

**JOB MULTIPLIER EFFECTS AND LEAKAGES IN PROTECTED AREAS IN
TANZANIA: A CASE STUDY OF MIKUMI NATIONAL PARK**

BY

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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MANAGEMENT OF NATURAL RESOURCES FOR SUSTAINABLE
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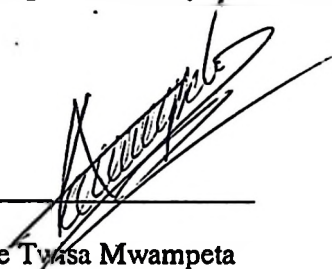
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ABSTRACT

The objective of this study was to assess job multiplier effect and leakage in protected areas (PAs). PAs are currently promoted as a positive tool for poverty reduction and sustainable livelihood of the local communities. Many people live in the vicinity of these PAs and denied consumptive access to wildlife resources which they have depended for centuries. Therefore, in order to ensure the long term survival of our PA's ecosystem including the wildlife, there is a need to ensure that the local people benefit through job creation from these PAs in turn for them to increase their support to the conservation efforts. Data for job multiplier effects and leakages analysis were collected using questionnaire, focus group discussions, and direct observations and by use of reports, published and unpublished reports from different offices. It was revealed that job multiplier for MINAPA was 20%. Job leakage was very high (83%), leakage was very high due to few accommodation facilities, low quality food processing and poor social services that courses the visitors to seek products and services to other location hence creating jobs to other area far from Mikumi area. It is recommended that more research to be done in order to get reference and standard for comparison purposes.

DECLARATION

I, Undule Twisa Mwampeta, do hereby declare to the Senate of Sokoine University of Agriculture, that this dissertation is my original work and that it has neither been submitted nor being concurrently submitted for degree award in any other institution.



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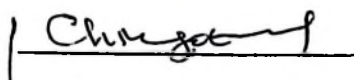
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DEDICATION

To My family; My Wife Hon. Magdalena Sakaya (MP) and daughter Nazareth Kasumbula Mwampeta.

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LIST OF ABBREVIATIONS

ATTA	African Travel and Tourism Association
CCS	Community Conservation Services
CPW	Chief Park Warden
GMP	General Management Plan
HQ	Head Quarters
IUCN	International Union for Conservation of Nature
MINAPA	Mikumi National Park
MNRT	Ministry of Natural Resource and Tourism
NGO	Non Governmental Organization
NP	National Park
PAs	Protected Areas
SCIP	Support for Community Initiated Projects
SPSS	Statistical Package for Social Services
TANAPA	Tanzania National Park
TAS	Tanzania Shillings
TWP	Tanzania Wildlife Policy
UNEP	United National Environment Programmer
URT	United Republic of Tanzania
VETA	Vocational Educational and Training Authority
WMA	Wildlife Management Areas

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

The principles of sustainability require part of the earth's land to be set aside as protected areas (PAs). According to IUCN (1994), PAs are supposed to be dedicated for protection and maintenance of biodiversity and associated natural and cultural resources and managed through legal or other effective means. These areas make a contribution to human society by conserving the natural and cultural heritage and ensuring the ecological balances. Many developing countries have therefore set aside natural areas for recreation in form of national parks and other protected area categories. For instance, while Green and Paine (1997) estimated that by the year 1996 the world network of PA's covered about 13 245 527 km² representing 8.84%, Eagles *et al.* (2002) observed that by the year 2002, about 44 000 sites met the IUCN definition of PA's together covering nearly 19% of the total land surface of the planet.

Major goals of PA's have been identified as protection of globally significant wildlife and ecological process and that concept of ecology has been used as a justification for the creation of new parks (Eagles, 1997; Eagles *et al.*, 2002). However, other factors like tourism plays a major role in the creation of PAs and that area's tourist potential becomes an important factor in the selection process. Tourism development in and around the PAs plays an important role in the development of the local areas in terms of provision of employments and other benefits.

The county's PAs are characterized by abundance, diversified, reliable and visible wildlife resources, unspoiled environment, beautiful and spectacular landscapes and sceneries and

numerous archaeological sites. These areas provide a diversified opportunity for tourism activity and that the country's wildlife is considered among the finest in the world known for many years. The declared and publically promotion of the natural features, ecosystems and biodiversity act as a strong attraction for the tourism industry and provides a vehicle for sustainable development of the national, regional, and local economies and their livelihood. There is an increasing appreciation of the economic importance that many PAs plays by providing environmental services like water supply, flood control and mitigation of the effects of the climate change (IUCN, 1998; 2000).

To show its commitment to conservation, the government of Tanzania has currently set aside nearly 28% of its land as wildlife and botanic sanctuaries which enjoys a high degree of protection and management in form of PAs. These areas include 16 (Table, 8) national parks, Ngorongoro Conservation Area, 30 game reserves, and 38 game controlled areas. Other PA categories include wildlife management areas, game controlled areas, forest reserves as well as marine and nature reserves. Management of PAs in Tanzania is governed by the Wildlife Conservation Act of 1974, which allows the Government to establish protected areas and outlines how these are to be organized and managed. Being one of the categories of PAs, National Parks represent the highest level of resource protection that can be provided.

The perspective of some communities is, establishment of PAs has made enormous changes in terms of their own identity, security and economic capacity (Zuluaga *et al.*, 2003). Some PAs e.g. Ngorongoro Conservation Authority, have included in the legislation the rights of indigenous peoples to live in and manage certain territories (Zuluaga *et al.*, 2003), while other PAs have helped poor communities economically by providing the basis

for developing tourism-based industries (Bettie, 2007). For instance, local communities living adjacent to Lake Manyara National Park are highly involved in entrepreneurial tourism activities particularly at Mto wa Mbu town (Looiboki, 2007).

However, observation by Borrini-Feyerabend *et al.* (2000) suggested that local and mobile communities feel a sense of resentment, distrust and resistance towards the PAs in their midst. For instances, communities were forced to relocate or limited from traditional resource uses because of the establishment of the PAs, with the consequent disruption of their livelihoods and well-being (Borrini-Feyerabend *et al.*, 2004). Personal communication with MINAPA Park ecologist in 2009 revealed that during boundary demarcation in Maharaka village near Mikumi National Park (MINAPA) resulted into conflicts between village residents and the park authority resulting into human injury and property damage. This could have been the reason as to why some commentators maintain that cumulative negative impact of PAs may have been underestimated (Cernea and Schmidt-Soltau, 2003). However, more or less strength, depending on their own organising abilities, many affected indigenous and local communities have been claiming for the recognition of past inequities and the redress of injustices (Cernea and Schmidt-Soltau, 2003).

In other cases, the local PAs administrators have responded by agreeing to distribute some “conservation benefits” to local communities, though this has not always been done with their involvement (Borrini-Feyerabend and Sandwith, 2003). It has been reported that from 1993 to 2009, MINAPA contributed a total of TAS 484 613 044 to communities adjacent to the park, through Tanzania National Park’s Support for Community Initiated Projects (SCIP). This fund amounts to 7.5% of each park’s operations (TANAPA, 2010).

Worah (2002) noted that, such contribution play a role as a development component to conservation initiatives and can only be judged on a case-by-case basis if such a measure is equitable and effective. In view of this opinion, it is justifiable to establish the contribution of PAs in Tanzania, so that appropriate conservation and natural resource management policies are put in place.

1.2 Problem Statement and Justification

PAs are currently promoted as a positive tool for poverty reduction and sustainable livelihood of the local communities. The move is considered to be the way in which the local people benefits from their presence in the vicinity of the PAs. For a long time these people have been custodians to our wildlife. PAs are found in most of the poorest parts of the world where people's livelihoods for many years depended to a great extent on natural resources found on these areas. Many people live in the vicinity of these PAs and denied consumptive access to wildlife resources which they have depended for centuries.

Therefore, in order to ensure the long term survival of our PA's ecosystem including the wildlife, there is a need to ensure that the local people benefit from these PAs in turn for them to increase their support to the conservation efforts. If carefully and properly planned and utilized, PAs can be a positive tool for local and regional social-economic development and biodiversity conservation.

MINAPA was gazetted in 1964 among the establishment objectives was to improve the living standard of local communities surrounding the park by providing direct and indirect jobs (MINAPA, 2007). However there is little information available in MINAPA on job creation and its multiplier effects. The hypothesis that tests the job multiplier effects and

economic leakages in Tanzania PAs is largely untested and currently still a gap of knowledge exists in that area. Therefore, MINAPA and Mikumi town represents a perfect case and hence the need for this study.

It is important to know how PAs improves the livelihood condition of the local people living in their vicinity because it can be the positive tool for social economic development and employment provision. Therefore, it is expected that the study adds to a scientific understanding of the relatively unknown aspects of its contribution to job multiplier effect and leakage. In addition this study may form a basis for more researches, projects and discussions among stakeholders in the fields of PAs conservation and socio-economics development. The outcome assists MINAPA management and other key stakeholders to assess their policies and strategies in order to cope with the demand for nature conservation and local community's development. It is also expected that the findings of this study will provide a benchmark for stakeholders like NGO's, researchers, planners and policy makers to build on and use it as a source of reference for further research.

1.3 Objectives

1.3.1 General objective

The overall objective of the study is to assess job multiplier effects and leakages in and around MINAPA.

1.3.2 Specific objectives

- i) To identify jobs created in community attributed to the presence of MINAPA;
- ii) To assess job multiplier and effects attributed to the presence of MINAPA;
- iii) To determine job leakages at MINAPA region and;
- iv) To identify factors which causes jobs leakage in and around MINAPA and provide some recommendations?

1.4 Research Questions

The following research questions will be answered by this study

- i) How effective is MINAPA in creating jobs to the local community?
- ii) What kinds of jobs are creating in the region due to the presence of MINAPA?
- iii) What are the job leakages factors in MINAPA?
- iv) What is the job multiplier due to the presence of MINAPA?

1.5 Limitation of the Study

At the beginning of my study I planned to calculate job multiplier by Income – Output model, however, that was changed due to unreliable of the data delivered by the businessman. When I tried to compare the data delivered by the businessman in some of the lodges and hotels about people accommodated per year and compared with the actual registration data from MINAPA for 2007, it was found that only 4.5% of the total visitors was reported (10 visitors out of 222, in case of Half way guest house) while in some Lodges the data were kept in their head quarters in Dar-es-salaam (Mikumi Wildlife Camp) this make it difficult to access. In other small business holder they do not keep the records of their business. For instance, only dairy calculations were available based on maximization of benefit and unfixed price subjected to customer income, as it was observed that the prices for agricultural products sold to MINAPA staff was higher compared to that of villagers of the Mikumi town thinking that MINAPA staff have higher income compared to the villagers. Also the salaries differ much in private sectors and there was no scheme of service to differentiate professionalism, skill and level of education. Economic base theory need some one who is familiar with the area (I worked in this area for more than 10 years), otherwise most of the information will be bias because most of the people do not like to talk about their business issues. Finally when planning for

questionnaire they must not take long time to be answered because most of the people feel bored and some respondents expect to get some income when time consumed is longer to postponed their duties. Inter-district leakage was difficult to evaluate at Mikumi because there is no clear tribes boundaries but only administrative regions. In Tanzania all the land is under the public and remains under president as a trustee for and on behalf of all the citizen of Tanzania (URT, 1999). It is also emphasized that any civilian of the United Republic of Tanzania has the right to live anywhere in this country as long as she or he does not break the laws (URT, 1999).

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Protected Areas

PAs present the heart of the world's political and economic commitment to conserve biodiversity and other natural and related cultural resources. They are major component of official conservation policy and practice. The United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) has recently calculated that there are more than 102 000 protected areas throughout the world covering more than 11.5% of the terrestrial and 3.4% of marine surfaces of the total earth (Chape *et al.*, 2003). These sites have been established virtually by all countries of the world and are managed through special rules and regulations for conservation goals. Conservation approaches, however, are evolving rapidly, responding to social and economic changes as well as advances in natural and social sciences (Chape *et al.*, 2003).

Protected areas are important due to the fact that they increase income, stimulate new enterprises through tourism, improve living standards and increases jobs for local residents, stimulate and diversify the local economy to people like farmers and pastoralist. In addition PAs encourage local manufacture of goods such as curio shops, improves local facilities, transportation, communications and social services through benefit sharing. Furthermore, PAs support environmental education for visitors and locals, establish attractive environments for residents and visitors. They also improve intercultural understanding; encourage development of culture, crafts, arts and increase education level of local community (Eagles *et al.*, 2002).

PAs in Tanzania have been operating since early 50's and the process of gazetting more PAs is still going on. In 1961 there were three national parks and nine game reserves in Tanzania (TWP, 1998). Currently, the country's protected area network consists of 15 national parks, Ngorongoro Conservation Authority, 34 game reserves and 38 game controlled areas covering an approximately 28% of the country's total landmass (URT, 1998). Other protected area categories includes marine and forest reserves.

The concept of adding more PAs is good for the benefit of the present and future generation. However increasing demand of natural resources from PAs by the adjacent communities creates more challenges to conservationist and policy-makers. Historically, the PA strategy was based on a "fence and fine" approach (Hutton *et al.*, 2005). The ability of this strategy to deliver effective conservation and equal social outcomes has been seriously questioned and has been under considerable scrutiny since mid 1980's in most African countries (Humble and Murhpre, 2001). The exclusion approach has been criticized being costly, not providing adequate conservation, socially unjust, leaving local people deprived and bound to bear the real conservation cost (Vedeld, 2002). Further more insufficient investment in many PAs has resulted in 'paper parks' with limited management and progressive degradation of the resources that the PAs were established to protect (Wilkie *et al.*, 2001).

2.2 Local Community and Local Job

A community as conceptualized by Borini (1992) consists of human group sharing a territory and involved in different but related aspects of livelihoods such as managing natural resources, producing knowledge and culture, and developing productive technologies and practices. It can be further specified that the members of a "local

community” are those people that are likely to have face-to-face encounters and/or direct mutual influences in their daily life (Borrini, 1992). In this sense, a rural village, a clan in transhumance or the inhabitants of an urban neighbourhood can be considered a “local community”, but not all the inhabitants of a district, a city quarter or even a rural town (Borrini, 1992). A local community could be permanently settled or mobile. From the scope of this study local job refers to people working on indirect jobs that are created in relation to the presence of MINAPA not permanently employed.

2.3 Economic Base Model

Knowledge of the local economy usually results via analysis using a variety of economic base analytical techniques. Klosterman (1990) noted that the economic base technique is considered to be one of the oldest, simplest and most widely used techniques for regional economic analysis. It is an analytical method that illustrates many fundamental techniques used by local and regional planners, including areas comparisons, local versus regional/national conditions, and standardizing values.

The economic base model divides employment into two major categories: First, export or basic industries which produce and sell goods that bring in new income from outside the area (Watkins, 2010). According to Davis (1990) basic sector made up of local businesses (firms) that are entirely dependent upon external factors which produce and sell goods that simply circulate existing income in the area and second is a non-basic sector which are firms that depend largely upon local business conditions.

The economic base technique is based on a simple causal model that assumes that the basic sector is the prime cause of local economic growth, that it is the economic base of the local economy (Klosterman, 1990). The economic base model is commonly used for estimating

the short-term impacts of a particular project on employment. It has also been used occasionally for projections (refer for example Dumas, 2003). Employment in the export sector creates a multiplier effect by providing additional employment from the new jobs it brings in. The total number of jobs resulting from one export job is the employment multiplier (Watkins, 2010).

2.4 Economic Multiplier

An economic multiplier is a number used to estimate economy-wide impacts of industry-specific economic changes (David, 1989). Multipliers are generated from numerical or statistical models of a national or regional economy. Using models, multipliers can be calculated for every business or industry sector in the economy. They often appear when advocates for private sector projects are seeking public support. According to David, (1989), multipliers often vary in their unit of measurement or denominator such as output, jobs and income.

2.5 The job Multiplier

Job multipliers refer to the total number of new jobs created in the region per each direct new job (David, 1989). David further argued that the job multiplier is associated with a particular regional economic stimulus designed to yield an estimate of the total employment attributable to the stimulus per job or man-year of employment directly created.

According to Isard (1960) the job multiplier is equal to total (or increase in) employment in both basic and service activities divided by total (or increase in) basic employment. The multiplier is simply a ratio (i.e. not an absolute number), whereas the multiplier effect

refers to the number of jobs (or the amount of income) supported or created by the basic jobs (Davis, 1990).

2.6 The Use of Economic Multiplier

Economic multipliers are used to justify public concessions to private industry. Such assistance for business may include land acquisition, new roads and sewers, job training programs, subsidized loans, and tax incentives. The extent of public concessions is determined through bargaining between government and industry, and in the course of the bargaining those who stand to gain most from the new enterprise have a natural tendency to inflate the relevant multipliers (Olsen, 1971). Economic multipliers are extremely simple and convenient tools for calculating the total economic impact of an activity from the known data on direct jobs, income, output, etc., involved in that activity (Duma, 2003). Economic impact analysis can be used also for a political purpose, such as demonstrating the importance of a particular government or private sector activity (or set of activities) in order to build public support for the establishment. Continuation or expansion of that activity, there is a great temptation to overstate the positive economic impact of the activity by overestimating the multipliers associated with it (Duma 2003). In this case this document may be used to justify the importance of protecting and conserving the PAs of the country and the whole world in general.

2.7 Types, Nature and Forms of Jobs

Job is a regular activity performed in an exchange for payment, especially as one's trade, occupation, or profession, is a piece of work one required to be done as a duty or for a specific fee. In the scope of this study jobs were categorised as; direct permanent (full-time) jobs, temporary full-time and indirect jobs (Susan, 2011).

2.7.1 Permanent (full-time) jobs

As defined by Garavan (2007) permanent job is a job designated by an agency as permanent that has attained or is eligible to attain permanent status and that the employees attain permanent status by successfully completing an initial probationary period, and hired through a competitive recruitment process. Once permanent employment status is attained, employees cannot lose permanent status unless they terminate employment with the organization. Permanent employees are eligible for all organization benefits including sick leave, annual leave, holiday pay, group health benefits, retirement and longevity allowance (Garavan, 2007). In this study direct permanent full-time jobs (D_n) is defined as a job designated by TANAPA as permanent that has attained or is eligible to attain permanent job by successfully completing an initial probationary period, and employed from any region within 120 districts tribes of Tanzania as long as she or he meets the requirement skill and experience as advertised in the media. The employee is subjected to transfer to any of the 15 National Parks (TANAPA, 1994).

2.7.2 Temporary (full-time) job

A temporary is a job designated by an agency for a definite period of time not to exceed 3 months performs temporary duties or permanent duties on a temporary basis, is not eligible for permanent status, is terminated at the end of the employment period and is not eligible to become a permanent employee without a competitive selection process (Susan, 2011). A temporary job can end at any time depending on the employer's needs. The scope of this study considers temporary full-time jobs (T_n) as jobs attained on a fixed term contract or whose expected duration of main job to be less than 3 months with seasonal/temporary/fixed contract work supplied as the reason. These workers are employed directly at park level and paid 3 500Tshs per day.

2.7.3 Indirect job

Indirect jobs (i) are jobs based on firms that depend largely upon local business conditions (Davis, 1990) The scope of this study considered indirect jobs as the jobs created in local area due to the presence of MINAPA (job multiplier effect) or total community employment attributed to the presence of MINAPA.

2.8 Leakage

Observation by Rodriguez *et al.* (2001), suggest that leakage occurs when money escapes the economy of a region because a local consumer, (household, business or government), has purchased a product from an outside supplier. To authors like Ian and Crompton, (2001), leakage is that part of the foreign exchange that leaves the country to pay for imports consumed which represents the dollars withdrawn from the respending cycle. Also leakage more importantly is associated with other sources including other forms of long term saving, non local investment, increased tax payments, spending on goods and services that are not produced locally (David, 1989).

Chachage (1999) observed that concentration of ownership in the hands of foreigners has caused Tanzania to loose about two thirds of its foreign earnings in the tourism industry. Ownership is not only enough but also control of these enterprises is even more important. In several occasions in Tanzania even when an enterprise is a joint venture, management is left to the foreigners (Chachage, 1999). According to Africa Travel and Tourism Association (ATTA) as cited by Chachage (1999), foreigners own 95%, 99%, 80%, and 50% of hunting, air travel, hotel and lodges, and leisure recreation, respectively. For instance about 55.7% of the tourist industry projects approved by Tanzania Investment Centre (TIC) were local investor's initiatives whereby 15.2% were foreign and 23% joint

ventures (Kulindwa *et al.*, 2001). Isindiga (1999) noted that economic leakage is a negative impact that should be mitigated so that locals enjoy more benefits from tourism. Exports bring new money to the region, and this money is circulated among the non exporting sectors, creating a multiplier effect. Higher multipliers reflect self-sufficiency in the regional economy, and lower multipliers denote larger “leakages” due to imports, savings and taxes (Rodriguez *et al.*, 2001)

CHAPTER THREE

3.0 METHODOLOGY

3.1 Description of the Study Area

This study was conducted in Mikumi National Park which was gazetted in 1964. The park is named after the town of Mikumi located to the west of the Park. The village was established in 1914 by Chief Mtwahela Kikuwe who was the leader of Wavidunda people at that time. There were small settlement at Doma, Kikoboga and Mgodu and compensation for settlement was provided for these people in 1963 (Mercer, 2005) with a total area of 3 230 km² (Fig. 1). The park is located in eastern Tanzania between 7°00'S and 7°50'S, and 37°00'E and 37°30'E. The park shares its ecosystem with Selous Game Reserve, as a result animals migrate to and from the Northern part of the reserve into the park. The Park is the 4th largest Park in Tanzania, after Ruaha, Serengeti and Katavi; located 283 km from Dar-es-salaam and 107 km from Morogoro town, in Morogoro region. The Park and its adjacent areas fall into the Kilosa, Mvomero and Morogoro districts, with nine ward and 21 villages.

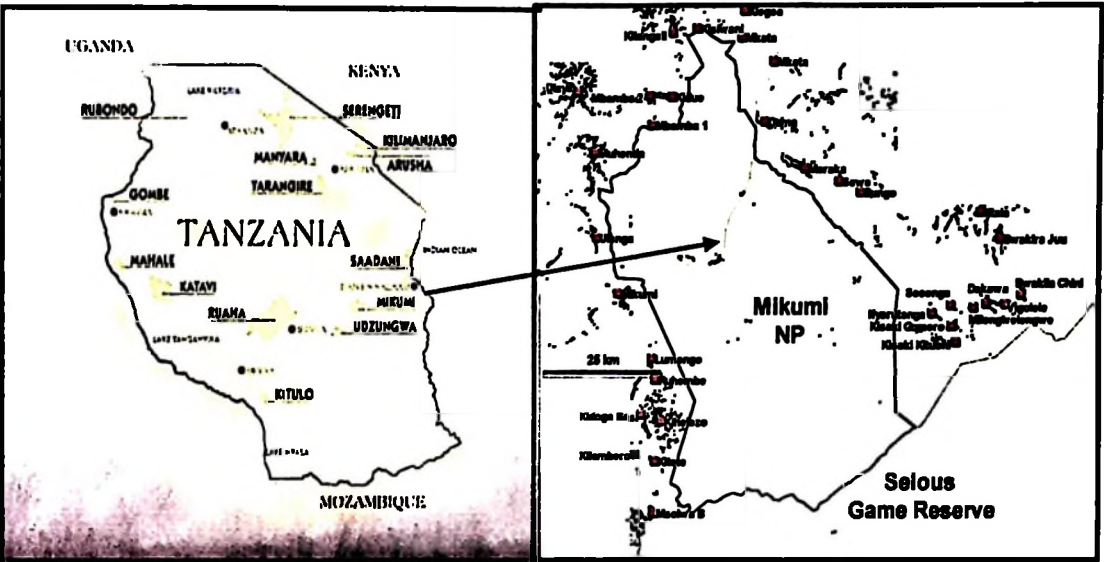


Figure 1: Map of Tanzania and MINAPA (Source: Travel notes and TANAPA website, 2010)

3.2 Study Design

Sanchet and Kapoor (2007) found that, an appropriate choice of method is necessary to get reliable inferences from a statistical data. A wrong method will not throw proper light on the true character of the data. Cross-sectional research design was used for this study. The design was adopted because it allows data collection at a single pointing in time (Christie, 1987). Cross-sectional design (also known as Cross-sectional analysis) formed a basis for this research method which involved observation of all of a population, or a representative subset at a defined time. A cross-sectional design is used for research that collects data on relevant variables one time only from a variety of people, subjects, or phenomena. The data were collected within a short time frame.

3.3 Sampling

The sample of 55 respondents purposely selected from MINAPA and 100 from outside were selected using Snowball sampling method, for interview based on the actor's

number (individuals, small and medium-sized enterprise operators and business operators). In order to get fairly accurate results and reliable picture of the total observation under investigation, purposively selected sample was used to measure and estimate job multiplier effect in MINAPA (Table 1). Sancheti and Kapoor (2007) noted that purposive selection method is based on the judgment of a person entrusted with the job under proper control and safe guard; this is also called deliberate sampling.

Snowball sampling was used to select respondents outside the park, this is a special non-probability method used when the desired sample characteristic is rare (Vogt, 1999). Is a method of obtaining respondents for a study by asking names of potential subjects from those participating in the study (Table 2).

Table 1: Respondents purposively selected for interview in MINAPA

Occupation	Number of staff	Types of information
CPW	1	General MINAPA matters
Park Warden Protection	1	Antipoaching activities
Pak warden CCS	1	Community Conservation Services
Administrative and Human resource	4	Employees Matters
Park Warden Tourism	1	Tourism activities
Park accountant	4	Financial matters
Park Rangers	38	Protection activities
Secretary	1	General staff matters
Procurement officer	1	Purchase and supply matters
Store keeper	1	Purchase and supply matters
Zonal Park Warden	1	General conservation matters
Park ecologist	1	Conservation matters

Table 2: Respondents selected using snowball sampling method

Types of business	Number	Types of services
Information Technology	1	Communication
Accommodations	11	Hotel and Lodges
Tour operator	7	Guiding Services and Transport
Groceries	18	Sales of Products
Road and Building contractors	2	Construction
General supplier	13	Import of items and supply
Petrol station	2	Fuel supply
Government Institution	3	Education
Herders	2	Livestock production
Farmers	3	Agriculture products
Transporters	24	Bus, Bajaj, Bicycle
Entertainers	3	Bar and Night club
General public services providers	14	Water and Electricity
Total	100	

3.4 Data Collection

Quantitative and qualitative data were both collected from different actors (individuals, small and medium-sized enterprise operators and business operators) in the business or jobs. Primary data were collected using questionnaire with both closed and open ended questions distributed to the actors in business or jobs.

Focus group discussions with key informants and direct personal investigation method were also used. Focus group discussions were done by direct approaching groups of informants and gather first hand information in their working place. The focus group consisted of 10-15 people direct involved in the work or business, such as managers, owners, dealers, administrators, and some other experienced persons on that particular jobs or business. Direct observation was done to get information by personally observing and recording from person with required information. The method was more useful to study where respondents were unable or unwilling to provide the correct information, especially

in collecting information about income, overtime, economic activities and other illegal activities which were kept confidential. Secondary data included reports, published and unpublished papers from the villages' office, MINAPA, TANAPA, the Ministry of Natural Resources and Tourism, and from SUA.

3.5 Data Analysis

Quantitative data from questionnaires survey were coded into specific categories after carefully editing the completed questionnaires. The EXCEL computer software was then used to perform a descriptive analysis. Descriptive statistics was used to analyze quantitative data on the types, quantity, nature and forms of jobs directly or indirectly created in and around MINAPA. To estimates job leakages in and around MINAPA, data were analyzed statistically using economic base models and EXCEL programs. Recorded interviews were transcribed. The transcripts carefully read to correct any grammatical errors related to the major themes of the study. The themes for qualitative analysis were developed based on the objectives of the study.

3.6 Computation of Multiplier and Job Multiplier Effects Attributed to the Presence of MINAPA

According to Freeman (2008) one permanent full time job is considered to be equal to a man working year round while part time or temporary full-time job to equal to the number of month an employee works for a year divide by the 12 month a year. In order to get the number of indirect jobs created it was important to first calculate the mean total number of working hours of direct permanent employees per day that was then compared to the mean total number of working hours for temporary employee per day. The following formula was used as recommended by Freeman (2008):

$$\frac{\text{Total working hours (Full time permanent jobs)}}{\text{Total number of permanent jobs in a sample}} = 1 \text{ job} \dots\dots\dots (i)$$

3.6.1 Direct versus Indirect jobs

While total number of permanent direct jobs at MINAPA (D_R) was obtained from the personnel department, the total temporary full- time jobs (T_R) in MINAPA was calculated based on theory by Freeman (2008).

$$T_R = \sum(w) / j \dots\dots\dots(ii)$$

Whereby:

$$\begin{aligned} T_R &= \text{Number of jobs for temporary workers} \\ W &= \text{Total working hours for temporary workers} \\ j &= \text{One job} \end{aligned}$$

$$\text{Total number of direct jobs created in MINAPA} = D_R + T_R \dots\dots\dots(iii)$$

Whereby:

$$\begin{aligned} D_R &= \text{Total number of direct permanent jobs (full-time)} \\ T_R &= \text{Total number of temporary jobs (full- time)} \end{aligned}$$

3.6.2 Indirect or job multiplier effect in MINAPA

To calculate the number of indirect jobs created the same theory suggested by Freeman, (2008) was used. This was done by calculating the percent of customer accommodated in and outside MINAPA who also visited the Park as a common factor (C_t) which was then multiplied by number of indirect jobs.

3.6.3 Indirect or job multiplier effect in MINAPA

To calculate the number of indirect jobs created the same theory suggested by Freeman, (2008) was used. This was done by calculating the percent of customer accommodated in and outside MINAPA who also visited the Park as a common factor (Cf) which was then multiplied by number of indirect jobs using the following formulas;

$$N_i = Cf \sum (w_i) / j \dots\dots\dots (iv)$$

$$Cf = \sum V_{ac} / \sum V_{vt} \dots\dots\dots (v)$$

Whereby:

N_i	=	Job multiplier effect
W	=	Total working hours for indirect workers
j	=	One job
V_{ac}	=	Total number of visitors who visited the Park, stayed overnight at the area and accommodated per year (Table 9)
V_{vt}	=	Total number of visitors who visited the park per year (Table 9)
Cf	=	Common factor

3.6.4 Job multiplier

Job Multiplier (M) was calculated using formula adopted from, Davis (1990).

$$M = T/D \dots\dots\dots (vi)$$

$$T = D + i \dots\dots\dots (vii)$$

$$D = T - i \dots\dots\dots (viii)$$

Whereby:

T	=	Total employment in a year
D	=	Direct employment in a year
i	=	Indirect employment in a year
M	=	Multiplier

3.6.5 Leakage

The formula developed by Davis (1990) was used to compute the job leakage.

$$\text{Job leakage coefficient} = 1 - i/T \dots\dots\dots (ix)$$

Whereby:

T = Total jobs

i = Indirect jobs

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Characteristic of the Respondents

During data collection it was revealed that 1% of the respondents were PhD holders, 5% Masters Degree, 5% Undergraduate degree 11 % Diploma, 48% Ordinary level and 17% were primary school level (Fig. 2).

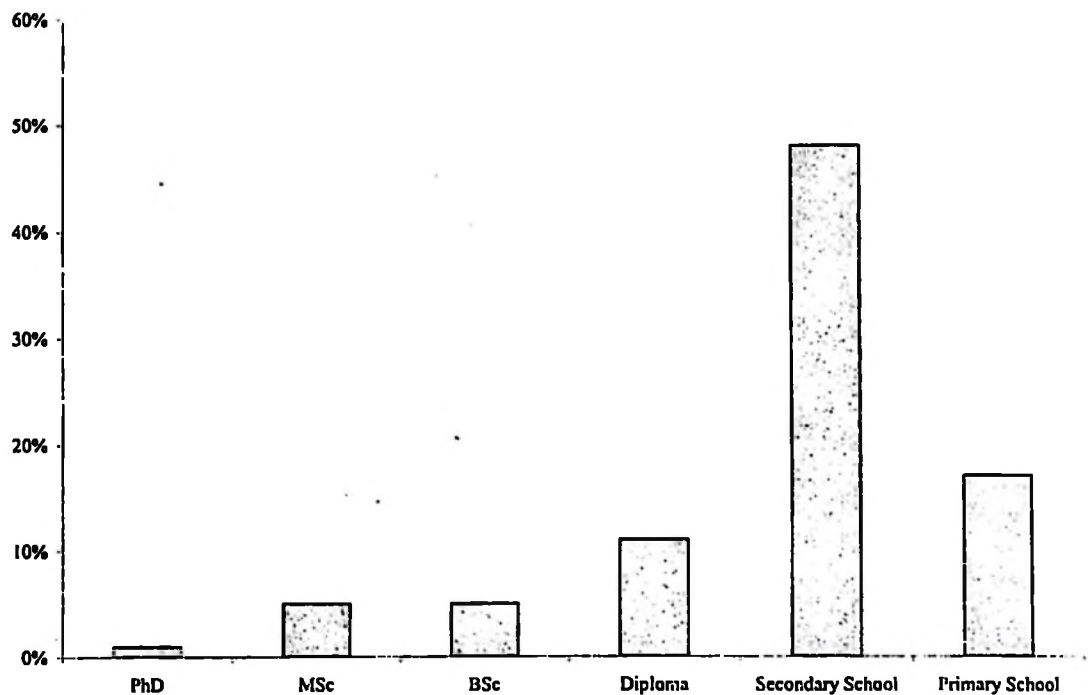


Figure 2: Level of education of the respondents

Secondary school level formed the majority of the respondent because 60% were park rangers from the Protection Department. The employment in this Department requires candidates to have a Form IV Certificate and Basic Certificate in Wildlife Conservation from Pasiansi Wildlife Conservation Training Institute (TANAPA, 2010).

This was also contributed by the establishment of ward secondary schools in 2006, in which many pupils had a chance to attend secondary school level of education. The number of higher education respondents was low probably because the Tanzania government sponsorship for this level is quite limited. Very few sponsorships are available for higher level of education and the few available are given to higher level of education and to specific disciplines such as veterinary, medical doctors, other special need. It was further noted that 20 % of the respondents were female and 80% were male (Fig.3). In Tanzania girls' and boys' enrolments are early equal at the start of lower secondary school, but by the upper secondary level only 25 percent of students are female, female are less educated hence have a very low chance of being employed they normally perform domestic works while male have a greater chance of being employed (Mason and Khandker, 1996).

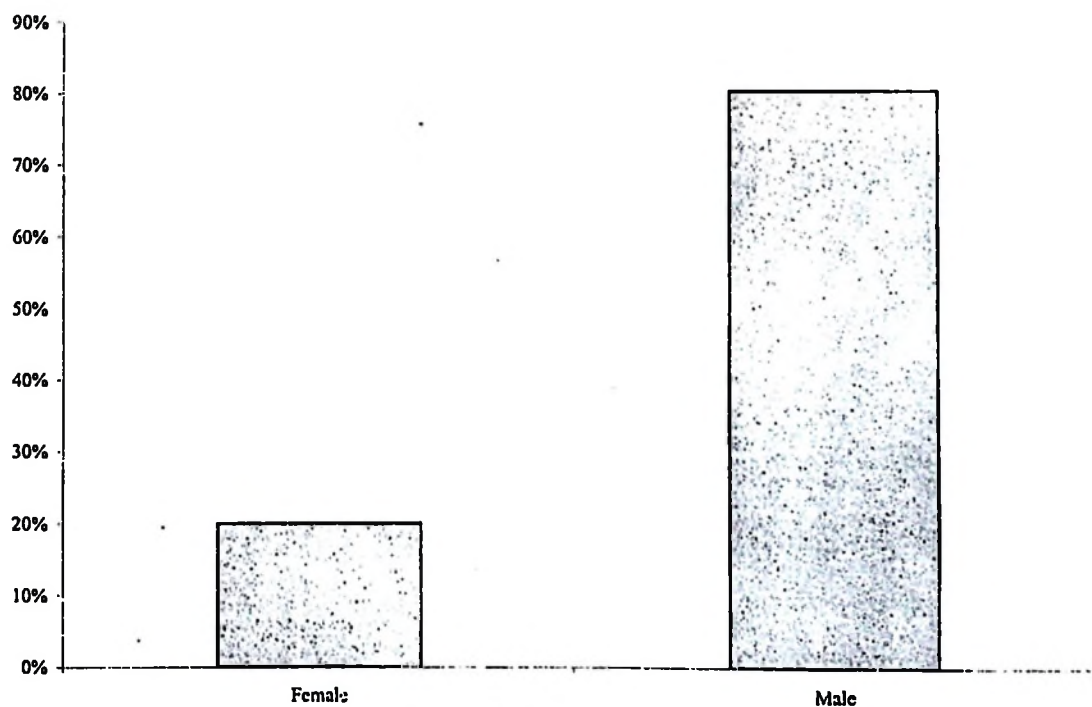


Figure 3: Gender status of the respondents

It was noted that 27% of the respondent had age interval between 21 and 30 ,23% between 31 and 40 ,33% between, 41 and 50 and 17% between 51 and 60 (Fig. 4). The study revealed that most of the staffs were employed when MINAPA was gazetted as national park in 1975 with an age of 20 to 25 years old which ranges between 41 to 50 years old when the data were collected.

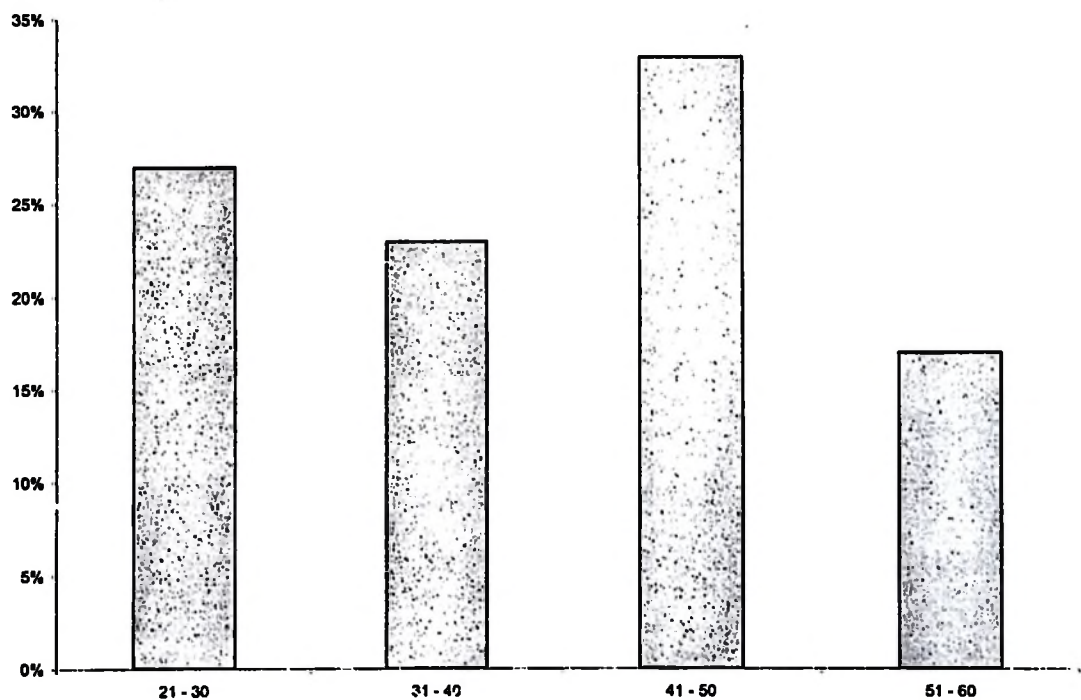


Figure 4: Percentage of the respondents' age interval

The study also revealed that 11% of the respondents were single where as 89% were married (Fig.5). Through interview with various respondents revealed that most of the people get married after attaining a reasonable income to sustain their daily needs from their temporarily or permanent jobs payments.

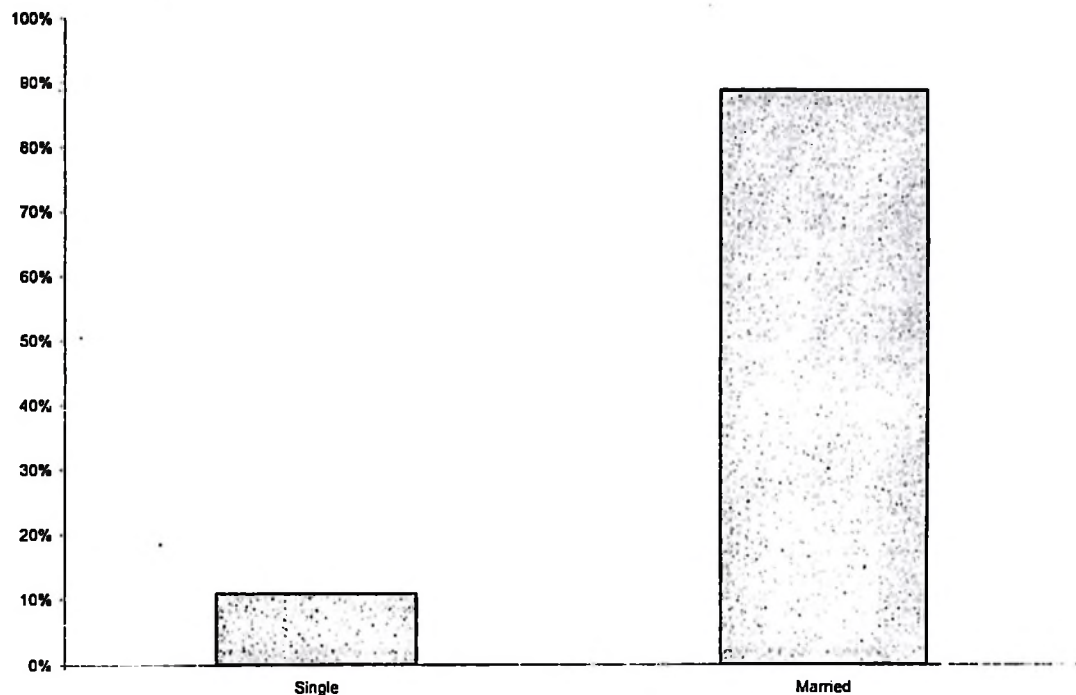


Figure 5: Marital status of the respondents

4.1.1 General Information of the MINAPA

MINAPA has only one entry gate which is 107 km from the Morogoro town and it is 20 km from Mikumi Village. Outside the park there were 9 accommodation facilities with a total number of 118 beds (Table 3) and inside the park there were 6 accommodation facilities with a total number of 152 beds (Table 4).

Interviews with park officials revealed that 65% of the MINAPA visitors are accommodated inside and outside the park, and 35% are day trippers, this was due to the fact that a large number of visitors are on transit on Dar-es-salaam - Malawi road. Therefore they tend to spend some hours in the park as on-transit rest. Fox camp, Vuma camp and Mikumi wildlife camps were private owned by foreigners while Mikumi bandas and campsites were owned and managed by the park.

Table 3: Accommodation facilities in Mikumi village

Accommodation	Number of beds	Number of staff
Chella Lodge	10	4
Genesis Motel	46	23
Tan-Swiss	12	43
Impala Guest House	8	5
Veta Hostel	14	6
Angalia Camp	5	8
Nkasi Lodge	6	4
Bush Camp	6	6
Halfway Lodge	11	5
Total	118	104

Table 4: Accommodation facilities inside MINAPA

Accommodation	Number of beds	Staff number
Mikumi Wildlife Camp	40	20
Fox Camp	24	39
Mikumi Bandas	16	2
Vuma hill Tented Camp	32	40
Public Campsite No : 2	25	3
Public Campsite No : 3	15	2
Total	152	106

In 1997 there was a Mikumi Wildlife Lodge owned by the government with a capacity of 150 beds, the lodge was privatized and later on burnt down through arsonic fire. The study revealed that 85% of the staff on private lodges in the park was local, and 2% were foreigners. Accommodation prices in the lodges per night range from USD 65 to 95. The price change with seasons, during high season when the number of visitors is higher, the price increased and vice versa. Accommodation prices in the bandas were USD 50, and for the campsites was USD per nights. Tanzanians usually pay a subsided prices i.e. TAS 30 in the when accommodated in the bandas. No prices differences observed between Tanzanians and foreigners when accommodated in the lodges and campsites. The study pointed out that 15% of the tour operators operating in MINAPA were local (Appendix 3).

4.2 Types of Jobs Attributed To the Presence of MINAPA

4.2.1 Direct jobs in MINAPA

Through interview with administrative manager it was observed that a total of 129 direct jobs were created by MINAPA. Direct jobs were divided into eight departments which are Human Resource and Administration, Finance and Procurement, Tourism, Ecology, Veterinary, Protection, Community Conservation Services (CCS) and Works Departments. The number of people employed under each Department as shown in Table 5.

Table 5: MINAPA administrative departments

Departments	Number of staff	Percentage
Chief Park Warden	1	1
Human Resource and Administration Department	23	18
Tourism Department	5	4
CCS Department	1	1
Protection Department	77	64
Works Department (this include Roads, Building and Garage) .	4	3
Ecology and Veterinary Department	2	2
Finance and Procurement Department	8	7
Total	121	100

Result from interview show that there were 17 types of jobs in MINAPA (Table 5 and 6). These were categorised into two groups including; permanent – employed in a full-time base in different departments. The total number of the permanent staff is 121 staff (Table 6).

The second category of direct created job included temporary employees. These were hired to assist MINAPA management to meet business demands, but allow the management to avoid the cost of hiring a regular employment. The study reviewed that some of the Department has very few staff, in that matter the park employ temporary workers on the three months contract basis, their payment are on daily basis. The range of payment were

between TAS 3500 for main gate, bandas, and office attendants whose main duties were for environmental cleanliness.

Table 6: Total numbers of identified permanent full-time jobs (direct) in MINAPA

Occupation	Total Number
Park Wardens	8
Administrative Manager	1
Tourism Assistant	3
Park Ranger	74
Mechanical Engineer	1
Veterinary Officer	1
Park ecologist	1
Technician	4
Artisan Grade II	1
Accountants	8
Procurement and Supplier Technician	1
Senior Office Secretary	1
Clinical Officer	2
Nurse	3
Plant Operator	2
Drivers	7
Park Attendant	3
Total	121

A wage of TAS 5000 were paid to a more professional duties like veterinary, garage and in the Ecology Department. There were about 15 temporary workers in MINAPA. Though interview with them it was revealed that they worked a mean of 6.6 hours a day that make a total 99.2 hour which is 8 jobs equivalents to permanent staff.

Table 7: Total numbers of identified temporary full-time jobs (direct) in MINAPA

Occupation	Number of Temporary Full-Time Worker
Veterinary Attendant	4
Main Gate Attendant	2
Bandas Attendant	3
Ecology Attendant	2
Garage Attendant	3
Main Office Attendant	1
Total	15

Equations (i) and (ii) in Section 3.6 were used to determine the number of direct temporary full time worker in the park. Table 6 indicates that the total number of temporary full time employees is 15, the total number of full time temporary jobs ($T_{if} = \sum (w) / j = 99.7/13 = 8$ jobs (equivalent to permanent). Through interview with 55 permanent full time staff, the study revealed that their total working hours was 707 hours. There for: One job = 707 hrs/55 = 13 hrs = 1 job. The total number of direct permanent jobs (full-time) in MINAPA (Dft) was 121 jobs.

$$T_{if} = 99.7/13 = 8 \text{ jobs}$$

$$\text{Total direct jobs} = 121 + 8 = 129 \text{ jobs}$$

$$Cf = \text{Common factor} = 22827/34857 = 0.65 = 65\% \quad (\text{For more information see section 3.6.3 equation (v)}).$$

$$N_i = \text{Job multiplier effect (indirect jobs)} = 519 \times 0.65/13 = 26 \text{ jobs}$$

Total number of Jobs attributed to the presence of MINAPA (T) is:

$$= D + i = 129 + 26 = 155 \text{ jobs}$$

$$\text{Job multiplier (M)} = T/D = 155/129 = 1.20$$

$$\text{Job leakage coefficient} = 1 - i/T$$

$$T = \text{Total jobs} = 155$$

$$i = \text{Indirect jobs} = 26$$

$$\text{Leakage} = 1 - 26/155 = 1 - 0.17 = 0.83 = 83\%$$

Countrywide TANAPA has a total of 16 national parks, with a total of 1870 staffs permanently employed. Serengeti National Park has the highest number of staff because of bigger area (12950 square kilometers), and the number of visitors was higher (100 000 per month in high season) as compare to other parks except Kilimanjaro National Park. Total number of park ranger was 1022 which is 55% of TANAPA staffs because the major activity of the parks is protection and conservation of natural resources (Table 8).

Table 8: Direct permanent jobs in TANAPA

Name	Male	Female	Total
TANAPA's Hq	72	38	110
Arusha NP	113	17	130
Kilimanjaro NP	174	23	197
Tarangire NP	116	15	131
Lake Manyara NP	82	18	100
Serengeti NP	368	27	395
Mkomazi NP	44	4	48
Saadani NP	57	9	66
Mikumi NP	99	15	114
Ruaha NP	171	10	181
Udzungwa NP	77	6	83
Kitulo NP	21	1	22
Katavi NP	101	4	105
Mahale NP	61	5	66
Gombe NP	33	4	37
Rubondo NP	55	10	65
Saaranane NP	16	4	20
Total	1660	210	1870

It was also noted that 89% of TANAPA staffs were male and 11% female as it was explained in section 4.1.

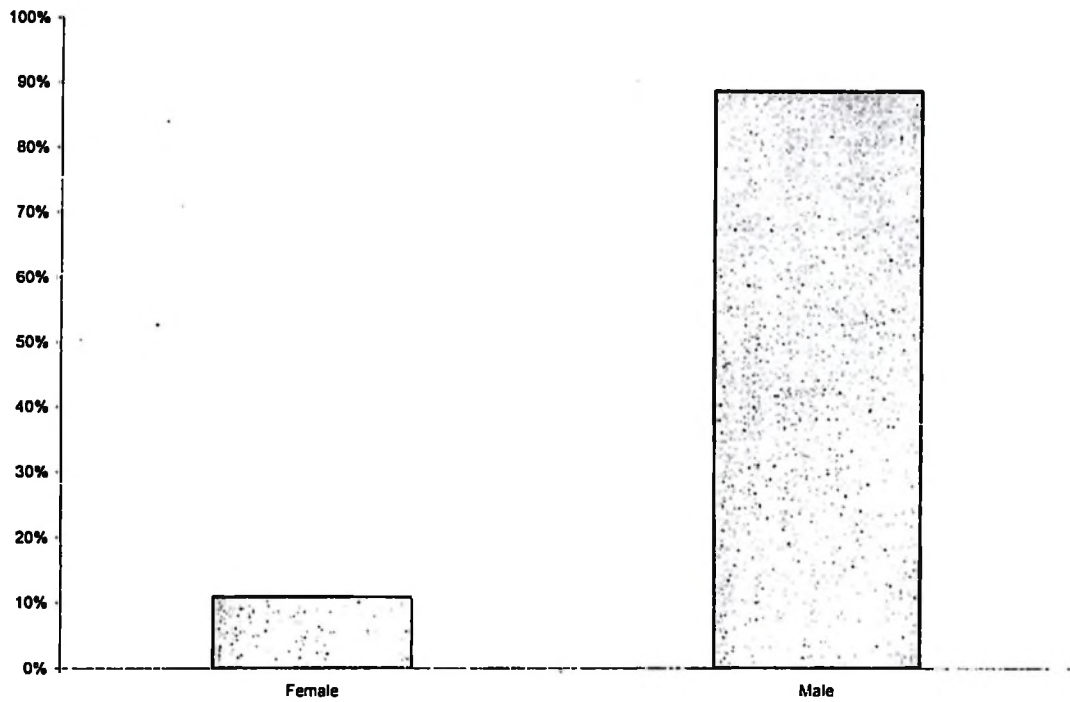


Figure 6: Percentage of male and female staff in TANAPA

4.2.3 Indirect jobs/ Job multiplier effect created by MINAPA

In order to get total number of indirect job or job multiplier effect equivalent to direct permanent jobs, total number of hours worked by temporary part time workers per day was divided by an average hours worked by direct permanent workers per day (1 Job) and multiplied by the ratio of visitors who visited the MINAPA and accommodated in and around MINAPA area to the total number of visitors who visited the park per year (Table 9), the calculated ratio was 0.65, meaning that 65% were intended to visit the park the rest 35% were on transit or other business not related to jobs created by MINAPA in Mikumi community as indicated to Fig. 7.

Table 9: MINAPA Park visitors in 2007

Month	Total visitors in the Park	Visitors Accommodated in and outside MINAPA
January	2279	496
February	2162	690
March	2047	562
April	2587	984
May	1763	542
June	2542	844
July	4553	1531
August	4791	1658
September	2570	1240
October	3663	1386
November	2076	908
December	3824	1189
Total	34857	12030

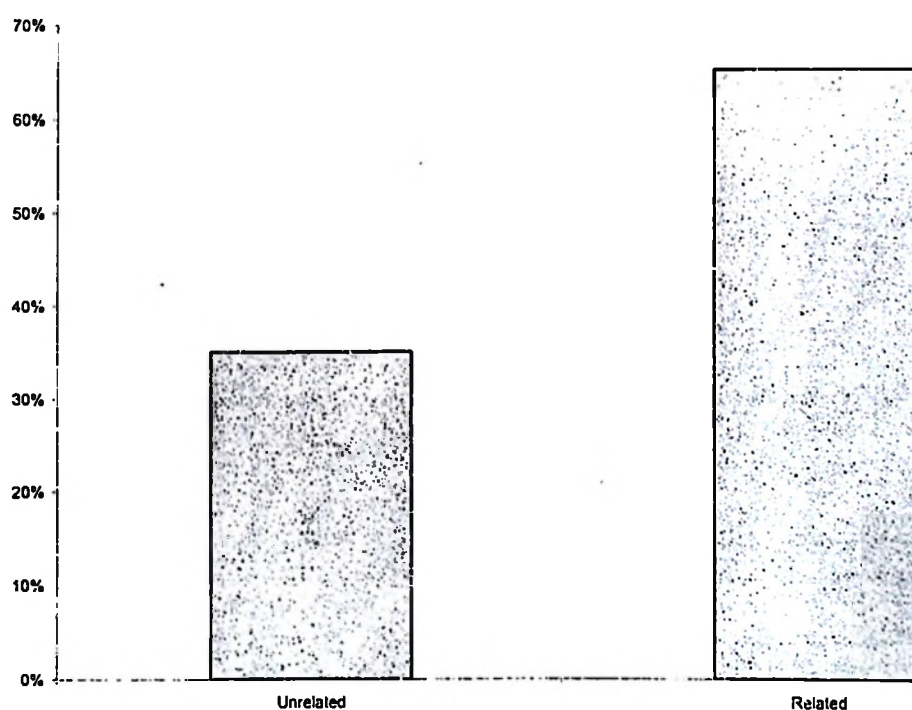


Figure 7: Percentage of related and unrelated jobs to MINAPA in Mikumi communities

The calculated jobs created due to the presence of MINAPA were 26 jobs. Although Table 4 indicates that the total number of temporary part time employees is 1 126, the total indirect jobs is 26 equivalent to direct permanent. The study also revealed that 14 types of indirect jobs were created around MINAPA as showed on Table: 10.

Table 10: Identified types of indirect jobs attributed to the presence of MINAPA

Indirect Jobs Identified	Number of Workers	Percentages
Building contractors	5	0.4
Casual labors	320	24
Electric technicians	2	0.2
Fuel station attendants	8	0.7
Hotel Managers	10	0.9
Hoteliers	205	18.2
IT-Technician	4	0.4
Road contractors	3	0.3
Shop keeper/Pet traders	460	41
Tour guide	24	2.1
Teachers	22	2
Farmer	52	5
Pastoralists	5	0.4
Local suppliers	6	0.5
Total	1126	100

4.3 Job Multiplier

Job Multiplier (M) was calculated using formula adopted from Davis (1990) as indicated in Section 3.6.4 which divides total number of jobs created to the direct jobs created. The calculated job multiplier was 1.20 that means for every one permanent job created in MINAPA 0.2 job or 20% jobs is created.

A study by David (2007) observed that the multiplier of 1.21 for jobs means that for every direct job in Bravo Funded Organizations, another 21/100ths of a job is supported in the central IOWA economy (about 21%) in the rest of direct employment.

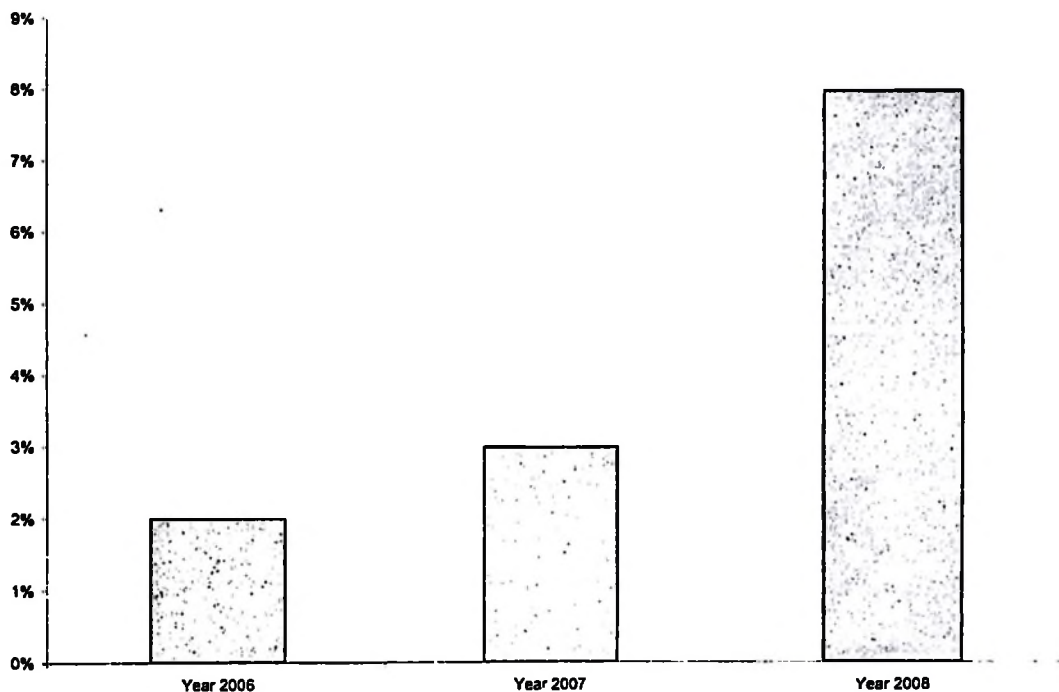


Figure 8: Trend of indirect jobs in MINAPA for year 2006 – 2008

The jobs multiplier attributed to the presence of MINAPA is very low (Figure 7), because a large fraction of the jobs were either part-time or seasonal. If the jobs restated on a full-time equivalency basis, the jobs multiplier would be higher (Over 50%). It was also observed that not all activities contributing to employment of the area are direct related to the presence of MINAPA as it was found that only 65% were attributed to the presence of the park (Fig. 7). According to Dumas (2005), the private sector tends to yield economic multipliers in the range of 1.5 to 2.0, while the public sector tends to have multipliers below 1.5. The case is true for MINAPA with job multiplier of 1.20.

However, this is contrasted with the Department of Energy in New –Mexico (DOE) which claimed multipliers of 2.4 to 3.5 in its studies for Fiscal Year 1998. Crain's Cleveland Business reported that most economists agree that manufacturing has a large multiplier

effect, with each job in manufacturing leading to the creation of two to five additional jobs elsewhere, depending upon which economist's estimates are used. As a result, it is impossible to directly analyze the accuracy of the data and model.

Moore (1975) uses the minimum requirements approach to estimate multipliers in the United States by city population and minimum employment percentage. He observed a multiplier ranging from around 1.25 to almost 5 for large, almost self-sustaining cities. A similar example for a developing country, in Nicaragua, it was estimated by Brodsky and Sarfaty (1977) that the multipliers range between 1.25 and 1.69 for different municipalities using the minimum requirements approach.

David (1989) noted that since some industries, notably services, are less likely to have leakages to other regions, each industry multiplier is estimated separately with estimates between 1.24 and 1.39, he also commented that it is hard to measure the accuracy of multipliers, especially hard for the first researcher, who has no standard of comparison. The ultimate user of multipliers is left to guess at the reliability of the multipliers he or she uses, and the user is in a worse position to make these guesses than was the original producer.

4.3.1 Prediction of the future total and indirect jobs to be created by MINAPA

Using job multiplier of 1.20, future total and indirect jobs to be created can be estimated using the following formula:

$$T_p = 1.2D \dots\dots\dots(x)$$

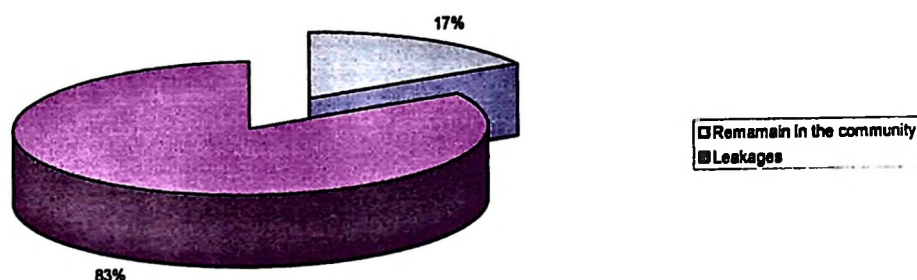


Figure 9: Job leakage in Mikumi community

The study revealed that some of the reasons for jobs leakage were as following;

Communication

Communication problem is among the reasons that make some of the visitors (35%) to prefer staying outside the region, for example, Mikumi area had only two centers for internet service: One centre at MINAPA office, which is for official use only and the second centre is at Vocational Education and Training Authority (VETA), which operate during working hours only (8am – 4pm) and do not operate during week end. Therefore, a lot of people travel to Morogoro in search of the services. This can be a cause of job leakage to the local community at Mikumi.

Where;

T_p = Total jobs for year p

D = Direct jobs for year p (predicted)

4.3.2 Getting the past job created and job multiplier effect

The past total job and indirect jobs created by MINAPA at that time can be calculated as shown in equation below;

$$T_p = 1.2D \dots\dots\dots (xi)$$

Where;

T_p = Total jobs for year p

D = Direct jobs for year p

4.4 Leakage

Job leakage was calculated using formula adopted from Davis (1990) as indicated in section 3.6.5 by one minus the ratio of indirect jobs created to total the jobs created. The calculated leakage was 0.83 that means for every one permanent job created in MINAPA create 0.83 job or 83% jobs is created outside the area only 17% remain in Mikumi community.

Figure 8 below shows job leakage of 83% at Mikumi locality, the rest 17% of jobs remains in the area or in the circulation of the area. Tourism leakages have been reported to be as high as 85% for African Least Developed Countries (LDCs), 80% in the Caribbean, 70% in Thailand, and 40% in India (Perez-Ducy, 2001). The following sections explain the source of leakages at Mikumi community;

Financial Sector

There are no permanent banking services at Mikumi area. The CRDB Bank operate temporary on Sunday from 8am to 1pm, using mobile banking system. Most of the clients travel to Morogoro and Kilombero town for such service. Therefore, a lot of people travel to Morogoro municipality in search of the services thus this can be a cause of job leakage to the local community at Mikumi.

Health Sector

Mikumi town have one Hospital (St.Kizito Hospital) and one Private dispensary (Saratein Dispensary))most of the people preferred to go to Morogoro Referral Hospital and Muhimbili Hospital in Dar-es-salaam in search of medical services. This in turn may attributes to job leakages to the local community of Mikumi.

Transportation Sector

Mikumi region has only four registered Tour Company which were: Fox Safari, Vuma hill, Tan-Swiss and Genesis Motel. My personal observation and my long experience as Head of Department Park Warden Tourism in MINAPA, these are not enough especially during high season (June to August) where there is high number of visitors (5 000 per month, see also annual tourism data in Fig. 9). Most of the visitors hire transport from Dar es Salaam, Arusha and Kilimanjaro, (Appendix 3). In this area there is no air transport for the visitors who need such transport; therefore they must seek such services to other areas. The park earth roads are only 500 km long which are frequently destroyed by heavy rains making it difficult to travel during rainy season this is may be caused by the type of soil in the area which is black-cotton soil. As a result, it could be one of the reasons for visitor to visit Northern National Parks (Serengeti, Manyara, Kilimanjaro, Lake Manyara and Tarangire). This could attribute to job leakages to the local community of Mikumi.

Energy Sector

The area has only two Petrol Stations: GAPCO and Oil com, the Stations are not so busy because most of the Tour Operators prefers to refuel their vehicle in town where there are varieties of Stations with different quality, prices and easy money transaction (visa, traveler cheque etc.), while British Petroleum (BP) supply fuel for MINAPA. This could attribute to job leakages to the local community of Mikumi.

Supplier Companies

There are seven supplier companies working with MINAPA, three of them are local supplier from Mikumi town, two from Morogoro town, three from Arusha town and other two from DSM (Table 10). For other users like Mikumi Wildlife lodge, Vuma hill Camp, fox camp, Genesis Motel, Halfway and Tan-Swiss Motel purchase products produced overseas to meet standards of international visitors, procured through domestic distributors. The low number of suppliers could be the reason for the job leakages to the local community of Mikumi.

Table 11: Number of supplier doing business with MINAPA

Name of Supplier	Item Supplied	Supplier Location
EM	Lubricants	
	Vehicle spare parts	Mikumi
Wahisani store	Building Material	Mikumi
GAPCO	Fuel	Mikumi
EDCO Investment	Stationary	Morogoro
GUPTA autospare	Vehicle spare parts	Arusha
Continental autospare	Vehicle spare parts	Arusha
Cummulative gener	Electronic parts	Arusha
MSD	Medicine	Dar-es-salaam
JD pharmacy	Medicine	Dar-es-salaam
R.M Hotel	Building Material	Morogoro

Accommodation

The accommodation facilities in Mikumi area were not adequate to accommodate all visitors intended to stay over night in the region as only 65% are accommodated in the place leaving other visitors to stay outside the area (Table 9). This also was experienced in 1996 when Mikumi Wildlife Lodge with capacity of 150 beds stop its operation resulting into people losing their jobs and Mikumi losing income generated from visitors stay overnight. The local investors who took up Mikumi Wildlife Lodge after privation by the government have been unable to implement the agreed investment plans. This could lead to the job leakages to the local community of Mikumi.

Agricultural Commodities and Processed Foods

Farmers have no effective linkages between their domestic food production, food processing industries and the hospitality industry. As a result, hotel and lodges purchase depend on non-local imported foods from outside Mikumi town (raw and processed/packaged food), even when these products are available locally (e.g., fruits, meat). In addition, many visitors segments demand goods not produced locally (e.g., milk, juice) due to food safety that imported brand products easily provide. This attributed to job leakages to the local community of Mikumi.

Support for Community Initiated Project (SCIP)

MINAPA is working hard to ensure that local communities have a sense of ownership and a vested interest in the future of the park by sharing the rewards of conservation and delivering tangible benefits. A percentage of park revenues is used to assist community development initiatives, such as schools, health dispensaries and water schemes. In the last fifteen years, 1993 to 2008 more than 500 000 000 TAS has been contributed to

communities adjacent to the park and to conservation education organizations (Appendix, 3). The SCIP fund currently amounts to 7.5% of park's operations budget (Appendix, II). Generally the Park contributes up to 70% of the project cost and the community contributes the remaining 30% (Appendix, 2). MINAPA receives over 17 000 and 15 000 non residents and residents respectively per year (Fig. 9) who inject into the park an income of over 700 000 000 TAS annually (Table 10). Though the Park invest a lot of fund through such Project but only supplier of the building material benefit (Table, 5), because the communities are supplied with material but are required to contribute man power or financially that could create jobs to them, hence the fund leak to a competent supplier taking into consideration that our local supplier are not capable enough in terms of capital.

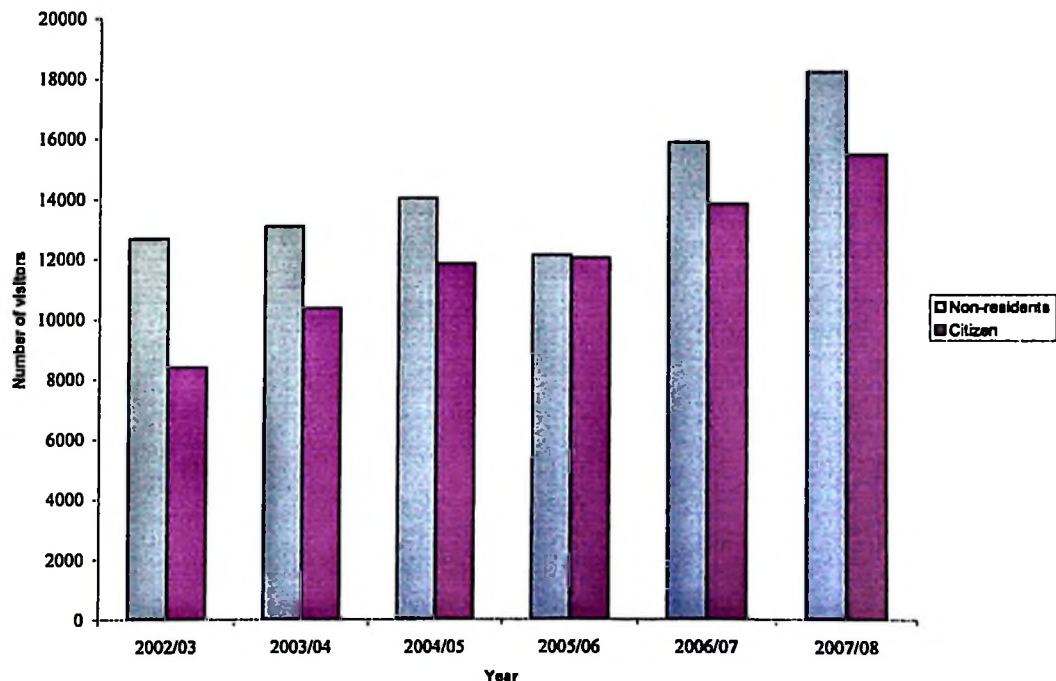


Figure 10: Visitor statistics for 2005/2006 to 2009/2010 in MINAPA

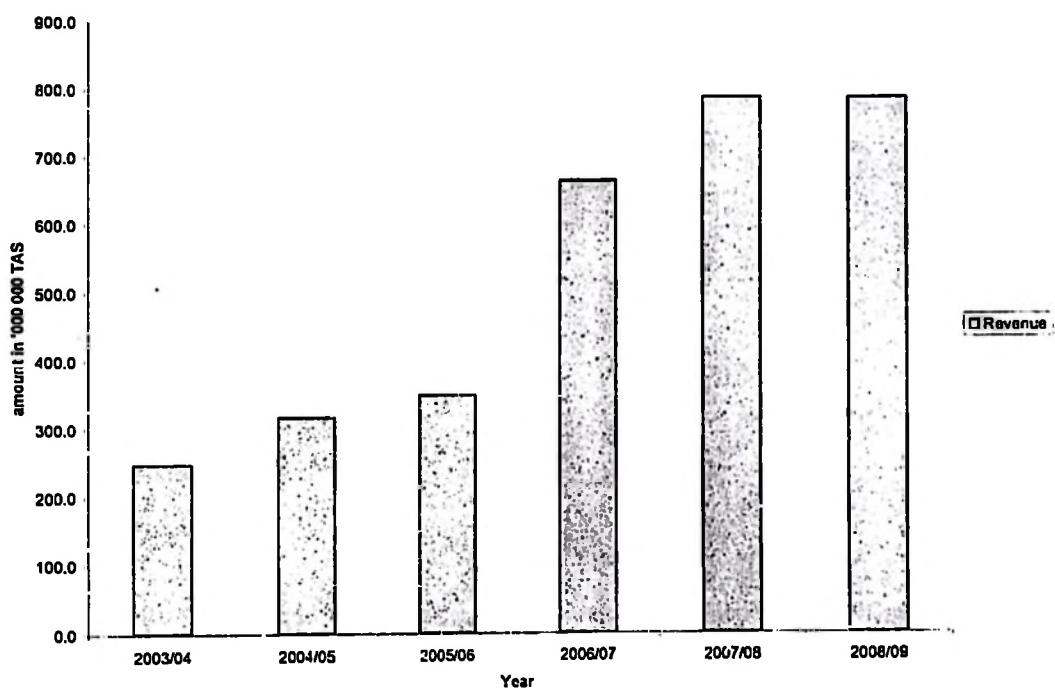


Figure 11: Revenue collected in MINAPA from 2003/2004 to 2008/2009

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The park have a total of 121 permanent employed staff (Direct jobs) with an average working hours of 13 hrs per day equivalent to 1 job, and 15 temporary full- time staff with an average working hours of 7 hours equivalent to 0.5 full-time permanent job. The total number of indirect respondents was 100 with an average working hour of 5 hours equivalent to 0.4 full-time permanent jobs. The total number of job created due to the presence of the Park was 155 jobs. The job multiplier effect was 26 with job multiplier of 1.20. About 42 types of jobs were identified created in MINAPA and the calculated job leakage was 83%. The percentage of visitors who visit the Park and accommodated in the area was 65%. The literature review supported in the conclusion that the direct and indirect impacts of MINAPA on jobs created in the community account for 20% or 1.20 multiplier of the total community's employment. In addition, the literature strongly supports the conclusion that MINAPA is needed if a community wants to attract industry and business.

5.2 Recommendations

5.2.1 Accommodation facilities

In order to increase the number of visitors in the park which is the major source of income, the park must improve and expand the present park accommodation facilities and develop strategies to ensure that they comply with international standard. This can be achieved by increasing accommodation facilities which includes public and special campsites, hostel, bandas, rest house and guesthouse which should be done in compliance with the conservation and management objectives. TANAPA should make sure that all planned projects stipulated in the GMP are completed on time. This will create more jobs to Mikumi community.

5.1.2 Staff motivation

Staff should be well motivated because the performance of the park depends on individuals who work under risk and tough condition in terms of wildness and poor social services like schools, hospital, transport and additional income due to prohibited activities in the park like livestock keeping, farming and other business in the park. Currently staff salary ranges from TAS 250 000 for junior to 500 000 Tshs for senior staff. Temporary staffs are paid 3 500 Tshs per day which can not satisfy the cost of living in Tanzania.

5.2.3 Infrastructure and services

For many years in the park had no considerable improvement of roads net work and most of the roads are seasonal passable during dry season only, this limit the number of visitor hence stop many operation during rain season. As a result the number of direct temporary jobs and indirect jobs are decreased. The only part of the road which is frequently maintained is tourist circuits of Mkata plain 500Km length, which cover less than 30% of the total park area In order to diversify tourism activities more roads are required on the southern part or the park that share boarder with Selous game reserve. This will create more jobs to the community around through involvement in different tourism oriented activities Services to visitors should be also improved , in particular water, electricity and communication.

5.2.4 The Government of Tanzania

The government should encourage more investment in economic institution, such as human resources, technology, financing, physical infrastructure, information infrastructure and specialization in training, research on enterprise new enterprise formation that will attract more industries to invest in Mikumi location.

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APPENDICES

Appendix 1: MINAPA budget for the financial year

Activities	2006/2007	2007/2008	2008/2009
Production of brochures	5,130,000	2100000	2100000
Promotion materials	7,193,000	13000000	24825000
Maintanance of airstrip	5616000	3478000	4092000
Improvement of trails	5395000	5000000	1700000
Improvement of sign post	2694000	8000000	6700000
Maintanance of campsites and Bandas	1901000	8000000	13838000
Ecological monitoring	30103525	30000000	27647000
Animal heath monitoring	21962500	10000000	15662500
Clearing and marking Park boundaries	22223000	23000000	42270000
Patrols /antipoaching	36341000	45997060	117724000
Service and repair of vehicle for antipoaching	40701124	46000000	99465720
Fuel, Lubricant and oil	23060900	26400000	43197000
Maintanance of hostel and resthouse	8475000	7000000	12540000
Fire management	3557799	3793800	7748665
Outreach program	2961000	6988600	7574700
Workshops with local authority	3072000	2380000	14181000
Conservation education	5616000	6232000	14181000
Conservation education material	520000	6232000	500000
Workers council	4280000	6175000	4330000
Annual leave	10248000	29100000	31740000
Medical cost	44130600	55000000	55527000
Education cost	5020000	6000000	10445000
Award	5520000	6710000	9400000
Sports	5817000	5000000	16817000
Communication cost	12960000	14000000	26516000
Hire for security	726000		2590000
Stationaries	6447500	8000000	15100000
Maintanance and repair of office machine	5100000	6000000	13900000
Maintanance and repair of water and electricity	9700000	15437332	32940000
Maintanance and repair of buildings	48180000	98500000	123793000
Maintanance and repair of vehicles/ ADMN	36740000	33816750	7278264
Maintanance and repair of heavy plants	77350000	143669980	115098200
Fuel for water	15600000	28594500	27752500
Fuel for electricity	22215000	54444500	42596500
Fuel and oil for ADMN	28995000	33816750	48422500
Maintanance of Roads	180,580,500	185790341	169789000
Proplem Animal controle!			5570000
TOTAL	746,132,448	983656553	1217041549

Appendix 2: SCIP project for MINAPA CCS

Year	Type of Project	District	Village	CONTRIBUTION	
				TANAPA	Community
93/94	Dispensary	Mvomero	Doma	5 488 210.70	1 372 210.60
93/94	Maintanance of Classroom at Mikumi Secondary				
94/95	Dispensary	Kilosa	Mikumi	774 400.00	193 600.00
94/95	Two classroom Mikumi Secondary	Kilosa	Maharaka	3 650 390.00	912 597.00
95/96	Dispensary	Kilosa	Mikumi	5 860 500.00	1 465 137.50
95/96	Two classroom and Teacher office	Kilosa	Ruhembe	5 644 438.15	1 411 109.50
97/00	Three Classroom Masanze secondary	Kilosa	Kilangali	8 111 365.00	2,027,841.25
97/00	Dispensary	Kilosa	Masanze	17 770 005.00	4,442,501.00
97/99	Dispensary	Morogoro Rural	Kidogobasi	6 771 165.80	1,742,791.50
98/00	Chemistry laboratory Mikumi Secondary	Kilosa	Gomero	10 702 409.50	2,667,602.35
2002/2002	Two Classroom and Teacher office Mhenda	Kilosa	Mikumi	14 670 275.75	3,667,568.75
2003/2005	Girls hostel Mikumi Secondary	Kilosa	Mhenda	16 282 800.00	3,256,560.00
2004/2005	Police Post	Mvomero	Mikumi	21 909 705.00	3,742,730.00
2004/2004	Two Classroom and office	Mvomero	Doma	11 783 922.00	3,028,963.60
2005/2006	Two Classroom and office	Kilosa	Mbamba	14 496 240.00	2,635,680.00
2005/2006	Two Classroom and office	Kilosa	Ruhembe	14 496 240.00	2,635,680.00
2005/2006	Two Classroom and office	Kilosa	Kitetemindazi	14 496 240.00	2,635,680.00
2006/2008	Adminstration block	Kilosa	Kielezo	14 496 240.00	2,635,680.00
2006/2006	Funiture at Kikoboga Primary school and Kite Msindazi	Kilosa	Ulaya	32 448 230.00	2,635,680.00
			Kikoboga/	0	0
			Kitetemindazi	2 744 000.00	0

Year	Type of Project	District	Village	CONTRIBUTION	
				TANAPA	Community
NOT YET	Water Project contribution with other stakeholders	Kilosa	Mikumi	5 000 000.00	17,000,000.00
2006/2008	Dispensary	Kilosa	Tindiga	28 000 000.00	7,634,469.00
2007/2008	Classroom and toilet at Mlimani Primary	Morogoro	Boma	35 500 000.00	0
2007/2008	Furniture at Doma police post and Kielezo Primary school		Doma	2 000 000.00	0
			Kielezo	2 440 000.00	
2007/2009	Two classroom, teachers office and toilet	Kilosa	Kikoboga	42 372 875.00	0
2008/2008	Furniture for mikumi Secondary	Kilosa	Mikumi	7 980 000.00	0
2008/2008	Furniture for Mgolole orphanage centre	Morogoro	Bigwa	13 835 000.00	0
2008/	Dispensary	Kilosa	Ihombeve	37 444 171.00	0
2008/	Dispensary	Morogoro Rural	Nyarutanga	37 444 171.00	0
2008/	Mushroom production	Kilosa	Ilakala	14 296 000.00	2,859,200.00
2009/	Girls hostel at Kimamba secondary	Kilosa	Kimamba - A	50 000 000.00	18,000,000
Total				498,909,043.90	83,248,627.45

Appendix 3: Tour Company and their Origin which bring Tourist in MINAPA

Tour Company	Origin
Fox safari	Mikumi
Genesis SafariTour	Mikumi
Vuma hill Tour	Mikumi
Tan-Swiss Tour	Mikumi
Savannah Tours	Dar-Es-Salaam
Leopard Tours	Arusha
Kearsley Tours	Dar-Es-Salaam
Takims Holidays	Dar-Es-Salaam
Elephant Adventure	Dar-Es-Salaam
Easy Travel	Arusha
Utalii Travel	Dar-Es-Salaam
Wild Things Safari	Arusha
Ebony Tours	Arusha
Makomo Tours	Arusha
Lion Of Tanzania	Arusha
Rhino Tours	Dar-Es-Salaam
Meru Treks	Arusha
Panthera Leo Tours Ltd	Arusha
Abercombie & Kent	Arusha
Nature Beauty	Arusha
Zara Tours	Kilimanjaro
Horton Tours	Arusha
Marko Tours	Arusha
Crowned Eagle	Arusha
Goba Tours	Arusha
Flycatcher Safaris	Arusha
Afrique Adventure	Arusha

Appendix 4: Questionnaire for Direct and indirect worker

1. Name.....
2. Phone number.....
3. Country of origin.....
4. Age.....
5. Level of education.....
6. Gender.....
7. Marital status.....
8. What is your major occupation.....
9. Were you recruited here.....When.....
10. If not where you were recruited.....
11. Are you working as permanent or temporary worker.....
12. How many hours do you work per day.....

Appendix 5: To be answered by Mangers of Hotel/Lodges/Guesthouse

Name.....

Phone Number.....

Country of Origin.....

1. What is the total number of full time staff?

How many hours do they work per day?

2. What is the total number of part time staff?

How many hours do they work per day?

3. When was the Camp established?

With how many beds (During establishment).....

What is the current status?

4. How many visitors received per year

In 2007.....

In 2008.....

In 2009.....

Appendix 6:Hotel/Lodges/Guesthouse expenditure for 2008/2009

S/N	Activities	Amount in Tshs
1	Promotion materials	
2	Maintenances of the camp	
3	Clearing the surrounding	
4	Security	
5	Service and repair of vehicle	
6	Fuel, Lubricant and oil vehicles	
7	Fire management	
8	Medical cost	
9	Education cost	
10	Sports	
12	Communication cost	
13	Stationeries	
14	Maintenance and repair of office machine	
15	Maintenance and repair of water and electricity	
16	Maintenance and repair of buildings	
17	Fuel for water	
18	Fuel for electricity	
19	Maintenance of Roads	