THE INFLUENCE OF SERENGETI NATIONAL PARK ECOSYSTEM TOURISM ON IMPROVEMENT OF RURAL LIVELIHOOD DEVELOPMENT:

A CASE OF ROBANDA VILLAGE

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A CASE OF ROBANDA VILLAGE

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for Award of the Masters Degree of Business Administration Corporate Management (MBA – CM) of Mzumbe University

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommended for acceptance by the Mzumbe University, a dissertation entitled **The Influence of Serengeti National Park Ecosystem Tourism on Improvement of Rural Livelihood Development: A Case of Robanda Village**, in partial fulfillment of the requirements for award of Master degree Business Administration at Mzumbe University.

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I, Victoria Joseph, declare that this thesis is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

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Date _____

ACKNOWLEDGMENT

It is not unusual for someone to be proud and blissful for making a certain success. This is very realistic on my side. The period takes this study makes me to realize this joy has come to an end. However, the accomplishment of this thesis is a result of collective efforts of many people whom my joy will have no meaning if I fail to accord my heartfelt appreciation for their support.

Glory is to Almighty God for giving me a chance and enabling me to perform this work.

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DEDICATION

This work is dedicated to my family and my beloved mother AGNESS C. MWIKWABE and my young brothers, I particularly thank for their support and motivation.

ABBREVIATIONS AND ACRONYMS

ADMADE	Administrative Design for Game Management Areas
CAMPFIRE	Communal Area Management Program for Indigenous Resources
CBD	Convention on Biological Diversity
CBNRM	Community-Based Natural Resource Management
COBRA	Conservation of Biodiversity Resource Areas
EBA	Ecosystem-Based Adaptation
GDP	Gross Domestic Product
LIFE	Living in a Finite Environment
LIRDP	Luangwa Integrated Rural Development Project
MEA	Millennium Ecosystem Assessment
MNRT	Ministry of Natural Resources and Tourism
PES	Payment for Ecosystem Services
TANAPA	Tanzania National Parks
UNESCO	United Nations Education Science and Cultural Organization
UNWTO	United Nations World Tourism Organization
WTO	World Trade Organization

ABSTRACT

The study was about effectiveness of the influence of Serengeti national park ecosystem tourism on improvement of rural livelihood development in Serengeti district. Conducted at Robanda village in Serengeti district with the aim of achieving the following objectives; first, identifying the nature of Serengeti ecosystem services on local people; secondly to assess the influence of Serengeti ecosystem on rural livelihood development and the last objective was to identify ways to improve influence of Serengeti tourism on rural livelihood development.

The study population involved households living in the selected village of Robanda, household living out of Robanda village and national park officers. The sample was obtained through simple random and purposive sampling techniques. The sample size for the study was eighty (80) respondents.

Data are collected through primary and secondary, where primary data collection involved interview and questionnaire tools.

Data are organized and presented using tables and charts. The analysis tool involved the use of frequencies and percentages.

The study revealed that; first, types of Serengeti ecosystem services to local communities are employment opportunities, improvement of social services and establishment of social relations. Secondly the study found that influence of Serengeti ecosystem on rural livelihood development is very effective. Lastly the study found four ways of improving influence of Serengeti tourism on rural livelihood development, these are; education on tourism activities, infrastructure development, entrepreneurship skills on tourism sector and advertisement of Serengeti national park worldwide.

In view of the above, the researcher recommends that; First, the government through ministry of wildlife and tourism should put more efforts in advertising Serengeti national park worldwide. Secondly, the government through ministry of infrastructure in collaboration with ministry of wildlife and tourism should make sure that all the infrastructures such as roads are constructed. Thirdly, government and other stakeholders should provide entrepreneurship skills to Robanda villagers so as to benefit the available opportunities on tourism sector. Fourthly, government should provide education to Robanda villagers on the importance of keeping the nature of Serengeti national park so that it may last longer.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter covers the background information, background of the problem, statement of the problem, research objectives and research questions, significance of the study, limitations and delimitation of the study.

1.1 Background of the Problem

The tourism industry is one of the main sources of foreign exchange earnings in Tanzania. However, the performance of the tourism sector in 2009 was not satisfactory mainly due to the global financial crisis (Tanzania Tourism Sector Survey 2011). The number of tourist arrivals declined by 7.0 percent to 714,367 from 770,376 in 2008. During the first half of 2009, the number of arrivals dropped by 14.7 percent as compared to the corresponding period the year before. The situation started to improve towards the second half of the year, as the number of arrivals started to show a positive increase in November 2009. Consequently, tourist earnings declined by 10.0 percent to USD 1,159.8 million in 2009 (Tanzania Tourism sector survey, 2011)

According to the United Nations World Tourism Organization (UNWTO, 2010), international tourism arrivals felt by 10.0 percent, 7.0 percent and 2.0 percent in the first three quarters of 2009 respectively, in comparison with the corresponding period last year. Nevertheless, there was an increase of 2.0 percent in the fourth quarter of 2009, thus showing signs of recovery which are expected to continue in the year 2010.

Tourism is one of the most rapidly growing industries in the world (WTO, 2003; Campbell, 1999).

Ecosystems are likely to show poor recovery when affected by climatic stressors and natural disturbances in particular if they have been exposed to continuous human activity and they are in degraded state (Campbell, 1999).

This is because persistent stresses on ecosystems weaken their resilience making ecosystems more susceptible to natural disturbance that otherwise could have been absorbed. If ecosystems resilience is lost, future climate change effects on ecosystems could lead to irreversible changes in their state. An example of abrupt environmental change in Tanzania that could be considered a signal of the potential effects of climate change and rising sea surface temperatures is the 1998 Indian Ocean coral bleaching event which reduced coral cover in most reefs of the country (Tanzania Tourism sector survey, 2011)

1.2 Statement of the Problem

In most developing countries endowed with significant tourist attractions, tourism has emerged as a new impetus for economic growth given its ability to generate foreign exchange and employment (blake, et al (1999). In Tanzania tourism sector has become a pillar of economy (Shitundu and Luvanga, 2003) it is postulated as an important industry for poverty alleviation. The advantages include among others, creation of job opportunities; boosting up of sales of different goods and services such as agricultural products and handcrafts, as well as cultural entertainment performed by locals the majority who are poor. The industry is also an important in-let for the much needed foreign exchange (Shitundu and Luvanga, 2003). Tourism as an industry can play very important roles on economic, improved livelihoods and socio cultural development that are critical for poverty alleviation (Shitundu and Luvanga, 2003). Poverty can be alleviated mainly through achieving higher sectoral growth and ensuring that the poor have a share in that growth.

Ecotourism which is also known as ecological tourism is a form of tourism that grabs the attention of those interested in ecological and social concerns (mowforth and munt, 2003). Ecotourism in general focuses on the way tourists can live harmoniously with the planet. It involves travelling and visiting destinations where cultural heritage, flora and fauna are the main attractions.

In Tanzania ecotourism is considered to be the source of improvement of livelihood communities living around the systems (Tanzania Tourism sector survey, 2011).

Government effort to support tourism has been given more emphasis on activities that will also lead to support the growth of livelihood of the people around national parks. Some of the efforts include formulation of tourism policy that encourage both local and foreign investment in tourism to promote livelihood of the people through improved source employment and source of revenue collection for economic and social development. Others include setting conducive business and investment environment for attracting more investors, improvement of infrastructure related investment to ensure smooth operations of tourism in Tanzania and ensuring expansion of areas of tourism training to improve knowledge and skills in tourism. All the efforts aim to improve tourism sector performance which in turn helps in improving the livelihood of the people as one way of reducing poverty in Tanzania. In view of the above, tourism sector is linked to poverty alleviation by becoming the source of development of local economies (UNESCO, 2011)

Despite the government efforts of reducing poverty through improving livelihood of the people through, local communities surrounding Serengeti national park which is one of the largest ecosystem located in Mara region found in northwest of Tanzania, complain of poor living standard and denied of the opportunities generated by tourism in Serengeti ecosystem.

A number of studies have been carried about tourism being one of the sources of poverty alleviation and improving livelihood of the people; Luvanga and shitundu (2003) the role of tourism in poverty alleviation, Kweka (2004). The studies have focused on whether tourism sector in general play role in alleviating poverty in Tanzania. In view of that little has been studied regarding individual tourism sector and their effectiveness in improving the livelihood of individual communities. Therefore, this study assessed effectiveness of the influence of ecosystem tourism in Serengeti national park on rural livelihood development.

1.3 Study Objectives

1.3.1 General Objective

To assess effectiveness of the influence of Serengeti national park ecosystem tourism on improvement of rural livelihood development

1.3.2 Specific Objectives

i. To identify the types of services provided by Serengeti ecosystem on local communities.
ii. To assess the effectiveness of influence of Serengeti ecosystem on rural livelihood development.
iii. To identify ways improving influence of Serengeti ecosystem tourism on rural livelihood development.

1.4. Research questions

The following are research questions of the proposed study:

i. What are the types of services provided by Serengeti ecosystem activities?
ii. Is Serengeti national park ecosystem tourism effective in influencing improvement of rural livelihood development?
iii. What ways can be used in improving the effectiveness Serengeti national park ecosystem tourism in improving rural livelihood development?

1.5 Significance of the study

This study is considered significant because of the Results in this study enhance understanding the relationship between ecosystem tourism and rural livelihoods development, also provide data that explains how and under what conditions Ecosystem tourism leads to changes in local livelihoods in the area. The findings provided information about the effectiveness of tourism as a tool to improve rural livelihoods. It hoped that this report has provided insights into ways of reducing or overcoming challenges that face Serengeti national park ecosystem tourism in achieving the goal of having rural livelihood improved

1.6 Organization of the study

The study has been organized in five chapters. Chapter One entails the purpose of the researcher to decide to undertake this particular research and not another. Chapter one provides preliminary information about the nature of the research and what will exactly be done. Chapter Two reveals literature sources which the researcher passed through when developing his idea about the research. Other people's ideas were

incorporated with the aim understanding well the research topic. The purpose was to know how other researchers, readers, organizations and governments say about the problem in question.

Chapter Three is the methodology part. This section explains the way the research has been conducted. The methods and techniques adopted. Chapter Four presents and discusses the findings. Instruments like, charts, per cent, tables and figures were used to present similarities and differences of the research findings. Similarities, differences and magnitude of the results are discussed. Chapter Five presents the summary, conclusion, recommendation and limitations of the study and areas for further research. The researcher makes summary of what has been done, observed and presented, implications of the findings and recommendations to policy makers. The last part presents the bibliography and the appendices.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the key concepts which were used in this study as well as looking at a number of theories that have been given by different authors concerning their views relating to the influence of Serengeti National Park ecosystem tourism on improvement of rural livelihood development.

2.1 Theoretical Literature Review

2.1.1 Definition of key terms and concepts

Ecosystem

An ecosystem is a dynamic complex of plant, animal, and microorganism communities and the nonliving environment, interacting as a functional unit. Humans are an integral part of ecosystems (Costanza et al, 1997).

An ecosystem provides a valuable framework for analyzing and acting on the linkages between people and their environment. For that reason, the ecosystem approach has been endorsed by the Convention on Biological Diversity (CBD) and the Millennium Ecosystem Assessment (MEA) conceptual framework is entirely consistent with this approach (CBD)

Types of Ecosystem

Ecosystem as the community of living organisms in conjunction with the nonliving components is essentially classified into two kinds which are; Terrestrial and Aquatic

- **Terrestrial ecosystems**

Terrestrial ecosystems can be found anywhere apart from heavily saturated places. They are broadly classed into:

The Forest Ecosystems

This is the ecosystems in which an abundance of flora, or plants, is seen so they have a big number of organisms which live in relatively small space. Therefore, in forest ecosystems the density of living organisms is quite high. A small change in this ecosystem could affect the whole balance, effectively bringing down the whole ecosystem. You could see a fantastic diversity in the fauna of the ecosystems. They are further divided into:

i. Tropical evergreen forest: These are tropical forests that receive a mean rainfall of 80 for every 400 inches annually. The forests are characterized by dense vegetation which comprises tall trees at different heights. Each level is shelter to different types of animals.
ii. Tropical deciduous forest: There, shrubs and dense bushes rule along with a broad selection of trees. The type of forest is found in quite a few parts of the world while a large variety of fauna and flora are found there.
iii. Temperate evergreen forest: Those have quite a few numbers of trees as mosses and ferns make up for them. Trees have developed spiked leaves in order to minimize transpiration.
iv. Temperate deciduous forest: The forest is located in the moist temperate places that have sufficient rainfall. Summers and winters are clearly defined and the trees shed the leaves during the winter months.
v. Taiga: Situated just before the arctic regions, the taiga is defined by evergreen conifers. As the temperature is below zero for almost half a year, the remainder of the months, it buzzes with migratory birds and insects.

The Desert Ecosystem

Desert ecosystems are located in regions that receive an annual rainfall less than 25. They occupy about 17 percent of all the land on our planet. Due to the extremely high temperature, low water availability and intense sunlight, fauna and flora are scarce and poorly developed. The vegetation is mainly shrubs, bushes, few grasses and rare trees. The stems and leaves of the plants are modified in order to conserve water as much as possible. The best known desert ones are the succulents such as the spiny leaved cacti. The animal organisms include insects, birds, camels, reptiles all of which are adapted to the desert (xeric) conditions.

The Grassland Ecosystem

Grasslands are located in both the tropical and temperate regions of the world though the ecosystems vary slightly. The area mainly comprises grasses with a little number of trees and shrubs. The main vegetation includes grasses, plants and legumes that belong to the composite family. A lot of grazing animals, insectivores and herbivores inhabit the grasslands. The two main kinds of grasslands ecosystems are:

- *Savanna:*

The tropical grasslands are dry seasonally and have few individual trees. They support a large number of predators and grazers.

- *Prairies:*

It is temperate grassland, completely devoid of large shrubs and trees. Prairies could be categorized as mixed grass, tall grass and short grass prairies.

The Mountain Ecosystem

Mountain land provides a scattered and diverse array of habitats where a large number of animals and plants can be found. At the higher altitudes, the harsh environmental conditions normally prevail, and only the treeless alpine vegetation can survive. The animals that live there have thick fur coats for prevention from cold and hibernation in the winter months. Lower slopes are commonly covered with coniferous forests.

- **Aquatic Ecosystems**

The aquatic ecosystem is the ecosystem found in a body of water. It encompasses aquatic flora, fauna and water properties, as well. There are two main types of aquatic ecosystem - Marine and Freshwater.

The Marine Ecosystem

Marine ecosystems are the biggest ecosystems, which cover around 71% of Earth's surface and contain 97% of out planet's water. Water in Marine ecosystems features in high amounts minerals and salts dissolved in them. The different divisions of the marine ecosystem are: Oceanic (A relatively shallow part of oceans which lies on the continental shelf), Profundal (deep or Bottom water), Benthic Bottom substrates, Inter-tidal (The place between low and high tides), Estuaries, Coral reefs, Salt

marshes, Hydrothermal vents where chemosynthetic bacteria make up the food base. Many kinds of organisms live in marine ecosystems: the brown algae, corals, cephalopods, echinoderms, din flagellates and sharks.

The Freshwater Ecosystem

Contrary to the Marine ecosystems, the freshwater ecosystem covers only 0.8% of Earth's surface and contains 0.009% of the total water. Three basic kinds of freshwater ecosystems exist: Lentic: Slow-moving or till water like pools, lakes or ponds, Lotic: Fast-moving water such as streams and rivers and Wetlands: Places in which the soil is flooded or saturated for some lengthy period of time. The ecosystems are habitats to reptiles, amphibians and around 41% of the world's fish species. The faster moving turbulent waters typically contain greater concentrations of dissolved oxygen, supporting greater biodiversity than slow moving waters in pools.

The advantages of Ecosystem

Ecosystem as the community of living organisms in conjunction with the nonliving components has number of advantages as follows;

i. The human population is expected to reach 9 billion people by 2050, and with that increase will come a greater demand for many natural resources. Look at freshwater needs, for example. Research has estimated per person per day dietary needs of 2,000–5,000 liters of water, and this does not include water needed for cleaning and other activities. Hand in hand with this growing demand for resources is the conversion of native ecosystems to meet growing needs; this is where a tradeoff assessment in terms of ecosystem services might be useful.

ii. Agricultural and pasture lands represent about 40 percent of global land surface. If people continue to depend on agricultural products as they have in the past, then by 2050, scholars estimate that 109 hectares of natural ecosystems will be converted to agriculture. This conversion would include a 2.4–2.7 fold increase in nitrogen and phosphorus-driven eutrophication of numerous waters with similar increases in pesticide use.6 Agriculture already accounts for 70 percent of water withdrawals from lakes, rivers, and aquifers.

Biodiversity

Is defined by the CBD as "the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (United Nations, 1992).

According to Mowforth and Munt, (2003), Biodiversity is the variety of life on Earth, it includes all organisms, species, and populations; the genetic variation among these; and their complex assemblages of communities and ecosystems. Ecotourism is a form of tourism that grabs the attention of those interested in ecological and social concerns. It is also known as ecological tourism (Ibid).

In general, ecotourism focuses on the way tourists can live harmoniously with the planet. It involves travelling and visiting destinations where cultural heritage, flora and fauna are the main attractions. Ecotourism is also the promotion of economical and social opportunities for local communities.

Ecosystem is the system in which we live - the system which include the earth, the water, the sky and of course the living and the non-living objects in all these systems. It is a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unity. But, there is no such specific and particular spatial unit or scale to measure an Ecosystem (Mowforth and Munt, 2003). The following are the types of biodiversity;

- *Species Diversity*

Every ecosystem contains a unique collection of species, all interacting with each other. Some ecosystems may have many more species than another. In some ecosystems, one species has grown so large that it dominates the natural community. When comparing the biodiversity of ecosystems, an ecosystem that has a large number of species, but no species greatly outnumbering the rest, would be considered to have the most species diversity. A large number of species can help an ecosystem recover from ecological threats, even if some species go extinct (Sylvie, 1993).

- *Genetic Diversity*

Genetic diversity describes how closely related the members of one species are in a given ecosystem. In simple terms, if all members have many similar genes, the

species has low genetic diversity. Because of their small populations, endangered species may have low genetic diversity due to inbreeding. This can pose a threat to a population if it leads to inheritance of undesirable traits or makes the species more susceptible to disease. Having high genetic diversity helps species adapt to changing environments (Sam, 2006).

- *Ecosystem Diversity*

A region may have several ecosystems, or it may have one. Wide expanses of oceans or deserts would be examples of regions with low ecological diversity. A mountain area that has lakes, forests and grasslands would have higher biodiversity, in this sense. A region with several ecosystems may be able to provide more resources to help native species survive, especially when one ecosystem is threatened by drought or disease (Sylvie, 1993).

- *Functional Diversity*

The way species behave, obtain food and use the natural resources of an ecosystem is known as functional diversity. In general a species-rich ecosystem is presumed to have high functional diversity, because there are many species with many different behaviors. Understanding an ecosystem's functional diversity can be useful to ecologists trying to conserve or restore damaged it, because knowing the behaviors and roles of species can point to gaps in a food cycle or ecological niches that are lacking species (Ibid).

2.1.2 The Serengeti ecosystem

The Serengeti ecosystem spans some 25,000 km^2 of north western Tanzania and south western Kenya and, with its natural barriers which effectively prevent the emigration or immigration of large mammals, is primarily defined by the annual movements of the migratory wildebeest (Sinclair, 1995). It is bounded by to the north by the rangelands of the dry Loita and Mara plains of Kenya, to the east by the Loita Hills of Kenya and Gol Mountains of Tanzania, to the south by the Eyasi Escarpment of Tanzania and to the west by a band of cultivation extending to Lake Victoria. The Serengeti contains a range of vegetation types. Northern sections are characterized by rolling, wooded savannahs, south eastern parts feature virtually treeless plains, while

further to the east the terrain rises steeply to massif highlands and forested areas (MNRT, 1985).

The Serengeti has major conservation significance because of the large and varied wildlife populations it supports. Thirty species of ungulates and 13 species of large carnivores have been recorded in the region (Sinclair, 1979), in addition to over 500 species of birds (TANAPA, 1992). Savannah areas of the ecosystem are estimated to contain some 1.3 million wildebeest, 0.2 million zebra, 0.5 million gazelles, 7 500 hyena, 2 800 lion and a vast number of other ungulates and their attendant carnivores (Sinclair, 1995). These large populations of plains mammals have national economic importance as a source of tourism earnings. The three strict protected areas in the Serengeti ecosystem Masai Mara National Reserve in Kenya, and Ngorongoro Conservation Area and Serengeti National Park in Tanzania account for the majority of wildlife tourism bed nights and income in each country.

2.1.3 Ecosystem tourism

2.1.3.1 Tourism

Tourism is an activity done by persons moving outside of their usual environment and stay in the foreign environments for not less than 24 hours daily for the purpose of leisure and other purpose related to tourism for not less than one year without engaging themselves in any paid work (Campbell, 1999). Tourism is divided into two types as follows;

- *Domestic tourism***.**

This is the type of tourism in which the resident tends to visit within the economic territory of their home country; the domestic tourists are more demanding, especially when it comes to the quality of products, and also with regard to their consumer-protection rights (Bigano et al., 2007)

- *International tourism*

This is another type of tourism which involving non- resident traveling in the given country or is the tourism which involving resident traveling in another country (Paul, 1999).International Tourism involves trips between two or more countries (Ibid).

2.1.3.2 Ecotourism

Ecotourism is a form of tourism involving visiting fragile, pristine, and relatively undisturbed natural areas, intended as a low-impact and often small scale alternative to standard commercial (mass) tourism. Its purpose may be to educate the traveler, to provide funds for ecological conservation, to directly benefit the economic development and political empowerment of local communities, or to foster respect for different cultures and for human rights. Since the 1980s ecotourism has been considered a critical endeavor by environmentalists, so that future generations may experience destinations relatively untouched by human intervention. Several university programs use this description as the working definition of ecotourism (Honey, 2008).

The latest trend in the tourism industry is called “ecotourism”, which refers to travel that combines preserving the natural world and sustaining the well-being of the human cultures that inhabit it. (Mowforth and Munt, 2003) In general, ecotourism differs from traditional tourism in two main respects: first, ecotourism openly promotes environmentally friendly travel and seeks to ensure that visitors do not disturb the natural environment of flora and fauna, nor do they leave behind rubbish and hazardous materials, which can disrupt the delicate ecosystem. A second aspect of ecotourism is that it seeks to promote “sustainable” tourism. Tourism that destroys the natural environment, or that leads to the disappearances of local human cultures and values is not compatible with ecotourism.

The impacts of global tourism reflect the fact that it is an activity of considerable economic importance. Tourism is not only a source of income and employment, but it also serves as a major factor in the balance of payments for many countries, and has therefore gained increasing attention on the part of governments, as well as regional and local authorities, business investors, and others with an interest in economic development.

In a pioneer paper, Kraph (1961) concluded that tourism has a “special function” in developing countries, a function which he defined in terms of a series of “economic imperatives” Kraph alluded that tourism has a perceived ability to generate, from

limited investment in plant and infrastructure, large sums of capital which may be transferred to other sectors of the economy. Such action positively contributes to growth of the developing country through the multiplier effect of tourism, the creation of employment, enhancement of education and professionalism, increased public pride, public revenue, foreign direct investment and foreign exchange earnings. More than 40 years after, Kraph's emphasis on tourism's contribution to economic growth and the notion that tourism had a special function in this regard is still widely held among the world.

At a national level, the major aim of a country in promoting tourism is often to increase foreign exchange earnings, and to improve or redress the balance of payments situation. Consequently, counties would tend to impose only the minimum currency exchange regulations on foreign visitors. It is evident that the continued development of tourism in a country provides benefits in terms of increased foreign exchange earnings because: tourism is an industry that has experienced notable growth and no doubt portrays even more potential growth for many years to come. (Riley, Ladkin, Szivas, 2002).

Tourism is the world's largest industry and creator of jobs across national and regional economies. According to recent statistics from the WTO, tourism provides about 10% of the world's income and employs almost one tenth of the world's workforce. WTTC's forecast reveal that in 2010 tourism will generate, indirectly and directly, 11.7% of GDP and nearly 255 million jobs in the world-wide economy.

Tourism development may also cause both positive and negative livelihood changes in destination areas (Andriotis, 2003). The literature on community development (Albrecht, 2004) has shown that whenever a dominant economic sector, such as tourism, is introduced in a society, there are often changes in the traditional l economic base. This is because of existing research (e.g. Magole & Gojamang, 2005; Mbaiwa, 2005) place emphasis on tourism growth, with measurement of indicators like infrastructure development, numbers of tourists, government revenues, and jobs created by the tourism industry. These studies (e.g. Magole & Gojamang, 2005; Mbaiwa, 2005) have focused on enclave tourism with little attention on community-based tourism development. Since the 1990s, remote communities in rich biodiversity

areas have become involved in wildlife-based tourism through the Community-Based Natural Resource Management (CBNRM) program. The rural communities participate in tourism activities such establishment of lodges, campsites, game viewing, dug-out canoe safaris and sell crafts as baskets to tourists. Communities also form joint venture partnerships with safari companies where they sub- lease their concession areas for photographic and safari hunting tourism purposes, Communities also sell community wildlife quotas to safari companies.

This study, therefore, aimed at analyzing changes in livelihoods and people's interactions with species, such as giraffe, sable antelope and thatching grass, before and after the advent of tourism in the area. The goal was to analyze the effectiveness of tourism in achieving improved livelihoods and conservation. The Community-Based Natural Resource Management (CBNRM) paradigm was useful for analyzing attitudes towards conservation and tourism development. Social capital was used to analyze effects of tourism development on biodiversity conservation. A framework of "sustainable livelihoods" was useful in analyzing changes in livelihoods caused by tourism development. Results of this study contribute to an understanding of interactions between local people and natural resources and to attempts of achieving improved livelihoods and conservation in developing countries.

As a program, CBNRM is implemented in various countries of Eastern and Southern Africa where the different programs are called by different names. For example, in Zimbabwe it is called the Communal Area Management Program for Indigenous Resources (CAMPFIRE); the Luangwa Integrated Rural Development Project (LIRDP) and the Administrative Design for Game Management Areas (ADMADE) in Zambia, the Living in a Finite Environment (LIFE) program in Namibia; the Tchuma Tchato "Our Wealth" in Mozambique; the Conservation of Biodiversity Resource Areas Program (COBRA) in Kenya; the Ujirani Mwena "Good Neighborliness" in Tanzania; and in Botswana, it is called the CBNRM program (Mbaiwa, 2005). Theoretically, CBNRM principles of conservation and rural livelihoods in different countries are the same. However, the success rate or performance of CBNRM differs from one project to the other and from one country to another.

2.1.3.3 The Role of Ecosystems Services for Human Well-being

In a world where climate change is resulting in more unpredictable weather patterns, sea level rise and more frequent and extreme storms, the regulating services provided by ecosystems are critical for climate change adaptation and disaster risk reduction. Examples of these services include climate and water regulation, protection from natural hazards such as floods and avalanches, water and air purification, carbon sequestration, and disease and pest regulation. These services determine the central role of ecosystem management in climate change adaptation and disaster risk reduction; the following are the role or advantages of ecosystem;

- *Ecosystem management increases the resilience of natural systems and human societies to climate change impacts.*

Managing ecosystems to conserve and improve their health is crucial for sustaining the various ecosystem services important to human well-being. Ecosystems also act as buffers, increasing the resilience of natural and human systems to climate change impacts and disasters (UNEP, 2009). Ecosystem-based adaptation strategies cut across all sectors. Some examples of these strategies include using mangroves for coastal defense, flood plain management for flood defense, and maintaining genetic diversity for adaptation in the agricultural sector (Ibid). Good practices already exist on the ground, such as wind sheltering and breaks to increase resilience of rangelands in Sudan and re-forestation of mangroves to protect shorelines from storm surge and sea-level rise in the Philippines.

- *Ecosystem management also maximizes co-benefits of mitigation of climate change.*

By reducing emissions and fixing carbon through good practices such as Land use, Land use change and Forestry activities and Reduced Carbon Emissions from Deforestation and Forest Degradation, reducing the loss of natural habitat and deforestation as well as increasing or maintaining carbon stocks in ecosystems. Managing ecosystems to enhance biological carbon sequestration (biosequestration) is a promising tool in the efforts to mitigate climate change, and may often also support the achievement of other societal goals. The discussion about possible ways of reducing carbon emissions in various land uses, such as forestry and agriculture, is

gaining momentum. Given the high rates of global forest loss and associated GHG emissions (18-25% of annual emissions), reducing emissions from deforestation and forest degradation would make a major contribution to meeting emission stabilization targets (UNDP, 2004).

- *Ecosystem management provides physical defense from climate related disasters.*

Ecosystems protect societies from disasters and improve their ability to cope with the impacts. Mountain meadows, bushes and forests protect people in the downstream from landslides and flash floods from glacier lake outbursts due to the accelerated melting of high mountain glaciers and snows. Coral reefs provide offshore breakwaters which reduce the impacts of sea surges and tropical storm waves before they reach the shoreline. Mangrove forests act as revetments or dikes: depending on their health and extent, mangrove forests can mitigate 70- 90% of the energy from wind generated waves (UNEP-WCMC, 2006).

- *Climate change adaptation and disaster risk reduction increase the resilience of ecosystems.*

There is a need for proactive adaptation and disaster management measures to reduce the negative impacts of climate change and disasters on ecosystems, Well designed adaptation measures can increase the resilience of ecosystems, and also reduce the risk of climate related disasters (UNEP, 2009). Adaptation is a process starting from identifying and projecting climate change impacts to fully responding to these impacts by reshaping the development pathways and ways of ecosystem management, It helps disaster risk reduction in terms of being prepared for and protected from future climate-related disasters (Ibid). On the other hand, disaster risk reduction contributes to the overall adaptation process, and if done well, can enhance the adaptation process by establishing the foundation for addressing long term climate change impacts. Climate change adaptation and disaster risk reduction are both dependent on the regulating services provided by ecosystems, and contribute to building their resilience (UNEP-WCMC, 2006).

- **Ecosystem Services for Human Well-being**

Although people's livelihoods, local and global economies depend on a reliable flow and interaction of multiple ecosystem services, it is oftentimes difficult to link between specific ecosystem services and social outcomes. This is mainly because there is a general lack of before and after data of verified evidence on the relationship between incremental change in ecosystem services and human well-being/development. This relationship is difficult to quantify because it is influenced by multiple stressors and because relationships between ecological and socio-economic systems are dynamic and non linear and ecosystem services do not operate in isolation, but interact with one another in complex, and often unpredictable ways. According to the Millennium Ecosystem Assessment (2005), the range of ecosystem services enjoyed by humans can be divided into four main categories (See Figure 2.1).

Figure 2.1: Range of ecosystem services enjoyed by humans

Source: MA, 2005

- ***Provisioning services:***

Include the production of basic goods such as crops, livestock, water for drinking/washing, industry, hydro-power and irrigation; fodder/or pasture/grazing, timber, biomass fuels, fibers such as cotton and wool; minerals for energy, construction, transport; and wild plants and animals used as sources of foods, hides, building materials, and medicines

- ***Regulating services:***

Include benefits obtained as ecosystem processes affect the physical and biological environment around them; these include water storage, flood protection, coastal/tsunami protection, regulation of air and water quantity/quality, regulation of water flow, absorption/biodegradation of wastes, absorption of carbon dioxide, control of disease vectors, and regulation of climate

- ***Cultural services:***

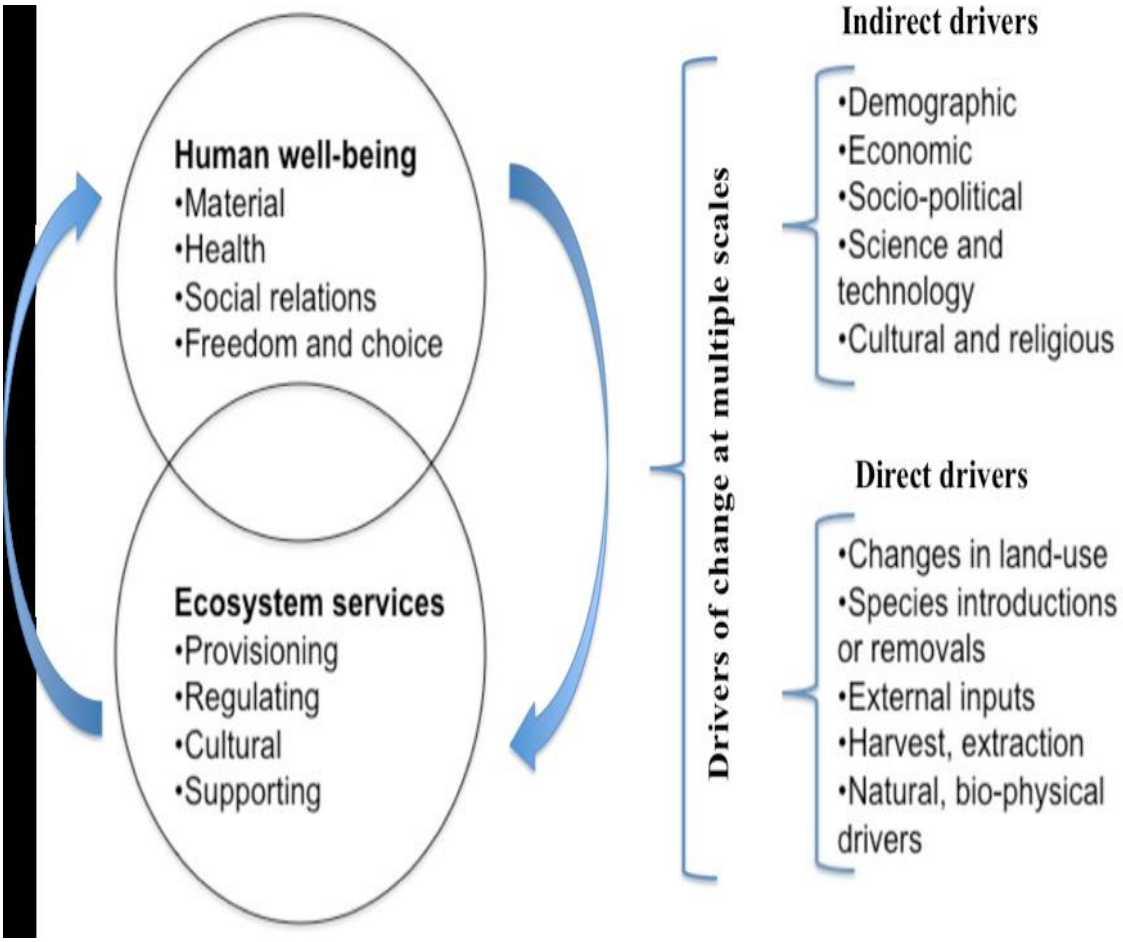
Include non-material benefits that people derive from ecosystems through spiritual enrichment, recreation, tourism, outdoors related sports, education, heritage, bequest value and aesthetic enjoyment. These services also include societies whose cultural identities and religions are tied closely to particular habitats or wildlife

- ***Supporting services:***

These services are necessary for the production and maintenance of the three other categories of ecosystem services. Examples are water cycle, nutrient cycling, production of atmospheric oxygen, soil formation, and primary production of biomass through plant photosynthesis.

Human intervention and dominant patterns of transformation brought about by demographic, social and economic change can affect the interaction between ecosystems and thus affect the flow of multiple ecosystem services directly and indirectly, with implications for the resilience of ecosystems. In turn, changes in ecosystems functioning and ecosystem services can lead to changes in human wellbeing **(see Figure 2.2).** The Millennium Ecosystem Assessment (2005) highlights two specific policy-relevant interactions among ecosystem services: synergies and tradeoffs.

Figure 2.2: Ecosystem functioning vs. human wellbeing



Source: SAFMA, 2004

According to the recent Global Forest Resources Assessment (FAO, 2010), about 6% of the national territory has been designated as protected area. The latest SOER (2008), however, indicates that about 40% of the country is set aside for conservation and wildlife management. The latest World Database on Protected Areas (2009) reports 565 nationally designated protected areas in Tanzania, including IUCN categories I-V and other. In terms of internationally recognized sites, there are 3 Biosphere Reserves, 4 Ramsar Wetland sites, and 4 World Heritage Sites. A significant national achievement in terms of conservation was the development and implementation of the Environmental Management Act in 2004, which addresses the issues of protected areas, environmental impact assessment, genetic resources, in situ and ex situ conservation, genetically modified organisms, and ecosystem conservation and management.

The list below indicates the different protected and wildlife conservation areas in Tanzania (Environmental Management Act, 2004); 14 National Parks (NP), 4.4 % of land area, 1 Ngorongoro Conservation Area, 0.9 % of land area, 34 Game Reserves (GR), 13 % of land area, 46 Game Control Areas (GCA), 5.5% of land area, 815 Forest Reserves (FR), 15 % of land area (3% overlap with wildlife PA's), 143 Hunting Blocks disaggregate by number in PA and non-PA, 33 Wildlife Management Areas (WMA), 35 000 km2, 200 villages, 9 with user rights, 10 900 Village Reserved lands, in 133 districts and 143 Hunting Blocks.

In addition, about 2.5 % (2266 km2) of land area is in 5 key Marine Protected Areas, namely: 750 km2 Tanga Coastal MPA, 822 km2 Mafia Island Coastal MPA, 668 km2 Mnazi Bay MPA, 36 km2 Dar es Salaam Reserve, and Chumbe private Marine Park.

This section provides some examples of ecosystems in Tanzania, namely mountain ecosystems, wetlands and mangrove ecosystems, and marine ecosystems, as well of some of the key services that these ecosystems provide for the Tanzanian population, namely biomass resources for energy generation, water resources for domestic consumption, agriculture, industry and energy generation, and services for nature-based tourism, one of the main economic activities in the country (SWMP, 2010)

- **Ecosystem services: Nature based Tourism**

Ecosystem services are the benefits people obtain from ecosystems. This definition is derived from two other commonly referenced and representative definitions: Ecosystem services are the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfill human life. They maintain biodiversity and the production of ecosystem goods, such as seafood, forage timber, biomass fuels, natural fiber, and many pharmaceuticals, industrial products, and their precursors (Daily 1997b:3). Ecosystem goods (such as food) and services (such as waste assimilation) represent the benefits human populations derive, directly or indirectly, from ecosystem functions (Costanza et al. 1997).

Ecosystem services have been categorized in a number of different ways, including by:

- Functional groupings, such as regulation, carrier, habitat, production and information services (Groot, et al. 2002).

- Organizational groupings, such as services that are associated with certain species, which regulate some exogenous input or that, are related to the organization of biotic entities (Norberg, 1999).
- Descriptive groupings, such as renewable resource goods, nonrenewable resource goods, physical structure services, biotic services, biogeochemical services, information services, and social and cultural services (Moberg and Folke, 1999). For operational purposes, we will classify ecosystem services along functional lines within the MA, using categories of provisioning, regulating, cultural, and supporting services.

The Government of Tanzania views tourism as a significant industry in terms of job creation, poverty alleviation, and foreign exchange earnings. Currently, the tourism sector is valued at USD 1.3 billion, accounting for 33% of the GDP (MNRT, 2008). The main tourist attraction in Tanzania is associated to the natural assets of the country. Tourism in wildlife contributes to employment, anti-poaching, community based management of natural resources and to secondary and commodity trade (i.e. supplies, equipment, vehicles, fuel, drinks, cutlery, linen, alcohol, etc.). Most visited sites include the great Serengeti plains, the Ngorongoro Crater, Lake Manyara and Africa's highest mountain, Kilimanjaro, in the north, Mikumi, Udzungwa and Ruaha National parks and Selous game Reserve in the south. Additional natural attractions include the sandy beaches in the north and south of Dar es Salaam and the deep sea fishing at Mafia. Furthermore, Tanzania has a rich heritage of archaeological, historical and rock painting sites, a number of which have been designated World Heritage Sites (MNRT, 2008).

- **Ecosystem-based Approaches for Adaptation**

Enhancing the capacity of ecosystems to generate essential services for climate change adaptation, meanwhile being buffered for changes in social-ecological systems requires ecosystems to be managed as components of a larger seascape and landscape of which human activities are part and where changes are factored in the management plans. (CBD, 2009).

- **The Dynamic Ecosystem-based Adaptation Pathways Framework**

The Ecosystem-based Adaptation (EBA) approach relates to the management of ecosystems within interlinked social-ecological systems to enhance ecosystem processes and services that are essential for adaptation to multiple stressors (CBD 2009, Chapin et al. 2009, and Piran et al. 2009). In other words, EBA integrates the management of ecosystems and biodiversity into an overall strategy to help people and ecosystems adapt to the adverse impacts of global change, such as changing climatic conditions (Colls et al., 2009).

A number of potential ecosystem-based adaptation strategies are available, which include the following;

i. To maintain and increase ecosystem resilience: enhancing the ability of ecosystems to absorb and recover from change while maintaining and increasing biodiversity (e.g. identifying resilient coral reefs that can recover from disturbances such as bleaching events or storms, while at the same time protecting the shorelines from wave forcing and tsunamis) (Environmental Management Act (2004)
ii. To accommodate the potential impacts of climate change: considering both gradual change and extreme events (e.g. planning projects and programmes that consider the ensemble of possible future climate scenarios for the specific location, while building socio-institutional and ecological adaptive capacity). (Environmental Management Act (2004)
iii. To facilitate knowledge transfer and action between partners, sectors and countries: successful adaptation requires ecosystem and biodiversity conservation to be integrated with other sector and local government management activities (e.g. mainstreaming community-based natural resources management – CBNRM – in all sectors as indicated by the Environment Management Act introduced in 2004).
iv. To develop the knowledge/evidence base and plan strategically: to effectively plan for an uncertain future, the best available evidence is needed to help social ecological systems adapt (e.g. developing a knowledge management system that will help share up-to-date and credible information among decision-makers and practitioners and promote an open-dialogue to promote

social learning and collective generation of knowledge) (Environmental Management Act (2004).

v. To use adaptive management: to deal with uncertainty using a flexible approach for effective conservation and adaptation planning, based on iterative processes of learning by doing, reviewing, and refining (e.g. considering the dynamic interactions between social and ecological systems, lessons learned, and changes over time in land-use planning processes, both in reserve land and in common land) (Environmental Management Act (2004).

vi. To enhance vulnerability assessments and monitoring systems: to allow evidence to be collated, existing schemes to be strengthened and new requirements incorporated (e.g. introducing programmes to study response of species to climate change (i.e. physiological, behavioral, demographic) into CBNRM in order to create awareness, while systematically obtaining data on key indicators of change over continued periods of time) (Environmental Management Act (2004).

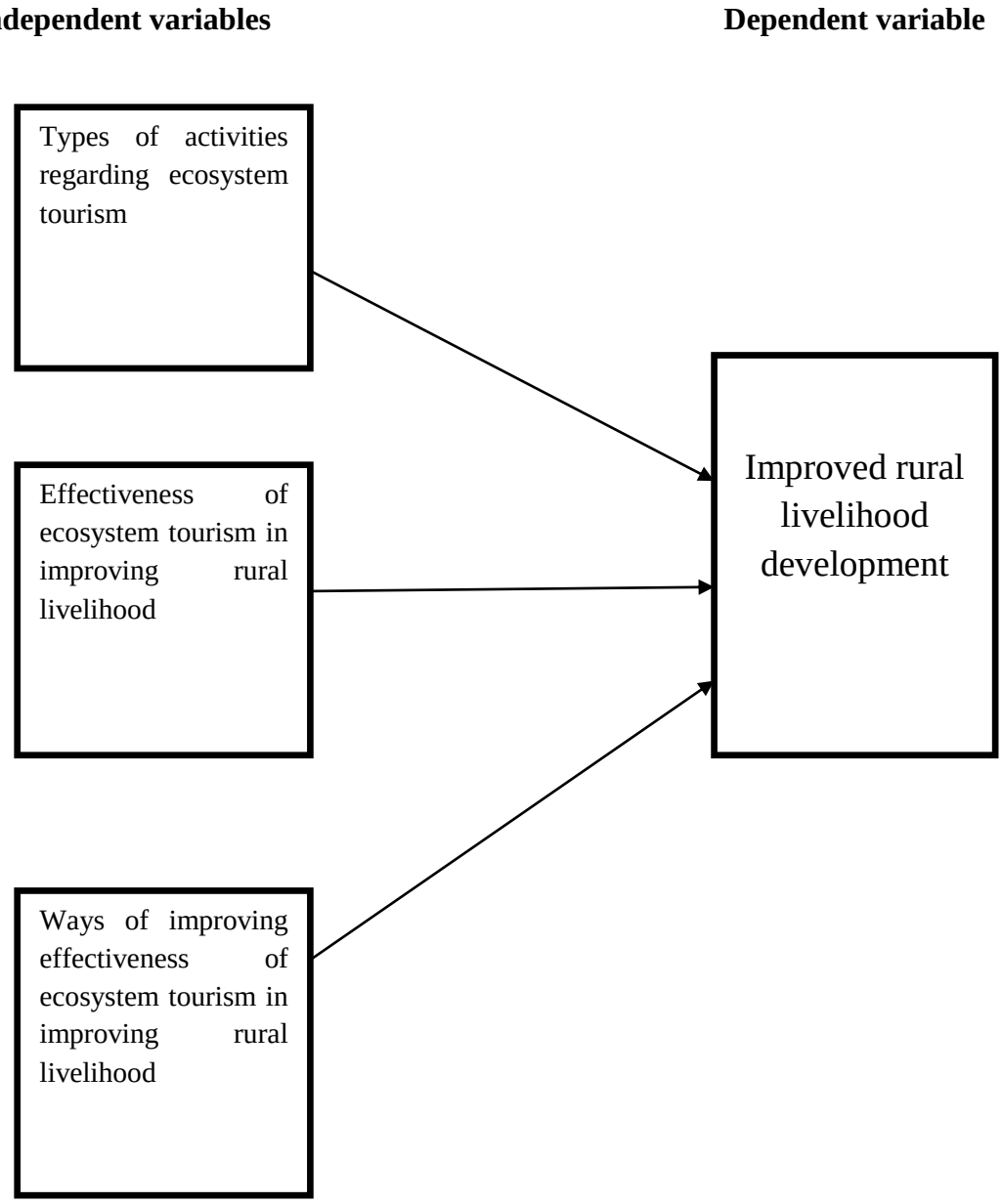
2.2 Empirical literature review

According to luvanga and shitundu (2009) Rural tourism development: a viable formula for poverty alleviation in Bergville Results show that while the people are pessimistic that the resourcefulness and accessibility of Bergville can support tourism development, they are also of the view that rural tourism is a very important, probably the most important, factor for economic development.

According to Maleya R,(2009), The effects of tourism investments on poverty reduction in rural communities in Tanzania : employment opportunities for rural communities were low in cadres with skills and remuneration; local people have complex livelihoods strategies which are affected by tourism in various ways; and there is a clear opportunity to have significantly their benefits from tourism. Thus, it was recommended that in order to increase tourism effects on poverty reduction.

According to Philemon J (n.d) The finding shows that Tanzania is doing relatively well on the basic factor endowments such as culture, wildlife, landscape and accommodation facilities, but fairly poor on tour guidance, tourism infrastructure and restaurants.

Figure 2.3: Conceptual framework



Source: Researcher (2014)

Variable relationship

The improvement of rural livelihood development is dependent variable which is the most important to the researcher. The independent variable include types of activities regarding ecosystem tourism which are improvement of social services like hospitals, schools and roads, source of investment and employment opportunities hence this lead to improvement of rural livelihood development, Also if the ecosystem tourism are effectives could lead to improvement of rural livelihood and if there is different ways of improving effectiveness of ecosystem tourism like advertisement of Serengeti national park, entrepreneurship skills and improvement of infrastructure all these could lead to improvement of rural livelihood development.

CHAPTER THREE

RESEARCH METHODOLOGY

3. 0 Introduction

The research methodology has two interrelated parts i.e. the research design and data collection methods. Therefore this chapter explains the research strategy or design, techniques, methods and resource which were used in collecting as well as description of the technique that were used in data analysis.

This section also describes the general way in which the researcher carried out the research. It describes the sampling procedures and states the main instruments which were used in data collection from the field. Lastly the chapter pointed out the validity and reliability of the methods which were used in data collection; this was done by pre-test questionnaire, use of more questions for the same variable and administration of questionnaire.

3.1 Research design

The study was cross-sectional design because it allows obtaining data and results more rapidly. According to Babbie (1990) and Bailey (1994), a cross sectional design allows data to be collected at a single point in time without repetition.

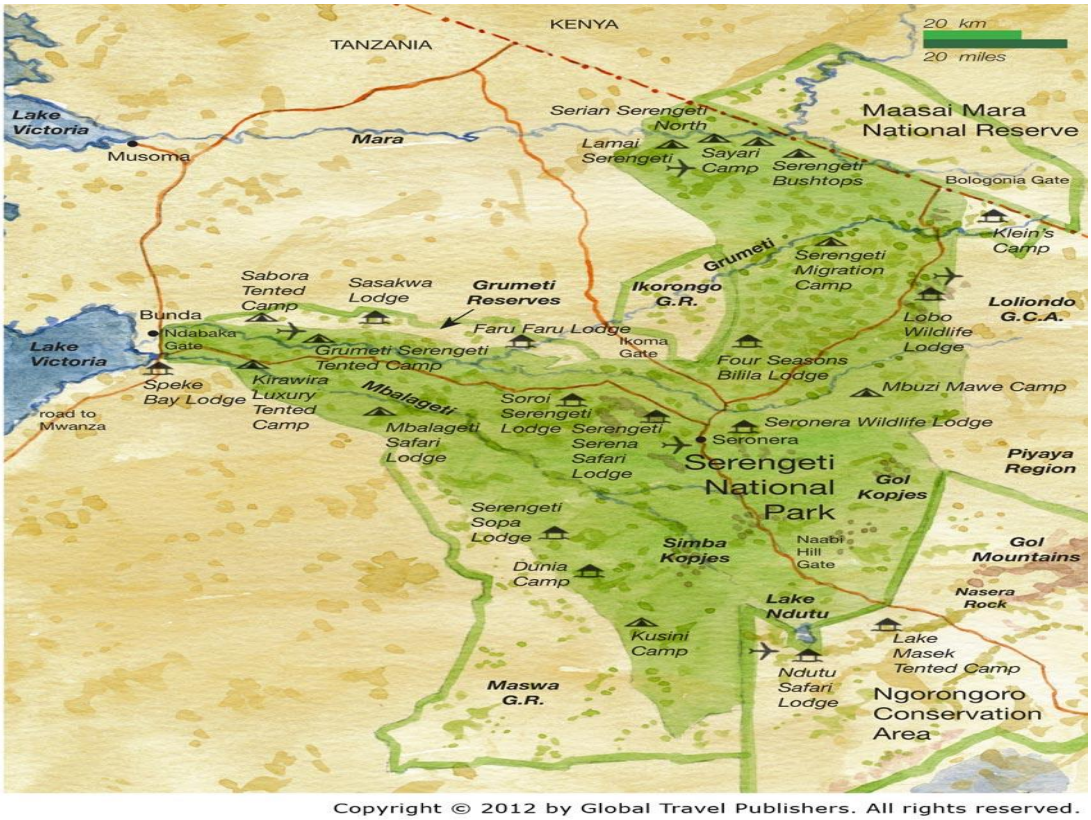
3.2 The Study Area

The people of western Serengeti are dominantly agro-pastoralists, relying on both livestock and crop cultivation for their subsistence. The population is composed of more than 20 ethnic groups, with Ikoma, Ikizu, Kurya, Natta, Issenye, Zanaki, Jita, Taturu, Luo, Robanda and Sukuma predominating The current population in western Serengeti is estimated to be about 2 million people, the Serengeti district alone having an annual growth rate of 3.1% Agriculture is practiced at a small scale, with maize, cassava, millet, and sorghum cultivated for food and cotton cultivated as a cash crop. The main livestock kept in the area are cattle, goats, sheep, pigs, donkeys, and poultry.

Crop agriculture and livestock account for around 80% of the average household income; the remaining 20% is obtained from off-farm activities, such as hunting, charcoal making, making local brew, and salaried employment. The estimated individual annual income from livestock ranges from US$ 45 to 130. Additionally, illegal hunting is reported to contribute an annual income of US$ 200 to illegal hunters, a value close to or equivalent to average on-farm income (Serengeti District profile, 2001).

The study was conducted at Robanda village within Serengeti District; Serengeti District is one of the five districts in the Region. The region is the home to the world-famous Serengeti National Park, It is bordered by Mwanza Region, on south to the west by the Musoma Rural and Bunda Districts, to the northeast by Kenya and to the east by the Arusha Region. This place is situated in Serengeti, Mara, Tanzania, its geographical coordinates are 2^0 7' 0'' south, 34^0 39' 0'' east and its original. Serengeti District has 4 division, 18 wards and 75 villages (Tanzania National Census, 2002).

Map of Serengeti National park with their surrounding villages



Source; Tanzania tourism report 2012

Robanda village

Kauzeni & Kiwasila (1994) have reviewed the socio-economic profile for Robanda village. Robanda is a traditional village established by the Ikoma tribe long before the Government villagisation programme of 1969. It is situated in Serengeti District along a dry weather road from Musoma and Mwanza to Arusha. According to the 1993 estimates, the village covers an area of 13 km ^{2} and has a population density of 121.7 per km ^{2}. The average number of persons per household is 9.1. It is one of the most densely populated and fastest growing villages in the district. The major economic activity is agro-pastoralist (Kauzeni & Kiwasila, 1994). Cotton is grown as a cash crop while sorghum and finger millet are grown for food. The livestock population is about 2,876 animals, comprising cattle (920), goats (1060), and sheep (896). Poaching for meat is also conducted (Kauzeni & Kiwasila, 1994). Among 190 households in the village, about 40 people engaged in poaching (Campbell & Hofer, 1995)

Robanda is set on a prime location for an unforgettable bush experience. The position was carefully chosen to be right in the path of the wildebeest migration, ensuring spectacular game viewing during the migration. But the camp also boasts of high resident game concentration all year round, with big herds of wildebeest and zebra, elephant and giraffe. Other animal species include lion, hyena, gazelle, topi and buffalo. (Robanda camp, 2009)

3.3 Sampling frame

Sampling frame consists of a list of items from which the sample is to be drawn (Kothari, 2004). The sampling frame of this study consisted of households, who are living in the village of Robanda, village government and Serengeti national park officers.

3.4 Sample size

Sample size is the exact number of items selected from a population to constitute a sample (Adam and Kamuzora, 2008). This study constituted a sample of a eighty (80) respondents. This included fifty (45) households who are living in the selected Village of Robanda, twenty (20) households living out of the village and fifteen (15) National Park Officers.

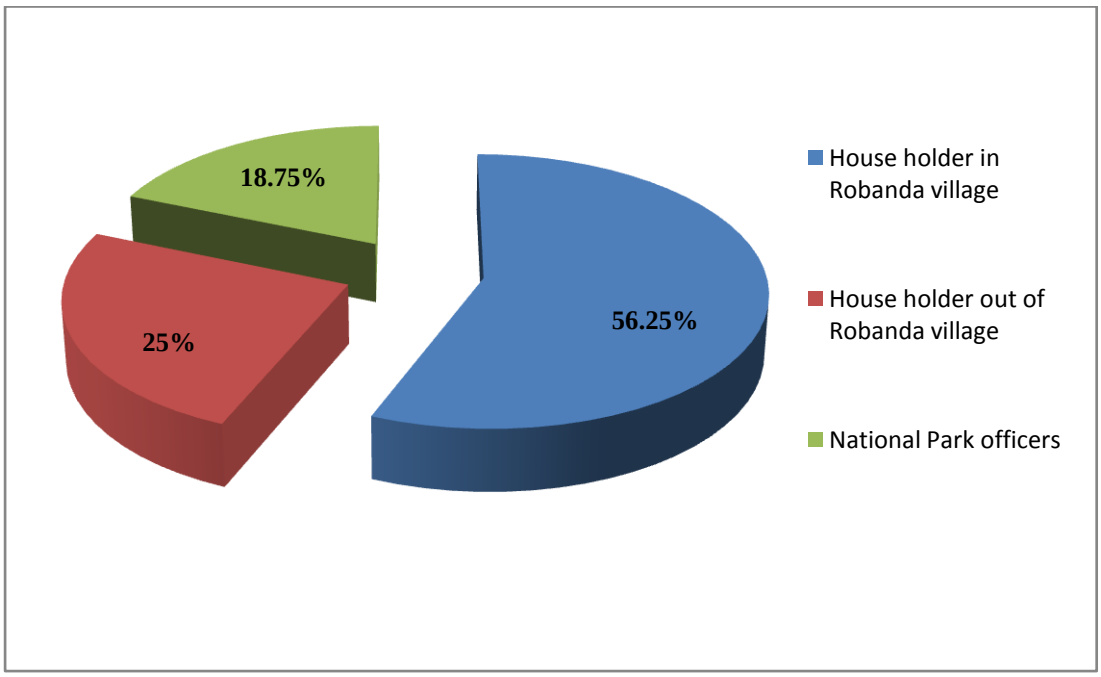
Table 3.1: Sample Distribution

CATEGORY OF RESPONDENTS	NUMBER
House holder in Robanda Village	45
House Holder out of Robanda Village	20
National Park Officers	15
TOTAL	**80**

Source: Researcher (2014)

The category of respondents shown above also can be expressed in percentage by using charts, see figure bellow;

Figure 3.1 Category of respondents



Source; Research data 2015

3.5 Sampling techniques

Due to the nature of this study and types of respondents, simple random and purposive sampling procedures were employed to select the study respondents. Simple random sampling is a probability sampling whereby all members in the population have equal chance of being selected to form a sample (Adam and Kamuzora, 2008) and purposive sampling involve making decision with regard to

which element or item to be included or excluded in the sample which rests on the researcher's judgement and intuition (Adam and Kamuzora, 2008). The task of the researcher at this juncture is to choose only those elements which are able to deliver the required data basing on their knowledge and position on the problem under investigation. In this study, both simple random sampling was applied to select villagers and purposive involved selection of village government and Serengeti national park officers that deal with ensuring good public relations exist between the national park and the local communities that surround the park respectively.

Simple random sampling procedure

Simple random sampling is a probability sampling whereby all members in the population have equal chance of being selected to form a sample (Adam and Kamuzora, 2008). Using simple random in this study, will involve the researcher to select sixty-five (65) of households who are living in the selected village of Robanda.

Purposive sampling procedure

The study will also adopt purposive sampling procedure. In this type of sampling, the decision with regard to which element or item to be included or excluded in the sample rests on the researcher's judgement and intuition (Adam and Kamuzora, 2008:138). The task of the researcher at this juncture is to choose only those elements which are able to deliver the required data basing on their knowledge and position on the problem under investigation, so this method will involve fifteen (15) National Park Officers.

3.6. Types and Sources of data

3.6.1 Primary data

Primary data are those which are collected afresh and for the first time and thus happen to be original in character (Kothari, 2004). Therefore primary data for this study was collected directly from respondents in the field by means of questionnaires and interviews.

3.6.2. Secondary data

Secondary data are those which have already been collected by someone else and which have already been passed through the statistical process (Kothari, 2004). Secondary data for this particular study therefore collected from electronic and non electronic documents such as websites, books, journals, articles and papers from different sources.

3.7. Data collection methods

In order to collect the data required by this study, the researcher used different data collection instruments which include questionnaires and interviews, however secondary data was collected through documentary review.

3.7.1. Questionnaires

This is a method of data collection whereby respondents were given a list of questions prepared by a researcher. The questions involved closed and open ended ones that respondents were required to fill in accordingly. Before distributing questionnaires a pilot study was conducted so as to ensure that there are no ambiguous questions. National park and village government officers filled in the questionnaires. There are two types of questionnaires Closed and Open questionnaires.

- *Closed questionnaire*

This is the question format that limits respondents with a list of answer choices from which they must choose to answer the question usually the closed questionnaire provide the following to the researcher; they give you facts, they are easy to answer they are quick to answer and they keep control of the conversation with the questioner (Paul, 2001).

- *Opened questionnaire*

This is the type of questionnaire which allows people to express what they think in their own words, usually these questions have the following characteristics; they ask the respondent to think and reflect, they will give you opinions and feelings, they hand control of the conversation to the respondent (Ibid).

3.7.2. Interview

This is the method whereby respondents are asked questions directly. In this study, the researcher used unstructured and structured questions in order to enable households to express themselves on how Serengeti ecosystem tourism makes rural livelihood development.

3.7.3. Documentary review

This is a method of data collection whereby the researchers collect data through past researches and documented information. This method helped the researcher to understand the magnitude of the problem in the past and how it has recently increased. By this method different agencies or Institutions dealing with ecotourism were consulted.

3.7.4. Observation

Observation is a process of collecting data through visually observing what is going on with a certain phenomenon in the field. Therefore in this study the researcher used this method because through directly observing community economic activities it is possible for the researcher to distinguish openly the work undertaken by them for their development. The economic activities that are being observed are farming, hunting and crafting

3.8 Data Processing Procedure

Data was edited, summarized, coded and entered using Statistical Package for Social Sciences (SPSS). Data analysis is important since it distil crude data into clear and interpretable ones (Kerlinger, 1986). Descriptive statistics such as frequencies, percentages and means were used to decode the data from the database template.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND FINDING

4.0 Introduction

This chapter presents and discusses findings of the study received through data collected in the field. It gives answers to the research questions which were raised before the research was conducted. This study aimed at assessing effectiveness of the influence of Serengeti National Park ecosystem tourism on improvement of rural livelihood development, a case of Robanda village. Collection of these data was done using questionnaires which was administered to respondents, questionnaire involved closed and open questions. All figures in the table are numbers of frequencies distribution presented in percentages (%).

4.1 Characteristics of Respondents

Researcher was interested to know education level of respondents, age of respondents, gender and respondents, marital status of respondents and the main occupation of respondents in order to know the characteristics of the respondents.

4.1.1 Education Level of Respondents

The researcher wanted to establish the level of education of respondents because she wanted to reveal the level of knowledge and understanding matter of study and quality of the important information produced from the respondents. Findings showed that 36 (45%) respondents had informal education, 32 (40%) had primary education, 8 (10%) had secondary education and 4 (5%) had tertiary education. These findings shows that majority of respondents have informal education. It is true that most uneducated people live in villages where they carry out farming activities and pastoralist while the educated live in town where some are working and others looking for jobs. **Table 4.1**, depict the findings.

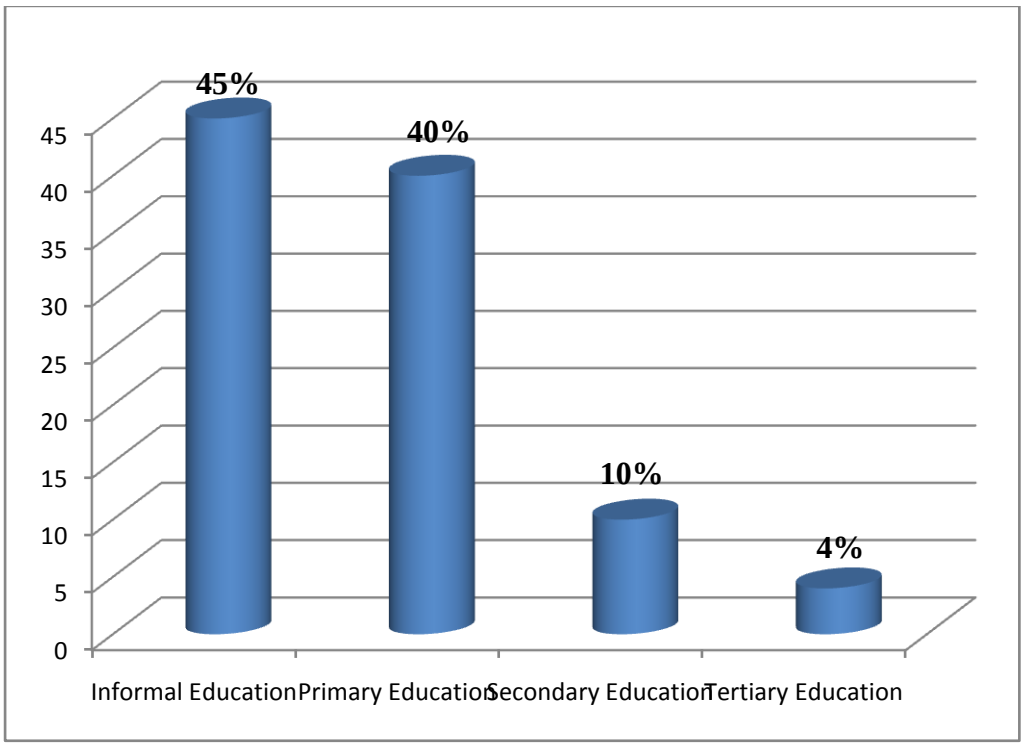
Table 4.1 Education level of Respondents

Educational level	Frequency	Percent
Informal Education	36	45
Primary Education	32	40
Secondary Education	8	10
Tertiary Education	4	5
Total	**80**	**100**

Source: research finding (2015)

The same information can be shown by using figures as follows;

Figure 4.1 Education levels of Respondents in percentage (%)



Source: Research data 2015

4.1.2 Age of Respondents

Results shows that 14 (17%) respondents had the age between 18 to 27 years, 26 (32%) had the age between 28 to 37 years, 24 (30%) had the age between 38 to 47 years and 16 (21%) had the age between 48 to 57 years. Majority of respondents in this group had the age from 28 to 37 years. This implies that the majority of the respondents who are involved in the ecotourism are mature individuals fully responsible about their future and families and perhaps to them this is a way of life and survival. Table 4.2 indicates the distribution of age of respondents.

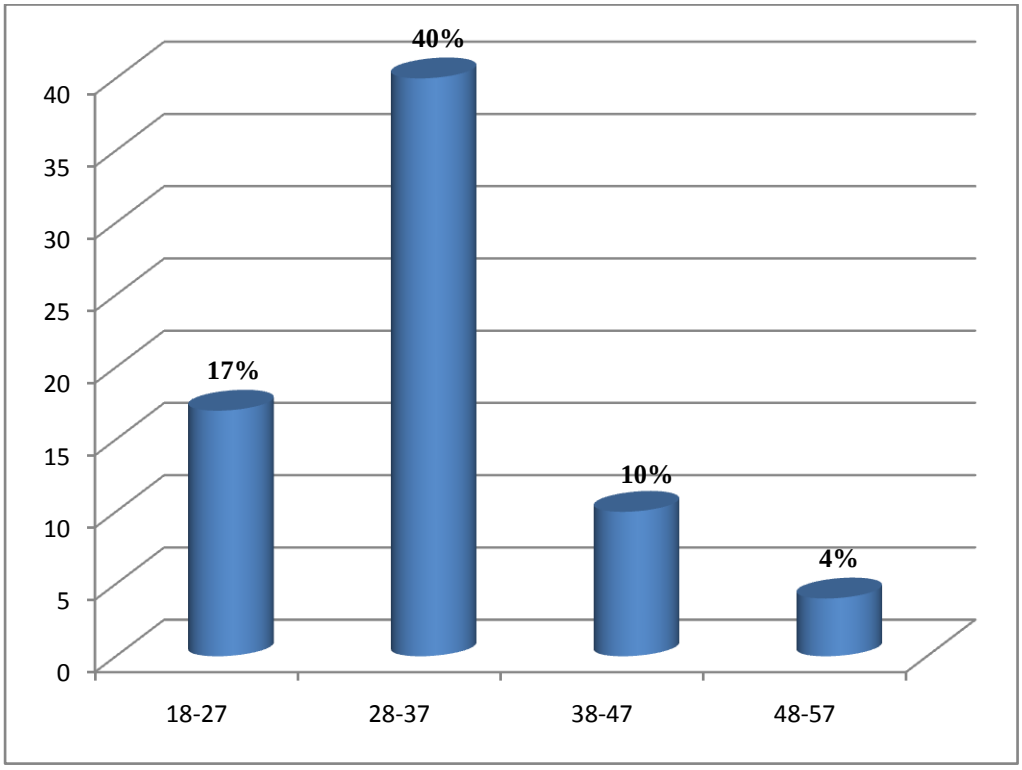
Table 4.2: Age of Respondents

Age interval	Frequency	Percent
18 – 27 Years	14	17
28 – 37 Years	26	40
38 – 47 Years	8	10
48 – 57 Years	4	5
Total	**80**	**100**

Source: research finding, (2015)

The same information can be shown by using figures as follows;

Figure 4.2 Age of Respondents in percentage (%)



Source: Research data (2015)

4.1.3 Sex of Respondents

Results shows that 44 (55%) respondents were male and 36 (45%) were female. These findings justifies that male in the study area are more involved in tourism activities as compared to female. This indicates that development interventions may be more successful if a large proportion of both males and females are involved in

creating awareness and sensitizing about the program. Gender consideration in tourism entrepreneurship programme can be an important aspect to ensure the viability of development projects at individual and household level. Table 4.3 is indicating gender distribution.

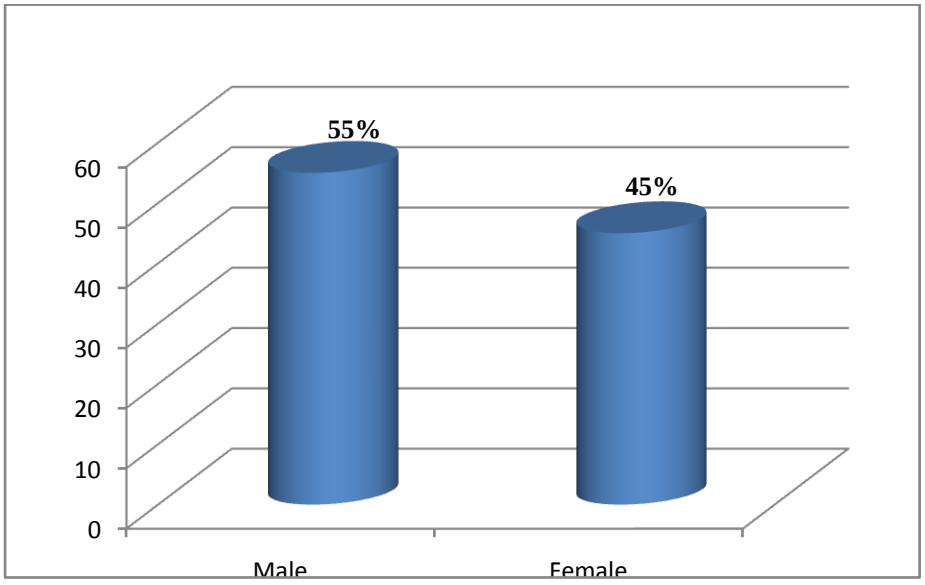
Table 4.3: Gender of Respondents

Gender	Frequency	Percent
Male	44	55
Female	36	45
Total	**80**	**100**

Source: Research data (2015)

Also the same information that shown above can be presented by using figures as follows;

Figure 4.3 Gender of Respondents in percentage (%)



Source: Research data 2015

4.1.4 Marital status of Respondents

Results showed that 24 (30%) respondents were single, 49 (61%) were married and 7 (9%) were separated. Study found that majority of respondents was married. This suggests that married people venture into ecotourism as a way of finding means of

relieving financial problems facing their families or increasing their family income. The table 4.4 depict marital of the respondents.

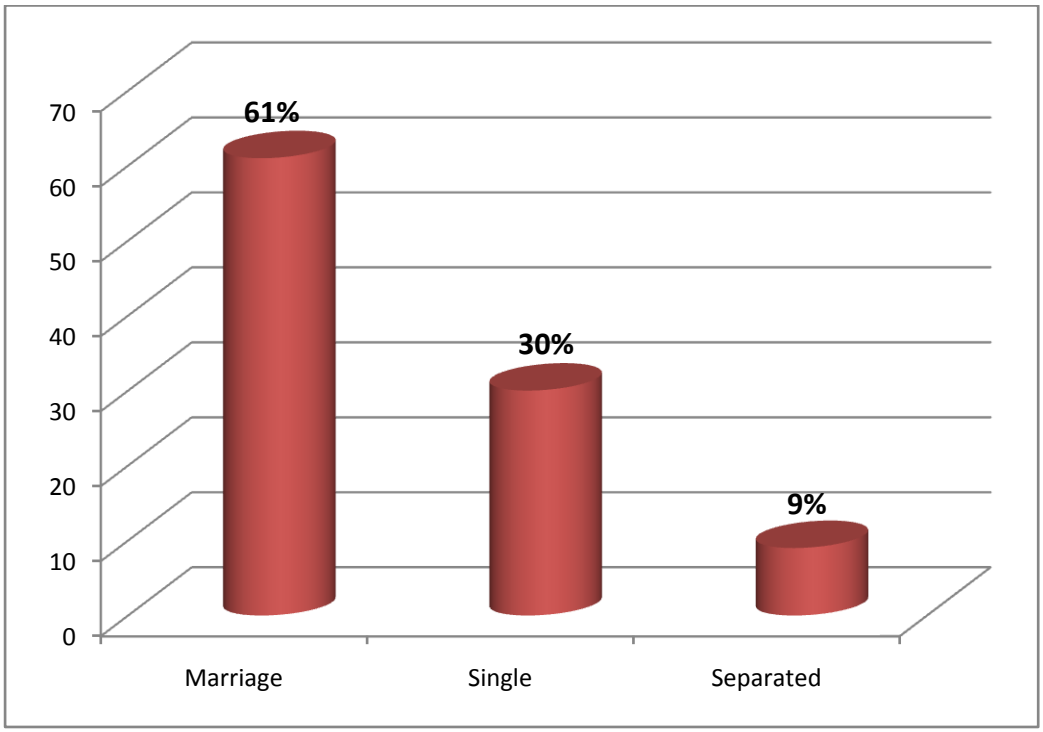
Table 4.4: Marital status of Respondents

Marital status	Frequency	Percent
Married	49	61
Single	24	30
Separated	7	9
Total	**80**	**100**

Source: Research data (2015)

The same information that shown above can be presented by using figures as follows;

Figure 4.4: Marital status of Respondents in percentages (%)



Source: Research data 2015

4.1.5 Main occupation of Respondents

Results showed that 10 (12%) respondents were farmers, 8 (10%) were government employees, 22 (27%) respondents were tour guides, 7 (9%) were pastoralists, 16 (20%) were in private sectors and 17 (22%) were doing business. Study found that majority of respondents in the study area is tour guides represented by 22(27%).

Therefore tourism sector/industry is found to be a major employer of the people but also it facilitates initiation of other social economic development. **Table 4.5** indicates occupation distribution of respondents.

Table 4.5: Main occupation of Respondents

Occupation	Frequency	Percent
Farmers	10	12
Public servants	8	10
Tour guides	22	27
Private sectors	16	20
Business	17	22
Pastoralists	7	9
Total	**80**	**100**

Source: Research data (2015)

- *Farmers*

The research finding shows that 12% of the respondents were the farmers, the number of farmers was few comparing to other areas from other areas in different Regions of Tanzania, this is because the area of Robanda are surrounded by wildlife like elephants, so it is very difficult for them to develop agriculture. Most of people in Robanda they depends food from neighbor villages.

- *Public servants*

These are workers who employed by government or agency. It involves Teachers, police, Doctors and others. The research finding indicates that 10% of the respondents were the public servants who were employed in different centre within Robanda village. Among of the employed areas were Robanda Primary school, Robanda secondary school Robanda Dispensary and Robanda police station. The finding reveals that, the number of public servant is few compeered to others, this is because the number of investors were invested much to the tourism sector, therefore large number of people in Robanda are working in such areas of tourism.

- *Tour guides*

These are people who provide assistance, information and cultural, historical and contemporary heritage interpretation to people on organized tours and individual

clients at educational establishments, religious and historical sites or museums. The findings shows that 27% of the respondents deals with tour guides activities, the data reveals that large number of people in Robanda village engaged on activities related to tourism like tour guide rather than others, this is because Tourism activities like tour guides bring more money to them comparing to other activities in Robanda village.

- *Private sectors*

This is the part of the economic system that is performed by individuals and companies rather than the Government; they were running for the purpose of making profit. The research finding indicates that 20% of the respondents are working in private sector that is related to tourism, for example most of them are working in Camp Sites. Majority of Robanda village initiated their own project related to Tourism so as to get more money. It should be noted that, most of activities that are performed in Robanda villages are tourisms oriented.

- *Business*

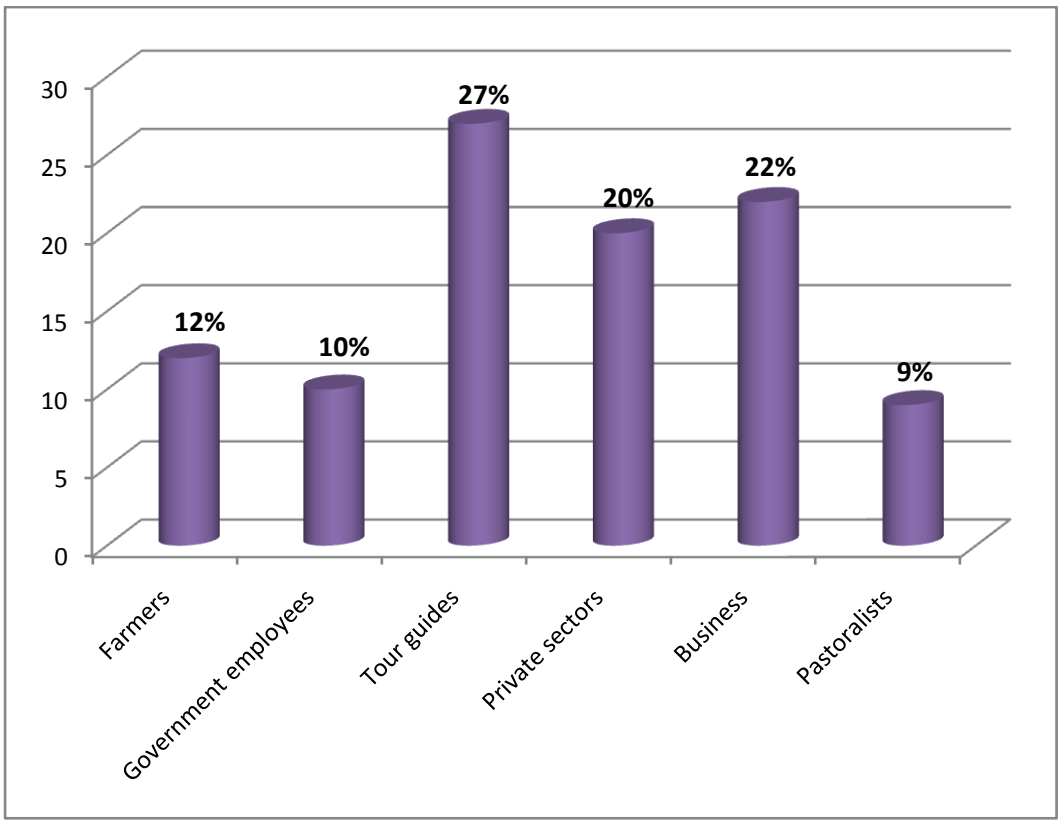
This is the involvement in trade of goods or services, the research findings indicates that 22% of the respondents were well engaged in performing business rather than other activities. In Robanda village there is the entrance of people from different part from Tanzania and worldwide as tourist of Serengeti National Park. the data reveals that, people from Robanda earn more foreign money through business hence most of people invest more their capital in business rather than other sector as we see there are huge number of camp sites

- *Pastoralists*

These are people who deals with animals keeping also cultivate to some extents. The search finding shows that 9% of the respondents were the pastoralist, these data reveals that, in Robanda village the number of pastoralist is very minimal compared to other activities. This situation is well caused by number of factors like, the Policy of Robanda village which insists on reducing livestock keeping as a means of eradicating conflict between the community and Government (wildlife like Lion can cause damage to livestock).

The above expressed information also can be shown by the following diagram;

Figure 4.5 Main occupation of Respondents in percentages (%)



Source: Research data 2015

4.2 The types of services provided to local community by Serengeti ecosystem.

The first objective was to identify the types of services provided to local communities by Serengeti ecosystem. Findings were as follows; 30 (37.5%) respondents said that Serengeti ecosystem provides employment opportunities to them, 10 (12.5%) said that ecosystem improves social services such as hospital, school and roads. 12 (15%) said ecosystem establishes entertainment, 8 (10%) said ecosystem act as a source of Investment and finally 20 (25%) said that ecosystem establish social services. Therefore types of Serengeti ecosystem services are employment opportunities, improvement of social services and establishment of social relations. Social services that are provided by Serengeti ecosystem services include food, supply of fresh water, fuel wood, fiber, genetic resources, construction and repair of schools to mention a few. The **table 4.6** below shows distribution of occupation in the Serengeti national park ecosystem.

Table 4.6: Serengeti national park ecosystem services

Service provided	Frequency	Percent
Employment opportunities	30	37.5
Establishment of social relation	20	25
Entertainment	12	15
Source of investment	8	10
Improvement of social services	10	12.5
Total	**80**	**100**

Source: Research data (2015)

- *Employment opportunities.*

According to research finding, the employment activities are often higher in tourism, wages of hotels, camp and tour guide are high compared to those who engage in other activities like agriculture activities. The percentage of employment opportunity is bigger than other; the Serengeti national park ecosystem service takes 37.5% for employment opportunity followed with others like establishment of social services, entertainment, and source of investment and improvement of social services.

- *Improvement of social services*

The research findings reveal that Serengeti national park ecosystem services play a great role on establishment of social services like hospitals, schools and roads. The Serengeti national park ecosystem service takes 12.5% for source of investment compared to others like establishment of social services, entertainment and source of investment. The income that obtaining from tourism helped to construct the female dormitory of Robanda Secondary School. Also through the income that obtaining from tourism sector, they have planned to construct the Robanda Girls high school, this is the plan for 2016.

- *Establishment of social relation*

A social relation or social interaction is any relationship between two or more individuals. The research findings show that Serengeti national park ecosystem services play a great role on establishment of social relation. The Serengeti national park ecosystem service takes 25% for source of investment followed by others like establishment of social services, entertainment and source of investment. Through tourism there is the big creation of relationship, there is the relationship between

people from Robanda and other people from different parts within Tanzania and outside Tanzania like Kenya, Uganda, and other countries from abroad like England, German and Italy.

- *Source of investment*

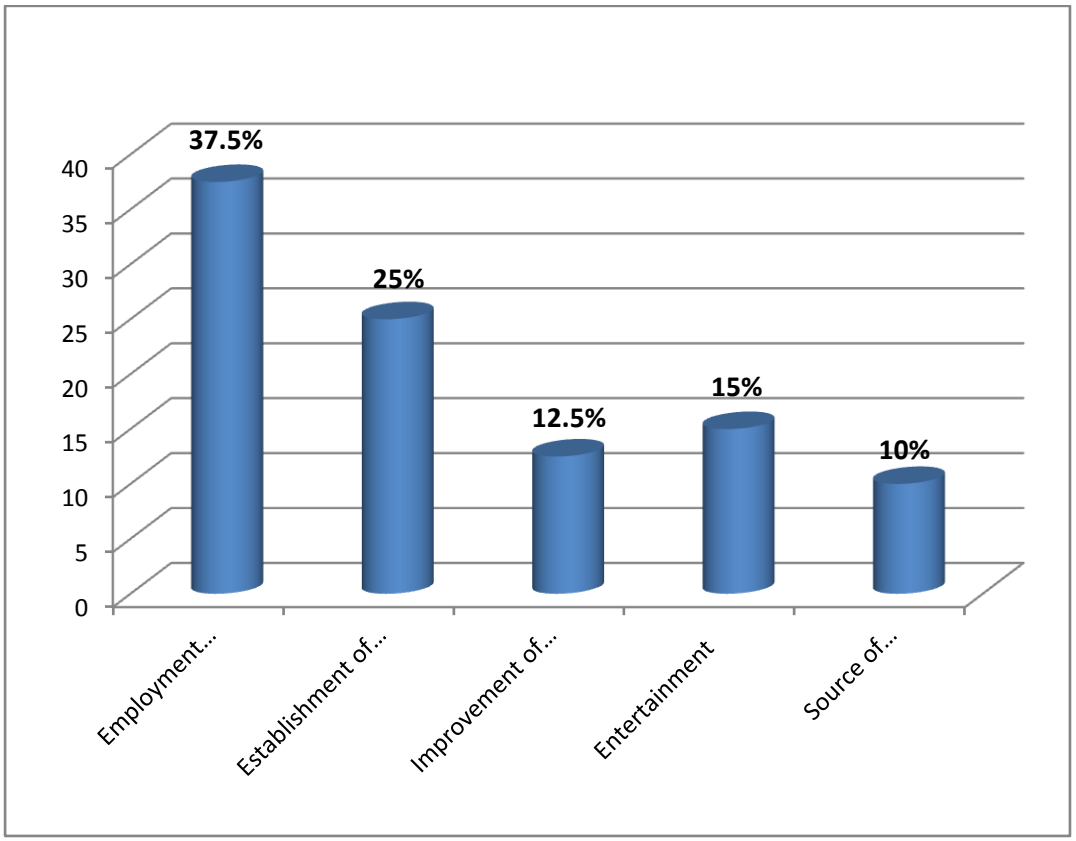
Investment is time, energy, or matter spent in the hope of future benefits actualized within a specified date or time frame. Investment has a different meaning in finance from that in economics. The research finding shows that in Robanda village, there are numbers of investment that is invested like, hotels and camp site. Through these investments, the investor earns a lot of money. Examples of that camp site it includes Ngome Safari, Kemangore Serengeti Lodges, Kenzani wildlife and Acacia East Africa.

Secondly, there are some groups which were created for the purpose of empowering every individual, examples of that group it include the followings; M and J cultural group, Robanda white Group, Duma Group, Soki group and Nyishengere investment Group.

- *Entertainment*

Research findings show that, in Robanda there are some groups which entertain the tourist who visit in their village, they sing various songs which explain various issues relating to their culture and historical background. Examples of that group are like Maendeleo group, Muungano group, Tumaini group, Kakakuona group and Upendo group. The same information that shown above can be presented by using figures as follows;

Figure 4.6 Serengeti national park ecosystem services in percentages (%).



Source; Research data 2015

4.3 Effectiveness of influence of Serengeti ecosystem on rural livelihood development

4.3.1 Levels of satisfaction

The second objective was to assess the effectiveness of influence of Serengeti ecosystem on rural livelihood development. In order to capture this objective researcher went through the following points; first, researcher wanted to know whether Robanda villagers are satisfied by the existence of Serengeti national park and available ecosystem services. Responses were as follows; 66 (83%) respondents were satisfied, 2 (3%) were highly satisfied and only 12 (14%) respondents were dissatisfied. These results implies that majority of Robanda villagers are satisfied both with the existence of the national park but also with ecosystem services. The findings are depicted in **Table 4.7** below.

Table 4.7: Level of satisfaction of the Respondents

Satisfaction level	Frequency	Percent
Highly satisfied	2	3
Satisfied	66	83
Dissatisfied	12	14
Total	**80**	**100**

Source: Research data, 2015

- *Highly satisfied*

The research finding shows that, 3% of the respondents were highly satisfied with Serengeti ecosystem on rural livelihood development; it helps them on getting more money that helps them to pay school fees in various level of education for their children. But the percentage of respondents who were highly satisfied is very minimal because numbers of people still have many plans in their life and it should be noted that development has no ends, once they finish one project the other come forward.

- *Satisfied*

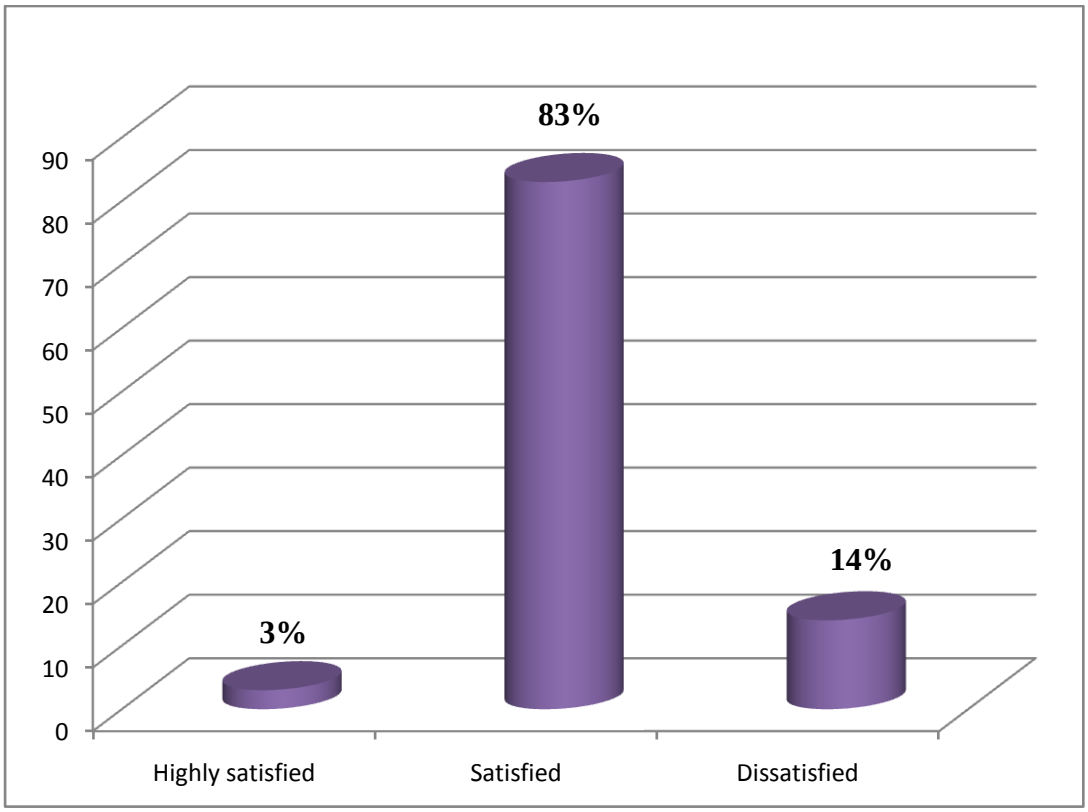
The research finding indicates that 83% of the respondents were satisfied with the Serengeti ecosystem. Majority of Robanda village likes the system of Serengeti ecosystem, this is because it ensure to some extents the availability of money which helps them on solving a number of problems that face them, Serengeti ecosystem on rural livelihood development ensure the provision of basic needs like food, shelter and clothes, without these three component a person cannot survive at all, hence number of respondent were satisfied.

- *Dissatisfied*

The research findings shows that, 14% of the respondents were dissatisfied with the Serengeti ecosystem on rural livelihood development, this situation involve interactions of people from various areas with their own culture in either within or outside the country, this interaction cause culture destructions to their community, also it influence the family members on changing their daily activates like agriculture and livestock keeping to other activities concerning to tourism.

All percentage of highly satisfaction, satisfactions and dissatisfactions can be shown by the following diagram;

Figure 4.7: Level of satisfaction of the Respondents in percentages (%).



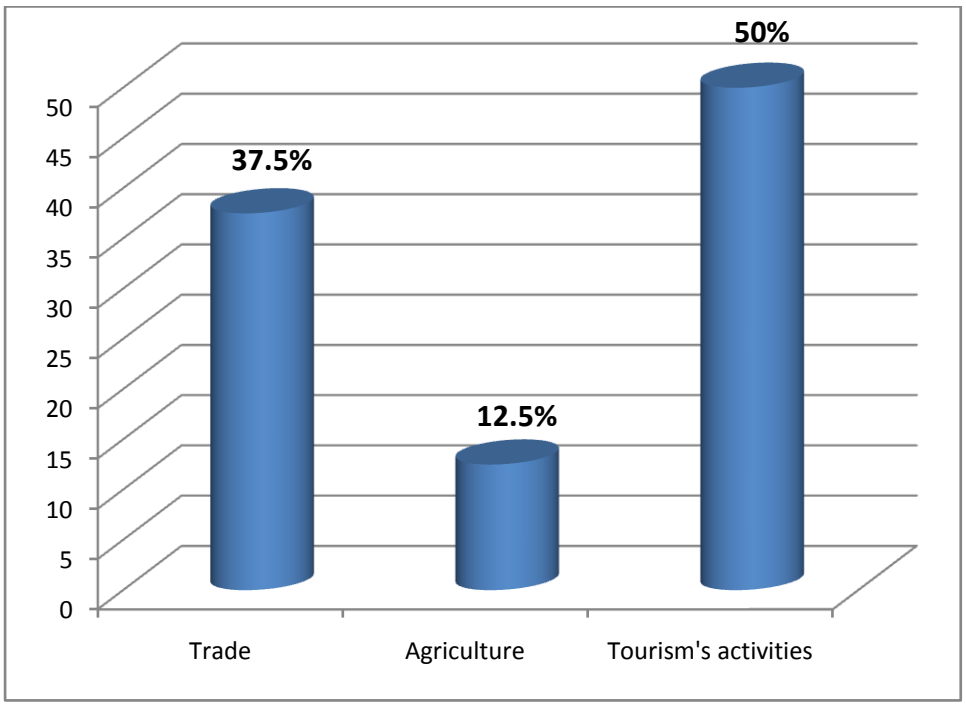
Source: Research data 2015

4.3.2 Expansion of activities

Secondly, on assessing the effectiveness of the influence of Serengeti ecosystem on rural livelihood development. Also the researcher went through on the Expansion of activities, researcher wanted to know whether in Robanda village there is the expansion of activities; Responses were as follows; 30 (37.5%) of the respondents said that, through the influence of Serengeti ecosystem on rural livelihood development there is the expansion of trade, number of villagers engage more on trade rather than other activities, this data reveals that in Robanda village there is an interaction of people from different parts, 10 (12.5%) of the respondents said that Agriculture was expanded due to the influence of Serengeti ecosystem on rural livelihood development and finally, 40 (50%) of the respondents said that, the influence of Serengeti ecosystem on rural livelihood development led to the

expansion of Tourism's activities. These information reveals that tourism's activities is more expanded, there is the flow of tourist in Robanda from various areas worldwide hence the villagers engaged on being tour guides, tour director and others. This information can be presented by figure as follows;

Figure 4.8 Expansion of activities



Source; Research data 2015

4.3.3 Monthly household income

Also, the researcher wanted to know the average household monthly income. Findings were as follows; 4 (5%) respondents earned less than Tshs 200,000, Fifty (62%) earned between Tshs 200,000 to Tshs 399,999 per month, Twenty four (30%) earned between Tshs 400,000 to Tshs 599,999 and 2 (3%) respondents earned more than Ths 600,000 per month. These results show that the average household monthly income to the majority is between Tshs 200,000 to Tshs 399,999. This kind of income implies that majority of Robanda villagers are living above one dollar per day. **Table 4.8** shows the monthly household income.

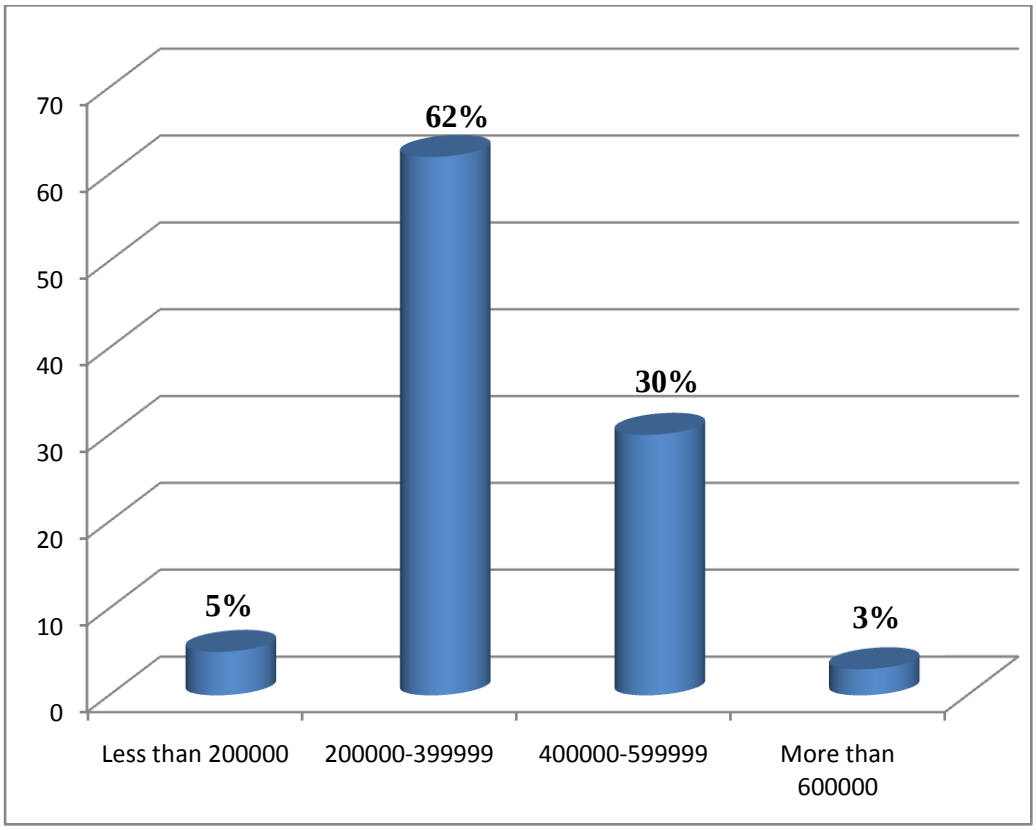
Table 4.8: Average household monthly income (Tshs)

Monthly household income	Frequency	Percent
Less than 200,000	4	5
200,000 – 399,999	50	62
400,000 – 599,999	24	30
More than 600,000	2	3
Total	**80**	**100**

Source: Research data (2015)

The above explained information also can be shown by the following figure;

Figure 4.9 Average household monthly incomes in percentages (%).



Source; Research data 2015.

Therefore having gone through the above points regarding level of satisfaction and average household monthly income, it is obvious that the influence of Serengeti ecosystem on rural livelihood development is very effective. This is because by having improved social services such schools, health care, supply of fresh water and availability of food those are signs of development.

4.4 Ways to improve influence of Serengeti tourism on rural livelihood development

The third objective was to identify ways to improve influence of Serengeti tourism on rural livelihood development. Responses were as follows; 20 (25%) respondents said that there is a need of providing education especially on tourism to the people around Robanda village. Educated community will be able to reap more benefit from tourism by improvement of social services to visitors and satisfying their needs. 12 (15%) respondents said that infrastructure should be improved so that the area could be attractive to tourists. But also more improvement of social services like water, rest house, camping site and road network will allow more visitors throughout the year. 16 (20%) of respondents said that there is a need for entrepreneurial skills concerning ecotourism activities. Therefore, there is a need of training to Robanda villagers so that they can understand how ecotourism activities may help them improve their livelihood. On top of that they said that there is a need to have access to loans in order to establish tourism enterprises at Robanda. 32 (40%) of respondents said that there is a need for advertisement of Serengeti national park worldwide. The table 4.9 below indicates ways to improve Serengeti national park ecosystem tourism.

Table 4.9: Ways to improve influence of Serengeti national park ecosystem

Improvement ways	Frequency	Percent
Provision of education	20	25
Improvement of infrastructure	12	15
Entrepreneurship skill	16	20
Advertisement Serengeti national park	32	40
Total	**80**	**100**

Source: Survey data, 2015

- *Provision of education*

The research findings shows that 25% of the respondents said that, in order to ensure the improvement of Serengeti national park ecosystem, the provision of education concerning with ecosystem is needed in Robanda and neighbor's villages so as to maintain the environment around the Serengeti National Park. This education can be provided through posters, Mass Medias, Journals and news papers.

- *Improvement of infrastructure*

The research findings indicate that 15% of the respondent said, in order to ensure Serengeti national park ecosystem, there is the need of improved infrastructure like roads so as to help the tourists to pass through from one point to another easily. For example there is the seasonal road around Robanda village that allows the tourist to move from one area to another seasonally.

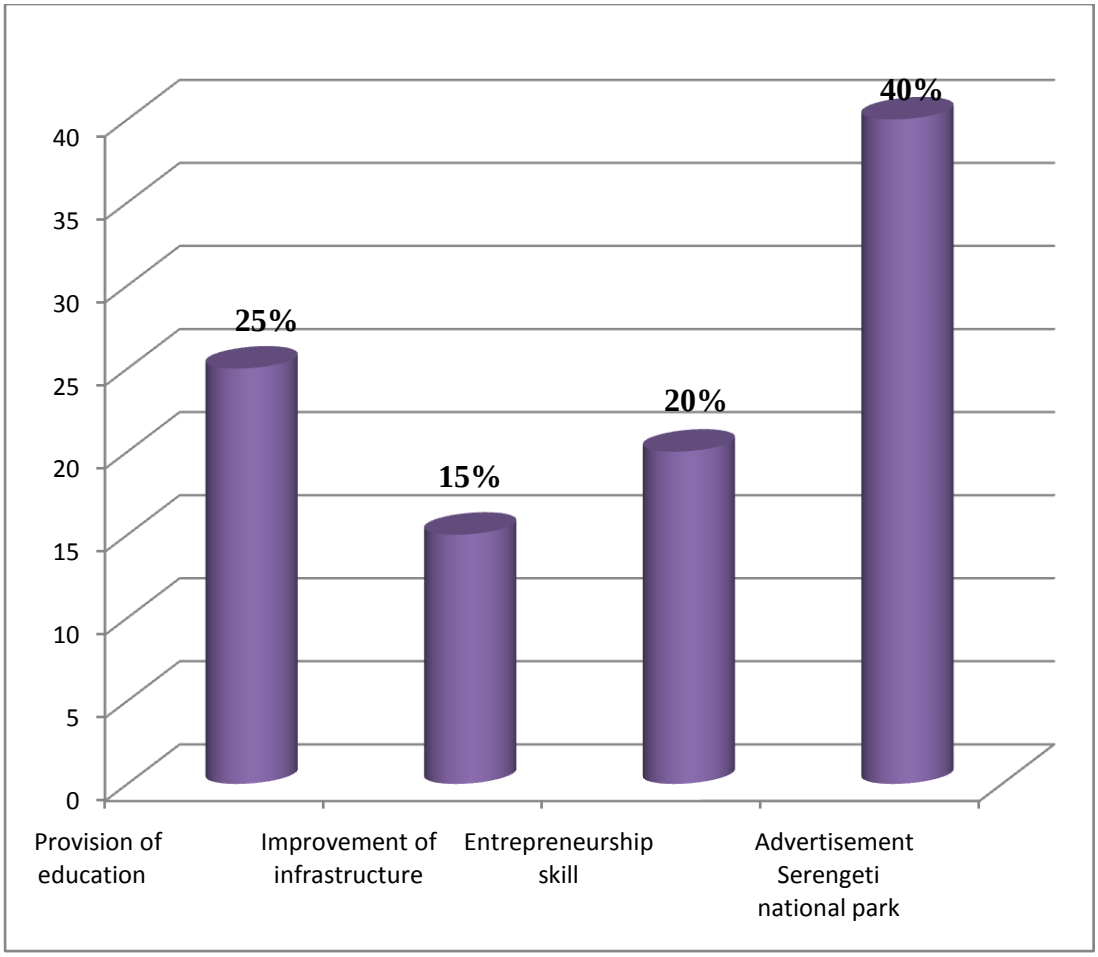
- *Entrepreneurship skill*

The research finding shows that 20% of the respondents said that, there is the need of entrepreneurship skills to the people of Robanda village so as to ensure the improvement of Serengeti national park ecosystem. The entrepreneurship skill helps the community preserve the available resources which also play a great role on ensuring ecosystem.

- *Advertisement Serengeti national park*

The Serengeti national park use various means so as to advertise the national park, they use Mass media like television, radios and journals. The research finding indicate that 40% of the respondents believe that the use of advertisement helps a lot on ensuring ecosystem to the Serengeti national park, these means that people from Robanda and other neighbor villages get educations concerning ecosystem through advertisements. All the above explained information also can be shown by the following figure;

Figure 4.10 Ways to improve influence of Serengeti tourism in percentages (%).



Source: Research data 2015

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMEDATION

5.0 Introduction

In this chapter there are several matters controlled, such matter are summary of the finding conclusion in respect to each research objectives and also it contain recommendations from finding of this study which is provided by researcher. Also researcher recommended in respect to research objectives

5.1 Summary

This study aimed at assessing effectiveness of the influence of Serengeti national park ecosystem tourism on improvement of rural livelihood development in Serengeti district. It explained all the three specific objectives which were first, identifying the nature of Serengeti ecosystem services on local people; secondly to assess the effectiveness of influence of Serengeti ecosystem on rural livelihood development and the last objective was to identify ways to improve influence of Serengeti tourism on rural livelihood development.

These results showed generally that; first types of Serengeti ecosystem services to local communities are employment opportunities, improvement of social services and establishment of social relations. Secondly the study found that influence of Serengeti ecosystem on rural livelihood development is very effective. Lastly the study found four ways of improving influence of Serengeti tourism on rural livelihood development, these are; education on tourism activities, infrastructure development, entrepreneurship skills on tourism sector and advertisement of Serengeti national park worldwide.

5.2 Conclusion

The major intention of this study was to assess the influence of Serengeti national park ecosystem tourism on improvement of rural livelihood development in Serengeti district. It is clear from the findings that the influence of Serengeti ecosystem on rural livelihood development is very effective due to high level of satisfaction of the existence of Serengeti ecosystem to Robanda people, expansion of different activities like tourism activities and also employment opportunities have favored rural livelihood development. Therefore for the sustainable of rural development livelihood the government should ensure sustainability of Serengeti national park ecosystem.

5.3 Recommendation

In this study we have seen the effectiveness of the influence of Serengeti national park ecosystem tourism on improvement of rural livelihood development. It therefore recommended that;

i. The government through ministry of wildlife and tourism should provide more information through using various means like Mass media, Journals, magazine and television so as to advertising Serengeti national park in worldwide.
ii. The government through ministry of infrastructure in collaboration with ministry of wildlife and tourism should ensure the provision of sufficient budget that they earn from tourism sector in improving the number of infrastructures such as roads so as to ensure the tourist reach at right time to the Serengeti national park.
iii. The Government should initiate Public Private Partnership so as to ensure the total provision of various services concerning to ecosystem, especially in those areas near to wildlife like in Robanda Villagers, these will allow the living standard both to wildlife and villagers in the respective area.
iv. Government should provide training and education towards ecosystem in among Robanda villagers so as to understand the importance of keeping the nature of Serengeti national park so as to make it last longer.

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APPENDICES

Appendix 3.1 Survey Study Questionnaire

APPENDIX I: QUESTIONNAIRE FOR HOUSEHOLD MEMBERS.

Robanda Village Serengeti District

2010/2011

Important*:* Questions that need general household information may be answered by either both spouses together or by the head of the household. Otherwise, each respondent must try to answer each question alone.

We are conducting a research on **effectiveness of the influence of Serengeti ecosystem tourism on rural livelihood development: a case of Robanda village.** The research requires conducting interviews with various stakeholders including your family. The information hereby obtained is solely for academic reasons and all your responses will remain confidential. We will try our best to share the results of our research with you once completed. We will be extremely grateful if you agree to collaborate with us and give some of your time to answer a set of questions we have. The questions are designed to help us understand how ecosystem tourism influences rural livelihood development.

We thank you for your time and eagerly hope for your cooperation.

IDENTIFICATION:

District: …….. Division: ……

Ward: ……. Village: ……

Hamlet…… Date ……

A. DEMOGRAPHIC DATA

1. Name of the Respondents …….……

2. Age of the Respondent ……..

3. Sex of Respondent

1= Male ( ), 2=Female ( ),

4. Level of Education.

1= Never attended formal education ( )

2= Primary education ( )

3= Secondary education ( )

4= Tertiary ( )

6=. Other (specify) ……

5. Marital status of Respondent

1= Married ( ), 2=Single ( ), 3= Widow / Widower ( ), 4= Divorce ( ), 4=Separated ( )

6. Occupation:

1= Farmer ( ), 2=Government employee ( ), 3= Tourist/Guide ( ), 4= Unemployed ( ), 5= Private sector employee ( ), 6= Retired, ( ), 7=Businesses ( ),

8=Others (specify) ……

7. How did you acquire this knowledge of Ecosystem Tourism?

1= Inherited ( )

2= relatives / friends ( )

3= Supported by NGOs/ government department ( )

4= Other (Specify)……

8. Years of experience in ecosystem tourism ……

9. Do you think that when foreign tourist come to visit your village , this will impact the people in your areas?

1= YES ( )
2 = NO ( )

Explain……

10. Will you be happy to see more tourists visiting your village?

1= YES ( )
2 =NO ( )

11 (a). Would you be happy to see your children or member of your household work in the ecotourism industry

1= Yes ( ), 2= No ( )

(b).Reason for yes/no ……

12 (a). How do you rank your level of satisfaction with ecosystem tourist in your village.

1= Highly satisfied

2=satisfied

3= Dissatisfied

4= High dissatisfied ( )

13. What is your view about Community based ecotourism development?

1=It's good

2 = it's fair ( )

3=Poor

4= very good

5=Others Specify ……

14. Has your life changed in any way as a result of ecotourism development?

1=Yes ( )

2= No

Why……

15. What have your livelihoods gained due to ecotourism development?

…….. ……

16. What have your livelihoods lost due to tourism development?

…….

17. How do you describe your household income from tourism development in the last

5-10 years?

1. Has significantly increased
2. Has fairly increased
3. Has remained constant ( )
4. Has fairly decreased
5. Has significantly decreased
6. I receive no income from tourism related activities

18. What is the average monthly income your household generates from Ecotourism? ……..

19. What do you do with the income from ecotourism? ……..

20. What do you hope to do with your future earnings from ecotourism?

b) What other benefits has your household so far derived from your community-based ecotourism project……

21. In the past 12 months, have you worked with others in your community to do something for the benefit of the community?

1. Yes
2. No ( )

If yes, what were three such activities in the past 12 months?

1.....

2.....

3.....

22. Has the community ever cooperated to solve a problem?

1. Yes 2. No ( )

What kinds of problem(s) did you solve, give examples?

.....

23. What price do you charge per kg of bee-wax? ……

24. Has the community ever cooperated to build something?

1=Yes ( )

2=No ( )

Explain ……

Thank you for your time and Assistance

APPENDIX II: KEY INFORMANTS QUESTIONNAIRE.

Robanda Village Serengeti District

2015/2016

We are conducting a research on **effectiveness of the influence of Serengeti ecosystem tourism on rural livelihood development: a case of Ikoma village**. The research requires conducting interviews with various stakeholders. The information hereby obtained is solely for academic reasons and all your responses will remain confidential. We will try our best to share the results of our research with you once completed. We will be extremely grateful if you agree to collaborate with us and give some of your time to answer a set of questions we have. The questions are designed to help us understand how ecosystem tourism influence rural livelihood development.

We thank you for your time and eagerly hope for your cooperation.

1. Sex of Respondent

1= Male ( ), 2=Female ( ),

2. Level of Education.

1= Never attended formal education ( )

2= Primary education ( )

3= Secondary education ( )

4= Tertiary ( )

6=. Other (specify) ……

4. Marital status of Respondent

1= Married ( ), 2=Single ( ), 3= Widow / Widower ( ), 4= Divorce ( ), 4=Separated ( )

5. How would you describe community attitudes towards tourism development in the Robanda Village?

1. Highly positive
2. Positive
3. Somehow positive
4. Somehow negative ( )
5. Negative
6. Highly negative

Explain you option.....

6. Make a list of some of the common assets that most households in your community own?

1 ……..
2…….
3…….

7. Make a list of some of the livelihood activities caused by tourism development in your village?

8. Think of your life before and after ecosystem tourism development, how have things changed?

Has significantly changed
Has fairly changed
Has somehow changed ( )
Has not changed
Has significantly not changed

Explain your opinion.....

9. How would you describe the impact of ecosystem tourism development on livelihood security?

1. Has significantly changed
2. Has fairly changed
3. Has somehow changed ( )
4. Has not changed
5. Has significantly not changed

Explain your opinion.....

10. What are gains in livelihoods that your community derive from ecosystem tourism development?

11. What are costs in livelihoods that your community lost due to ecosystem tourism development?

12. Do you think ecosystem tourism development has improved livelihood security in your village?

Yes

No ( )

Explain your opinion.....

Thank you for your time and Assistance