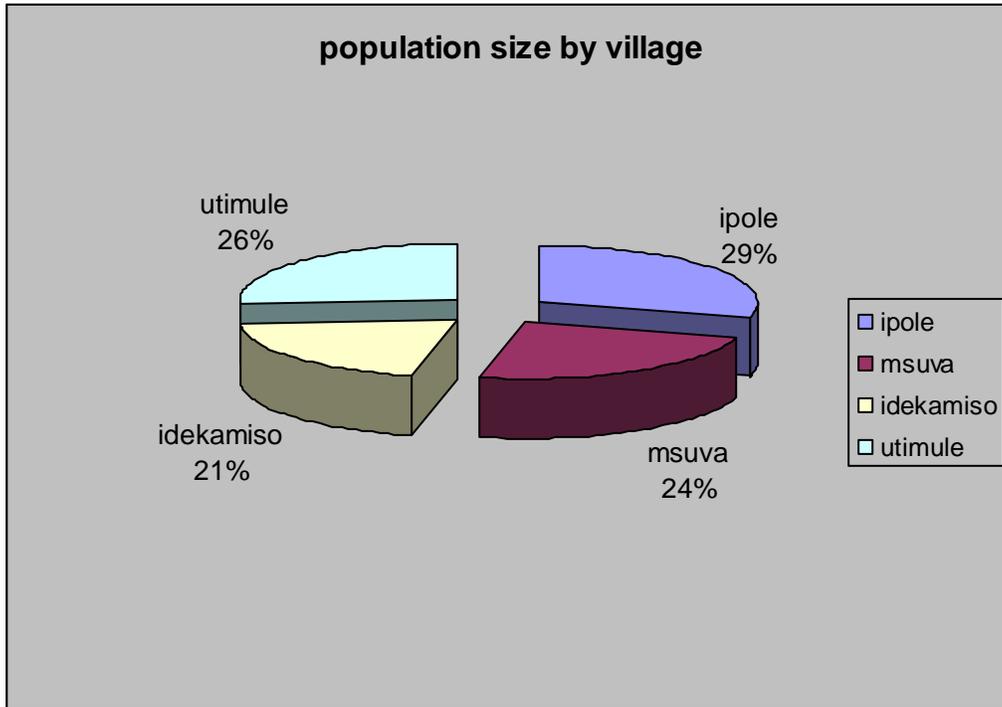
### SOCIO-ECONOMIC CHARACTERISTICS AT VILLAGE LEVEL

#### 6.1 Population Characteristics of villages

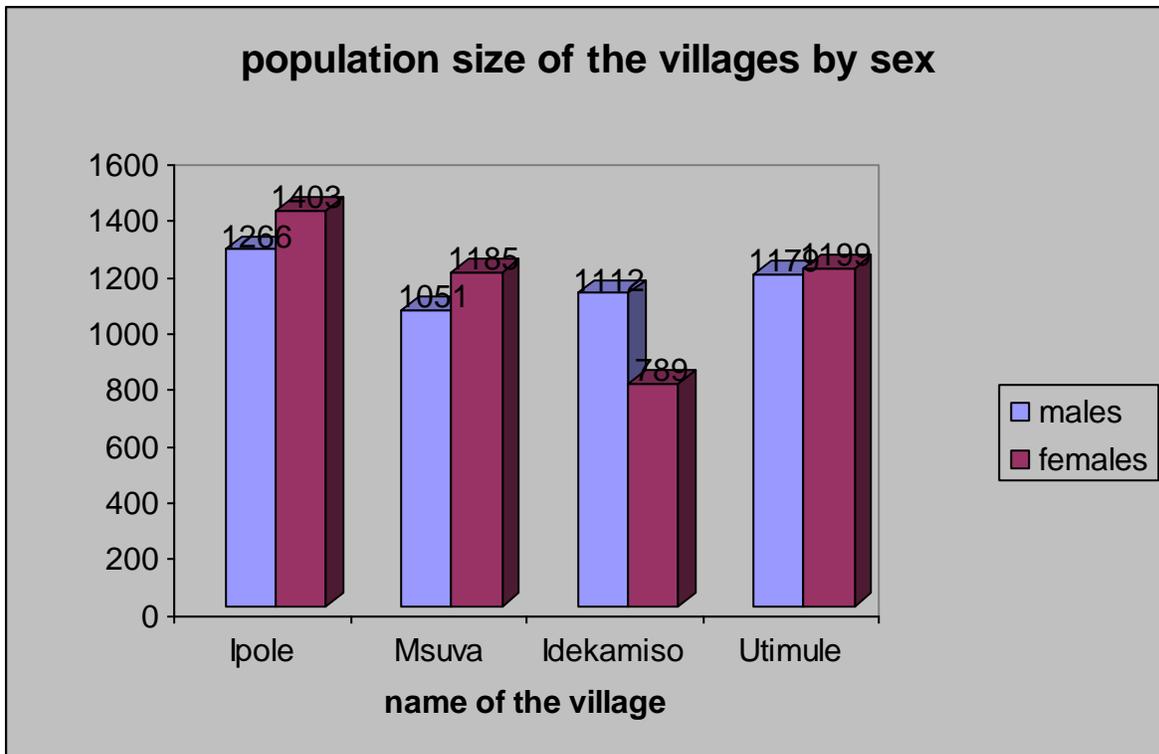
There are four villages that form Ipole WMA. These villages include Ipole, Msuva, Idekamiso, and Utimule. All the four villages participate in conserving the WMA through their organization known as Jumuiya ya hifadhi Wanyamapori (JUHIWAI). The said villages are part and parcel of the WMA although most of the residents are not aware about that.

There are several households in Ipole WMA. In total there are 1291 households in the WMA. Ipole has more households than other villages. It has a total of 518 households followed by Msuva which has 273 households and Utimule 270 households. Idekamiso has the lowest number of households (230) in all the four villages. In terms of population size, Ipole village has the highest population size of 2669 which accounts for 29 percent of the total population. Out of the said 2669 population, 1266 are males and 1403 are females. The next village with high population size is Utimule (2378) which accounts for 26 percent in which 1179 are males and 1199 are females. Msuva and Idekamiso villages have a total population of 2236 and 1901 respectively (Table 6.6). Thus Idekamiso is the only village with a relatively small population in the WMA (21%). This is also reflected in the number of households available in the village. In terms of sex Msuva has 1051 males and 1185 females while Idekamiso village has 1112 males and 789 females. The total population size by percentage of each village is shown in the figure below.

**Figure 6.1: Population size by villages forming Ipole WMA**



**Figure 6.2: Population size of the villages forming Ipole WMA by sex**



Comparing population by sex, the number of men seems to surpass that of women in most villages except for Msuva and Utimule. Generally there are more men than women in the Ipole WMA that is 4608 and 4576 respectively.

## 6.2 Village economic status

### 6.2.1 Main economic activities

However, despite the fact that the above mentioned activities were identified as the major economic activities, such activities were not practiced in all the four villages. Specifically people in the three villages (Ipole, Idekamiso and Utimule) engage in all the above mentioned economic activities, namely agriculture, petty trade, bee keeping and livestock keeping. The results indicate that livestock keeping is not one of the major economic activities in Msuva village. Thus, villagers in Msuva village engage most in agriculture, petty trade, and bee keeping. This is indicated in the table below.

**Table 6.1: Household economic activities per village**

	Economic activity			
Village	Agriculture	Petty trade	Livestock keeping	Bee keeping
Ipole	yes	Yes	Yes	Yes
Msuva	yes	Yes	No	Yes
Idekamiso	yes	Yes	Yes	Yes
Utimule	yes	Yes	Yes	yes

### 6.2.2 Village income levels

At the village level, the average annual income obtained differ as per the type of economic activity. As regard to petty trade/business all the four villages (Ipole, Msuva, Idekamiso and Utimule) earn an average income of 100,000/-. On agriculture, Ipole and Msuva villages earn an average income of 500,000/- each while Idekamiso and Utimule villages earn an average annual income of 100,000/- each. Respondents in Msuva village did not indicate livestock keeping as one of their economic activities. Of all the four villages, villagers in Idekamiso village earn more money from livestock keeping than other activities. The results show that people in Idekamiso earn an average annual income of 500,000/- while Ipole and Utimule villages earn an average annual income of 150,000/- and 300,000/- respectively. Bee keeping was practiced by people from all the four villages. Ipole, Idekamiso and Utimule villages earn an average annual income of 250,000/- each while people in Msuva village earn an average income of 300,000/- annually. The table below summarizes the above income variation.

**Table 6.2: Annual average income per village**

Activity	Name of the village forming WMA			
	Ipole	Msuva	Idekamiso	Utimule
Petty trade/business	100,000/-	100,000/-	100,000/-	100,000/-
Agriculture	500,000/-	500,000/-	100,000/-	100,000/-
Livestock keeping	150,000/-	-	500,000/-	300,000/-
Bee keeping	250,000/-	300,000/-	250,000/-	250,000/-

Apart from income from various economic activities, the villages forming Ipole WMA have also been able to receive some income from the investor (Northern Hunting and Camping Safari). The available data shows that, the money received by each village from the investor increase each year.

### **6.2.3 Availability of social services in villages forming Ipole WMA.**

One of the objectives of this baseline survey was to assess the availability and quality of services in Ipole WMA. The results show that, as far as social services are concerned Ipole WMA has not enough social services. Of all the three villages Ipole and Utimule are the villages which to some extent easily access some social services like health services and education. Residents of Msuva and Idekamiso villages have to walk for at least one kilometer to either reach a school or dispensary. With regard to education, Ipole village has four primary schools, Msuva and Utimule villages have two primary schools each and one primary school in Idekamiso village. There are two secondary schools: one in Ipole village and another in Msuva village. Idekamiso and Utimule villages do not have any secondary school. As pointed out earlier, there are two dispensaries in Ipole WMA. These are found in Ipole and Utimule villages.

### **6.2.4 Expenditure levels per household**

This baseline survey was also aimed at examining the expenditure at the household level. It was not very easy to capture the exact amount spent by particular households because most of the respondents in the WMA do not keep records of their expenditure. Thus, respondents were asked to approximate the amount of money spent per day for household needs. The results show that the level of household expenditure per day differ reflecting household size. In Ipole and Msuva villages, the villagers spend more than 4000 shillings per day which is 45.7% and 29.7% respectively, in Idekamiso the highest expenditure is between 1501 and 2000 shillings (25.0%) while in Utimule the highest expenditure is between 1000 and 1500 shillings per day (42.9%). This is summarized in the table below.

**Table 6.3: Household expenditure per day by villages forming Ipole WMA.**

Expenditure interval (Tshs)	Villages forming Ipole WMA			
	Ipole	Msuva	Idekamiso	Utumule
< 1000	2.2	8.1	20.0	17.1
1000 – 1500	8.7	16.2	12.5	42.9
1501 - 2000	13.0	16.2	25.0	14.3
2001 - 2500	2.2	2.7	2.5	2.9
2501 - 3000	19.6	13.5	20.0	2.9
3001-3500	0.0	5.4	0.0	0.0
3501 - 4000	8.7	8.1	5.0	2.9
4001+	45.7	29.7	15.0	17.1
Total	100.0	100.0	100.0	100.0

The following table shows average daily expenditure per day for each village forming Ipole WMA.

**Table 6.4: Average daily expenditure by villages forming Ipole WMA**

Average expenditure (Tshs)	Ipole	Msuva	Idekamiso	Utumule
<1000	2.2	8.1	17.1	20.0
1250	8.7	16.2	42.9	12.5
1700	13.0	16.2	14.3	25.0
2250	2.2	2.7	2.9	2.5
2750	19.6	13.5	2.9	20.0
3250	0.0	5.4	0.0	0.0
3750	8.7	8.1	2.9	5.0
4000+	45.7	29.7	17.1	15.0
Total	100.0	100.0	100.0	100.0

In Ipole village most of the respondents (45.7%) spend an average of 400+ daily. This is higher than the rest of the villages forming WMA. This reflects the actual household size in the respective village as was revealed by the researcher through a quick scan method. In Idekamiso village most of the respondents spend an average of Tshs 1250 per day, in Msuva village most of the respondents (29.7%) spend an average of Tshs 400+ daily while in Utumule village most of the respondents spend an average of Tshs 1700 per day. Of all the villages forming

Ipole WMA, most of those who spend less than 1000/- are found in Idekamiso (17.1%) and Utimule (20.0%).

### **6.3 Business groups**

The villagers in Ipole WMA engage in various entrepreneurial activities. Some of these activities are registered while some are not although they exist. However most of the activities are concentrated in Ipole village than in other villages. Specifically, based on those activities which are registered in specific villages, Ipole village has ten retail shops, three guest houses, two male salons, sixteen food outlets, five milling machines (which use diesel), one machine for making cooking oil and three bars. Utimule village has eight retail shops, and four grinding machines. Msuva village has four retail shops and two milling machines. Through in-depth interviews and focus group discussions, it was found out that some women are engaged in local brewing. There are only three milling machines in Idekamiso. Residents in all the four villages which form Ipole WMA do not have a club or bar where they can drink local brew, instead, they usually go to drink in the households where the local brew is prepared. Moreover, most of the respondents could not manage to estimate their average annual income regarding their various activities. The table below summarizes the above explanation and the average annual income provided is for those who were only able to estimate their annual income:

**Table 6.5: Entrepreneurship facility by villages forming Ipole WMA**

Entrepreneurship facility	Ipole		Utimule		Msuva		Idekamiso	
	Number	Average annual income	Number	Average annual income	Number	Average annual income	Number	Average annual income
Retail shops	10	200,000/=	8	150,000/=	4	100,000/=	0	0
Guest houses	3	250,000/=	0	0	0	0	0	0
Male salons	2	80,000/=	0	0	0	0	0	0
Food outlet	16	300,000/=	0	0	0	0	0	0
Milling Machines (diesel)	5	400,000/=	4	400,000/=	2	200,000/=	3	300,000/=
Oil making machine	1	3,000,000/=	0	0	0	0	0	0
Bars	3	350,000/=	0	0	0	0	0	0

Entrepreneurship groups are mostly found in villages where trading activities are pronounced (Ipole village in this case). However, local brewing is commonly done by women as their major alternative income generating activity in all the four villages namely Ipole, Msuva, Idekamiso and Utimule.

**Table 6.6: Key parameters at the village level in Ipole WMA**

Village	Population Size			Main economic activities	Social services available	Average annual income per household	Daily average expenditure per household	Business/product ion groups
	Total	Female	Male					
Ipole	<b>2669</b>	<b>1403</b>	<b>1266</b>	Agriculture, livestock keeping and petty trading	Primary school, secondary school dispensary, water wells, earth road and mobile phones	<b>350,000/-</b>	<b>4,000/-</b>	Local brew and food vending (Mama Lishe) mainly involve women. Men surface mainly in retail shops, salons, food outlets, bars, guest houses, oil making machine, grinding machine.
Msuva	<b>2236</b>	<b>1185</b>	<b>1051</b>	Agriculture, bee keeping and petty trading	Primary school, secondary school, earth road	<b>300,000/-</b>	<b>4,000/-</b>	Kiosk and grinding machine
Idekamiso	<b>1901</b>	<b>789</b>	<b>1112</b>	Agriculture, livestock keeping and petty trading	primary school and water pump, earth road	<b>287,500/-</b>	<b>1,250/-</b>	There are three grinding machines only and kiosk.
Utimule	<b>2378</b>	<b>1199</b>	<b>1179</b>	Agriculture, livestock keeping and petty trading	Primary and dispensary	<b>362,500/-</b>	<b>1,700/-</b>	Kiosk, retail shops, food vending and grinding machine

# CHAPTER SEVEN

## CONCLUSIONS AND RECOMMENDATIONS

### 7.1 Conclusions

This survey reached the following conclusions basing on the research objectives. The sources of income in the selected villages forming Ipole WMA include agriculture (mainly tobacco, maize, groundnuts, cassava and potatoes), fishing, beekeeping, wild fruit processing and tourism both photographic and hunting. The expenditure patterns of the Ipole people show that they spend more on education and health.

Most of the houses are built of thatch, mud and wooden poles. Very few are built using burnt bricks and cement bricks. They are characterized by mud or sand floors. Most respondents possess small radios used for listening to the news. Interestingly only one house had solar power allowing them to have a fridge and television and other electrical appliances. Few had bicycles and motor bicycles, and the land was mostly used for farming and grazing activities on a seasonal basis.

The existing economic activities in Ipole WMA include agriculture, fishing, logging and tourism both photographic and hunting. Moreover, in the whole of Ipole WMA there is no electricity which has made it difficult for communication to take place. People walk long distances to recharge their mobile phones and must pay for the service. Also mobile phone networks are not stable and only one company (Zain) was found to be active.

Up to the time that the survey was conducted in Ipole, only one Investment Company was found operating- Northern Hunting Safari and Camping. Its main activities are hunting and photographic tourism. Since its inception it has only contributed 8mil TZS to facilitate the communities' socioeconomic activities. The number of visitors could not be obtained because the office was closed by the time the survey was conducted. Conservation has decreased the number of poaching incidences and other illegal activities. Although respondents argued that fire incidences had decreased, the team observed several areas with fresh fire. This shows that fire is still a problem.

Ipole people are generally positive about the establishment of the WMA. They understand the meaning of the WMA and the objectives of the WMA.

Socioeconomic threats included: conflicts between community members and the investor and/or community and the government; fire incidences; poaching; lack of water could then ultimately lead to outbreaks of various waterborne diseases. Poor

transportation and lack of good healthcare services were also seen as socioeconomic threats. Ownership of land and access to the natural resources could also however be seen to add value to the socioeconomic status of Ipole people. The conservation of natural resources is a great opportunity for their livelihoods.

## **7.2 Recommendations**

This survey has made the following recommendations;  
The government from the ministry to the local levels should involve the community members in decision-making since they are the main stakeholders.

There should be a clear demarcation between wildlife departments and forestry departments in order to avoid conflict of interests.

The government should review its contracts with the investors since this has been the center of the communities' grievances.

Briefly, these are the socio-economic indicators which can be monitored and measured over time in Ipole WMA.

## REFERENCES

Emmanuel Sulle and Fred Nelson, ***“Biofuels, land access and rural livelihoods in Tanzania”*** Prepared by Tanzania Natural Resource Forum, August 2009.

Fred Nelson, Emmanuel Sulle and Peter Ndoipo, ***“Wildlife Management Areas in Tanzania: A Status Report and Interim Evaluation”***, Prepared by Tanzania Natural Resource Forum, August 2006.

Ipole Wildlife Management Area: Resource Management Zone Plan 2004-2014.

JUHIWAI Constitution (2008).

Namibian Association of Community-Based Natural Resource Management Organizations (NACSO): Proceedings of the Regional Community-Based Natural Resource Management Conference, ***“Sharing Best Practices for future”***, Windhoek, Namibia, March 2003.

Sikonge District Council, JUHIWAI Regulations (2008)

United Republic of Tanzania: Ministry of Natural Resource and Tourism, ***“The Wildlife Conservation Act”***, 2009

United Republic of Tanzania: Ministry of Natural Resources and Tourism, Wildlife Division, ***“Assessment and Evaluation of the Wildlife Management Areas in Tanzania”***, Unpublished Report carried out by Institute of Resource Assessment, University of Dar-es-Salaam, Tanzania. 2007.

United Republic of Tanzania: Ministry of Natural Resources and Tourism, ***“Wildlife Policy of Tanzania”***, 1998.

United Republic of Tanzania: Wildlife Conservation Act, 1974, ***“Wildlife Conservation (Wildlife Management Areas) Regulations”***, Dar Es Salaam, Tanzania, September, 2005.

## Appendix 1

### Structured Questionnaire

# SOCIO-ECONOMIC BASELINE STUDY IN SELECTED WILDLIFE MANAGEMENT AREAS (WMAs)

## HOUSEHOLD QUESTIONNAIRE

<b>IDENTIFICATION</b>	
Questionnaire Identification	[    ]
Number.....	.....[    ]
Region..... _____	.....[    ]
District..... _____	.....[    ]
Division ..... _____	.....[    ]
Ward..... _____	.....[    ]
Village..... _____	.....[    ]
Name of WMA..... _____	.....[    ]

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	OFFICE EDITOR	ENTERED BY (1 <sup>ST</sup> ENTRY)	ENTERED BY (2 <sup>ND</sup> ENTRY)
NAME _____	NAME _____	NAME _____	NAME _____
DATE _____	DATE _____	— DATE _____	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?	<b>A2</b> Date of birth [DD/MM/YYYY] <b>A2-1</b> 1 Don't know year 2 No response	<b>A2</b> Day [ ][ ] Month [ ][ ] Year [ ][ ] <b>A2-1</b> [ ][ ]
A3	How old are you? (At your last birthday)	Age in completed years _____ 1 Don't know 2 No response	A3 [ ][ ]
A4	What is your marital status?	1 Single 2 Married(Monogamous) 3 Married(Polygamous) 4 Divorced 5 Widowed 6 Cohabiting	A4 [ ][ ]
A5	What is the highest education level you have attained?	1 No formal education 2 Primary education 3 Secondary education 4 Vocational training 5 College(Diploma/Certificate) 6 University (Degree)	A5 [ ][ ]
A6	Were you born in this Village ?	1 Yes 2 No	A6 [ ][ ]
A7	If you were not born in this village mention your place of birth	A7 Mention village and district _____	A7 [ ][ ]
A8	How long have you lived in this village? (Mention duration in years)	1.Less than one year 2.1-4 Years 3.5-9 Years 4.More than 10 Years	A8 [ ][ ]
A9	Why did you move to this Village?	1 Farming 2 Business 3 Employment 4 Family and friends 5 Policy( Villagelization policy) 6 Others (specify)	A9 [ ][ ]

A10	What is the main activity you do for a living?( That is what is your main occupation that brings you an income?)	1 Cash crop farming 2 Food crop production 3 Livestock keeping 4 Small business 5 Wage employment 6 Horticulture 7 Handcraft for sale (curio goods seling) 8 Hunting 9 Game meat business 10 Tourist business 11 Casual worker 12 Others (mention)_____	A10 [      ]
-----	--	--	--------------

**HOUSEHOLD SIZE AND COMPOSITION**

Now please tell me about the people who live in your household i.e. people who eat from the same pot and have been here at home. Start by mentioning the head of household and others after him/her.

S/No	Initial (Name)	Relationship 1.Head 2.Spouse 3.Child 4.Reletive 5.Others	(Age in yrs)	Is .. Male (1) Or Female (2)	Is .. independent Economically? 1 Yes 2 No	Is .. in school? 1 Yes 2 No	Why is.. not in school? 1 Lack of security 2 Financial reasons 3 Needed for domestic work 4 Cultural reasons 5 Other_____
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

<b>SECTION B : RESPONDENT'S SOCIOECONOMIC STATUS – BY LOOKING AT HOUSEHOLD ASSETS AND FACILITIES</b>			
B12	Do you own, rent or live freely in this house?	1 Own 2 Rent 3 Do not rent but live freely under agreement with landload 4 Do not rent just staying with friends 5 No response	B12 [      ]
B13	What kind of toilet facility does your household use?	1 Flush toilet 2 Pit latrine 3 No facility 4 Others	B13 [      ]

B14	Do you share toilet facility with another household?	1 Yes 2 No	B14 [ ]
B15	What is the main source of drinking water for members of your household?	1. Piped into residence/yard 2. Public tap 3. Well in residence/yard 4. Public well 5. River/Stream/Spring 6. Bottled water 7. Pond/lake 8. Water tanker or water seller	B15 [ ]
B16	What can you say concerning the availability of water from this source?	1 Available all the time 2 Available most of the time 3 Sometimes available 4 Hardly available 5 No response	B16 [ ]
B17	How much time does it take for someone to go to fetch water and come back?	1 Mention minutes/hours _____ 2 No response	B17 [ ]
B18	What is the main source of energy in your household	1 Generator 2 Car battery 3 Electricity 4 Charcoal 5 Firewood 6 Animal dung 7 Kerosine 8 Others (specify) _____	B18 [ ]
B19	Does your household have assets?	B19-1 1 Yes 2 No TV B19-2 1 Yes 2 No VCR/DVD B19-3 1 Yes 2 No Satellite dish B19-4 1 Yes 2 No Radio/cassette player B19-5 1 Yes 2 No Refrigerator B19-6 1 Yes 2 No Mobile phone B19-7 1 Yes 2 No House landline phone B19-8 1 Yes 2 No Others (specify) B19-9 Do not have	B19-1 [ ] B19-2 [ ] B19-3 [ ] B19-4 [ ] B19-5 [ ] B19-6 [ ] B19-7 [ ] B19-8 [ ] B19-9 [ ]
B20	Does your household own among the following transport facilities?	B20-1 1 Yes 2 No Bicycle B20-2 1 Yes 2 No Motor cycle B20-3 1 Yes 2 No Vehicle B20-4 1 Yes 2 No Oxen/Donkey cart B20-5 1 Yes 2 No Other – Specify _____	B20-1 [ ] B20-2 [ ] B20-3 [ ] B20-4 [ ] B20-5 [ ]
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 4 Sheet metal 5 Wood 6 Thatch 7 Mud bricks	B23 [    ]
-----	---------------	--	------------

**SECTION C: SOCIO-ECONOMIC ACTIVITIES OF HH AND SOCIAL RELATIONSHIPS**

C24	What is the main economic activity of the household?	_____	
C25	In case of agriculture production please mention the type of crops that you grow	_____	
C26	What is the estimated annual income of each economic activity mentioned in C- 24 above?	_____	
C27	Is this income enough for your household needs?	1 Yes 2 No	C27 [    ]
C28	If no how do you supplement your household income?	Mention activities used to supplement income _____	
C29	In your opinion, do you think men and women share equally processes of decision making in the household?	1 Yes 2 No 3 Don't know 4 No response	C29 [    ]
C30	Who usually determines how income generated by household should be spent?	1 Husband 2 Wife 3 Both 4 Don't know 5 No response	C30 [    ]
C31	Do you or a member of your household engage in any wildlife venture for a wage <b>If not go to section D</b>	1 Yes 2 No	C31 [    ]
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.**

D38	What do you understand about WMAs	1 Community participation 2 Benefit sharing 3 Resource conservation 4 Others 5 Don’t know	D38 [ ]
D39	Do you attend the Village General meetings?	1 Yes 2 No	D39 [ ]
D40	If Yes how many times have you attended the meetings last year?	1.Once 2.Twice 3Thrice 4.Four times 5.Never had a meeting	D40 [ ]
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	1 More than three times 2 Thrice	D45[ ]

	incidences in this village?	<ul style="list-style-type: none"> <li>3 Twice</li> <li>4 Once</li> <li>5 Never happened</li> </ul>	
D46	In your opinion are poaching incidences increasing or decreasing?	<ul style="list-style-type: none"> <li>1 Increasing</li> <li>2 Decreasing</li> <li>3 Don't know</li> </ul>	D46 [    ]
D47	Have ever experienced any disputes and conflicts related to wildlife management in this village?	<ul style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ul>	D47 [    ]
D48	If yes, what type of disputes and conflict are related to wildlife management in your village?	<ul style="list-style-type: none"> <li>1 Village boundaries</li> <li>2 Wild animal attack</li> <li>3 Destruction of crops by wild animals</li> <li>4 Misunderstanding between Villagers and investors</li> <li>5 Disagreement on benefit sharing mechanism</li> <li>6 Others (specify)</li> </ul>	D48 [    ]
D49	With the establishment of WMAs what are the potential productive activities did you anticipate WMA? Would bring to the village?	<ul style="list-style-type: none"> <li>1 Cash crop farming</li> <li>2 Food crop production</li> <li>3 Small business (food-vending,)</li> <li>4 Wage employment</li> <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>	D49 [    ]
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</li> </ul>	D53 [    ]

		generations 4 Reduces conflicts 5 Improves livelihood 6 Provides access/security to resources(property rights) 7 Other	
D54	Do you think the system of sharing the benefits accrued from WMAs is fair?	1 Yes 2 No	D54 [    ]
D55	Overall, how has WMA impacted your livelihood?	1 Decreased 2 No changes 3 Increased 4 Don't know	D55 [    ]
D56	Overall, do you think that WMA has been good or bad for businesses?	1 Yes 2 No 3 Don't know	D56 [    ]
D57	In your opinion, what are some of the problems with WMA?	1 Too many regulations 2 Regulations not well enforced 3 Reduce benefit 4 Causes conflicts 5 Erodes traditional authority 6 Inequity 7 Other	D57 [    ]
D58	Mention the infrastructural problems among the following in your village? 1 Road 2 Schools 3 Dispensary 4 Markets	Taja _____ _____ _____ _____	D58 [    ]

**SECTION E: LEVELS OF INCOME AND MAIN EXPENDITURE PATTERNS.**

E59	How many members of your household currently earn some income (from a job and/or business and/or part-time work)?	Number of people _____	E59 [    ]
E60	Do you have livestock	1 Yes 2 No	E60 [    ]
E61	How many of the following livestock do you own?		
	<b>Livestock</b>	<b>Number of livestock</b>	
	Cattle	_____	

	Sheep	_____	
	Goats	_____	
	Pigs	_____	
	Rabbits	_____	
	Chicken and other poultry	_____	
	Donkey	_____	
	Others (specify)	_____	
E62	Do you have a farm?	1 Yes 2 No	E62 [    ]
E63	If yes,how much land does the household own?	2 Below 1 acre 3 Between 1 and 2 acres 4 Between 3 to 5 acres 5 Between 6 to 10 acres 6 More than 10 acres 7 No response	E63 [    ]
E64	Do you think this size of land suffices your household needs	1 Yes 2 No	E64 [    ]
E65	If no, how much land would be adequate for your household needs?	Mention No of acres _____	E65 [    ]
E66	If yes indicate the quantities of crops harvested		
	<b>Crops</b>	<b>Quantity in good season</b>	<b>Quantity in bad season</b>
	Green Vegetables		
	Tomatoes		
	Sunflower		
	Simsim		
	Pigeon pea		
	Maize		
	Beans		
	Onions		
	Cassava		
	Paddy		
	Others(Specify)		
E67	Is the household own space for grazing land in your area?	1 Yes 2No 3 Do not know	E67 [    ]
E 68	Do you think this grazing land is enough?	1Yes 2No 3Do not know	E 68[    ]
E69	On average how much do you		

	spend for household need per day?	1 Less than 1000 Tsh 2 1000- 1500Tsh 3 1501- 2000Tsh 4 2001-2500Tsh 5 2501-3000Tsh 6 3001-3500Tsh 7 3501-4000Tsh 8 4000 Tsh and above	E69 [     ]
E70	Can you roughly explain to us your percentage of income expenditure among the following?	1.Education 2Health 3 Food 4 Others(Specify)	
E71	What is the pattern of expenditure among men/women(depends on whom you are interviewing)	_____ _____ _____ _____	
E72	Do you have access to credit?	1 Yes 2 No	E72 [     ]
E73	If yes, which of the following are the main sources of credit?	1 Bank 2 Micro finance institutions 3 SACCOS 4 AA 5 Relatives and friends 6 Others (specify)	E73 [     ]

**Now we have come to the end of our conversation, Thank you very much for your cooperation.**

## Appendix 2

### Focus Group Discussion Guide

#### MUONGOZO WA MAJADILIANO YA VIKUNDI (FGDs)

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 kuyatatua, dhana yao ya umaskini, mikakati wanayoitumia ili kuondoa umaskini, wanafanikiwa wapi na wanakwama wapi na kwa nini. Pia tunataka kujua uelewa wao wa umilikaji wa malihai (WMA) na dhana ya hifadhi ya jamii ya maliasili (Community Based of Natural Resources Management). Ili kuendesha vizuri majadiliano ya vikundi, lazima awepo mwezeshaji wa majadiliano (Facilitator) na mwandishi (Note-Taker or Recorder).

<b>Name of Moderator (Mwezeshaji)</b>	
<b>Name of Recorder (Mwandishi)</b>	
<b>Date of the FGD (Tarehe ya Majadiliano)</b>	
<b>Name of WMA (Jina la WMA)</b>	
<b>Name of the Village (Jina la Kijiji)</b>	
<b>Duration of the FGD( Muda wa Majadiliano)</b>	
<b>Number of participants(Idadi ya Washiriki)</b>	
<b>Sex (Jinsi)</b>	<b>Male:</b> <b>Female:</b>

## **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?

#### **4. Uelewa kuhusu maeneo ya hifadhi ya wanyamapori (WMAs)**

- Waruhusu watu wajiadili kwa kirefu kuhusu dhana hii ya WMAs. Je, wanaijua? Je, wanahusika vipi? Kwa nini kijiji chao kilijiunga na WMA? Je, watu wanapata faida gani?
- Waeleze faida au hasara ya kuwa wanachama wa WMA iliyo kwenye maeneo yao. Waeleze kuhusu uongozi wa WMA na namna jinsi viongozi wanavyochaguliwa.
- Je, hali ya maisha yenu yamebadilika tangu ilipoanzishwa hii WMA? Je, kuna matatizo gani mnayapata kwenye WMA yenu? Mnayatatia vipi?
- Ni shughuli zipi wananchi au kijiji kinazifanya zinazohusiana na WMA? Je, mapato ya kiasi agani hutokana na shughuli hizo?
- Nini mngenda kifanyike ili kuboresha faida/manufaa ya WMA kwenu? Je, nini mngenda kifanyike ili kuboresha biashara za kiutalii katika eneo hili? Toeni sababu za majibu yenu.
- Je ujangili upo katika maeneo yenu? Je, unaongezeka au unapungua? Una maoni gani kuhusu ujangili?
- Kijiji kinafanya nini ili kuzuia ujangili? Je, WMA imesaidia kupunguza ujangili? Toa sababu za majibu yenu.

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

Waulize washiriki mambo yafuatayo:

- Jitihada zipi wanazifanya ili kuleta maendeleo hapo kijijini
- Wanafanya nini au miradi gani ili kuondoa umaskini. Je, wako tayari kufanya nini na wangependa serikali au mashirika ya hiari na mengine yawasaidie nini?
- Je, wako tayari kushiriki kwenye miradi kama ya ujenzi wa miundo mbinu, barabara au miradi inayolenga kuleta maji safi kijijini? Je, wako tayari kushiriki vipi kwenye miradi hiyo?
- Je, wanafikiri wangependa waletewe miradi ipi ya maendeleo. Waeleze kwa kufuata kipaumbele.
- Je, katika hiyo miradi wanayoitaka, wao wako tayari kufanya nini na nini wanataka wasaidiwe?

## 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 kuyatatua, dhana yao ya umaskini, mikakati wanayoitumia ili kuondoa umaskini, wanafanikiwa wapi na wanakwama wapi na kwa nini. Pia tunataka kujua uelewa wao wa umilikaji wa malihai (WMA) na dhana ya hifadhi ya jamii ya maliasili (Community Based of Natural Resources Management). Ili kuendesha vizuri majadiliano ya vikundi, lazima awepo mwezeshaji wa majadiliano (Facilitator) na mwandishi (Note-Taker or Recorder).

<b>Name of Interviewer (Jina la mdodosaji)</b>	
<b>Aina ya Mhojiwa (Katibu wa Kijiji nk.)</b>	
<b>Date of the Interview (Tarehe ya Mahojiano)</b>	
<b>Name of WMA (Jina la WMA)</b>	
<b>Name of the Village (Jina la Kijiji/Wilaya)</b>	
<b>Duration of the Interview (Muda wa Mahojiano)</b>	
<b>Sex (Jinsi)</b>	<b>Male:</b> <b>Female:</b>

## Maswali ya kawaida kuhusu jamii

### 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.-Dadisi 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 zinawaitea 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 wanaijua kikamilifu
- dhana hii? Je wanahusika vipi? Kwa nini kijiji chao kijiunga na umilikaji wa mali hai (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

#### A. GENERAL INFORMATION

1. Data and Information to be collected from Village/ District office
2. Ethnic Composition i.e. see the tribes in the village/WMA
3. Village Population & number of Households
4. Number of villages forming WMA. Mention them
5. Available social services in the villages forming WMA such as Hospitals/Health Centers/dispensaries, education/schools, transport and communications roads (land lines/internet/markets etc).

#### B. ECONOMIC ACTIVITIES

6. Available resources such as wildlife, village forest, minerals, water sources, etc
7. Main economic activities i.e. agriculture, businesses, pastoralist etc e.t.c
8. Available investments in the village/WMA i.e tented camps/lodges/hotels/etc
9. Number of investors in the village/WMA
10. Number of visitors both for hunting, tourism and photographic tourism

#### C. REVENUE AND EXPENDITURE

11. What types of revenue does the village collect? e.g from hunting tourism (direct contribution from the hunting companies or the 25% quota from the (Wildlife Department) WD as well as Photographic tourism (tented camps, hotels, game drive).
12. Revenue Expenditure patterns. i.e. how is the revenue earned from the tourism sector used in the village/WMA

#### D. CONSERVATION

13. Conservation efforts: how do community participate in conservation activities in the village?
14. Are there any incidences of poaching and fire outbreak in your village?

#### E. AVAILABILITY OF INSTITUTIONS and CSOs

15. Presence of CSOs and CBOs
16. Presence of SACCOS/VICOBA