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<sup>1</sup> WMA refers to Wildlife Managing Areas.

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# REPORT ON THE BASELINE STUDY OF IPOLE PILOT WILDLIFE MANAGEMENT AREA

## 1. INTRODUCTION

### 1.1. Background

December 2002 marked the beginning of a new era of wildlife conservation in Tanzania. The exact date was 15 December, 2002 when the Minister for Natural Resources and Tourism signed and released for gazettelement Regulations made under Section 84 and 19 of the Wildlife Conservation Act, 1974 governing the establishment, administration and use of areas to be known as Wildlife Conservation (Wildlife management Areas).

The WMAs Regulations, 2002 brought into operation a long awaited opening for the integration, involvement and participation of rural communities in the management, ownership and utilization of wildlife resources in the country. The objective is to engage meaningfully and practically the majority of Tanzanians living in rural areas in managing and benefiting from the country's rich biodiversity. This is a concrete step of putting into implementation the Tanzania Wildlife Policy of 1998 in which the Government shows its commitment of involving local communities in the conservation of wildlife resources and thereby directly benefit from such undertaking. The move enhances the Government of Tanzania commitment to effectively managing the nation's wildlife resources for the benefit of its citizens. Thus integrating conservation work with rural development activities will contribute to poverty eradication efforts while sustainably managing the country's biodiversity resources.

In addressing this aspect, the following challenges have been identified:

- The need to promote involvement of local community participation in wildlife conservation in and around the PA network;
- The need for integrating wildlife conservation with rural development
- Ensuring that wildlife conservation competes with other forms of land use
- Enhancing the recognition of the intrinsic value of wildlife to the rural people,

- Minimizing human-wildlife conflicts whenever they occur,
- To contribute to poverty alleviation in rural areas.

The Wildlife Division (WD) in the Ministry of Natural Resources and Tourism (MNR&T) in collaboration with various partners, NGOs and local communities has been supporting the implementation of Community Based Conservation (CBC) activities in villages adjacent to Core Wildlife Protected Areas (i.e. Game Reserves, National Parks, and the Ngorongoro Conservation Area). Map 1 shows the distribution and location of Game Reserves in Tanzania.

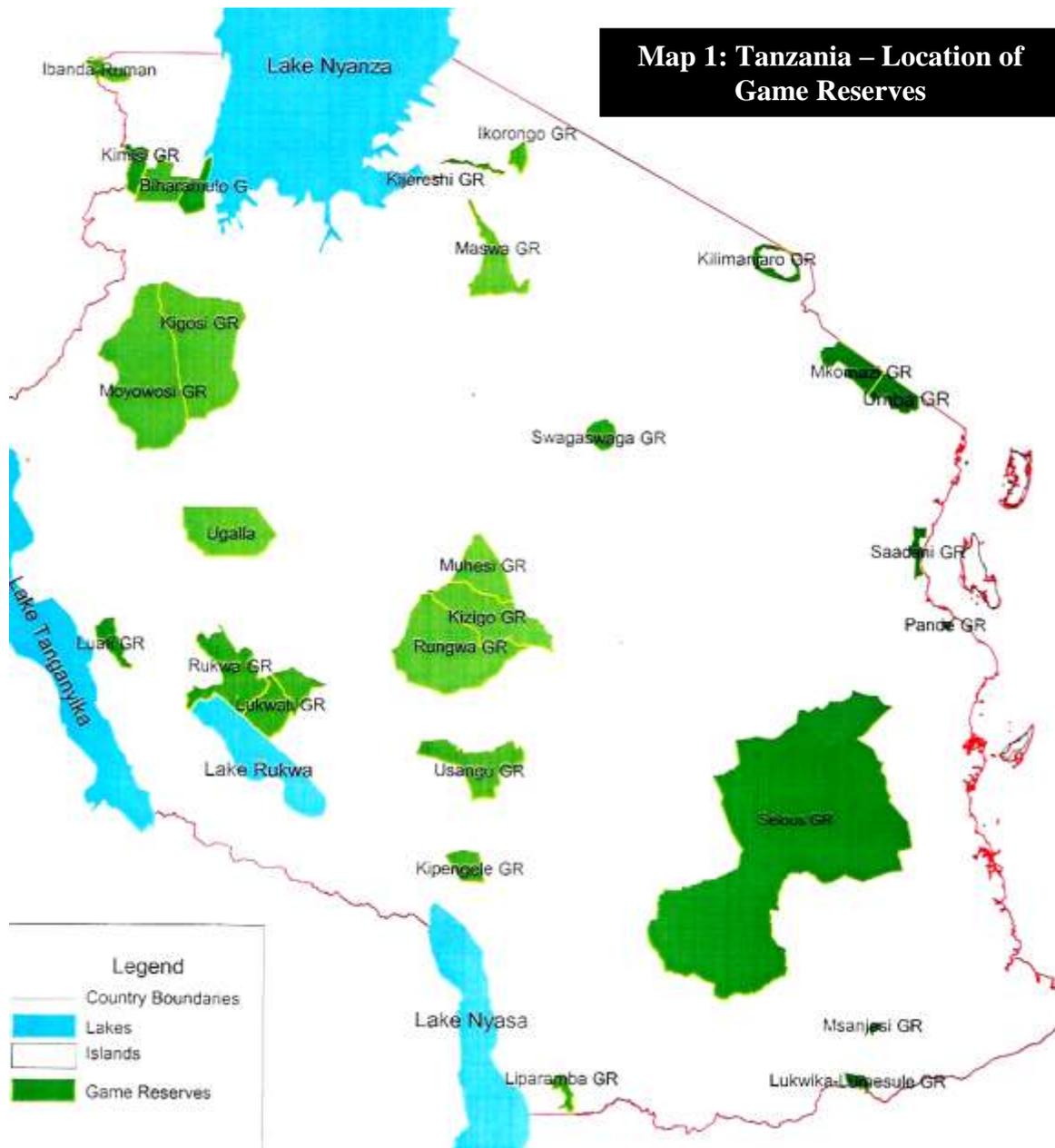
Most of the CBC activities in these areas relate to the utilization of wildlife and forest resources for tourism, live animals and forest products and eco-tourism. This has stimulated other activities including farming, handcraft and several community-based ventures, small and macro enterprises.

Since this is a new management approach, capacity and experience have to be built. As such, the Government chose to operationalize the WMAs concept in 15 Pilot areas and the process is to be closely monitored during the next three years using agreed monitoring indicators. An evaluation is to be done at the end of the three years period to assess achievements and challenges met.

In order to develop the monitoring indicators, the Wildlife Division in collaboration with its close partners and donors in CBC work, commissioned a study for collecting baseline data in all the Pilot WMAs. The work was contracted to teams of consultants on 1<sup>st</sup> February 2003. Four working groups comprising an Ecologist, an Economist and a Sociologist each were contracted to undertake the research work in different parts of the country.

Ipole Pilot WMA is located in Sikonge Districts in Taboga Region. The WMA has an area of 2,510 km<sup>2</sup> covering 4 villages in Ipole Ward. Ipole has a visible variation in numbers and diversity of wildlife species during the rainy and dry seasons of the year.

**Map 1: Tanzania – Location of Game Reserves**



The Ipole Pilot WMA has been proposed to occupy the area which is presently known as Uganda Game Controlled Area. In this respect, tourist hunting operations have been taking place, plus other forms of unlicensed hunting. The area is waterlogged during the rainy season thereby forcing most animals to move out to adjacent Forest Reserves and other habitable areas. Water loving animals like aquatic avifauna are common to abundant exploiting the rich habitats during the rainy season. However, the dry season is characterized by an influx of both wild ungulates (big game) and livestock that use the area for grazing.

## **1.2. Study Rationale and Objective**

The Wildlife Sector in Tanzania has been undertaking major reforms aimed at improving its contribution to the national economy as well as to the livelihood of rural communities so that they live in harmony with wildlife by practicing sound conservation of the natural resource biodiversity, ecological processes and landscape. The most recent change in the sector was the gazetting of regulations that permit rural communities to engage in businesses related to wildlife conservation. This opened a new window in the history of wildlife management and utilization in Tanzania, which is an outcome of more than a decade of experimentation in what is known as community based conservation (CBC). The philosophy is a product of the 4<sup>th</sup> World Parks Congress, held in Caracas, Venezuela in 1992 – whose theme was “Parks Without Boundaries”.

Ethical arguments have been raised by many people that, excluding people who live adjacent to PAs from the use of resources, without providing them with alternatives, is increasingly viewed as politically infeasible and ethically unjustifiable. Communities occupying lands adjacent PAs boundaries frequently bear substantial costs while receiving few benefits in return.

In the Public Sector Reforms currently taking place in Tanzania, costs cutting have obliged the downsizing of government employees. The exercise has affected mainly central government staffing levels. The outcome has been a thin workforce to handle all the tasks formally performed a number that is more than four times as large. By implication, the government no longer has the capacity to effectively manage wildlife inside and outside the PAs. The establishment of WMAs as strong and competitive estates run and managed by

local communities who will own and benefit from the natural resources therein, provides a solution to this problem. The process under which the WMAs Guidelines were developed through a comprehensive and intricate participation of all stakeholders, gives a lot hope that the same will succeed.

According to the Terms of Reference [ToR] signed on 30th January 2003, between WWF – TPO and Team Members of the WWG; the later were to carryout consultancy work that will provide a situation analysis of baseline information from three Pilot WMAs namely Wami–Mbiki, Uyumbu and Ipole. The assignment, with a duration of 79 days had the objective of collecting, analyzing and compiling baseline data to generate information to be used in the preparation of Monitoring Indicators and Monitoring Plans to be applied later for evaluating the performance of the three WMAs at the end of three years of operation. The ToR are contained in Annex 2.1. The work entailed review of existing literature on CBC and those directed at developing WMA paradigm shift as discussed under section 4.

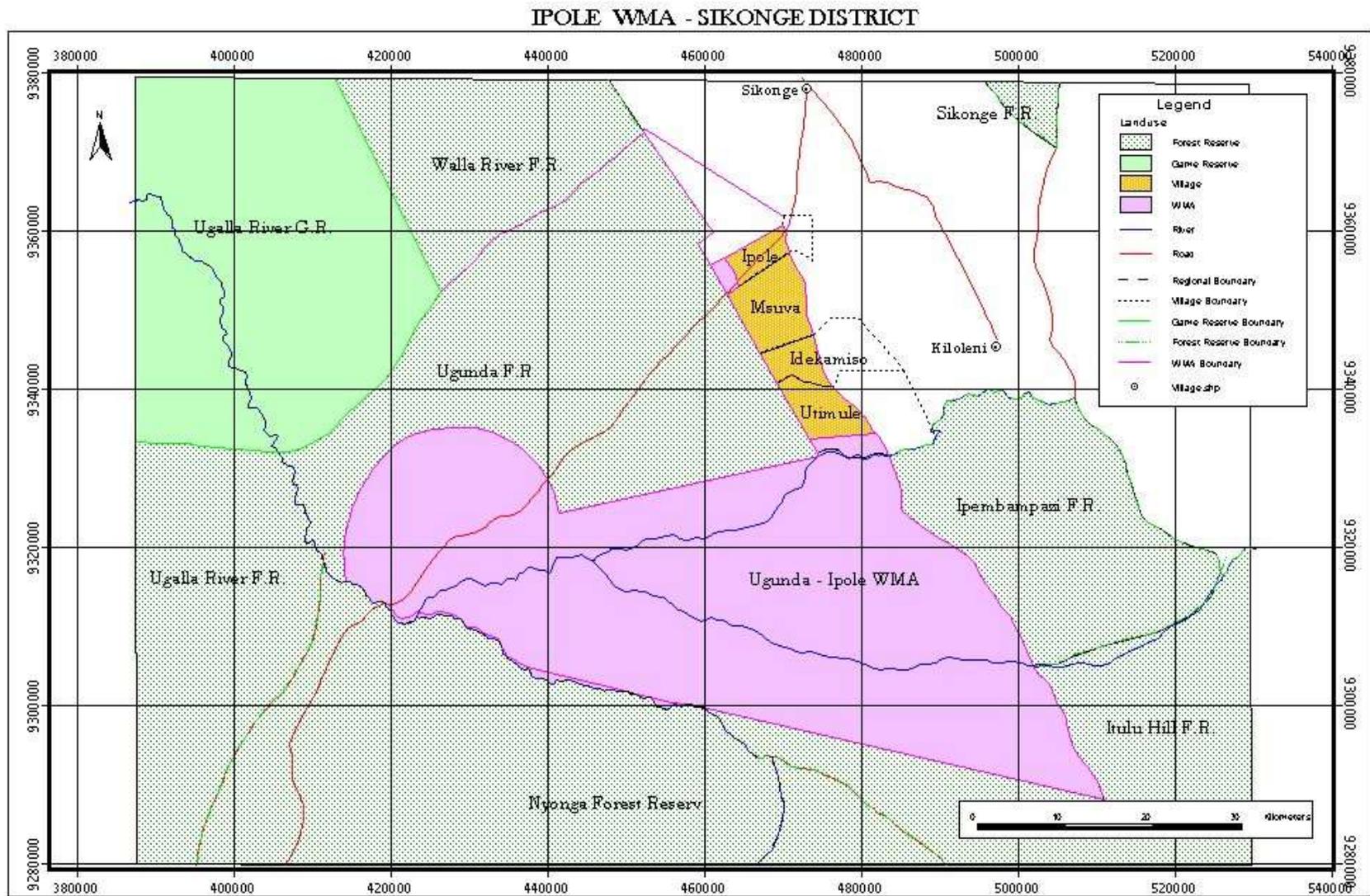
## **2. DESCRIPTION OF THE STUDY AREA**

The study area referred in this report covers the Ipole WMA in Sikonge District. This Pilot WMAs has a total number of 4 villages, namely Ipole, Msuva, Idekamiso, and Utimule (See Map 2).

### **2.1. Location of the Study Areas**

Ipole Pilot WMA is located in Ipole Ward, Sikonge Division in Sikonge District in Tabora Region (See Map 4). The WMA has four villages, namely Ipole, Msuva, Idekamiso, and pole, Utimule. All these villages border the Ugunda Forest Reserve on the West. Utimule village in particular, borders the southern part of Ugunda Forest Reserve that has been demarcated as Ipole WMA. The size of Ipole WMA is 2,510 km<sup>2</sup>. The road from Tabora to Chunya creates the eastern boundary of the Ipole WMA separating it from the Ipembampazi and Itulu Hills Forest Reserves, which conceal the WMA on the eastern side. Ipembampazi Forest Reserve lies on the southeastern side of Utimule village. On the far Southwestern end and on the south, the WMA borders the Ugalla River and Nyonga Forest Reserves, respectively.

Map 4: Location of Ipole WMA



The Ugalla River separates these Forest Reserves with the pilot WMA. Generally, various Forest Reserves surround a larger part of the Ipole WMA.

Ipole village is the headquarters of HIMAUMII<sup>2</sup>, which is the Community Based Organization uniting the four villages for the purpose of managing the natural resources in the Ipole WMA on behalf of the member villages. Ipole is an old settlement that started during the colonial period and currently it has five sub-villages, namely Ipole Kaskazini, Ipole Kati, Ipole Mashariki, Ipole Kusini, and Ipole Kininga. Msuva village is has three sub-villages, namely Msuva, Ulyampumba, and Mkolo.

In the past villagers were living in scattered settlements, but were brought together at the current location in 1974 during the villagization exercise. Idekamiso village has three sub-villages, namely: Ngoyo, Kanoge, and Idekamiso. The village was originally a sub-village of Utimule village and was registered as a separate village in 1999. Utimule village has three sub-villages, namely Utimule, Mabangwe, and Ng'wamulu. Villagers were brought together at the current location in 1974 during the villagization exercise.

## 2.2. Institutional Set-Up

Like in the Uyumbu WMA, the Land Use Commission in collaboration with Africare has been conducting PRA meetings that are aimed at accomplishing Village Land Use Management (VLUM). PRA meetings and land use planning exercises have been accomplished in all villages that form Ipole Pilot WMA, except in Msuva village. Leadership conflicts at Msuva caused the delay in accomplishing land use planning. Land allocations are made for settlements, livestock, forestry, agriculture, and for the WMA for the next 20 years to come.

In each village there is a Village Natural Resources and Environment Committee, which is responsible for overseeing natural resource utilization and management at the village level. The CBO for Ipole WMA is called HIMAUMII, which represents “*Hifadhi Mazingira Utimule, Msuva, Ipole and Idekamiso*” villages. The process of registering the CBO has already started. Village leaders have been done study tour to Songea where they also attended

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<sup>2</sup> HIMAUMII is an acronym “Hifadhi Mazingira Utimule, Msuva, Ipole and Idekamiso”.

a course of leadership management. At the village level, VGSs have been trained to tackle the security aspects.

Africare is responsible for coordinating the activities in the WMA in both Ipole and Uyumbu WMAs. Africare has also been responsible for community conservation around the Ugalla Game Reserve with the aim of creating buffers zones for the reserve. In so doing, it is also addressing issues of poverty alleviation by introducing new initiatives that may lead to income generation.

Villages are responsible for the remunerations to the VGSs. The funds for remuneration come from the proceedings made after sale of caught items. To avoid a tag-of-war between the village governments and the natural resources committees regarding who should control the resources, a formula for the distribution was suggested:

- Village Government 25%
- Village Natural Resources Committee 25%
- Village Game Scouts 50%

Since the HIMAUMII CBO has not yet being registered, even the election of the office bearers has not yet being done. There is an Acting Chairman of the HIMAUMII, who also represented the WMA to various meetings at regional and national levels.

### **3. LITERATURE REVIEW**

#### **3.1. Paradigm Shift**

Despite its potential, wildlife in Tanzania has not contributed much in the social economic development of the rural communities. This low profile can be attributed to the ill conceived land tenure systems and development policies, repressive wildlife legislation, inadequate planning and coordination among stakeholders with interest in wildlife, inadequate financial capacity to effectively manage wildlife by the government institutions and limited ability in marketing wildlife and its by products.

In recognition of the above failures the Wildlife Sector in Tanzania launched a programme aimed at integrating biodiversity conservation with economic development of the rural

communities. The programme launched a decade ago constitutes what one would call CBC initiatives now to be found in various parts of the country but mostly around the core protected areas especially National Parks and Game Reserves

Good examples are those around the Selous Game Reserve where active CBC projects have been running for some years now. The Community Conservation Service (CCS) work done by TANAPA around the Serengeti, Tarangire, Lake Manyara, Ruaha NPs also provide lessons to be learnt. All these undertakings were initiated during the 1990s and have provided learning ground where lessons and experiences gained demonstrate the need to integrate rural socio-economic development with wildlife conservation and true devolution of power to the local communities to enhance the sustainable development of both.

The traditional approach to nature conservation in Tanzania had been through the gazettment of various categories of Protected Areas (PA). These comprise Reserve Lands as stipulated for in the Land Act No 4 of 1999. The administration, control and management of these areas is entrusted in the hands of a number Government institutions which include the following:

- The Wildlife Division administers Game Reserves, Game Controlled Areas and all other wildlife found outside the PAs.
- Tanzania National Parks (TANAPA) is mandated to administer all areas gazetted as National Parks
- The Ngorongoro Conservation Area Authority (NCAA) administers the Ngorongoro Conservation Area.
- The Forest and Beekeeping Division (FoBD) controls all areas gazetted as Catchments Forest Reserves and Government Forest Plantations.
- The Marine Parks and Reserves Unit of the Fisheries Division (MP&RU) administers all gazetted Marine Parks and Marine Reserves.

Restrictive laws have been used in the control of using the PAs estates, which denied in most cases, access of people living in the rural areas to the resources found in those areas. Such a phenomenon persisted during the colonial era up to about the late 1980's. Here the government took a leading role and the communities remained passive spectators. A strong law enforcement unit had to be in place to suppress emerging conflicts from the depressed local communities. The measure of performance was based on the number of arrests of illegal hunters, fishermen and extraction of timber and other forest products.

A major drawback to the CBC programme was lack of a legal framework dealing with community integration within the existing Wildlife Act (1974). This weakness was somehow reduced when a new Wildlife Policy (1998) was adopted by the Government.

Although the TWP made a breakthrough in recognizing the role of rural communities in getting involved in the management and use of wildlife resources in the country, yet the absence of a legal instrument continued to be felt. The recent bold step taken by the Ministry of Natural Resources in gazetting WMAs, Regulations (2002) has opened the way forward. The new move addresses key questions regarding full integration in terms of local communities being now mandated to manage and use wildlife resources. In other words they are now responsible and accountable for the management and sustainable use of wildlife in village lands. This is a historic evolution in the conservation of wildlife resources in Tanzania. It is a major paradigm shift from the previous position whereby wildlife resources in the whole country were the property of government to the new position where local communities now have ownership or use right of wildlife resources in prescribed areas (WMAs).

The Government has released some Guidelines for Designation and the Management of WMAs; but it is the hope of everyone that in due course, the WMAs will be fully owned run and used by the rural communities for their own benefits. That times frame will depend on how fast facilitators (NGOs) will help local communities to build need management, administrative and financial capacities to be able to run WMAs effectively.

The move and effort achieved maps the way for integrating, involving and empowering local communities in the Management and use of wildlife resources found in WMAs. Total commitment is required from resources managers and other users in helping the diversification for wildlife use and creating of innovative marketing strategies that promote the development of local entrepreneurship as well as joint ventures between the private sector business community and the rural communities.

Needless to mention that sound economic development should benefit every citizen of Tanzania both in urban and rural areas. Poverty eradication is a critical necessity due to the

fact that economic growth and per capital income is still very low in this country. In fact, poverty is the biggest enemy in the rural communities.

It is paradoxical that despite the rich biodiversity, which Tanzania is endowed with, its wildlife has had little impact on improving the livelihood and food security of the rural people. Many constraints account for this including poor land tenure practices and ownership of wildlife. Since Wildlife was fully state-owned, local communities living on the periphery of protected areas, bear significant conservation costs, in the form of wildlife damage to their crops, livestock and human lives. This further impoverished rural communities, and as a result, their attitude towards government conservation programmes had been negative. Subsequently, illegal off-take of PA wildlife resources has continued unabated. The much spoken emplacement of rural people in the recreational use of wildlife is limited and the benefits derived from wildlife based tourism hardly reached the people in adjacent rural areas.

Consequently rural communities viewed the government's perceived values of wildlife, the legislations and policies governing the management of wildlife's as antagonistic, which ignore their socio-economic dependence on their wildlife resources. The reaction of the local people is manifested through illicit encroachment into PAs for various consumptive uses and sometimes demands for degazettement of a given PA.

#### **4. DISCUSSION OF MONITORING INDICATORS**

The primary objective of this study is to compile baseline information for the purpose of developing indicators for monitoring the performance of these and other WMA during the three year trial phase and subsequently. The indicators are being sought from three different perspectives; Social, economic and ecological. The social and economic indicators will be used to monitor respective aspects that will impinge on the WMA ecology and the environment in general as local residents and outsiders strive to meet their various social and economic needs. Meanwhile, the ecological indicators will be used to assess the level of sustainable utilization of the natural resource base. Such information will provide guidance in order to address in due course any unsustainable practices arising due to human activities or other due natural and biological dynamics within the ecosystem.

Indicators are parameters that can be monitored to track the performance of an activity, development project or program, policy change or any other intervention over time. Indicators can be direct when they seek to reflect changes that are being sought by the intervention directly. Sometimes it is not possible or easy to measure the parameter of interest directly. For example, changes in the well being of communities are best captured indirectly through proxy indicators. Both types of indicators will be used in this study.

One of the most important characteristic of an indicator, apart from being simple and consistent is its being measurable. Indicators may be measured using qualitative means such as changes in attitudes and feelings, proper functioning of community organization or by quantitative means such as numbers of people, animals or any other parameter of interest, yield of crop or Natural resources products, price of products and many others. Indicators may also be behavioral such as changes in sanitary facilities. Indicators are only useful to the extent that the means of verification can be general and cost effective. In the discussion, which follows, the process of identification and determining the measurement of indicators for the performance of the pilot WMAs is presented.

#### **4.1. Identification**

The process of identifying feasible indicators for the monitoring and evaluation framework of the pilot WMAs was done in two steps. First, the team of consultants proposed a set of indicators, which were discussed and streamlined, based on which a checklist of questions for focus group discussion was developed (Annex 1). Also, a questionnaire for the household survey was designed to meet the requirements of proposed indicators regard general information about the villages and proposed indicators under social, economic and ecological parameters. (Annex 2).

#### **4.2. Measurement**

During the field survey and in the process of analyzing the data, the proposed indicators were assessed based on two important aspects; ease of availability and measurability. The indicators could be obtained through direct observation, recall by villagers during informal and focus group discussion or during interviews for the structured survey. Key informants also provided useful insights of some indicators. Other indicators could be obtained through

direct measurement or counting as well as photographs. Records at the District level and those of village government provided useful information, especially those pertaining demographic aspects and village financial records. The means of measuring each of the indicators, which has been selected for monitoring the performance of the WMAs during this pilot phase are indicated under section 8 of this report.

## **5. METHODOLOGY**

The study covered three Wildlife Management Areas (WMAs), which have been described in detail under section 3.0. As stated under the ToR, the main goal of the study was to collect data that would provide baseline information and monitoring indicators in the following broad areas;

- Social factors like health, education, water; human demographic structures, administrative set-ups, immigration and emigration of people.
- Economic activities like agriculture, livestock, beekeeping, shopkeepers and traders, laborers and other employment opportunities revenue generating sources for each village like charcoal burning and harvesting of timber
- Ecological factors covering animal and plant species composition, age and sex structure for animals; habitats condition including availability of water for wildlife and occurrence of wild fires; crops raiding by wild animals plus subsistence hunting.
- Communication networks like roads and tracks used for transport

In the case of ecological and environmental factors, the reconnaissance surveys for field truthing were used to assess:

- Habitat condition- vegetation types, dominant plant species, any degradation or disturbance on the vegetation and the state of recovery.
- Edaphic and environmental factors such as fires, rainfall regimes, droughts, floods,
- Wild animals populations, species composition, sex and age structures; animal movements and migrations; current utilization; crop raiding animals plus any other damage caused by wildlife to the local communities in the respective WMA.

Each of the four villages within the the Ipole WMA was visited during the field survey. The list of villages, which were contacted and their basic statistic are given under section 6.

## **5.1. Data type and source**

Information for the study was collected from primary and secondary source secondary data were collected from various documents, which were provided by the client and those obtained from other sources. Additional information, especially those pertaining to conceptual aspects of the study were obtained from literature on the management of natural resources. The list of documents which were used are presented under Annex 6.1 stated under section 5, the type of data which was required fall under three categories; social economic and ecological.

## **5.2. Primary Data Collection**

### ***5.2.1. Sampling Methods***

Rural appraisal (PRA) and structured surveys were used to collect ecological indigenous knowledge about the WMA as well as socio-economic information. The PRA focus group members were selected from among the villages. In most cases prior information was sent to the villages such that the focus group included about 20 people who were representative of the village population by gender, age and location within the village in a few cases such prior information on the selection criteria. Efforts were then made to get as representative a sample as possible.

In addition there were discussions with key informants both within the villages as well as district regional officials. Information about the volume of sales was sought from owners of shops and kiosks who were willing. The list of people who were contacted is provided under Annex 3.

Multistage sampling was done to select villages and respondents for the structural survey. For Ipole two villages were selected represent the furthest from the WMA boundary (Ipole) and the nearest (Utimule) to the WMA.

Two researchers assisted to collected data for the structured survey. Respondents were selected randomly, but taking into account spatial, gender and age representation. In All cases the research assistants worked in different sub-villages.

### 5.2.1.1. Data Collection Instruments

#### a) PRA and questionnaire Administration.

To facilitate collection of primary data, a number of instruments were used, including a checklist of question to guide discussion during focus group discussion. This is appended under Annex 4. A pre-coded questionnaire was developed and used for the structured surveys. It is given in Annex 5. All three research were involved in the PRA. As stated earlier two research assistants administered the questionnaire for the survey.

#### b) Observation and Transect walk.

Observation was used to collect both socio-economic and ecological information on social-economic aspects observation was made on the general well being of the village in terms of type of house, performance of crops, which were in the field and other qualitative aspects, which are reflected in the report. In the case of Wami-Mbiki, where the WMA has contributed towards construction of classrooms and teachers house, these were often visited.

In the case of ecological data, initial observation was done by driving through part of the WMA to get a general picture of the vegetation, animals and the flora and fauna in general. The composition of plant species and the number of plant species and the number of animals was noted. Where appropriate, photographs were taken. Additional transect walks were then planned and executed to visit several sites of interest within the WMA such as where concentration of animals had been reported by villagers. Ecological data was collected through three methods:

- i. Focused Group Discussions were used to obtain information on the history, trends and species composition for both plants and animals. Animal movements, migration routes, water-drinking areas, for the wild animals; were all-important factors influencing the year round distribution and abundance of wildlife in any given area. The vegetation or specifically the habitat condition that we know to be a factor of soil, terrain, temperature and rainfall plus the influence that man exerts on vegetation- could therefore best be linked to the history of man in the area. Human activities that had great influence on the vegetation included but not limited to, shifting cultivation, growing and curing of tobacco, charcoal burning, lumbering, wild or uncontrolled fires fcaused by man for various reasons and livestock husbandry.

- ii. Assessment done using road transects surveys: Road counting of animals was conducted in each of the three Pilot WMAs in order to assess species composition; age and sex structure and habitat for each species
- iii. Use of indices such as night calls for carnivores, spoor and dung or droppings.

#### 5.2.1.2. Key Informants

Discussion with key information mostly involved government staff and political leaders. Visits were made to Regional Commissioners in Tabora, District Commissioner and District Executive Director in Sikonge. However at Sikonge the substantive District Commissioner was out of office on other duties during our visits. Discussion was held with the Acting DC. The team met the DED of Sikonge District and the District Natural Resources Officer, the District Game Officer, and the District Forestry Officer.

Other key informants who were contacted include the the management of Wami– Mbiki, Staff of Africare at the Tabora Office. To conclude the fieldwork, briefing and discussion were held with staff at the Africare office in Dar es Salaam, and with USAID also in Dar es Salaam. Discussion was done with staff from the wildlife division during preparation for fieldwork. A representative from the wildlife division Mr. Peter Otaro also accompanied the team during most of the fieldwork. A list of institutions that were contacted is appended (Annex 6.2)

### **5.3. Data Analysis**

#### 5.3.1. *Participatory Rural Appraisal (PRA)*

Information from the focus group discussion was summarized, sometimes in tabular form. Analysis for economical data was done using excels. Parameters, which were computed, include frequencies, means and range (Maximum, minim and mode). Social data was analysed by descriptive statistics and qualitative assessment. Ecological data that was gathered through PRA meetings was used to describe the general ecological situation of the WMA. Such data was analyzed and supplemented with observations, which were made

through direct observation in the field. Results for the analysis are discussed in section 7 of this report.

### ***5.3.2. Structured surveyed***

Information from the structural survey was analysed using the statistical package for social science (SPSS). Frequencies Means and range were computed. The outputs were summarized in table and they are discussed in section 7 of the report.

### ***5.3.3. GIS Data***

Maps collected from the Africare office in Tabora were digitized and converted into digital format at the IRA GIS lab. The maps show the location and distribution of the villages within the Uyumbu and Ipole WMAs. Other information shown on the maps included drainage systems, distribution of game and forests resources.

## **6. FINDINGS**

### ***6.2.Social Aspects***

#### ***6.1.1. Location and Size:***

Ipole Pilot Wildlife Management Areas has four villages, namely Ipole, Msuva, Idekamiso, and pole, Utimule. All the four villages are located in Ipole Ward, Sikonge Division in Sikonge District. Ipole village is an old settlement which started during the colonial period and currently it has five sub-villages, namely Ipole Kaskazini, Ipole Kati, Ipole Mashariki, Ipole Kusini, and Ipole Kininga. Msuva village is has three sub-villages, namely Msuva, Ulyampumba, and Mkolo. In the past villagers were living in scattered settlements, but were brought together at the current location in 1974 during the villagization exercise.. Idekamiso village has three sub-villages, namely; Ngoyo, Kanoge, and Idekamiso. The village was originally a sub-village of Utimule village and was registered as a separate village in 1999. Utimule village has three sub-villages, namely Utimule, Mabangwe, and Ng'wamulu.

Villagers were brought together at the current location in 1974 during the villagization exercise.

### 6.1.2 Population:

The village distribution of the number of households and total population in the Ipole WMA by village and sex is shown in the Table 6.1 below.

*Table 6.1: Number of Households and Population Size by Village*

<b>Villages</b>	<b>No. of Households</b>	<b>Males</b>	<b>Female</b>	<b>Total</b>	<b>Average H'hold Size</b>
Ipole	600	-	-	2,328	3.9
Msuva	276	-	-	1,896	6.9
Idekamiso	216	518	545	1,063	4.8
Utimule	304	738	940	1,678	5.5
<b>TOTAL</b>	<b>1,396</b>	<b>-</b>	<b>-</b>	<b>6,965</b>	<b>5.0</b>

The majority of the residents of Ipole village are Wanyamwezi. Other tribes include Wasukuma, and Waha, Wanyaturu and Wafipa. Msuva, Idekamiso and Utimule are dominated by the Sukuma people. In Idekamiso village, the Sukuma comprise about 75% of the total population. Other tribes in these villages include the Wanyamwezi, Wanyaturu Wafipa, Waha, Wagogo, and are the Wanyiramba.

In-migration in Ipole, Msuva village is largely dominated by the Sukumas from Shinyanga Region who move into the village in search for pasture, settlement areas, and arable lands for cultivation. Also migrants from other tribes like the Wanyaturu Wafipa, Waha, and Wagogo migrate into the village mostly in as laborer in the tobacco farms. However, most of these in-migrants end up settling permanently in the village. In Idekamiso, there are recent migrants in the village. Most of these migrants are the pastoral Sukumas from Shinyanga Region, who are basically livestock keepers moving southwards in search for pasture and arable land. Traditionally, Wasukuma are agro-pastoral people, who always move to areas that have both fertile arable land and enough pasture for the livestock. Likewise, recent migrations into Utimule village are dominated by the Wasukumas who move into the village in search for pasture, settlement areas, and arable lands. There are few migrants from other tribes like the Wanyiramba, Waha, and Wagogo from Singida, Kigoma and Dodoma Regions, respectively.

Few people out-migrate from Ipole village. These out-migrations are largely due to family problems, search for pasture and water for the livestock, and search for arable land. Similarly, the Wasukumas who are largely agro-pastoral, move their livestock to Mbeya and Sumbawanga Regions on temporary or permanent basis in search for pasture and water for their livestock. Few youngsters from other tribes move out to town in search for better living conditions and employment. Very few people move out of Idekamiso village where most out-migrations are seasonal and are dominated by the pastoral communities who move out in search for water and pasture, especially during the dry season. In most cases, however, these people move back to the village during the rain season. Villagers are aware that they need permits to be able to graze their animals in the surrounding forest reserves. From Utimule, out-migration is practiced by the Sukumas moving to Mbeya and Sumbawanga Regions. However, out-migration is not a common practice at the moment in almost all villages in the Ipole WMA because the land in the village is still productive to ensure food security. The main reasons for out-migration are similar to the other villages, being search for pasture, water and more productive lands.

#### *6.1.3 Natural Resources:*

Each of the four villages in the Ipole Pilot WMA has contributes land, forests, and animals to the WMA. The wildlife resources include animals like elephants, lions, zebras, buffalos, warthogs, wild pigs, baboons, antelopes, hyenas, hippos, giraffes etc. Ipole village is endowed with large reserves of honeybee that provide significant amount of honey to the villagers. This forest product is a major source of income to villagers. Villagers are required to seek for permit from the DNRO to put beehives in the Forest Reserves. There are efforts to modernize beekeeping in the Ipole village by introducing modern/improved beehives and honeybee farming practices. Currently there are 9 modern beehives in Ipole, but the number is increasing over years. Utimule village has the largest forestland that has been contributed to the pilot WMA.

#### *6.1.4 Taboos and Rituals Related to Natural Resource Conservation:*

The Isuwangala area in Ipole village was used for burial of local chiefs and rituals in the past. It was reported that other areas that are used for rituals are found around Utimule village. The identified areas in Utimule used as burial places for the traditional chiefs. These are located in

areas like Ng'ongo, Kamalampaka, Ng'walupambe and Sinde. A close assessment of the Ipole village indicates that most of the traditional beliefs, customs, rituals and taboos have been abandoned due to the influence of religion in the area. In Msuva village, it was reported that the Mpuya areas located in the current WMA protected areas was used in the past as a burial places for the local chiefs. This area is traditionally protected and people are not allowed to cut trees. Some people regularly visit the place for rituals.

With regards to taboos, there are various tree species that are not used for firewood. The villagers in Ipole named *mlugala*, *mumwaga*, and *mubanga* trees to be among the trees that are not used for burning. Specifically, it is believed that if *mumwaga* tree is used for cooking, there will be no peace in the household. Similarly, if *mubanga* is used for firewood it will cause headache to the users. In Idekamiso, certain animals, birds and trees species are considered to be taboos for the local communities. For example, the Wanyamwezi believe that people who are affected by leprosy not allowed to eat giraffe's meat. They believe that if these people with leprosy eat giraffe's meat they would be affected by having some spots similar to the giraffe's skin. Similarly, the Nyamwezi don't eat hippo's meat because they believed that in the past dead bodies of people with leprosy were dumped into the rivers and were eaten by the hippos. Other animals that are considered as taboos are elephant, and zebras. The Wanyamwezi also consider the Owl to be a taboos because it is used for witchcraft. Similarly; the claws (Kunguru) are believed to be poisonous, and the *Ntentye* is considered to be a blessing (*mzenga kaya*) for the the household. In Utimule, villagers reported that trees like *irambula*, *mputika* and *mmwaga* are not used for firewood because they can cause bad luck to the household. Animals like lion and hyenas are not used for meat; hence they are not killed except for the purpose of defence.

#### 6.1.5 Village Governments:

The village governments in all villages have three permanent committees, namely, Planning and Finance Committee, Defence and Security Committee, and Social Services and Community Development Committees. The distribution of committee members by village and sex are summarized in Table 6.2.

Table 6.2: Distribution of Village Committee Members by Gender

Villages	Name of Committee	Committee Members		
		Males	Females	Total
Ipole	Planning and Finance	5	3	8
	Defense and Security	6	2	8
	Social Services and Community Development	8	1	9
	<b>Total</b>	<b>19</b>	<b>6</b>	<b>25</b>
Msuva	Planning and Finance	7	1	8
	Defense and Security	6	2	8
	Social Services and Community Development	9	0	9
	<b>Total</b>	<b>22</b>	<b>3</b>	<b>25</b>
Idekamiso	Planning and Finance	4	3	7
	Defense and Security	3	3	6
	Social Services and Community Development	3	4	7
	<b>Total</b>	<b>10</b>	<b>10</b>	<b>20</b>
Utimule	Planning and Finance	5	2	7
	Defense and Security	3	2	5
	Social Services and Community Development	4	3	7
	<b>Total</b>	<b>10</b>	<b>10</b>	<b>19</b>

At the village level, there are also other subcommittees that are concerned with natural resource management. These include Lands, Natural Resources and Environment Development Committee, Village Land Reconciliation Committee, and Village Land Use Planning Committee. Membership to these committees are prescribed in the guidelines. Table 6.3 shows the sex distribution of committee members by village.

Table 6.3: Composition of Subcommittees by Sex and Village

Villages	Name of Sub-Committee	Sub-Committee Members		
		Males	Females	Total
Ipole	Lands, Natural Resources and Environment Development	5	2	7
	Village Land Reconciliation Committee	4	3	7
	Village Land Use Planning Committee	7	5	12
	<b>Total</b>	16	10	26
Msuva	Lands, Natural Resources and Environment Development	5	1	6
	Village Land Reconciliation Committee	4	3	7
	Village Land Use Planning Committee			
	<b>Total</b>	9	4	13
Idekamiso	Lands, Natural Resources and Environment Development	5	3	8
	Village Land Reconciliation Committee	7	5	12
	Village Land Use Planning Committee			
	<b>Total</b>	12	8	20
Utimule	Lands, Natural Resources and Environment Development	8	4	12
	Village Land Reconciliation Committee	5	6	11
	Village Land Use Planning Committee			
	<b>Total</b>	13	10	23

#### 6.1.6 Village Government Office:



Ipole village has a temporary office, which will be left to host the CBO Headquarters after completion of a larger village office that is currently under construction (Photo 1).

*Photo 1: Focus Group Discussion in Ipole Village, Sikonge District (Village Office Under Construction Seen in the Background).*

Msuva village has no office and they are currently using an old school building that was used as a teacher's office in the past . Photo 2 shows the meeting at Msuva village which was conducted under a shade of a tree around the school compound.



*Photo 2: Focus Group Discussion in Msuva Village (Meeting done under a tree shade near the school), Sikonge District*

There are plans to construct a village office during the years 2003. It was reported that, Msuva village has been facing leadership problems for quite a long time. It is only recently that a new Village Chairman has been elected to replace the one that was removed from office due to misuse of funds. Due to this problem, Msuva village is the only one in the Ipole WMA that has not yet completed its village land use plan (VLUM).

Idekamiso village is new and it has no village government office. Villagers promised that they would be constructing their village office latter in 2003. Though Utimule is an established village, it has no village office either. The village government is currently using an old teachers' office at the village primary school. It was noted from the PRA discussions that the village is planning to build its office in 2003. The village has actually started to prepare bricks for the village office.

#### 6.1.7 Community Based Organizations:

The four member villages that form the Ipole WMA has formed a Community Based Association (CBO) called Hifadhi Mazingira Utimule, Msuva, Ipole and Idekamiso (HIMAUMII<sup>3</sup>). The process of getting the CBO registered is underway. Ipole village is the Headquarters of the HIMAUMII.

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<sup>3</sup> HIMAUMII is the acronym of "Hifadhi Mazingira Utimule, Msuva, Ipole and Idekamiso", the CBO formed for the Ipole WMA.

Africare is the main development partners in all four villages within Ipole WMA. In all villages Africare has been providing environmental conservation education to the local population and assisting villages in preparing their land use plans through the VLUM project. Africare started working in Msuva and Idekamiso in 1999. Through Africare, Msuva village has re-initiated its discussions that aim at completing the village land use plan through the PLUM<sup>4</sup> and VLUM<sup>5</sup> projects. Through Africare, Ipole, Idekamiso and Utimule villages have managed to complete their village land use plans.

TASAF<sup>6</sup> is working in Ipole, Idekamiso and Utimule villages. At Ipole village, TASAF is assisting the village to rehabilitate and expand the existing dispensary. A new dispensary building has just been completed at a cost of Tsh. 19.0 million, of which Tsh. 14 million (80%) was provided by TASAF and the Tsh. 5.0 million (20%) contributed by the village in the form of labour and materials. In Idekamiso, TASAF is assisting villages to construct a school at a cost of Tsh. 18 million. TASAF assistance is given in terms of finance and materials worth Tsh. 13 million. In Utimule, TASAF is providing assistance in the construction of a dispensary. TASAF has promised to provide Tsh. 15 million (80%), which is the total cost of the construction. The total cost of the dispensary is Tsh. 19 million.

Another development partner in Ipole WMA is the MEMM programme. Through MEMM Ipole village has constructed 2 classrooms and 1 teachers' office at a cost of Tsh. 3 million. Other contributions from MEMM in Ipole include assistance in the construction of 26 desks for the primary school at a cost of Tsh. 360,000. In Msuva, MEMM assisted the village to construct 2 classrooms and 1 teachers' office costing Tsh. 3.5 million in total. Idekamiso, village has received an assistance of Tsh. 7.2 million from the MEMM programme to construct two classrooms and an office. These facilities have been completed and are already in use. Caritas is planning to work in Msuva village where it will assist the village to construct 5 shallow wells.

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<sup>4</sup> PLUM refers to Participators Land Use Management.

<sup>5</sup> VLUM refers to Village Land Use Management.

<sup>6</sup> TASAF refers to Tanzania Social Action Fund.

6.1.8 Knowledge of the WMA<sup>7</sup> Concept:

Generally, there is a high level of awareness of the WMA concept in the villages. Efforts have been made to educate the community. An added advantage is the presence of a very aggressive and knowledgeable District Council Chairman who resides in Ipole village. With the assistance of Africare, local communities have understood the importance of wildlife conservation and are increasingly becoming positive in terms of attitude and practise. Ipole village is the main gateway to the Ugalla Game Reserve, and into the Ipole WMA. Local communities have been educated on the need to participate in wildlife conservation. The villagers in Msuva village generally understand the concept of WMA.

Though the communities have been educated on the need to participate in wildlife conservation, there is still need for continued efforts to educate and convince villagers that the WMA concept is real and possible. It seems villagers are still sceptical. Villagers have started patrols to protect the area earmarked for the Ipole WMA. Evidence from the PRA discussions in Idekamiso demonstrates that hunting of wildlife is still going on. Villagers are, however, very reluctant to give information of the presence of hunting. In Utimule village, the local community has started to implement some of the sustainable utilization strategies like the use of improved beehives which would save the miombo trees from which the bark are taken off to construct traditional beehives.

During the PRA meetings villagers in Ipol and, Msuva village mentioned conservation, security, provision of conservation education to the public, sustainable utilization of the existing natural resources, and benefit sharing as their main responsibilities. Most villagers have high expectations of been allowed to hunt wildlife and benefit from the quota allocated for the village.

Each of the participating villages has trained 3 VGSs who are responsible for the day-to-day patrols in the protected area. Msuva village has trained 10 VGSs. Idekamiso has trained 16 VGSs who are involved in patrols. Similarly, village leaders have received training in village leadership, seminars, and study tours have been provided to various areas involved in wildlife

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<sup>7</sup> WMA refers to Wildlife Managing Areas.

management. In Utimule village, leadership training had been given including the introduction of Mlonge as an alternative crop to the villagers.

#### 6.1.9 Wildlife Related Court Cases:

The natural resources and environment sub-committees are responsible for the protection of the area earmarked for the Ipole WMA. Though it was reported that villagers are carrying out patrols, no case has been reported so far to the court of law for trespassing or for illegal possession of wildlife trophies in all villages.

There are few natural resource use related cases that have been sent to the village reconciliation committee. The VGSs in Ipole managed to confiscate timber, which were handed over to the Village Reconciliation Committee for action. The leadership vacuum that existed for a long period in Msuva village largely contributed to the lack of seriousness in the village security system. Efforts are being made to ensure that there is close collaboration between the current leadership and the community at large to ensure full community commitment and participation in natural resource conservation issues. In Idekamiso, there are no cases that have been sent even to the to the Village or Ward Reconciliation Committee. The cases sent which were sent to the village reconciliation committee in Utimule village include the one regarding livestock trespassing into other peoples' farms, and possession of logs and timber. The owners of the logs and timber managed to escape and these resources were confiscated and used for constructing classrooms.

The Wasukumas have a very famous traditional security system known as "*Sungusungu*"<sup>8</sup>. It is, however, surprising to note that the *Sungusungu guards* are not involved in any wildlife conservation or protection activities. This is one of the weaknesses that reflect low understanding of the WMA concept at the village level. In most cases, the VGSs are referred to as the "*Africare Askaris*". This situation has to be tackled in order to educate the villagers that security of the WMA is a responsibility of everybody and that every villager is required

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<sup>8</sup> Sungusungu is the traditional guards that operate at village level and they have a network of collaborators in most of the villages. Though the youths are the main Sungusungu force, all village members play a role in one way or another in facilitation the implementation of Sungusungu activities. In this case Sungusungu throne is not based on individuals or individual households, but rather on village basis. This means that every villager is a member of Sungusungu.

to participate fully both in the conservation and in the benefit sharing. In this case, efforts to involve the *Sungusungus* in the protection responsibilities would be eminent.

#### 6.1.10 Collaboration With Other Stakeholders:

There are regular meetings between villagers of Ipole and Africare. It was reported that 5 or more meetings were conducted during the 2002. There is also regular implementation reporting for implementation and training seminars, which are conducted in the village by both Africare and TASAF. Villagers in Ipole reported that there is a Wildlife Officer in the village who is managing the main gate to Ugalla Game Reserve and the Ipole WMA. There is also close collaborating with other officials including the District Forest Officer, the Water Resources Officer, and Land Officer. So far Ipole village has completed its land use plan through the VLUM project.

Though the development partners were eager to collaborate with the village community in Msuva, local communities have for a long time not been responsive. There were several cases whereby only the development partner attended concined the meetings while no villagers were able to attend. Using the example of the classrooms that were constructed through self-help under the MEMEM project, we can see a sense of readiness if the leadership issue in Msuva is permanently resolved. The villagers reported that they have on various occasions met with the DNRO, DWO and other staff from the region, district, division, and ward levels to discuss issues of natural resource conservation. Though not completed, the village has initiated the VLUM exercise in which they collaborated with regional and district officials to carry out the village land use-planning exercise.

In Idekamiso, villagers mentioned that there wereregular meeting between the local community and staff from Africare. Similarly, there are monthly meetings between village leaders and TASAF to discuss development issues including progress of the school project. Close collaboration was also reported between the village and various natural resource management departments at the district council level. These include the DWO, DFO, DNRO, and DALDO. In addition to these, there are staff from the above mentioned departments who are stationed at the Ward and Divisional levels.

In Utimule, villagers indicated presence of regular visits and meeting between the community and staff from Africare, and monthly meeting between village leaders and TASAF to discuss progress of the dispensary project. Close collaboration between the village and various natural resource management departments at the district council was noted. These include staff from the land, wildlife, forestry and agriculture departments. The village has been involved in the VLUM in which they collaborated with regional and district officials to complete the village land use planning exercise.

#### *6.1.12 Social Services*

Education: Ipole village has a primary school, which has Class I-VII. There are 7 good quality classrooms and 8 teachers, but there are no teachers' houses at the school. Some of the teachers have built their own houses in the village and some are living in rented houses. The school has 598 pupils. About 6, 10 and 4 pupils were selected to join secondary education in 2000, 2001, and 2002, respectively. Msuva village also has a primary school, which has Class I-VII. There are only 4 good quality classrooms and 2 more are still under construction. The school has 5 teachers but there are no teachers' houses. All teachers live in Ipole village, some 5 kilometers away. The school has 311 pupils. In the year 2002, 2 pupils were selected to join secondary education and 4 went for vocational training.

Currently there is no school in the Idekamiso village. Pupils from this Idekamiso go to neighbouring Utimule village to attend school, some 6 to 10 kilometres far. It was observed, however, that a large proportion of school-aged children from this village do not attend school. In other words the illiteracy rate in the village is high. Efforts are being made to construct classrooms in the village in order to rescue children who have to travel many kilometers to attend school in neighboring villages. Already four classrooms are under construction through assistance from TASAF. Utimule village also has a primary school, which has Class I-VII. However, it is only recently the school has obtained quality classrooms through the MEM project. Currently there are 6 good classrooms at the school. There are 6 teachers but there is no single teacher's house. The teachers live in rented houses in the village. The school has 242 pupils, among which 140 are boys and 102 are girls. Three pupils were selected for higher education (1 secondary school and 2 VETA) in 2002.

Health: There is a dispensary in Ipole village. Construction is underway to improve and expand the facility so as to provide better services. There is 1 Medical Assistant, 2 nurses, and 2 Health Officers at the dispensary. Msuva village has no health facility at the moment. Health services for this village are obtained from Ipole village (some 5 km) or at Sikonge DDH<sup>9</sup> (about 36 km). Like Msuva, Idekamiso village has no health facilities within the village. The nearby health facility is Ipole which is more than 15 kilometres away. Referral health services are obtained from Sikonge DDH. Utimule village also has no health facility at the moment, but villagers are constructing a dispensary building through TASAF assistance. Health services for Utimule villagers are also obtained from Ipole dispensary (about 28 kilometres) or Sikonge DDH (some 50 kilometres away) for referral purposes. Generally, health service provision in Msuva, Idekamiso and Utimule villages are poor and people depend on the Ipole dispensary for such services.

Water: There is a piped water system in Ipole village, but the system is not working due to lack of fuel, despite the fact that the pump is in good working conditions. Villagers still have a free water mentality despite the changes made in the government policies as reflected in the Rural Water Policy (URT, 2002). There is no Water Committee in the Village, which would have been responsible for managing the existing piped water system. There are many locally constructed shallow wells of up to 30 feet deep. In Msuva village there are about 3 self-constructed shallow wells. However, these wells are not protected and cannot be considered to provide safe and clean water to the community. Also there are rivers and tributaries that provide water on seasonal bases to livestock and in some cases for domestic use. The Koga river has water throughout the year but other tributaries dry up and just remain as ponds during the dry season. The only reliable sources of water in the Idekamiso and Utimule villages are the traditional wells and locally constructed *bwawas* (charco dams) for livestock. There are about 6 *bwawas* in the Idekamiso village but most of which dry up during the dry season from September. In Utimule village, there are about five locally constructed *bwawas* and 3 reliable traditional wells.

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<sup>9</sup> District Designated Hospital

### ***6.1.13 Community Solidarity:***

Community solidarity in the villages under Ipole WMA is high. Villagers are involved in self-help projects including the construction of classrooms and dispensary buildings. In Ipole village the level of development attained is a reflection of the people's willingness to adopt change and collaborate to bring common development for the benefit of all villagers. However, community solidarity in Msuva village is still poor because of poor leadership in the past. A new leadership has been elected recently and ward, division, and district leaders are making all necessary efforts to assist the new leadership to bring the villagers together. Poor cooperation was demonstrated in the year 2002 where villagers were not attending meetings called by the various facilitators and development partners to discuss village development issues. There are signs of progress and change. At least the level of understanding is increasing among the local community members. In Idekamiso village, high degree of community solidarity is demonstrated by the efforts made to build 4 classrooms. However, there is need to encourage the people to participate fully in their own development activities. Similar experiences were noted in Utimule village where the community made efforts to build 6 classrooms, 1 office and now they are finalizing the construction of the village dispensary building. People are eager to solve their own problems regardless of their limited resources and tight time schedules.

## ***6.2. Economic Aspects***

### ***6.2.1 Economic Services***

The number of households and people in each village are presented under section 7.3 above. Information about the work force could not be obtained. The four villages are located along the truck road from Tabora to Mbeya through Kipambawe and Chunya. This is an old road, which has deteriorated due to lack of repair. There is a bus services only once per week during the dry season between July and November/December. Ipole village is closest to Sikonge town, the district headquarters being 19 kilometers away. The next village is Msuva, followed by Idekamiso and Ultimate. There are daily bus services from Ipole to Sikonge and Tabora. Travellers from the other village must walk or travel by bicycle to Ipole to catch a bus.

The bus fare from Ipole to Sikonge is 500 shillings. When the bus to Mbeya is in service, the fare from Utimule the furthest from Sikonge town is 1, 000 Shs. Bicycles are the main means of transportation. Between 70% and 80% of the households own bicycles in each village. The rental rate for bicycles is between 500 and 1,000 Shs for self-drive, depending on the distance. If a driver is also required the price is 2,500 from Utimule to Ipole. Other economic services include a dip at Msuva and a livestock market (*gulio*) at Idekamiso. The cost of washing one cow is Tsh. 50 per head. Livestock keepers practice “*Lubaga*”<sup>10</sup> system, whereby livestock are moved to distant locations during the dry season and are brought back to the village during the rainy season. The main criteria for the selection of places to send livestock during the dry season are availability of reliable water and pasture.

### 6.2.2 Economic Activities

Farming is the most important economic activity, being practiced by all households. This is followed by beekeeping, which involves 20% of the households at Idekamiso. Msuva and Utimule villages have 25%, 30% and 45% respectively. Livestock production was mentioned as being important in four villages. Idekamiso village which is almost exclusively settled by Wasukuma as many as 75% of the households involved in livestock keeping. The other villages have only about 5 to 6% of the households involved in this activity. Fishing is most important at Msuva where about 20% of the households are said to be involved. Utimule and Ipole had 3% and 2% respectively. Timber production is important at Ipole and Msuva, involving 20% and of the household respectively.

Business, including trading in livestock was mentioned in all four villages representing 20% of the households at Idekamiso and Utimule while Ipole and Msuva reported 3% and 2% respectively. It should be noted that at Utimule and Idekamiso villagers who buy crops from other villages for sale at Ipole or Sikonge were also classified as being involved in business. Traders from outside normally don't reach these villages due to poor transport. Employment was only mentioned at Ipole where about 10% of the households are said to be involved working at the primary school, church and government employees at the division and ward offices, which includes extension staff in agriculture, forestry, wildlife and community

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<sup>10</sup> The Lubaga system is a traditional system of transhumance whereby livestock keepers send their livestock far away outside the village to camp for a while in places where water and pasture are assured. This is actually done during the dry season. When the rain season starts, the livestock are brought back home.

development. The number of employees was only given for teachers being 4 at Msuva and 5 at Utimule.

Common businesses are kiosks/*genge* and milling machines, which exist in all the villages. Utimule, the furthest from Sikonge has the highest number of Kiosks (8) and *genge* (4). There were 4 carpenters at Ipole, 5 at Utimule and 3 at Msuva. The number of tailors was 3 in all villages, except at Utimule where there was none. There are many masons at Ipole and 3 at Msuva and one in the other village. A blacksmith exists at Msuva village.

The most commonly demanded commodities include sugar, rice, beans, cooking oil, soap, kerosene, bicycle spare parts and oil for skin softening. Information on prices was not readily available. For most villages prices of each commodity was only available from one village. Prices are highest at Utimule and lowest at Ipole. The price range for rice is 300 – 350 Shs/kg, and that of sugar is 700 – 800 shs/kg. The price of beans, soap bar and cooking oil, was only obtained at Ipole, being 300 Shs/ kg, 1,000 Shs/litre and 500 Shs/bar respectively. Kerosine was sold at 80 – 100 shillings per measurement (*kibaba*). Oil for skin softening was sold at 500 Shs/bottle at Ipole and Utimule. The volume of sales was reported as ranging from 30,000 – 15,000 Shs/day at harvest and 10,000 – 5,000 Shs/day during the farming season. One trader at Ipole estimated a profit margin of about 15%.

Table 6.4: Income Distribution for Basic Needs

Expenditure item	Percent of Income (Shs)			
	<i>Ipole</i>	<i>Msuva</i>	<i>Idekamiso</i>	<i>Utimule</i>
Food	70	75	45	70
Medication	20	20	10	15
Clothes	5	5	10	7
Education	-	-	-	5
Buy cattle & medicine	-	-	30	-
Others	5	5	-	3

Food is the most important expenditure item, followed by medication, and clothes. However, at Idekamiso village buying cattle and medicine for livestock represented as much as 30% of the annual household income. Education was only mentioned at Utimule representing 5% of

the household income. Other expenditure items represented between 3 – 5%. Table 6.4 summarizes the expenditure pattern for each village.

### 6.2.3 Consumption, Production and Productivity

The supply of food is not a major problem for the majority of villagers during most years. In all four villages households are reported to have at least three meals per day throughout the year and some families, especially Wasukuma may even have four meals or more per day because they have adequate food. This probably contributes to them being more industrious. However, at Ipole, some households in the lower rank may have one to two meals between September and April. When asked for criteria of ranking households into different wealth rank, they were given as indicated in Table 6.5.

Table 6.5: Common Characteristics of Wealth Ranks

Wealth Rank	Percent				Common Characteristics
	Ipole	Msuva	Idekamiso	Utimule	
<b>High</b>	<b>10</b>	<b>25</b>	<b>25</b>	<b>25</b>	<ul style="list-style-type: none"> <li>- Adequate food</li> <li>- More than 100 head of cattle</li> <li>- Brick house with corrugated iron roof</li> <li>- Large farm &gt; 8 acres tobacco or other crops</li> <li>- Owning more than 100 cattle</li> <li>- Having dairy cattle (only at Ipole)</li> <li>- Owns a business (Kiosk or milling machine)</li> <li>- Having more than 10 acres of tobacco</li> <li>- Owning &gt; 100 beehives and getting &gt; 10 drums of honey</li> </ul>
<b>Middle</b>	<b>50</b>	<b>50</b>	<b>45</b>	<b>50</b>	<ul style="list-style-type: none"> <li>- Having 3 meals/day</li> <li>- Having 15 – 100 cattle</li> <li>- House made of brick with grass thatch or mud walls and corrugated iron roof</li> <li>- Owning a bicycle</li> <li>- Owning a radio</li> <li>- Having an oxen plough and oxen cart</li> <li>- Owning a medium size farm 5 – 7 acres</li> </ul>
<b>Low</b>	<b>10</b>	<b>25</b>	<b>30</b>	<b>25</b>	<ul style="list-style-type: none"> <li>- Being a casual laborer</li> <li>- Not having adequate food</li> <li>- Having 0 – 5 cattle or owns only small stock (goats, sheep and chicken and dogs)</li> <li>- Owning a small farm 1 – 2 acres</li> <li>- Has poor quality bed</li> <li>- Has many children</li> <li>- Is not hard working</li> </ul>

The wealth ranking of a household is closely related to the number and type of economic activities they undertake. Maize, rice, groundnuts, sorghum, and cassava are grown in all four villages. Beans, sunflower, cowpeas, sweet potatoes, tobacco, and bambara nuts are also important. Moringer was mentioned only at Ipole village. The percentage of households that engage in the production of each crop or commodity is given in Table 6.6 while the levels of productivity for some of the economic activities are given in Tables 6.7.

Table 6: Involvement in Economic Activities

Crop/Activity	Percent of Household Involved			
	<i>Ipole</i>	<i>Msuva</i>	<i>Idekamiso</i>	<i>Utimule</i>
Maize	100	100	100	100
Groundnuts	100	100	100	100
Sweet potatoes	100	100	100	100
Rice	70	100	45	80
Cassava	90	100	25	80
Beans	50	100	100	-
Tobacco	-	25	-	25
Bambara nuts	50	100	-	-
Cowpeas	3	-	100	-
Fishing	2	20	0	3
Beekeeping	40	25	20	30
Livestock	5	5	75	6

Table 6.7: Productivity of Crops/Activities

Crop/Activity	Unit	Mean Productivity		Productivity Range	
		<i>High technology</i>	<i>Low technology</i>	<i>Maximum</i>	<i>Minimum</i>
Maize	Bag/acre	16	7	20	4
Sorghum	Bag/acre	6	3	8	2
Rice	Bag/acre	15	6	20	5
Groundnuts	Bag/acre	10	5	15	3
Sunflower	Bag/acre	5	2	6	1
Tobacco	Kg/acre	600	300	700	100
Honey	Lts/hive	18	3	20	1
Fish	Number	275	200	350	100

Regarding the availability of markets, it was said that traders buy at the farm gate in Ipole and Msuva villages. At Idekamiso village farmers must ferry their produce to Ipole where they sell to traders from Sikonge and Tabora. At Utimule, respondents complained that there was no local market for food crop. A few of the villagers buy limited quantities from their colleagues for ferrying to Ipole and Sikonge by bicycle.

Most of the farmers do not use fertilizer, except for tobacco where they receive inputs on credit from companies that buy tobacco. However, the use of manure especially among Wasukuma, is quite high. Maize that is planted on a previous kraal may yield as high as 20 bags per acre. But, for the majority of farmers obtain low yields due to low input use. This explains the high average proportion of households in the middle (49%) and low ranks (23%).

#### 6.2.4 *Utilization of Natural Resources*

The list of most commonly used natural resource products include firewood, thatching grass, poles and rope for construction, timber, mushroom wild vegetables, medicine, fish, game meat, honey, pastures, grass for mats and baskets. Sand was only mentioned at Ipole. Resources that require permits include timber, beekeeping, game hunting, fishing and grazing within Ugalla game reserve. The most important natural resources businesses are livestock production, beekeeping, timber production, fishing and grass for making baskets and mats. The latter was only mentioned at Idekamiso.

Direct use value was mentioned as the main reason for having interest in the sustainable management of natural resources. Ecological value was only reflected at Ipole village. It was reported that local people could obtain a permit to get game meat for special occasions such as festivals. However, illegal hunting was common, sometimes involving ruthless hunting methods, by hunters who come from Sikonge and Ipole. The pilot WMA of Ipole also falls within the Udunda hunting block, which is currently leased to the Northern Hunting Company. Potential business from the designated WMA, which were proposed by the respondents include; sustainable tourist hunting, hunting by local people to obtain game meat, timber production, beekeeping and making slippers for the railway industry.

Working in collaboration with the Village Land Use and Management Program (VLUM), Africare has facilitated the mobilization of villagers to support CBC activities, which include developing land use plans for each village and training village game scouts for monitoring illegal use of natural resources. Thus all four villages have a land use plan, but none of them have title deeds. The land use plans have designated areas for different uses such as land for crop production, open land, reserved land, grazing areas and land for residential use. The

most common means of accessing land is by customary tenure and allocation by the village government. The land frontier has been closed at Ipole village, but still open at the other three (Msuva, Idekamiso and Utimule). A market for land is emerging at Ipole where land can be rent for Shs 2,000 per season or bought at Shs 10,000 per acre.

#### 6.2.5 Village Government Income, Expenditure and Development Plans

Information about income was only available at Utimule. At the other villages information was either not available or very scanty. During the last year (2002), Utimule village had income from the following sources (with the amount indicated in brackets); contribution from villagers (Shs 100,000), crop cess (Shs 47,720 ), market tax (Shs 27,000), other sources (Shs 100,000), all adding up to Shs 235,420 on average. The main items of expenditure include construction of classroom (Shs 89,200), Office expenses (Shs 18,200), hospitality for visitors (Shs 17,600), allowances (Shs 12,700) and payment of previous debts (Shs 69,000), all adding up to Shs 206, 120. This reflects a very low level of village government revenue, which means the ability to undertake significant village development projects, is also limited. The fact that records were not available in the other three villages and incomplete at Utimule is an indication of the poor state of record keeping and management of village government financial resources. In all villages the Annual General Meeting (AGM) for the previous year (2002) had not been held due to various reasons.

Some of the VEOs reported that they were new and therefore did not have a full account of previous records. Poor record keeping and not holding the AGM as stipulated encourages misappropriation of village government funds. Unless deliberate steps are taken to improve the skills of VEOs in record keeping and financial management, along with sensitizing village community members to demand for accountability from their leaders, any potential income from the pilot WMA may also be mishandled for the benefit of only a few people.

All four villages reported having a development plan, but no specific activities were indicated for Ipole village. At Msuva village, the plan includes constructing three classrooms, four teacher's house and a toilet at the primary school. They also plan to build a village government office, which does not exist at present. At Idekamiso there is construction of three teacher's houses and a village government office, also not present in the village. Utimule village plans tuse burnt bricks to build improved houses for all villages within two

years. They also plan to construct two houses for teachers. Sources of funds for these projects were not specified.

#### *6.2.6 Development of the WMA*

The proposed WMA at Ipole has been managed under community-based conservation, which has been supported by Africare. Steps towards forming the WMA have therefore been; mobilization of villagers to inform them about potential benefit from joining the CBC initiatives. Villages then contributed land for CBC. Village scouts have also been trained and village environmental committees have been formed. The collaboration among villages within the WMA has also facilitated ease in solving boundary conflicts. A community-based organization (CBO) has been formed (HIMAUMII) and a constitution is being developed. Training that has been received by some of the villagers, aimed at providing them with alternative economic activities, which include alternative crops such as sunflower and moringer, and adding value through procession of sunflower into oil.

Problems that are related to the process of forming a WMA include; boundary conflicts between villages, which was stated at Ipole, Idekamiso and Utimule. Illegal timber harvesting was also mentioned at Ipole, while crop damage due to vermin was only mentioned at Msuva, and Ipole, where crop loss due to vermin was estimated to be up to 75% - 100% if steps to guard crops are not taken in time. The most common vermin include; elephants, wild pigs, monkeys and wild pigs.

### *6.3. Ecological Aspects*

In Ipole WMA, game census and habitat assessment was undertaken for a day each. The survey took place on the 1<sup>st</sup> March 2003. Though the census crews left their base camps early in the morning, yet it was not easy to arrive at the starting points before 9.00 in the morning.

The game census procedures outlined for Wami-Mbiki were the same for Ipole WMA. However, the distances covered by the road line transects for the two areas were much longer than those of Wami-Mbiki. Ipole transect was 48.4km. Visibility could be taken to be almost the same as that experienced in Wami-Mbiki, although some areas of Ipole were open wooded grasslands.

The Ipole WMA is indeed rich in wildlife during the dry seasons of the year. Table 6.8 summarizes the list of animal species that were mentioned by villagers in the respective villages during the PRA meetings.

*Table 6.8: Summary of Animal Species Composition in the Ipole WMA*

- |                              |                 |
|------------------------------|-----------------|
| • Greater Kudu [very common] | • Wild-dog      |
| • Bush duiker                | • Crocodiles    |
| • Warthog                    | • Roan-Antelope |
| • Dikdik                     | • Waterbuck     |
| • Elephant                   | • Giraffe       |
| • Buffalo                    | • Hippopotamus  |
| • Nile monitor lizard        | • Bushbuck      |
| • Lion                       | • Hyeana        |

Uyumbu and Ipole Pilot WMAs have many things in similarity. Each of them appeared to be a dry season refuge for wildlife which they share with Ugalla Game Reserve and the adjoining Forest Reserves. Very little large mammals were encountered in the two areas during the surveys that were undertaken. But on the other hand, the verbal reports from both the villagers and the Wildlife Officers interviewed confirm the presence of good numbers of various species as being the dry season users of both Uyumbu and Ipole areas. From the interviews one can therefore assume that the Pilot WMAs of Uyumbu and Ipole are indeed rich in wildlife during the dry seasons of the year; all of them mentioned the presence of the following species.

## **7. EMERGING ISSUES**

The following are major issues emerging from the field survey and analysis relevant to the Ecology part of the study.

- a) The watershed area of both the Wami and Mbiki Rivers need to be protected. There is some unplanned cultivation and settlements encroaching the wetlands and important

catchment forests in both Mvomero and Morogoro Districts. Encroachment was also noted in the river valleys and some virgin forest land on the Bagamoyo District side of the Wami River distributaries.

- b) Preparation of village land use plans is needed for all the villages forming the Wami-Mbiki CBO.
- c) Capacity building at the village level and also at the CBO level to enhance the administration of the WMAs.
- d) Good governance through streamlining and proper definition of areas of responsibility, accountability and decision making structures in favour of the communities. Presently the Regulations and Guidelines give authority and mandate to the Director of Wildlife over the WMAs. This may not enhance true devolution of power to the local communities as originally intended.
- e) Benefits accruing from the WMA economic activities should go to the community based organization (CBO) since it is the one that is active on the ground. The Government should get its share through normal taxes paid by the communities.
- f) Put in place a plan that will allow for sustainable use of natural resources. Determine population levels for hunted game animals; set realistic hunting quotas and supervise hunting activities to adhere to set quotas.
- g) Monitor regeneration of degraded vegetation especially timber species which had been heavily exploited by putting in place a recovery programme to improve species diversity.
- h) Building capacity of villagers and therefore the CBO to enable for effective control of illegal activities.
- i) Control the exploitation of woody plants for production of charcoal and timber.

## **8. THE WAY FORWARD**

The intention of establishing the pilot WMAs is to ensure that local communities benefit directly from the natural resources around them, which they should actively participate in managing sustainably. The study shows that the local communities and their leaders at various levels are willing and ready to take up their new role as co-owners of the wildlife resources, which were previously perceived as being under the exclusive jurisdiction of the

government. In order to realize the objectives of establishing these pilot WMA, each WMA must strive to complete setting up the institutional set up to facilitate the operationalization of the WMA. According to the guidelines, which have been issued by the Ministry of Natural Resources and Tourism, they require that each pilot WMA should complete a series of steps for it to become operational. The table below summarizes key steps and the status of accomplishment within each pilot WMA, which gives an idea of what remains to be done and therefore provides a roadmap on the way forwards towards becoming an operational WMA. These involve designation of the WMA area and formation of the CBO, which will often be the designated Authorized Association. Although these steps may take place concurrently, they are presented in Table 8.1 separately for clarity.

Table 8.1: Level of Development of Pilot WMA

Activity	Level of Attainment		
	Wami-Mbiki	Uyumbu	Ipole
<b>A. Designation of WMA</b>			
1. Consultation with village members, approved by village assembly to designate part of the village land for CBC as WMA	✓	✓	✓
2. Application made by village(s) to Director WD for designating part of village(s) land as WMA along with: <ul style="list-style-type: none"> <li>• Certified copy of Village Assembly minutes endorsing designation</li> <li>• Dully completed information data sheet as completed by District Council</li> <li>• A certified copy of registration of CBO</li> <li>• A Land use plan approved by Village Assembly</li> </ul>	✗  ✓  ✗  ✓  ✗	✗  ✗  ✗  ✓  ✓	✗  ✗  ✗  ✓  ✓
OR Minister designates Pilot WMA	✓	✓	✓
3. Director WD approves or rejects application for WMA	✗	✗	✗
4. Director WD assigns reasons for rejecting application to become WMA	✗	✗	✗
5. Director WD forwards to Minister (within 14 days) successful application of WMA for publication	✗	✗	✗

in Gazette			
6. Minister issues certificate of authorization	×	×	×
7. Designated WMA gazetted according to regulations	×	×	×
<b>B. Formation of CBO and Designation as Authorized Association (AA)</b>			
8. Formation of CBO, dully registered in accordance with Societies ordinance	✓	×	✓
4. Developing and approval of constitution for CBO according to schedule one of WMA regulations	✓	×	×
3. Status of meeting requirements for application of AA	✓	×	×
<ul style="list-style-type: none"> <li>Minutes of village assembly approving formation of WMA</li> </ul>	✓	×	×
<ul style="list-style-type: none"> <li>Complete WMA data sheet as provided under schedule 2 of regulations and in accordance with regulation 11</li> </ul>	×	×	×
<ul style="list-style-type: none"> <li>Registration of CBO having a copy of the certificate of registration</li> </ul>	✓	×	×
<ul style="list-style-type: none"> <li>A copy of the constitution of the CBO</li> </ul>	✓	×	×
<ul style="list-style-type: none"> <li>Land use plan of the village, as approved by village assembly of respective villages</li> </ul>	×	✓	✓
<ul style="list-style-type: none"> <li>A sketch map of proposed WMA in relation to village land use plan</li> </ul>	×	✓	✓
<ul style="list-style-type: none"> <li>Boundary description of proposed WMA, its size and name</li> </ul>	✓	✓	✓
<ul style="list-style-type: none"> <li>A copy of the General Management Plan (GMP) according to Schedule 7 or a Resource Management Plan (RMP) according to schedule 8</li> </ul>	×	×	×
5. Application for Authorized Association status lodged to Director WD	×	×	×
8. Director WD accept or rejects application of CBO to become AA	×	×	×
9. Director Assigns reasons for rejecting application to unsuccessful CBO within 14 working days	×	×	×
10. Director WD forwards successful application to Minister for declaration of AA	×	×	×

11. Appeal by unsuccessful CBO lodged to Minister within 30 working days	✗	✗	✗
12. Successful AA enters into contract with investor for using WMA resources in accordance with GMP	✗	✗	✗
13. Investor works in close collaboration with AA to use and manage pilot WMA resources sustainably according to GMP	✓	✗	✗
14. Appoint and train Village game scouts	✓	✓	✓
15. Form village environmental committee	✓	✓	✓
14. WD monitors performance of AA and WMA according to social, economic and ecological criteria	✗	✗	✗

Key: ✓ = Step has been done or attained  
✗ = Step has not been done or attained

It is obvious from Table 10.1 that each of the pilot WMA has accomplished some steps towards becoming an operational WMA, but Wami-Mbiki has reached the most advanced stage in terms of forming the Authorized Association. However, it does not a General Management plan. This activity is scheduled for this year (2003). It should be given high priority so that the process of lodging application for the AA is done completed June or July at the latest. This will allow the WMA to undertake hunting activities if they are chosen among economic activities that will be pursued by the pilot WMA. The AA for Wami-Mbiki should also be considering the options, which have been proposed for economic activities. Based on recommendations by villagers from this survey, and a previous study on Economic Opportunities for Wami-Mbiki, these include;

- Trophy and resident hunting
- Photo tourism of animals and riverine along Wami river
- Individual beekeeping
- Collection center
- Natural forest management (NFM)

Based on the need expressed by villagers on the need for them to be allowed some consumptive use of game meat from time to time, grass for mats, baskets and other goods as well as timber, consideration for providing this under the GMP should be considered. Where

the desired use is incompatible with the proposed economic activity, the issue should be discussed with village members of the WMA so that they understand the ecological and economic rationale for the chosen use plan and where feasible, alternatives should be provided for the villagers.

Another important aspects for Wami-Mbiki on the way forward is to consolidate the fragile institutional set up of the CBO, which forms the AA. As a matter of priority, efforts should be made to encourage and entice Kibindu village in Bagamoyo district to join the WMA in order to close the gap, which could provide an opportunity for illegal users within the designated WMA area. Related to the institutional set up of Wami-Mbiki is the loose and sometimes uncertain relationship and ownership rights of various key stakeholders of the natural resource, including the District Councils, the Villages, the AA, the Army, which uses part of the designated WMA area for military purposes. The conflicting interests and claims of all these stakeholders need to be resolved as a matter of priority. It was proposed during discussion with the District Commissioner for Morogoro District that a forum involving all stakeholders should be convened before to resolve pending ownership perceptions and use rights before the pilot WMA develops their GMP, latter this year.

Currently, Village Game Scouts at Wami-Mbiki are paid an attractive incentive package for the opportunity cost of the time they spend performing activities on behalf of the WMA. While this is positive for morale and enhancing rural incomes, the rates should be examined so that when the facilitator eventually withdraws, the AA will be capable of paying and able to maintain a reasonable size of village game scouts.

At Uyumbu and Ipole, each village has a land use plan, which have been developed under VLUM. However, at Uyumbu, the process of establishing the CBO and subsequently identifying the designated AA has not yet started. Moreover, Uyumbu needs to close existing gaps in the WMA boundary by bringing on board villages that fall under Usoke and Sikonge district. So in terms of developing towards an operational WMA, Uyumbu has some way to go since the process of mobilization and sensitization of villagers and village governments is only about half done (for four villages that currently form the WMA). Concurrent with this, steps toward establishing the CBO such that it meets the criteria to become an AA should begin. In the meantime, Africare should facilitate the development

of a GMP for the WMA in order to expedite the process of applying to become a designated AA once other relevant information are in place.

In the case of Ipole, the villages already have a land use plan, which have been developed under VLUM. However the pilot WMA does not have a GMP. The process of forming the CBO and developing a constitution is already underway. It was recommended during fieldwork that this process should be expedited since Ipole could benefit from this year's hunting season if the application process for the AA is completed in time. The pilot WMA of Ipole already has an investor who is operating within the designated WMA. What is required therefore is for the AA to seek clarification from WD regarding the legal implications of any contract that may be negotiated between the investor and the AA. Of course, once the present lease agreement with the current investors is over (in 2003), the AA will be free to renegotiate the contract or seek another investor who may offer better terms. In order to control the movement of clients into the WMA, the AA for Ipole should build a gate at Ipole village, where entry permits will be monitored. In addition, the AA should work with village governments of current members to bring on board those villages to the southeast, which provide an opening into the WMA.

## Annex 6.1: BIBLIOGRAPHY

- Hederselskabet (2000). Review of Wami-Mbiki community based protection and utilization project, Tanzania (review)
- Jorgensen Korning, Asger Busk Petersen, Bukwali Hohansen, Timothy Rwegasira and Niels Kanstrup (1998). Wami-Mbiki Community based protection and utilization project, Tanzania. A project document
- Kjell Christophersen and George Jambiya (2000). Economic Opportunities in the Wami-Mbiki Wildlife Management Area
- Massawe, G. (2001). “Socio-economic impact of conservation on rural communities: A case study of Wami-Mbiki community based protection and utilization project “– Morogoro/Bagamoyo, Tanzania
- Ministry of Natural Resources and Tourism (2000). Options for participatory land use planning. Wami-Mbiki community based protection and utilization project – Morogoro & Participatory management of natural resources project
- United Republic of Tanzania (1998). *Wildlife Policy of Tanzania*. Ministry of Natural Resources and Tourism
- United Republic of Tanzania (1998). *National Beekeeping Policy*. Ministry of Natural Resources and Tourism
- United Republic of Tanzania (2002). *Guidelines for Designation and Management of Wildlife Management Areas*. Ministry of Natural Resources and Tourism
- United Republic of Tanzania (1974). *The Wildlife Conservation Act, 1974* (No. 12 of 1974) Wildlife Conservation (Wildlife Management Areas Regulation, 2002)

Rwegasira T. N. (2001). “The role of Community based conservation: A case study of Wami-Mbiki Community based protected and utilization project,” Morogoro/Bagamoyo, Tanzania. A special project submitted in partial fulfillment for the degree of bachelor of Science in Wildlife Management of Sokoine University of Agriculture

## 9. APPENDICIES

### *Appendix 1: Participation in the Focused Group Discussions*

#### **IPOLE PILOT WMA**

<b>NO.</b>	<b>NAME</b>	<b>IDEKAMISO</b>	<b>NO.</b>	<b>NAME</b>	<b>IDEKAMISO 28/2/03</b>
1	Samwel Nkari	Member	2	Mbuke Mlolo	Member
3	Mbuke Masunga	Member	4	Lime Masunga	Member
5	Mwahi Masunga	Member	6	Lusoloja Jilunga	Member
7	Daudi katoto	Member	8	Kabagasho Bukori	Member
9	John Anthony	Member	10	:Luigula Malimi	Member
11	Shija Lukuveja	Member	12	Sasoma Lumbika	Member
13	John Shija	Member	14	Sani Lyela	Member
15	Jemsi Malwilo	Member	16	Paskali Mtiliga	Member

<b>NO.</b>	<b>NAME</b>	<b>MSUVA</b>	<b>NO.</b>	<b>NAME</b>	<b>MSUVA 28/2/03</b>
1	Nasibu masoud Mdumla	Village Chairman	2	Ramadhani Mahinda	Village Secretary
3	Maganga S. Ramadhani	Member	4	Ally Ntami	Member
5	Maneno Charles	Member	6	Ramadhani K. Kitupa	Member
7	Haruna Issah	Member	8	Seif S. Kalehoa	Member
9	Hellen Richard	Member	10	Mariamou Said	Member
11	Edward Mayengo	Member	12	Daudi Rahim	Member
13	Haidani Omari	Member	14	Adamu Mbila	Member
15	Mrisho J. Lyamba	Member	16	Elizabeth Ndalanga	Member
17	Haruna I. Kaombwe	Member	18	Jibrali Omari	Member
19	Kulwa K. Clement	Member	20	Mauled S. Mahinda	Member
21	Ramadhani Juma	Member	22	Nkinga Kulwa	Member
23	Shabani iddi Lyaba	Member	24	Asha Abdalla	Member
25	Paulina Jhoshua	Member	26	Hamisi iddi	Member
27	Huseni Shabani	Member	28	Ramadhani Sanare	Member
29	Ramadhani Sefu	Member	30	Jumanne Makonda	Member
31	Ally Shaban	Member	32	Stivin Msogolo	Member
33	Stivin Msogolo	Member	34	Amina Dotto	Member
35	Amina J. dotto	Member	36	Ramadhani athumani	Member
37	Ramadhani Kanangwa	Member	38	Juma Sh. Mangwila	Member
39	Mashauri James	Member	40	Olipa Kamende	Member
41	Haruna Hamisi	Member	42	Mashaka Nsaso	Member
43	AllyChamba	Member	44	Saidi Msita	Member
45	Idaya maganga	Member	46	Tausi Haruna	Member
47	Mhozya Pumbuni	Member	48	Sikudhani Juma	Member
49	Juma Nkinga	Member	50	Kashindye Kipindula	Member
53	Doho clement	Member	52	Mashauri Jemsi	Member

55	Adiana Lucas	Member	54	Mbogo Sadiki	Member
		Member	56	Iddi Mlatwe	Member

<b>NO.</b>	<b>NAME</b>	<b>IZENGABATOGIL WE</b>	<b>NO.</b>	<b>NAME</b>	<b>IZENGABATOGILWE 28/2/03</b>
1	Jumanne Mange	Village Chairman	2	William Kasisa	Village Secretary
3	Saidi Hamisi	Member	4	Mussa Ramadhani	Member
5	Ramadhani Mzata	Member	6	Mathias Nyambebe	Member
7	Clement Yohana	Member	8	Daniel Kampen	Member
9	Magolofa Jumanne	Member	10	Dina Kiswagala	Member
11	Fatuma Masudi	Member	12	Mariam Masudi	Member
13	Samweli Seni	Member	14	Bratton Moses	Member
15	Kinga Machebe	Member	16	Hamisi Khakensa	Member
17	Seleman Masudi	Member	18	Hasan Hamisi	Member
19	Sophia Moses	Member	20	Method bigobo	Member
21	Mashaka Shaban	Member	22	Mohamed Shaban	Member

**Appendix2: Consultants Meeting With Donors and Facilitators of Pilot  
WMAs in Tanzania**

<b>No.</b>	<b>Name</b>	
1	Dr. H. Spsve;;e	WWF (TPO)
2	Mr. C. Malima	WWF (TPO)
3	Mr. Daniel Moore	USAID (NRM)
4	Mr. Asukile Kajuni	USAID (NRM)
5	Dr. Rolf Baldus	GTZ
6	Dr. Luduring Siege	GTZ (SCP)
7	Mr. Asgar Peterson	DANIDA (WAMI-MBIKI PROJECT)
8	Dr. Marcus Borner	FZS
9	Mr. Lesion Ole kwai	FZS
10	Ms. Rosemary Mpendazoa	BELGIUM EMBASSY
11	Prof Raphale Mwalyosi	UDSM (IRA)
12	Prof. H. Madulu	UDSM (IRA)
13	Mr. Lota Melamari	FORMER DG TANAPA
14	Dr. kassim Kulindwa	UDSM (ERB)
15.	Dr. Agness Mwakajo	UDSM (IRA)

### Appendix 3: Game Census Results

*Ipole Pilot WMA on 1<sup>ST</sup> MARCH 2003 (Line Transect length: 44.4KM)*

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Oribi	2	1	1	-	Marsh grassland
2.	Golden backed Jackal					Combretum/ Terminalia woodland
3.	Terrapin	5	<i>Not sexed</i>		-	Swamp
<b>BIRDS</b>						
4.	Open billed Stork	30	<i>Not sexed</i>		-	Marshy grassland
5.	Saddle billed stork	2	<i>Not sexed</i>		-	Marshy grassland
6.	White backed vulture	3	<i>Not sexed</i>		-	Miombo woodland
7.	Batleaur Eagle	1	<i>Not sexed</i>		-	Miombo woodland
8.	Red billed-hornbill	4	<i>Not sexed</i>		-	Miombo woodland

The two Pilot WMAs (i.e. Uyumbu and Ipole) in Tabora region did show in terms of wildlife in both absolute numbers and species composition. Infact only a few species were sighted although footprints and droppings were common. The species whose droppings and spoors were recorded are: - Elephant, Buffalo, Kudu, Hartebeest, Giraffe and Zebra others include Bushpig, duikers, baboon and bushbuck.

## Appendix 4: Summary of Animal Census Results as per Species.

### 1. Impala

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Transect One	136	54	69	13	<i>Miombo Woodland</i>
2.	Transect Two	382	-	-	-	<i>Miombo Woodland</i>
3.	Grand Total	618	-	-	-	<i>Miombo Woodland</i>

### 2. Lichtenstein Hartebeest

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Transect One	24	7	14	3	<i>Miombo Woodland</i>
2.	Transect Two	30	6	10	4	<i>Miombo Woodland</i>
3.	Grand Total	54	13	24	7	<i>Miombo Woodland</i>

### 3. Waterbuck

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Transect One	17	1	13	3	<i>Miombo Woodland</i>
2.	Transect Two	36	3	28	5	<i>Miombo Woodland</i>
3.	Grand Total	53	4	41	8	<i>Miombo Woodland</i>

### 4. Bush Duiker

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Transect One	1	-	1	-	<i>Miombo Woodland</i>
2.	Transect Two	3	2	1	-	<i>Miombo Woodland</i>
3.	Grand Total	4	2	2	-	<i>Miombo Woodland</i>

### 5. Warthog

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Transect One	3	-	1	2	<i>Miombo Woodland</i>
2.	Transect Two	12	1	4	7	<i>Miombo Woodland</i>
3.	Grand Total	15	1	5	9	<i>Miombo Woodland</i>

### 6. Southern Reedbuck

Serial #	Species	Total observed	Males`	Females`	Young and Juveniles	Habitat or comment
1.	Transect One	-	-	-	-	<i>Miombo Woodland</i>
2.	Transect Two	1	1	-	-	<i>Miombo Woodland</i>
3.	Grand Total	1	1	-	-	<i>Miombo Woodland</i>

**7. Steinbuck**

<b>Serial #</b>	<b>Species</b>	<b>Total observed</b>	<b>Males`</b>	<b>Females`</b>	<b>Young and Juveniles</b>	<b>Habitat or comment</b>
1.	Transect One	1	-	-	-	<i>Miombo Woodland</i>
2.	Transect Two	-	-	-	-	<i>Miombo Woodland</i>
3.	Grand Total	1	-	-	-	<i>Miombo Woodland</i>

**8. Bush Pig**

<b>Serial #</b>	<b>Species</b>	<b>Total observed</b>	<b>Males`</b>	<b>Females`</b>	<b>Young and Juveniles</b>	<b>Habitat or comment</b>
1.	Transect One	-	-	-	-	<i>Miombo Woodland</i>
2.	Transect Two	1	-	-	-	<i>Miombo Woodland</i>
3.	Grand Total	1	-	-	-	<i>Miombo Woodland</i>

**9. Zebra**

<b>Serial #</b>	<b>Species</b>	<b>Total observed</b>	<b>Males`</b>	<b>Females`</b>	<b>Young and Juveniles</b>	<b>Habitat or comment</b>
1.	Transect One	-	-	-	-	<i>Miombo Woodland</i>
2.	Transect Two	5	-	-	-	<i>Miombo Woodland</i>
3.	Grand Total	5	-	-	-	<i>Miombo Woodland</i>

## *Appendix 5: Itinerary of Work*

### REPORT ON THE CONSULTANCY FOR PILOT WILDLIFE MANAGEMENT AREAS BASELINE DATA SURVEY. WESTERN WORKING GROUP (WAMI-MBIKI, UYUMBU & IPOLE)

**Team Members:**

- Lota Melamari (Ecologist) - Team Leader,
- Dr. A. Isinika (Economist), and
- Prof. H. Madulu (Sociologist).

DATE	PLACE	ACTIVITY
24 <sup>th</sup> January, 2003	TCMP Offices Dar es Salaam	Meeting with donors and facilitators of the WMs process in Tanzania.
30 <sup>th</sup> January, 2003	WWF – TPO Dar es Salaam	Signing of work contracts by Consultants with WWF- TPO
1 <sup>st</sup> February , 2003	Dar es Salaam	Preparations for field work including some payments
17 <sup>th</sup> and 20 <sup>th</sup> February, 2003		Literature review
21 <sup>st</sup> February, 2003	Tabora	Travel to Tabora by air, Received by Africare Team in Tabora.
22 <sup>nd</sup> February, 2003	Urambo	Early morning travel by road to Urambo.  Afternoon reconnaissance survey of Uyumbu Pilot WMA.
23 <sup>rd</sup> February, 2003	Uyumbu	Game Census in Uyumbu.
24 <sup>th</sup> February, 2003	Urambo	Morning paid courtesy call to DC, DED, DPLO, DNRO with Africare Field Officer for Urambo.  Afternoon visit Nsogoro and Isongwa Villages.
25 <sup>th</sup> February, 2003	Uyumbu	Work with Izenya Batogile and Izimbili Village members.  Afternoon travel to Tabora.
26 <sup>th</sup> February, 2003	Tabora	Morning – Briefing and discussions with Africare office. Courtesy call to RC for Tabora Region.  Afternoon travel to Sikonge on arrival paid a courtesy call to District Officials.
27 <sup>th</sup> February, 2003	Sikonge	Worked in Msuva nd Ipole villages.  Late afternoon paid a courtesy call to DED – Sikonge
28 <sup>th</sup> February, 2003	Ipole	Work in Idekamiso and Utimule Villages.
1 <sup>st</sup> March, 2003	Ipole	Game Census in Ipole Pilot WMA and return to Tabora.
2 <sup>nd</sup> March, 2003		Travel by air from Tabora - Dar es Salaam.
19 <sup>th</sup> March, 2003		Consultants return to their places of residence to embark on report writing.

## **Appendix 6: Interview Checklist**

### **PILOT WILDLIFE MANAGEMENT AREAS BASELINE SURVEY INTERVIEW CHECKLIST**

#### **SOCIAL ASPECTS**

Based on the list of social indicators above, hereunder is the interview guide that was used to guide discussion with village government officials, NGOs, and other relevant stakeholders. The consultants, through discussion, gathered the information. Probing was often done to clarify issues or to seek for more informations

1.	Name of the village, ward, division, and WMA (VG).	
2.	The ethnic groups permanently living in this village (VG Staff).	
3.	Are some residents' permanently/temporarily moving to other areas? If yes, where do they go mainly and why? (VG, FGD District and Central government staff working in the area).	
4.	Are some residents moving into this area? If yes, why do they move in and where do they come from? (Same as above).	
5.	What are the personal characteristics of those who move out and in? (Same as above)	
6.	Which natural resources do village residents have access to? (FGD)	
7.	Of these, which are used for ritual purposes?	
8.	What are the taboos associated with natural resource use?	
9.	What are the mechanisms of accessing these resources? (FGD)	
10.	What is the composition of the village government in terms of age and sex? (VG)	
11.	What is the quality of the village government offices (take note by observations)? Did the village residents alone build them? Was there external assistance? (VG, Observation)	
12.	Which Community Based Organizations exist and for what purpose? (VG, FGD)	
13.	Do village residents know about WMAs and what is their role in them? (GFD)	
14.	Any training received by officials? (VG).	
15.	Have there been court cases involving village residents against natural resources or individuals against the village government? (VG, Wildlife officials, FDG).	
16.	How many cases are " <i>Mabaraza ya Usuluhishi ya Kata</i> " resolve per year and of what nature? (VG, Ward Council, Members or the Ward reconciliation committee).	
17.	How often does the lead Authorised Association meet with other stakeholders and what are the issues discussed? (VG).	
18.	Do you regularly meet with Wildlife staff? What issues do	

	you discuss? (VG).	
19	Number and type of educational facilities, enrolment by gender, drop out rates School staff).	
20	Which medical facilities are present in the village? (Medical staff).	
21	Water supply by type and quality (Community development staff) VG, Observation)	
22	The extent to which the villages have a sense of community (solidarity), as indicated by participation in community activities, stability of the village government, voter complaints, party affiliation, etc. (Community development staff, Communities).	
<b>ECONOMIC ASPECTS</b>		
1.	What occupation exist in the village (farming, livestock, fishing etc.) (VG), Give proportion of villagers in each occupation	
2.	What is the labour power available in the village (Number or proportion of able bodied villagers) VG	
3.	What are the main natural resources uses in the village (what type, game, wood, fuel, thatch grass, poles, timber etc.) (VG)	
4.	What is the status of natural resources access by villagers? (Use right to resources) (VG, FGD)	
5.	What is the average price of game meat in the village? (VG, FGD)	
6.	Availability of social and economic services (transport by road, water etc., water services, energy, medical services, education, shops etc.) (Mention type and number where applicable (VG, FGD)	
7.	What are the cost/price associated with accessing various basic needs in the village? (e.g. food stuff, medical services, transport, water , energy, education etc. ) (VG, FGD, Other stakeholders)	
8.	What types of business exist in this village? (e.g. shops, kiosk, butcher, tailors, blacksmith, mechanical shops such as garage etc.)	
9.	How many people are engaged in this business?	
10.	What are the main types of goods sold in this village? (food stuff, construction material, clothes, tools and equipment, kerosene, electronic goods etc) (FGD)	
11.	What are the natural resources base business (Mention then)	
12.	What are the five major income generating activities existing in the village today? (VG)	
13.	What are the potential economic opportunities in the village if the WMA starts operation?	
14.	What is the main annual village government income (VG)	
15.	What is the annual village government expenditure? (VG)	
16.	What are the sources of the village government income (VG, FGD)	
17.	What is the proportion of natural resources sources in the village government income (VG)	
18.	How many people are employed who currently live in this	

	village? (Salaried) (VG, FGD)	
19.	What is the consumption pattern of people in this village? (What is the staple food in the village? How many meals do families have per day? (VG, FGD)	
20.	What is the wealth status of villagers (Give rough estimate of proportions of poor, middle and rich categories. Also get criteria for categorization stated by villagers e.g. number of cows, size of cultivated farm, business ownership of assets etc.) (VG, FGD)	
21.	How is the availability and access to markets? (Do traders come to buy goods in the village or do village traders take goods to outside markets? Do buyers offer good prices? Are there enough traders to exhaust the volume of good available in the village? (FGD, Trader, business)	
22.	How is the current productivity of economic activities (VG, FGD) <ul style="list-style-type: none"> <li>- How much is harvested per acre/year for each crop type</li> <li>- How many visitors/tourists per season</li> <li>- How much milk/cow/day</li> <li>- How much fish is caught per day per person</li> </ul>	
23.	What is the profitability of business activities (Traders, FGD) <ul style="list-style-type: none"> <li>- What is the volume of sales/month</li> <li>- What is the profit margin on average</li> <li>- Are you able to re-invest some of the proceeds</li> </ul>	
24.	What are the main land use patterns in the village? (VG)	
25.	What are the land tenure regimes in the village? (VG) <ul style="list-style-type: none"> <li>- Customary ownership</li> <li>- Village government allocation</li> <li>- Private property (market transaction)</li> <li>- Use right (rent, borrow etc.)</li> </ul>	
26.	What are the natural resources values in this village? (VG, FGD) <ul style="list-style-type: none"> <li>- Direct use values (market values)</li> <li>- Indirect use values (ecological functions)</li> <li>- Existence values (State of being there – accustomed to its presence)</li> <li>- Aesthetic value (tourism etc)</li> <li>- Bequeath value</li> </ul>	
27.	Does the village have development plans? (VG)	
28.	What are the projects involved in the village development plan?	
29.	How far has the village gone in preparation for the WMA? (VG, FGD) <ul style="list-style-type: none"> <li>- What are the problems encountered?</li> <li>- What are the achievements attained thus far?</li> </ul>	
30.	Does the village have any CBC activities (VG, FGD) <ul style="list-style-type: none"> <li>- What are they?</li> <li>- What achievements have been registered?</li> <li>- What problems has the village encountered in implementing CBC?</li> <li>- Does CBC generate income for the community? How much per year?</li> </ul>	

	<ul style="list-style-type: none"> <li>- How is the distribution of benefits from the CBC to the; <ul style="list-style-type: none"> <li>o Village government?</li> <li>o Villagers?</li> </ul> </li> </ul>	
<b>ECOLOGICAL ASPECTS</b>		
1.	How many animal species are in the WMA and can you mention the names of these species	
2.	Of these, which ones are endemic, endangered, threatened or exotic species?	
3.	What are the estimated populations sizes or number of animals of each species?	
4.	Can you give the animal population trends for each species for the last five years?	
5.	Give the distribution of different animal species in the WMA according to different seasons and can you indicate this on the WMA map?	
6.	Are there animal movements or migrations in the WMA and what species are involved and at what seasons	
7.	Are there special routes or corridors the animals follow during their seasonal movements or migrations and can you indicate them on the WMA map?	
8.	What is the total area of the WMA and do you consider it as an ecosystem?	
9.	Do you have a general management plan (GMP) of the WMA?	
10.	How many habitat types make the WMA and can you mention the animals species found in each habitat type?	
11.	How many plant species are in the WMA and which species do you consider to be endemic, threatened, or exotic in the area?	
12.	Can you identify the dominant plant species composition of each habitat type in the WMA indicating at least the proportion of each species?	
13.	What are different types of water sources for wild animals and how are they distributed over the area?	
14.	Are these water sources permanent or seasonal? And do you consider them adequate?	
15.	What are some of the disturbances to the WMA, which are caused by human activities such agriculture, fires, and cutting trees for firewood or charcoal making?	
16.	What is the size of the area of the WMA that has been affected by these disturbances?	
17.	What other perturbations, for example floods that occur or have occurred in the past within the WMA, and what area has been affected?	
18.	What animal species are hunted in the WMA and for what purpose	
19.	What is the hunting quota allocated for each species and the average percent utilization of this quota?	
20.	Are there uses of other of other natural resources for example beekeeping or fishing or mining in the WMA? What is the extent of the activity	
21.	Is there any crop raiding by animals in the area, what	

	crops are raided and by which animals?	
22.	Can you estimate the area of farmed land that is raided by wild animals and the value of the crops lost through loss due to vermin	
23.	Do animals attack human beings and livestock? If so, what animals are responsible and what is the extent of attack per year	
24.	Are there diseases, which are transmitted between wild animals, livestock and people (zoonotic)? If so, what are these diseases and which animals are involved? And to what extent?	

**Appendix 7: Household Questionnaire**

**UNITED REPUBLIC OF TANZANIA  
MINISTRY OF NATURAL RESOURCES AND TOURISM  
WILDLIFE DIVISION**

**BASELINE SURVEY FOR PILOT WILDLIFE MANAGEMENT AREAS  
HOUSEHOLD QUESTIONNAIRE**

Questionnaire No. \_\_\_\_\_

Village _____ Ward _____ Division _____
District _____ Region _____
Name of Enumerator: _____
Date: _____
Checked by: _____

**SECTION A: DEMOGRAPHIC INFORMATION**

1. Age \_\_\_\_\_
2. Sex  
\_\_\_\_\_ 01 male  
\_\_\_\_\_ 02 female
3. How many persons are there in your household (i.e. persons that leave here with you and share this house/room)
4. Size of household  
\_\_\_\_\_ Adult (15+) \_\_\_\_\_ male \_\_\_\_\_ females  
\_\_\_\_\_ Children (0-14) \_\_\_\_\_ male \_\_\_\_\_ females  
\_\_\_\_\_ Older (61+) \_\_\_\_\_ male \_\_\_\_\_ females  
\_\_\_\_\_ Number of Household members
5. Education of the household head  
01 \_\_\_\_\_ None  
02 \_\_\_\_\_ Primary incomplete  
03 \_\_\_\_\_ Primary complete  
04 \_\_\_\_\_ Secondary incomplete  
05 \_\_\_\_\_ Secondary complete  
06 \_\_\_\_\_ Diploma  
07 \_\_\_\_\_ Vocational training  
08 \_\_\_\_\_ University

6. Occupation of head of household  
 01 \_\_\_\_\_ Farmers  
 02 \_\_\_\_\_ Fisher folk  
 03 \_\_\_\_\_ Employed/have permanent work  
 04 \_\_\_\_\_ retired  
 05 \_\_\_\_\_ unemployed  
 06 \_\_\_\_\_ casual worker  
 07 \_\_\_\_\_ livestock keeper  
 08 \_\_\_\_\_ Other
7. Where were you born?  
 01 Same village  
 02 Same ward different village  
 03 Same district different ward  
 04 Same region different district  
 05 Other regions
8. If not born in this village when did you start living in this village?  
 \_\_\_\_\_
9. Which factors influenced your movement to this village?  
 01 \_\_\_\_\_  
 02 \_\_\_\_\_  
 03 \_\_\_\_\_
10. Are there people from your household who have moved out of this village?  
 01 Yes  
 02 No
11. What is the age and sex characteristics of those who moved out?

NO.	Age	Sex	Reasons for moving
1.			
2.			
3.			
4.			

12. Which factors influenced your movement from that village?  
 01 \_\_\_\_\_  
 02 \_\_\_\_\_  
 03 \_\_\_\_\_
13. Are there people from your household moved in to village?  
 01 Yes  
 02 No

14. What is the age and sex characteristic of those who moved in?

NO.	Age	Sex	Reasons for moving
1.			
2.			
3.			
4.			

## SECTION B: WATER SOURCES SITUATION

15. Water source table

	1.5 Which source of water do you use? (Check all that apply)		15.3 Amount that you pay per unit  Pay nothing (0) Tshs/m3 or Tshs/20L bucket (please specify)	15.4 Amount of time your household spends collecting water  Minutes/day (including walking and waiting time)
	15.1 Wet season	15.2 Dry season		
1) Private connection to piped water in house			Tshs/m3	
2) Yard tap (shared connection)				
3) Own source (specify) (well, borehole)				
4) Village well			Tshs/bucket	
5) Water Vendors (specify)----- (Tanker, handcart, other)				
6) Rivers and streams				
7) Spring				
8) Other; specify_____				
TOTAL	100%			

16. Source satisfaction table

	16.1 [Enumerator: Check all sources used in 10.1 and indicate here with an "X"]	How long do you have to queue waiting to get water? (01)<15 min. (02)<30 min (03)<1 hour (99)>1 hour		16.4. Availability from this source is ...? (01) Poor (02) Fair (03) Good
		16.2 Wet season	16.3 Dry season	
1) Private connection to piped water in house				
2) Yard tap (shared connection)				
3) Own source (specify) (well, borehole)				
4) Village well				
5) Water Vendors (specify)_____(tanker,				

handcart, other)				
6) Rivers and streams				
7) Spring				
8) Other; specify _____				

17. What is the primary method you use to treat your water? [do not prompt]
- \_\_\_\_\_ (00) None
  - \_\_\_\_\_ (01) Boiling
  - \_\_\_\_\_ (02) Filtering
  - \_\_\_\_\_ (03) Settling
  - \_\_\_\_\_ (04) Chemical treatment
  - \_\_\_\_\_ (05) Other, specify \_\_\_\_\_

**SECTION C: SANITATION SITUATION**

18. What types of toilet systems does this household usually use?
- \_\_\_\_\_ (00) No facility
  - \_\_\_\_\_ (01) Pit Latrine
  - \_\_\_\_\_ (02) Filtering
  - \_\_\_\_\_ (03) Pour Flush toilet
  - \_\_\_\_\_ (04) Public Latrine
  - \_\_\_\_\_ (05) Other

**Solid Waste**

19. What is the most commonly used mode of disposing refuse from this household?  
How does your household dispose off most of its refuse?
- \_\_\_\_\_ (01) dumping in your neighborhood
  - \_\_\_\_\_ (02) burning in your compound
  - \_\_\_\_\_ (03) burying in your compound
  - \_\_\_\_\_ (04) indiscriminate disposal (throwing away anyhow?)
  - \_\_\_\_\_ (05) local collection system
  - \_\_\_\_\_ (06) organized community collection system

**SECTION D: Natural Resources Use Benefit (Energy, wildlife, forest products)**

20. What sources (s) of energy do you use for cooking? Check all that apply
- \_\_\_\_\_ (01) Firewood
  - \_\_\_\_\_ (02) Charcoal
  - \_\_\_\_\_ (03) Biogas Stove
  - \_\_\_\_\_ (04) Kerosene Stove
  - \_\_\_\_\_ (05) Electric hot plate or cooker
  - \_\_\_\_\_ (06) Other, Specify \_\_\_\_\_
21. What natural resource products do you use in your household?

- \_\_\_\_\_ (01) building poles
- \_\_\_\_\_ (02) thatching grass
- \_\_\_\_\_ (03) game meat
- \_\_\_\_\_ (04) medicinal plants
- \_\_\_\_\_ (05) Pottery soil
- \_\_\_\_\_ (06) grazing grass
- \_\_\_\_\_ (07) Other, Specify \_\_\_\_\_

22. How frequently do you use these resources?

Code	Resource use	Daily	Weekly	Monthly	Annually
01	Building poles				
02	Thatching grass				
03	Game meat				
04	Medicinal plants				
05	Pottery soil				
06	Grazing grass				
07	Other, Specify				

23. What is the availability of these resources currently

Code	Resources use	Low	Medium	Plenty
01	Building poles			
02	Thatching grass			
03	Game meat			
04	Medicinal plants			
05	Pottery soil			
06	Grazing grass			
07	Other, Specify			

## SECTION C: ECONOMIC PROFILE

### Productive Activities and Markets

24. What productive activities do you engage in during the dry season (rank 3 by Importance)

- \_\_\_\_\_ (01) Cash crop farming
- \_\_\_\_\_ (02) Food crop production (maize, paddy, cassava, etc)
- \_\_\_\_\_ (03) Small business (food vending,)
- \_\_\_\_\_ (04) Wage employment (casual labour)
- \_\_\_\_\_ (05) Vegetable farming
- \_\_\_\_\_ (06) handcrafts for sale
- \_\_\_\_\_ (07) Water vending
- \_\_\_\_\_ (08) game meat business
- \_\_\_\_\_ (09) tourist

25. What productive activities do you engage in during the wet/rainy season
- \_\_\_\_\_ (01) Cash crop farming
  - \_\_\_\_\_ (02) Food crop production (maize, paddy, cassava, etc)
  - \_\_\_\_\_ (03) Small business (food-vending,)
  - \_\_\_\_\_ (04) Wage employment (casual labour)
  - \_\_\_\_\_ (05) Vegetable farming
  - \_\_\_\_\_ (06) handcrafts for sale
  - \_\_\_\_\_ (07) Water vending
  - \_\_\_\_\_ (08) Game meat business
  - \_\_\_\_\_ (09) Tourist guide)
26. What are the potential productive activities do you anticipate resulting from the establishment of the new WMA?
- \_\_\_\_\_ (01) Cash crop farming
  - \_\_\_\_\_ (02) Food crop production (maize, paddy, cassava, etc)
  - \_\_\_\_\_ (03) Small business (food-vending,)
  - \_\_\_\_\_ (04) Wage employment (casual labour)
  - \_\_\_\_\_ (05) Vegetable farming
  - \_\_\_\_\_ (06) handcrafts for sale
  - \_\_\_\_\_ (07) Water vending
  - \_\_\_\_\_ (08) Game meat business
  - \_\_\_\_\_ (09) Tourist guide)
27. How much did you earn last season from your economic activities?
- \_\_\_\_\_ (01) less than 10,000
  - \_\_\_\_\_ (02) Between 10,001 and 20,000
  - \_\_\_\_\_ (03) Between 20,001 and 30,000
  - \_\_\_\_\_ (04) Between 30, 001 and 60,000
  - \_\_\_\_\_ (05) Between 60,001 and 100,000
  - \_\_\_\_\_ (06) Between 100,001 and 150,000
  - \_\_\_\_\_ (07) Between 150,001 and 200,000
  - \_\_\_\_\_ (08) Between 200,001 and 300,000
  - \_\_\_\_\_ (09) Between 300,0001 and 500,000
  - \_\_\_\_\_ (99) Above 500.000
28. Remittance How much money do you receive as gifts or assistance from your children and others?
- \_\_\_\_\_ (01) less than 10,000
  - \_\_\_\_\_ (02) Between 10,001 and 20,000
  - \_\_\_\_\_ (03) Between 20,001 and 30,000
  - \_\_\_\_\_ (04) Between 30, 001 and 60,000
  - \_\_\_\_\_ (05) Between 60,001 and 100,000
  - \_\_\_\_\_ (06) Between 100,001 and 150,000
  - \_\_\_\_\_ (07) Between 150,001 and 200,000
  - \_\_\_\_\_ (08) Between 200,001 and 300,000
  - \_\_\_\_\_ (09) Between 300,0001 and 500,000
  - \_\_\_\_\_ (99) Above 500.000

**Income and Expenditures**

29. How many members of your household currently earn some income (from a job and/or business and/or part-time work)?
30. Do you receive money in terms of gifts or otherwise from other sources (including relatives or friends living outside the village)?  
 \_\_\_\_\_(00) Yes  
 \_\_\_\_\_(01) No
31. [If yes] how much money (cash) do you receive per year?
32. Does your household receive any other income (agricultural sales, own business, rental, seasonal income sales of property, etc.)?  
 Amount per year \_\_\_\_\_ Tshs don't know (99)
33. How many of the following assets are owned by your household?

	Assets	Number	Estimated value Tshs
01	House		
02	Cart		
03	Hoes		
04	Motorcycle		
05	Boat		
06	Bicycle		
07	Ploughs		
08	Tractor		
09	Sewing machine		
10	Land (acres)		
11	Refrigerator		
12	Generator		
13	Trolley		
14	Kerosene stove		
15	Radio		
16	Water tank		
17	Furniture (tables, chairs, beds)		
18	Improved charcoal stove		
19	Fire arm		
20	Vehicle		

34. Do you have any livestock?  
 \_\_\_\_\_(01) Yes  
 \_\_\_\_\_(00) No

## 35. Livestock type, number and value

	Animals	Number	Estimated Current Value T (Tshs) (mean value)
1	Cattle		
2	Sheep		
3	Goats		
4	Pigs		
5	Rabbits		
6	Chicken and other poultry		
7	Donkey		

## 36. Do you have a farm?

\_\_\_\_\_ (00) Yes  
 \_\_\_\_\_ (01) No

## 37. If yes, indicate the quantities of the crops harvested

	Crop	Acreage		No. of units harvest	
		Short rains	Long rains	Short rains	Long rains
1	Green Vegetables				
2	Tomatoes				
3	Maize				
4	Beans				
5	Onions				
6	Cassava				
7.	Rice				
8	Others				

**HOUSING and ownership**

## 38. How many rooms does your household have?

\_\_\_\_\_ No. Of rooms

39. What material(s) were used to build this house? *Check only one primary material for Walls, Floors and Roof.*

Walls: \_\_\_\_\_ (01) Cement  
 \_\_\_\_\_ (02) Burnt bricks  
 \_\_\_\_\_ (03) Mud and poles  
 \_\_\_\_\_ (04) Sheet metal  
 \_\_\_\_\_ (05) Wood  
 \_\_\_\_\_ (06) Thatch  
 \_\_\_\_\_ (07) Mud bricks  
 \_\_\_\_\_ (08) Lime and stone  
 Floor: \_\_\_\_\_ (01) Cement and sand  
 \_\_\_\_\_ (02) Earth/Clay

- Roof: \_\_\_\_\_(03) Other  
 \_\_\_\_\_(01) thatching grass/palm thatch  
 \_\_\_\_\_(02) mud poles and grass  
 \_\_\_\_\_(03) Mud and straw  
 \_\_\_\_\_(04) Corrugated iron sheets (aluminum)  
 \_\_\_\_\_(05) tiles

40. Have you ever-borrowed money  
 (01) Yes  
 (02) No
41. Where or from whom do you borrow the money? *Check only 1 important source:*  
 \_\_\_\_\_(01) Family member  
 \_\_\_\_\_(02) Friend  
 \_\_\_\_\_(03) Money Lender  
 \_\_\_\_\_(04) Bank  
 \_\_\_\_\_(05) other, specify \_\_\_\_\_  
 \_\_\_\_\_(99) don't Know/Not sure
42. How long would it take you to return the borrowed money?  
 \_\_\_\_\_(01) Less than 3 months  
 \_\_\_\_\_(02) 3-6 months  
 \_\_\_\_\_(03) 7-12 months  
 \_\_\_\_\_(04) 13-18 months  
 \_\_\_\_\_(05) More than 18 months  
 \_\_\_\_\_(99) Don't Know/Not sure

**SECTION D: SOCIAL DIMENSION**

43. What do you understand by WMA? (Check relevant aspect mentioned)  
 a \_\_\_\_\_(01) Participation  
 b \_\_\_\_\_(02) Benefit sharing  
 c \_\_\_\_\_(03) Resource conservation  
 d \_\_\_\_\_(04) Follow WMA guidelines and regulations
44. Do you like the idea of WMA? \_\_\_\_\_(01) Yes \_\_\_\_\_(02) No
45. If No, why \_\_\_\_\_
46. What are your opinions for improvement \_\_\_\_\_
47. How many times have you been involved in a village collective activity last year? \_\_\_\_
48. How many village meetings have been called for the past one year \_\_\_\_\_
49. Does the leadership present the annual income & expenditure report? \_\_\_\_ (01) Yes-  
 (02) No.
50. Does the leadership act responsibly and in justice? \_\_\_\_\_(01) Yes \_\_\_\_\_(02) No.

**UNITED REPUBLIC OF TANZANIA**  
**Wildlife Division**  
**Ministry of Natural Resources and Tourism**

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**Draft**

**By**

**L.Melamari, N.F. Madulu &  
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