

**THE EFFECTS OF NATURE CONSERVATION ON LOCAL ECONOMIC
DEVELOPMENT IN TIMBAVATI, MPUMALANGA PROVINCE**

by

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DECLARATION

I declare that the dissertation submitted to the University of Limpopo, for the degree Master of Development in Planning and Management is my own work and has not previously been submitted at any University or other educational institutions; where use has been made of the work of others, it was acknowledged accordingly in the text.

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15/09/2015
Date

DEDICATION

This dissertation is dedicated to my father, Daniel Segage and my mother, Francina Segage, thank you for the love, support, prayers, and encouragements during my studies. Special gratitude to my mother for the sacrifices she made to ensure that I get better education. If it was not for her courage I would not be here.

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ABSTRACT

The rationale for the establishment of nature reserves and protected areas has emphasized community benefits in terms of job and market opportunities, generation of income, facilitation of entrepreneurship and business, and the creation of an enabling local development environment within which locals would acquire the ability to make productive use of available opportunities and to resist the threats associated with poverty, deprivation, social exclusion and inequality. Evidently, the promotion of nature reserves has in recent years seen an unprecedented and, in many ways, uncomfortable convergence of the local economic development and environmentalism. Theoretically, the increasing popularity of nature reserves rests on the assumption that an enabling local economic development environment would be established wherein increased tourism would precipitate economic growth, job-creation and such other qualities which are collectively characterized as local economic development. However, in practice the interface of nature conservation remains scarcely tested.

The study used Timbavati Nature Reserve which is adjacent different Villages including among others Timbavati Village to argue that the practice of nature conservation is far from popular pronouncements, captivated by the conjecture of an enabling local economic development environment. For the purpose of this study, a sample of 99 households from Timbavati Village was used to investigate the effects of nature conservation on LED. The findings of the study affirm that nature reserves are inherently preservationist and focus on protection of biodiversity, maintenance of critical ecological processes as well as ecosystem goods and services rather than “pro-poor growth” and “growth-focused” development paradigms. That is, the findings demonstrated that the Timbavati Nature Reserve is not contributing optimally towards LED as expected by the local communities. Although a general judgement could not be made, however, 28.3% of the respondents disagreed that the nature reserve produces desirable effects and 15.1% agreed that the nature reserve have undesirable effects on the village while 86.5% of the respondents were neutral on both effects. Additionally, the dearth of LED activities in the village

indicated that the Timbavati Village does not get an injection from the nature reserve towards LED. Such findings indicate that the question of community ownership and access to natural resources remains unresolved where abundance of natural capital co-exists with poverty among communities. Thus, lack of integration, coherence, access to resources, local ownership, community participation and equal benefits sharing is apparent in most nature reserves and other protected areas including Timbavati Nature Reserve. Therefore, the study concludes that the Timbavati Nature Reserve is yet to contribute towards local economic development because its practice is devoid of community development principles.

ACRONYMS

BLM: Bushbuckridge Local Municipality

DEAT: Department of Environmental Affairs and Tourism

DOF: Department of Finance

DPLG: Department of Provincial and Local Government

DTI: Department of Trade and Industry

EPWP: Expanded Public Works Programme

EU: European Union

ISRDS: Integrated Sustainable Rural Development Strategy

IUCN: International Union for Conservation of Nature

LED: Local Economic Development

LEDF: Local Economic Development Fund

NGOs: Non-governmental Organizations

RDP: Reconstruction and Development Programme

RSA: Republic of South Africa

SANParks: South African National Parks

SALGA: South African Local Government Association

SETA: Sector Education and Training Authorities

SMMEs: Small Medium and Micro Enterprises

StatsSA: Statistics South Africa

WWF: World Wide Fund for Nature

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO NATURE CONSERVATION AND LOCAL ECONOMIC DEVELOPMENT

1.1. Introduction and Background

The rationale for establishing protected areas and nature reserves has been dominant in the conservation discourse since the nineteenth century (Andam, Ferraro, Sims, Healy, & Holland, 2010; Sims, 2010; Kangalawe & Noe, 2012; Ahmad, Abdullah & Jaafar, 2012). Evidently, objectives of nature reserves and national parks are inherently preservationist and focused on protection of biodiversity, maintenance of critical ecological processes as well as ecosystem goods and services (Torri, 2011; Kasyzynska, Cent, Jurczak & Szymanska, 2012). That is, ecocentrism has become manifest in the institution of nature reserves which is practical in most countries across the globe (Igoe, 2004). However, large tracts of human habitants have been observed adjacent to nature reserves especially in developing countries. The hegemony of the nature-centred approach justifies insinuations that needs and aspirations of local communities are often neglected (Mariki, 2013). The apparent exclusion from access of natural capital is commonly blamed for overwhelmingly negative attitudes, negligence and destruction as local communities search for means to deal with threats associated with poverty, deprivation, malnourishment and food insecurity (Watts and Faasen, 2009). Therefore to deal with such negative occurrences, a sudden paradigm shift was witnessed in conservation discourse and practice with a focus on utilitarian and anthropocentric purposes (Watts & Faasen, 2009; Scheba & Mustalahti, 2015).

Since the introduction of World Conservation Strategy in 1980, United Nations Conservation on Biological Diversity of 1992 and the World Parks Congress Durban accord of 2003 held in South Africa, most nature reserves in the world adopted a people-centred approach that incorporates environmental, political and socio-economic benefits for the local communities (Pelsefr, Redelinhuis & Velelo, 2011;

Kangalawe & Noe, 2012). The World Parks Congress views nature reserves and other protected areas as vehicles for poverty reduction, economic development and sustainable livelihoods (Pelser *et al*, 2011). This includes the significance of nature reserves to contribute towards local economic development in terms of job and market opportunities, generation of income, facilitation of entrepreneurship and business, and the creation of an enabling local development environment. Accordingly, attention has increasingly moved from perceiving local communities as threat to biodiversity to local people as stewards and beneficiaries to the natural environment (Kothari, Camill & Brown, 2013; Mariki, 2013). South Africa like other developing economies also went through that paradigm shift in nature conservation (Simelane, Kerley & Knight, 2006; Pelser *et al*, 2011).

In the apartheid era, South Africa's natural biodiversity were demarcated and fenced to segregate the local population from the natural capital (Watts & Faasen, 2009; Pelser *et al*, 2011). That approach justifies insinuations that needs and aspirations of local communities are often neglected therefore diverged from the developmental needs of the rural populations (Pelser *et al*, 2011). Consequently, the system of protected areas popularised enforced removal and segregation of communities in the management and benefits of conservation (Kalamandeen & Gillson, 2006; Watts & Faasen, 2009; Pelser *et al*, 2011). However, in accordance to the new conservation approach introduced in different parts of the world, South Africa publicized different legislation and legal frameworks in the post-apartheid era for a participatory approach to conservation that encouraged community participation, local involvement in the operation and management of protected areas, as well as equitable benefit sharing (Paterson, 2009; Watts & Faasen, 2009; De Koning 2010; Pelser *et al*, 2011). Such legal frameworks include among others the Constitution of Republic of South Africa (RSA, 1996b), White Paper on Environmental Management Policy (RSA, 1998b) and Protected Areas Act of 2003 (RSA, 2003). The South African National Parks agency also adopted a participatory approach that is governed by inclusion of local communities and linking conservation to human needs (Watts & Faasen, 2009). Moreover, the Department of Environmental Affairs and Tourism collaborated with SANParks to initiate various community outreach programmes which are meant to set an example for a people-conservation nexus as

required by the participatory approach (Pelser *et al*, 2011). The new approach also aimed at dealing with racial segregation and imbalances which was created by the apartheid government (Watts & Faasen, 2009). This entails allowing the majority black population access to the natural capital and accrued benefits.

However, despite this shift in conservation, many nature reserves still fail to adhere to the ideal of community participation and enhanced local economic development for neighbouring local communities. As stated by Pelser *et al* (2011) majority of the outreach conservation related programmes undertaken in the new management system were unable to afford local communities tangible benefits which could make a lifelong difference to their poverty level, income, livelihoods and the LED components. It has been observed that majority of nature reserves in South Africa still practice the “keep out or you will suffer” (command-and-control) ideologies towards nature conservation (Watts & Faasen, 2009). Furthermore, poverty, inequality, unemployment and economic stagnation persist in communities inhabited by nature reserves (De Beer & Marais, 2005). Along similar lines, the study argues that the practice of nature conservation in South Africa is far from popular pronouncements, captivated by the conjecture of an enabling local economic development environment. The study therefore focuses on the effects of nature conservation on local economic development in local communities neighbouring Timbavati Nature Reserve. The study used Timbavati Village to investigate the assertion and derive evidence to corroborate the argument.

1.2. Statement of the Research Problem

The relationship between nature conservation and local economic development has been observed in various academic studies (Sims, 2010; Ntonzima & Binza, 2011; Ramukumba, Mmbengwa, Mwamayi & Groenewald, 2012; Snyman & Spenceley, 2012; Mishra & Padhi, 2013). In the conservation discourse, the increasing popularity of nature reserves rests on the assumption that an enabling local economic development environment would be established wherein increased tourism would precipitate economic growth, job-creation and such other qualities which are collectively characterised as local economic development (Ntonzima &

Binza, 2011; Ramukumba *et al*, 2012; Snyman & Spenceley, 2012; Mishra, & Padhi, 2013; Das & Chatterjee, 2015). In practice, though, the interface of nature conservation remains scarcely tested. Several studies have documented high poverty levels and negative community events associated with the formation of nature reserves (Brockington, 2003; Mcshane, 2003; Wilkie, Morelli, Demmer, Starkey, Telfer & Steil, 2006; Phillips & Roberts, 2013; Shoreman-Ouimet & Kopnina, 2015). Therefore, argued that the effects of nature conservation are not always desirable for the local communities (Brockington, 2003; Mcshane, 2003; Wilkie *et al*, 2006; Phillips & Roberts, 2013). Spenceley (2003) stated that the effects differ in scope and intensity, thus include among others loss of legal rights to access natural capital, displacements, uneven economic growth, labour exploitation and cultural pollution.

Additionally, the practice of nature conservation has been often accused of being a playground for the most privileged groups with the poor communities drowning in poverty (Zeka, 2008). In developing countries such as South Africa, nature reserves seem to serve the commercial interests of global business and capital rather than promoting economic development of local communities (Zeka, 2008). Given that such nature reserves are established through natural capital in areas inhabited by poor communities, the emphasis on nature conservation tends to exclude those owner-communities from access (Zeka, 2008; Watts & Faasen, 2009; Pelsler *et al*, 2011). Although the South African government has made it a legal requirement for nature reserves and other protected areas to incorporate local communities in conservation (RSA, 1996b; RSA, 1997a; RSA, 1998b; RSA, 2003), most nature reserves fail to adhere to such requirements.

Essentially, it was discovered that there is poor planning in the shift of conservation from exclusionary to human-centred approach (Paterson, 2009; Mariki, 2013). Whereas the participatory approach dominates the presentation of the conservation discourse, the hegemony of the nature-centred approach remains unchanged. Nolen (2008) highlighted that even though some nature reserves incorporate local communities in conservation, it remains a challenge to understand how and to what extent the local communities should be involved both productively and successfully.

Therefore, underwritten by the motive for inherent valuation of natural capital, nature conservation continues to exclude local communities from the operations and management of nature reserves and also in economic benefits (Watts & Faasen, 2009). Lack of integration, coherence and local ownership is apparent in most nature reserves established within communities of South Africa. Communities such as Timbavati experience diverse social challenges associated with poverty, poor infrastructure, unemployment and poor public amenities, however there is a nature reserve neighbouring the community within which the local people expect to benefit optimally from with regard to the LED components. The most pertinent consideration is, therefore, related to the effects of nature conservation on local economic development in Timbavati.

1.3. Research Questions

The general research question for the study is as follows: How does nature conservation affect local economic development? From the general research question, the study has formulated the following specific research questions:

- What are the approaches to nature conservation?
- What are the components of local economic development?
- What are the effects of nature conservation on local economic development?

1.4. Research Aim and Objectives

The aim of the study is to investigate the effects of nature conservation on local economic development. To operationalize the aim, the study intended to meet the following objectives:

- To identify the approaches to nature conservation.
- To determine the components of local economic development.
- To investigate the effects of nature conservation on local economic development.
- To recommend interventions that could reduce the undesirable effects of nature conservation on local economic development.

1.5. Definition of Concepts

Nature conservation is a complex concept as it is often confused with nature preservation; however SANParks (2008) defines nature conservation as the management of anthropogenic activities on biodiversity for the benefits of the current generations while ensuring that the necessity for the forthcoming generations to satisfy their needs is not compromised. The universally accepted definition of conservation thus focuses on the sustainable use, protection, maintenance, rehabilitation, restoration and the enhancement of the natural environment (RSA, 1997a cited in SANParks, 2008). Akosim, Bode, Kwaga & Dishan (2010) support SANParks definition of the concept by stating that nature conservation is the use of natural capital to provide the higher quality of mankind with the aim of enriching both material and spiritual wellbeing of human inhabitants on a sustainable basis. Nature conservation also has different dimensions, this includes among others soil conservation, water conservation, energy conservation, biodiversity conservation, forest conservation, urban conservation and ocean conservation. However, the study focused only on biodiversity and forest conservation.

Local Economic Development (LED) is the process by which the local government, private sector, communities and non-governmental sector come together in an effort to collectively create better conditions for economic growth, poverty reduction and employment generation (Hindson & Meyer-Stamer, 2007; Patterson, 2008; Koma, 2012). The main aspects of local economic development are to alleviate poverty, provide job opportunities and boost local economies to benefit the local communities (Patterson, 2008; Ntonzima & Binza, 2011; Koma, 2012; Ramukumba *et al*, 2012). Thus, the study focuses on the above definition as it is central to the components of local economic development which include job-creation, income generation, business partnerships, entrepreneurial and market opportunities, enabling local development environment and economic growth.

Nature reserve is referred to as a geographical area which is declared, managed and protected for the sake of its biodiversity through a use of legal or other effective mechanisms, to achieve the long term conservation of the environment (IUCN, 2008

cited in Ahmad, Abdullah & Jaafar, 2012). It has become a universally adopted way of conserving biodiversity for a wide range of human values and sustainable uses (Ahmad, Abdullah & Jaafar, 2012). In the South African context, nature reserves refers to an area declared, or regarded as having been declared, in terms of section 23 as a nature reserve or designated in terms of provincial legislation for a purpose for which that area could in terms of section 23(2) be declared as a nature reserve (RSA, 2003).

1.6. Research Design and Methodology

This section discusses the methods followed in the process of undertaking the study. It focuses on: research design, kinds of data required, description of the study area, target population, sampling design, data collection techniques as well as data analysis procedures.

1.6.1. Research Design

Research design is the general approach used to integrate the various components of the study in a rational and logical manner so as to deal with the research problem. In research there are two approaches which are commonly used namely quantitative and qualitative research approaches. Quantitative approach relies on measurement to analyse different variables, while on contrary qualitative approach uses words or descriptions to understand a phenomena (Bless, Higson-Smith & Sithole, 2013). However, for a deeper understanding of the research problem, Bless *et al* (2013) stated that it is befitting to use both of the research approaches. Therefore, for the purpose of the study, both quantitative and qualitative approaches were adopted. The study used a qualitative approach to describe both direct and indirect effects of nature conservation on local economic development in the village with regard to job-creation, income generation, market opportunities, entrepreneurship, business partnership, local development environment and economic growth. Furthermore, the qualitative data was used to describe the social, economic and historical context of the study area, while quantitative design played a role in assessing the research problem using numerical data (numbers and percentages). Additionally, the study

adopted the correctional design to understand the relationship between nature conservation and local economic development to answer the research questions. A case study approach was also adopted for the purpose of the study. The case study for the study is Timbavati Nature Reserve which is located in Ehlanzeni District Municipality, Mpumalanga Province. The choice of the area was due to that the nature reserve is adjacent to several communities which are expecting to benefit from the reserve with regard to local economic development.

1.6.2. Kinds of Data Required

The study required a set of data to meet its objectives that included theoretical and empirical data. With regard to theory the data collected is based on approaches to nature conservation, the components of local economic development and the effects of nature conservation on local economic development. The approaches to nature conservation included the centralised management approach, the community-based approach and collaborative management approach while the components of LED focused on job-creation, income generation, market opportunities, entrepreneurship, business partnership, local development environment and economic growth. Furthermore, data was collected on the direct, indirect and cumulative effects of nature conservation on those components of LED.

Empirical data on the other hand included unpacking the components of local economic development and relating it to the existing situation in the study area, Timbavati. The data focused on the demographic profile of the respondents, the management approaches adopted by the nature reserve with a focus on community participation and involvement in the decision-making process about the management and operations of the nature reserve. It further focused on the effects of nature conservation on LED, through incorporating the nature reserve to the LED components in the study area. The theoretical data required is crucial as it focus on what other scholars are saying about the research problem, while empirical data holds the features that help to understand the relationship between nature conservation and local economic development using existing evidence.

1.6.3. Description of the Study Area

The Timbavati Nature Reserve is a rich biodiversity concession situated in the western side of the Kruger National Park, comprising of both private and public lands called "The Greater Kruger Park". The nature reserve covers 53,392 hectares of private land and has 50 contiguous territories of land housing 12 luxury tourist lodges (Harrison, 2004). Additionally, the reserve has over 40 various mammal species which include the Big Five namely Lion, Leopard, Rhino, Buffalo and Elephant as well as more than 360 species of bird life (Harrison, 2004). Sims (2010) has discovered that such landscape has a potential to deliver positive effects to local economic development components. The village which is mostly relevant to investigate the effects of nature conservation on local economic development is Timbavati Village, which is adjacent to the nature reserve and adopted its name from the reserve. Looking at the socio-economic status of the village, the area is still faced with several social problems including high unemployment rate, poverty and lack of basic services such as water whereby the community members spend time without running tap water (Bushbuckridge Local Municipality, 2010). Considering the community's socio-economic status, the people depend highly on natural capital for survival which becomes a challenge when the capital is been protected in the nature reserve. In addition to that, the choice for selecting the nature reserve was that the Timbavati Nature Reserve similar to other nature reserves in South Africa have experienced a paradigm shift in governance from the fortress conservation to community conservation, therefore is appropriate to understand nature conservation approaches and how the adopted approaches affect local communities with regards to LED.

1.6.4. Target Population

Target population is a group of people that the research project seeks to study and draw conclusions (Bless *et al*, 2013). Timbavati Village covers an estimated 630 households and all the households formed part of the target population in the study (BLM, 2010). The village neighbours the nature reserve and all the households are affected by the existence of the nature reserve; therefore, they contained appropriate

characteristics to give relevant information. The target population also included key informants such as the village *Induna* and other village representatives. The key informants provided information with regard to the background history of the village, the relationship between the village and the nature reserve, LED activities in the village and community projects initiated by the nature reserve. Additionally, the management of Timbavati Nature Reserve also formed part of the elements, with information on the historical background, management and operations of the nature reserve as well as the role of the reserve in improving social and economic development of the neighbouring communities.

1.6.5. Sampling Design

Due to the fact that the whole population cannot be studied, only 120 households were sampled for the purpose of the study, however during the analysis of data only a total of 99 questionnaires met the requirement for the study. This was due to the fact that some of the questionnaires were incomplete or spoiled. The study adopted a non-probability sampling, wherein the probability of including each element of the population in the sample was unknown. The specific type of sampling design used was convenience sampling, based on availability of prospective respondents in households who were available and willing to partake in the survey. Questionnaires were administered with people who were conveniently available at the time of the survey, implying the use of non-probability convenience sampling in the selection of the respondent within sampled households. The same approach was used until the desired size of sample was reached. Additionally, purposive sampling was adopted to select the management of Timbavati Nature Reserve and community key informants, inclusive of the *Induna*. The choice of the sample was based on the researcher's judgement regarding the characteristics of the respondents and their knowledge of the required information. The specific designs adopted for the study was appropriate for soliciting the data required because the respondents in question were in possession of relevant information relating to the operations and effects of the nature conservation. Overall, the designs are appropriate for selecting respondents that are knowledgeable on the subject of investigation in the study area.

1.6.6. Data Collection Techniques

The study adopted both quantitative and qualitative research designs. The choice of using two research designs was influenced by the fact that the study required statistical data, opinions, views, thoughts and understanding of respondents in relation to the effects of nature conservation on LED in Timbavati. In the process of collecting data for the study, four techniques were used for the purpose of the study, this included questionnaires, interviews, documentations and observation.

A questionnaire was used to interact with the members of Timbavati Village (Appendix A). A self-constructed questionnaire was administered to the village with the support of two research assistants recruited from the village. The questionnaire comprised of four sections and included the biographical information of the respondents, approaches to nature conservation in Timbavati Nature Reserve, effects of nature conservation on local economic development and recommendations. For the purpose of this study, a hand-delivered questionnaire was adopted. The respondents completed the questionnaires in the presence of the research assistants. The questionnaires were structured in a form of open-ended questions where by the respondents had to choose the appropriate answer from the options given and further state their opinions in the provided spaces. The data from the questionnaires was compared with the data gathered from the other data collection techniques for verification and to determine the validity of the information.

The study also used interviews to gather data from the respondents. An interview involves direct personal contact with the respondent who is asked to answer specific questions relating to the research problem (Bless *et al*, 2013). This allows for participants to express their views, to expand on the topic under discussion and also relate to their own experiences on the research problem (Bless *et al*, 2013). For the purpose of the study, interviews were used when collecting data from the management of the nature reserve and key informants, inclusive of the *Induna*. With regard to the interview schedule a series of visits was made to the reserve and the village with a set of questions to interview the management as well as the key informants (Appendix B). Other key informants were interviewed telephonically due

to their unavailability during the visits. An interview schedule was appropriate to collect data from these set of elements as it allowed an open process of probing.

Additionally, the study made use of documentation as an instrument to collect theoretical data. With respect to theoretical data, literature review was used to gather information on the approaches to nature conservation, components of local economic development and the theoretical frameworks, international and South African experiences on the effects of nature conservation on local economic development. The researcher reviewed literature relevant to answer the research questions. Data was collected from relevant published material such as academic journals, books, government publications related to the effects of nature conservation on LED. Furthermore, observation also played an important role in data collection predominantly with regard to the qualitative analysis of the socio-economic, physical conditions of the study area and the LED activities in the village. The researcher paid a sequence of visits to the Timbavati Village, the Timbavati Nature Reserve and the Timbavati Bush School. During the observation, the researcher managed to observe various social and economic activities taking place in the study area. The visits were done between from August 2014 to December 2014. The time period allowed for further analysis on the LED activities taking place in the village.

1.6.7. Data Analysis Procedures

Cognitive digestion was used to analyse the approaches to nature conservation, components of local economic development and the effects of nature conservation on LED. Literature was reviewed, analysed, understood and synthesized, to check scholarly debates on the similar or related research problem. The analysis focused on the direct, indirect and cumulative effects of nature conservation on local economic development based on relevant literature.

The empirical data collected from the field through the use of questionnaires and interviews was analysed using IBM 22 Statistical Package for Social Sciences (SPSS). The data was captured in the variable and data view system and frequency

tables were produced. From then, the frequency tables were transported to Microsoft Excel (MSE) to draw tables and graphs. The MSE outputs were interpreted in accordance with the qualitative information that was collected from the household respondents to demonstrate the effects of nature conservation on local economic development in the study area.

1.7. Structure of the Dissertation

In order to have a systematic and coherent presentation of facts in the study, the following plan was followed:

Chapter One: The chapter presented the introduction and background of the study, statement of the research problem in relation to the effects of nature conservation on local economic development of Timbavati Village, which were explored in depth. Such problems ranged from lack of community participation, lack of access to natural capital and poor distribution of economic benefits. Additionally, the chapter continued to focus on the research questions, research aim and objectives, definition of terms and furthermore, discussed the research design and methodologies adopted for the purpose of the study.

Chapter Two: This chapter focused on the conceptual framework and international experience of the effects of nature conservation on local economic development. The international debates highlighted that nature reserves can contribute significantly towards local economic development with regard to job-creation, income generation, market and entrepreneurial opportunities, enabling local development environment and economic growth. However, to make an effect the contribution depends on the management approach to conservation adopted in nature reserves which include centralised management, community-based conservation and collaborative management approach.

Chapter Three: This chapter presents the background to nature conservation and LED in the South African context. Emphasis was also placed on the nature conservation approaches in South Africa, its practice and its challenges. Also the

discussion focused on local economic development practice; while simultaneously determining the desirable and undesirable effects of nature conservation on LED in the South African context.

Chapter Four: The chapter presents the analysis and interpretations of the effects of nature conservation on LED in Timbavati. It further analysed the data collected by means of questionnaires and interviews through using frequencies and graphs for a better reflection. The findings are clearly stipulated and are ensured to be relevant to the study.

Chapter Five: This chapter includes the findings, conclusions and recommendations made in relation to the aim and objectives of the study.

1.8. Significance of the Study

The study has significance, both theoretically and pragmatically. The findings of the study might assist in improving the understanding regarding the effects of nature conservation on local economic development so as to pave a way for local communities to engage in conservation and development programmes. The study would also add value to literature, given that negligible research has been conducted in the subject of investigation. Furthermore, the results of the study should provide a baseline for future research on this or related topics. In practice, the research results could be valuable for both local communities and nature reserve management in relation to their efforts to improve collaboration and mutual beneficial partnerships. Also, the results of the research could contribute to the policy making process relating to the Timbavati Nature Reserve in order to address the existing problems in terms of its effects on local economic development and, perhaps, conservation. Finally, the study could usefully be used for assessing both economic and social problems facing nature reserves and local communities in the interest of conserving natural resources and enhancing the local development environment for LED.

1.9. Ethical Considerations

Various ethical issues were involved in the process of collecting information from the local residents. All respondents were guaranteed anonymity. Confidentiality of sensitive information from the respondents was considered and upheld in the study. Great care was taken that in the process of conducting fieldwork, administering questionnaire survey and interviews, the traditional customs and values of the community are fully respected. The process of data collection did not cause any physical or emotional harm to the respondents and participation in the study was voluntary. In fact, the procedures adopted for the study did not carry any known risk or hazard to the participants. Finally, the results of the study was shared and discussed with the community, nature reserve management and municipality.

1.10. Conclusion

The chapter discussed the introduction and background of the study as well as the statement of the research problem. Additionally, the chapter focused on the research questions, aim and objectives of the study. The terms used in the study were therefore defined for clarity. The chapter continued to discuss the methods followed in the process of carrying out the study. The focus was also on the outline of the structure of the dissertation and also looking at the significance of the study. Finally, the ethical considerations adopted in data collection were explained. The study adopted both qualitative and quantitative research wherein questionnaires, interviews and observations were used to gather empirical data. In selection the sample population, non-probability sampling procedures were used focusing on purposive and convenience sampling. The next chapter discusses the theoretical framework and international experiences on the effects of nature conservation on local economic development.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND INTERNATIONAL EXPERIENCE ON THE EFFECTS OF NATURE CONSERVATION ON LOCAL ECONOMIC DEVELOPMENT

2.1. Introduction

Nature conservation is viewed internationally as a mechanism to overcome social challenges associated with poverty, inequality, unemployment and economic immobilism in both developed and developing economies (Binns & Nel, 2002; Pelsler *et al*, 2011; Ramukumba *et al*, 2012; Das & Chatterjee, 2015). That is, the tourism industry as symbiosis to nature conservation is probable to attain economic development and through it, create jobs and market opportunities, generation of income, facilitation of entrepreneurship and business partnerships, and the creation of an enabling local development environment in local communities (Binns & Nel, 2002; Rogerson, 2002; Sebola & Fourie, 2007; Pelsler *et al*, 2011; Das & Chatterjee, 2015). However, not all protected areas mandate at promoting human welfare and economic growth (Sims, 2010; Ferraro, Hanauer, Miteva, Canavire-Bacarreza, Pattanayak & Sims, 2013). But, the focus is nature-centric with a purpose to exclude human activities in protected areas (Watts & Faasen, 2009; Mariki, 2013).

The use of strict mechanisms to exclude local communities have been observed in most protected areas, which makes it difficult for people especially in rural areas, who depend highly on forests for livelihoods to sustain themselves (Watts & Faasen, 2009; Mariki, 2013). Instead of coming up with mechanism to integrate environmental protection to development, protected areas continued to expand so as to reach the 10% global target for protected areas in each country (Brockington, 2003). Surprisingly, the expansion took place without careful analysis of the impact on the wellbeing of the neighbouring communities (Brockington, 2003). Thus, that abandonment came with various vulnerabilities for the local communities. Ferraro *et al* (2013) stated that the effects of nature conservation can include both costs and benefits for local communities. As previously stated, the costs of nature reserves

include displacement of local communities, loss of access to natural capital, human-wildlife conflicts and changes in land tenancy (Redford & Fearn, 2007). On the contrary, benefits include infrastructure development, job-creation and economic outputs (Sims, 2010). Theoretically, nature conservation is associated with generating income for the neighbouring communities by attracting tourism, inducing infrastructure development and can be a major source of livelihoods through job-creation in the rural areas (Andam, Ferraro, Sims, Healy, & Holland, 2010; Sims, 2010; Owino, Jillo & Kenana, 2012). However, critics argued that those benefits might not be fundamental to improving the development of the rural communities (Owino *et al*, 2012; Sirovongs & Tsuchiya, 2012). (Owino *et al*, 2012; Sirovongs & Tsuchiya, 2012) continued to argue that nature conservation separate people from their natural capital which they rely heavily on for basic needs and subsistence. Therefore, there are different conflicting debates regarding the effects of nature conservation on local economic development. In order to understand the research problem, this chapter focussed on the approaches to nature conservation, components of local economic development and the effects of nature conservation on local economic development in the international context.

2.2. Approaches to Nature Conservation

Most protected areas and nature reserves in developing countries have adopted the American concept to environmental protection. The underlying motive was to perceive nature reserves as untouched and pristine wilderness (Torri, 2011). This system originated over a century when Yellowstone National Park was put aside as the first untouched area in the United States (Torri, 2011). From then to date, most countries in both developing and developed world adopted approaches used to segregate natural capital from the local communities (Andrade & Rhodes, 2012). The emphasis is that natural capital should be protected for its own existence (intrinsic or inherent value) (Watts & Faasen, 2009; Torri, 2011). In accordance to that system, local communities were completely excluded from environmental protection practices. Consequently, the marginalisation led to conflicts between the local population and the nature reserves management (Torri, 2011). The outcome of that system has given rise to the recent consideration of local communities as the

important stakeholder in environmental policies and the creation of nature reserves (Torri, 2011). Although such shift has occurred, it is evident that most nature reserves and protected areas remain in the hands of centralised authorities as the “fencing and fines” (Mariki, 2013: 2) system is still largely practiced. Additionally, contestations over tenure rights and rights to access natural capital are experienced in conservation efforts (Watts & Faasen, 2009).

The contestations originated with the motives for the protection of natural capital. In theory, there are various motives to the protection of natural capital (Watts & Faasen, 2009; Torri, 2011; Ferraro *et al*, 2013). Firstly, natural capital is protected for its instrumental value, where it is significant for promoting human welfare in a sustainable manner (Ferraro *et al*, 2013; Shoreman-Ouimet & Kopnina, 2015). On the other hand, natural capital is protected for its own existence (intrinsic or inherent value) (Watts & Faasen, 2009; Torri, 2011; Shoreman-Ouimet & Kopnina, 2015). However, Ferraro *et al* (2013) emphasized that the extent at which natural capital is protected and managed is not always equal. This is due to the complexity in management and ownership of biodiversity (Berkes, 2007). To pre-empt the complexity in the management of protected areas, the IUCN introduced six management categories of protected areas as follows: Category I: (a) strict nature reserve, (b) wilderness area; Category II: national park; Category III: natural monument; Category IV: habitat and/or species management area; Category V: protected landscape and seascape; and, Category VI: protected area with sustainable use of natural resources (IUCN, 1980; Berkes, 2007; Torri, 2011). The management categories from Ia and Ib (strict reserve) to Category V emphasise management resource use (Torri, 2011), while category VI correspond to specific management objectives that permit increasing human use (Berkes, 2007; Torri, 2011). Therefore, the presence and influence of human habitants in protected areas is determined by the management category adopted in that protected area (Torri, 2011).

Apart from the management categories, theoretically it was found that there are protected areas which use nature conservation and preservation as practices to

environmental protection (Sims, 2010; Andrade & Rhodes, 2012; Ferraro *et al*, 2013). Those that practice the preservation ideology depend on legal restrictions to prohibit natural capital uses by local communities (Ferraro *et al*, 2013). As stated by Andrade & Rhodes (2012), most protected areas have adopted the exclusionary approach applied at the Yellowstone national park, wherein the important factors of social, cultural and political were not integrated to environmental protection objectives. In such protection, the local communities will require permits for them to have access to natural capital in reserves or face legal actions if they fail to comply (Ferraro *et al*, 2013). However, there are protected areas that permit for anthropogenic activities (Ferraro *et al*, 2013). Such protected areas put an emphasis on conservation goals and seek to promote the welfare of the local communities, especially those neighbouring the protected areas (Sims, 2010). That is, community participation, poverty reduction, livelihoods protection and human welfare are being put at the fore front of conservation, while ensuring that there is a sustainable use of natural capital. Basically, such protection seeks to achieve what is called “conservation with a human face” (Mariki, 2013: 1) and “conservation as if people also matters” (Kothari *et al*, 2013: 1). However, the challenging factor in most nature reserves is to understand the difference between environmental preservation and conservation, which as a result lead to the whole conservation-development nexus to be a fallacy (Watts & Faasen, 2009).

In most cases, there is a mixed understanding in the conception of environmental conservation and preservation as dimensions of environmental protection. Both dimensions emphasise protection; however there is a difference in the extent at which the protection is practised (Ferraro *et al*, 2013). Preservation is much of a fortress approach to environmental protection, wherein the “hands off” principle is applied. The “fences and fines” (Mariki, 2013: 2) and “keep out or you will suffer” (command-and-control) (Watts & Faasen, 2009: 25) represent the preservation approach to environmental protection. Conservation on the other hand, encourages wise usage of natural capital, thinking of the future generation (Ferraro *et al*, 2013). In most developing countries, the distinction between conservation and preservation is blurred, due to the ascendancy of the neo-liberal system in economic policy (Cousins & Kepe, 2004). This is because most emphasis is being placed on the

economic valuation of natural capital, thus the practice itself is not being given a pragmatic effect. As a result, the two dimensions of environmental protection are being used as to draw the same meaning, which leads to inadequacy in the conception of environmental conservation and preservation (Cousins & Kepe, 2004). Unsurprisingly, literature characterise the fortress protection and its principles as an approach to nature conservation (Watts & Faasen, 2009; Pelsler *et al*, 2011; Torri, 2011; Daim, Bakri, Kamarudin & Zakaria, 2012). However, for the purpose of this study the focus is on nature conservation as one dimension of environmental protection and how it affects local economic development.

It is noticeable that for nature conservation to have significant effects on LED, it is appropriate to understand the systems or approaches adopted in protected areas. Thus, this section focuses on the conservation approaches adopted in nature reserves. Nature conservation is a dynamic process that changed over the years. Therefore, a broad typology of approaches have been introduced to explain the concept of nature conservation and its management (Watts & Faasen, 2009; Sims, 2010; Pelsler *et al*, 2011; Torri, 2011; Daim *et al*, 2012; Ferraro *et al*, 2013; Mariki, 2013). At the minimum, this approaches includes the centralized management approach, which emphasise the exclusion of local people in environmental management (Igoe, 2004; Sims, 2010; Ferraro *et al*, 2013; community-based management approach, which strives to put local communities in control and management of natural resources (Nolen, 2008; Benjaminsen & Svarstad, 2010; Torri, 2011; Pelsler *et al* 2011) and collaborative management approach, whereby state authorities, conservation bodies, local communities and other stakeholders entre into agreements for management and governance of natural through joint management efforts (De Koning, 2009; Pelsler *et al* 2011; Foggin, 2012).

2.2.1. Centralized Management Approach

Historically, most countries in the world were practicing a top-down approach often referred to as fortress approach to nature conservation (Pelsler *et al* 2011; Daim *et al*, 2012; Mariki, 2013). That is, local communities were prohibited from natural resources use in nature reserves and protected areas (Daim *et al*, 2012). The

fortress approach focus on preservation ideologies, wherein the emphasis is placed on protecting nature for its own sake using strict mechanisms to prohibit human influence (Pelser *et al*, 2011; Andrade & Rhodes, 2012; Daim *et al*, 2012; Mariki, 2013). The restrictions applied in this approach deprive local communities' opportunities for survival and development (Torri, 2011). That is, communities are alienated from access to land and resources they rely on to meet their basic needs (Torri, 2011). Torri (2011) stated that most nature reserves used the zoning system to earmark areas which permanently restrict human presence. Those zones were strictly protected by law to forbid human activities and cater for biodiversity (Torri, 2011). Although those mechanisms were openly being used in the past, there are still nature reserves that still use those zones to protect natural capital from the outside forces, wherein the fencing system is used to protect the natural capital from human exploitation (Ferraro *et al*, 2013). Ferraro *et al* (2013) emphasized that most of such nature reserves with strict mechanisms towards conservation are not really protecting natural capital, rather they are using the resources for own benefit. This section therefore discusses the practice of centralized management approach in nature reserves and challenges experienced when applying the approach. The principles of centralised management approach involves the creation of nature reserves and other forms of protected areas, centralised decision-making, exclusion of people, uses of fences and fines, preventive of consumptive uses, and preempting any other forms of human impact on the natural environment (Gandiwa, Heitkönig, Lokhorst, Prins & Leeuwis, 2013: 7).

2.2.1.1. Principles of Centralized Management Approach

Over the years there has been an increasing interest in conservation community to understand the practice of centralized managed conservation in protected areas (Brockington, 2003; Igoe, 2004; Kalamandeen & Gillson, 2007). In the 20th century protected areas were viewed as pristine wherein wilderness ethics played a prominent role in nature conservation (Kalamandeen & Gillson, 2007). The whole system was managed by the Wilderness Movement of the United States of America which formulated a model for conservation by putting aside Yellowstone National Park as the first pristine areas in the world (Kalamandeen & Gillson, 2007; Torri,

2011). With the movement being led by advocate of preservation such as John Muir (Kalamandeen & Gillson, 2007), the system of conservation became an exclusionary approach, that emphasise the ideas of law and science (Vasile, 2008).

The centralised management as an approach to conservation is controlled by elites and centralised agencies with a major focus on protecting nature for its own existence and for scientific research (Vasile, 2008; Benjaminsen & Svarstad, 2010). To do so, most countries enforced laws and legislation that govern the management and control of nature reserves often referred to as “state enforced conservation” (Vasile, 2008). Such laws focused on the exclusion of local communities in nature conservation. As illustrated in India, the national government has control over all protected areas using official policies and laws governing nature conservation in the country with no input from the local citizens (Torri, 2011). Additionally, Benjaminsen & Svarstad (2010) stated that in Tanzania nature conservation is dominated by the fortress system, where the practice is associated with recentralization and economic outputs instead of poverty alleviation. The Tanzanian policy on nature conservation focuses on the state management of biodiversity and no emphasis on participation, development and benefits sharing (Benjaminsen & Svarstad, 2010). The state is maintaining the control and decision-making of national parks at the central level (Benjaminsen & Svarstad, 2010). Namaqua National Park in South Africa is another case of centralised management approach. The park is owned by the World Wildlife Fund for Nature (WWF), SANparks and De Beers consolidated mines through a contractual partnership, with exclusion of Nama community who previously occupied the land, in the management plan (Benjaminsen & Svarstad, 2010). Although, centralised management approach is not working in those cases (Benjaminsen & Svarstad, 2010), there are some nature reserves which have experienced positive outcomes of the approach. In Nepal, the practice of top-down approach has successfully worked to protect biodiversity through using the Army to guard natural capital in Nepal protected areas (Bajaracharya, Gurung & Basnot, 2007).

For centralised approach to take its shape, the management of the protected areas are the ones responsible for the planning, operations and management of the areas with no inputs from the neighbouring communities. This was created by the scientific

discourse on the relationship between nature and human habitants (Vasile, 2008). As contended that, it is not possible for humans and nature to have a mutual relationship, it is either the humans dominate over nature and destroy it or the nature is being left untouched (Akosim, Bode, Kwaga, & Dishan, 2010). A considerable amount of literature has been published on the benefits of nature to the human habitants but the same cannot be said about the importance of humans in nature (Roe & Elliot, 2004; Sims, 2010; Kangalawe & Noe, 2012). Therefore, it has been argued that there is no co-existence between nature and humans (Igoe, 2004). As a result, protection of nature from the increasing pressures of anthropocentric disturbance became the driving factor in nature reserves.

Most conservationist assumed that nature reserves resemble wilderness and that the natural capital should not be touched (Torri, 2011). This created problems in achieving conservation objectives. Firstly, the conservation planning focused on the exclusion of human habitants. Secondly, human activities were seen as a threat on the environment (Igoe, 2004). Theoretically, most critics based their argument about fortress conservation on the story of Eden (Igoe, 2004; Sanderson, Jaiteh, Levy, Redford, Wannebo & Woolmer, 2002). Sanderson *et al* (2002) citing (Genesis, 1), stated that God had blessed human habitants and bid them to take domination over the fish in the sea, the birds in the air, and every other living thing on earth. In addition to that, they should multiply and fill the earth. That indicated that human habitants had the ability to be stewards towards nature and make it multiply. However, in the 20th century most countries experienced environmental crises due to high consumption as a result of increasing population pressures (Sanderson *et al*, 2002). As such conservationist realised a need to protect the environment from anthropocentric activities.

The story of Eden was again used to prevent human beings from exploiting the environment (Igoe, 2004). Theoretically, it was argued that the story of Eden is in two parts (Igoe, 2004). Firstly, it gave an impression that human habitants have control over nature; on the other hand, they are also separated from nature. These contrary ideas emerged when God created the earth and on the six day, the sky, the land, water and other creations (Genesis 1 cited in Sanderson *et al*, 2002). Then put

Adam to take charge of those creations (Igoe, 2004). However, it was found that as life continued in the Garden of Eden, Eve was tempted by the serpent to eat a forbidden fruit in the garden, which was interpreted in literature as nature taking domination over human habitants (Igoe, 2004). Thus, Eve in turn convinced Adam that he should try the fruit; consequently God banished the couple out of Eden, where they will have to survive separate from nature. Igoe (2004) stated that the story presented an ambivalent state wherein human habitants are tainted and worthless, therefore cannot co-exist with nature or even be part of it. This situation, therefore gave conservationists a platform to deny human habitants access to nature.

Conservation advocates continuously emphasised that human habitants do bad to nature more than the good it does to them (Pimbert & Pretty, 1995; Igoe, 2004). Therefore, it must be protected from their exploitation. Less attention was given on the human welfare of the local communities adjacent to the protected areas. Even when the conservation efforts shifted to a participatory approach, conservationist advocates remain firm against human interferences in nature conservation. Over the years organisations were even formed which were against community involvement in nature reserves (Brockington, 2003). As demonstrated in Africa, conservationists often preferred to work in isolation from development activities and neighbouring communities, using their own theories and research literature which are not linked to the development agenda (Pimbert & Pretty, 1995). The management philosophy of such conservationists emphasised that "public services is best served through the protection of natural capital, even if it meant displacement of local communities" (McCracken, 1987 cited in Pimbert & Pretty, 1995: 3). Therefore, continued to argue that protected areas can generate revenue from tourism activities, inducing infrastructure development and accumulating economically significant environmental services (Sims, 2010), without direct influence from the local communities (Brockington, 2003). Most national parks and nature reserves therefore followed that exclusionary approach to nature conservation (Pelsler *et al* 2011; Daim *et al*, 2012; Mariki, 2013).

In such nature reserves where the focus is on the exclusion of local communities, local livelihood activities are seen as a threat to biodiversity (Zhou, Wang, Lassoie, Wang & Sun, 2014). Thus, the reserves were designed and implemented in a manner of preventing human interferences. Roads were not being erected in those nature reserves for people to walk around and amenities such as electricity, credit facilities, water, education and health care were not available (Akosim *et al*, 2010). Thus, became a challenge to bring the local communities in conservation arena in such condition, as they do not fit in the system (Zhou *et al*, 2014). The way those protected areas were designed was purely to counter for the threats posed by the human habitants and to ensure that they do not interfere with the nature (Zhou *et al*, 2014). Another factor is that the local communities were not being involved in the designing of those nature reserves (Akosim *et al*, 2010).

Over the years, cases of exclusionary approach were mostly found in East African countries (Igoe, 2004). This came after the English settlers came to Africa and anticipated that Africans do not value the beauty of nature and therefore should be removed from it (Igoe, 2004). Thus, the centralised approach has resulted into management decisions with serious threat to the livelihoods and cultural heritage of local people (Torri, 2011). Therefore, the system became central to the displacement of local communities for it to be viable (Igoe, 2004). Local communities' displacement is one of the pressing issues in conservation practice (Cernea, 2006; Brockington & Igoe, 2006; Andrade & Rhodes, 2012). This is due to that, once an area is earmarked to be a nature reserve, the people residing in that area are evicted from their homes and in other cases forcefully relocated so that a nature reserve can be established (Igoe 2004; Andrade & Rhodes, 2012). The evictions occurred due to the idea that humans and nature cannot co-exist and conservation of biodiversity requires restrictions of human habitants (Igoe, 2004). Therefore, humans had to be evicted from those areas with potential to be nature reserves. Cernea (2006) stated that displacement often occur when people lose, through expropriation, their houses, land, farms, livestock, assets, income sources or means of livelihoods . In some cases, the displacement interrupts the traditional living of the communities and destroys their ancestral places (Andrade & Rhodes, 2012). This is done with no compensation or support, often leaving the local people in poverty and

overwhelmingly with resentment, negative attitudes and negligence towards conservation.

Often accused of creating publicity battles, displacement for conservation is manifested in two forms (Cernea 2005 cited in Brockington & Igoe, 2006) the first one is the forced removal of people from their homes. In this kind of displacement, the local communities lose to conservation, their houses and their family composition. Another form of displacement is the economic displacement, which focuses on prohibiting people from areas where they derive their livelihoods (Brockington & Igoe, 2006). These include loss of farms, livestock and other assets, infrastructure in which income was derived. Brockington (1999) argued that forced removals and loss of grazing land has in developing countries affected the livestock economy and the livelihoods of the local communities, within which they depend on for survival. Once eviction for conservation has taken place, strict mechanisms are implemented to keep the people away from the protected areas. Access to the natural capital in those protected areas is often prohibited (Brockington & Igoe, 2006). Therefore, expose the people, especially women and children to risks and vulnerabilities such as poverty, food insecurity and morbidity due to the forced migration. The experience has provoked protests in most nature reserves (Brockington & Igoe, 2006). Those protests occur in situations where people depend highly on natural capital for income, livelihoods and for survival, thus increase exposure to risks such as poverty and impoverishment with the displacement (Brockington & Igoe, 2006). India, South Africa, China, Southeast Asia and Tanzania, are among others the countries which were mostly affected by the incidents and negative consequences of the centralised approach to conservation (Watts & Faasen, 2009; Benjaminsen & Svarstad, 2010; Torri, 2011). In those countries, nature reserves continued to expand over the years. That practice thus troubled the already crippling relationship between conservationists and rural local communities. The approach is strongly contested by the local communities and the incidents of displacements created a scare in the local communities that even to date they still have a negative attitude towards nature conservation.

2.2.1.2. Challenges of Applying Centralized Management Approach

Although the centralised management approach was practised in most nature reserves, the system has various challenges which make its practice to be invalid. One drawback about this approach is its exclusionary ideology to nature conservation. This has in many cases been criticised by different social advocates (Torri, 2011; Andrade & Rhodes, 2012; Badola, Barthwal, & Hassain, 2012; Sirivongs & Tsuchiya, 2012; Owino *et al*, 2012). The base of their argument is that it is almost impossible to conserve natural capital without the interference of the local communities, therefore cannot be avoided in conservation objectives (Torri, 2011; Andrade & Rhodes, 2012). Torri (2011) stated that local communities play a vital role in conservation practices and therefore should be central to the management and operation of nature reserves. However, the system discourages community involvement in nature conservation. In most nature reserves, local communities often complain due to lack of integration between the management and the local communities which has led to the failure of centralised approach to reach conservation objectives.

The practice of centralized approach has been costly to the state and the management of the nature reserves. The approach brewed negative attitudes and perceptions towards nature conservation due to its “command-and-control” principles. Over the years, distraction of natural capital, illegal poaching and logging were reported in most nature reserves (Watts & Faasen, 2009; Andrade & Rhodes, 2012). The local communities protested against the exclusions and came up with mechanisms to retaliate against that system. Therefore, most nature reserves experienced loss of wildlife and forests as a result of the local communities’ retaliations. Watts & Faasen (2009) illustrated that in Tsitsikamma National Park, South Africa, local communities reacted to the exclusionary approach by practicing illegal poaching and harvesting of wild fruits and in Bwindi Impenetrable Forest, Uganda, several veld fires were intentionally set burning half of the forest (Andrade & Rhodes, 2012). Additionally, in Kilimanjaro national park situated in Tanzania, the centralised approach led to hatred, resentment and illegal harvesting of natural capital (Mariki, 2013). However, those illegal activities also create vulnerabilities to

the local communities. Most nature reserves came with harsh mechanisms to mitigate illegal poaching and distraction of natural capital in the nature reserves. This includes strategies to save rhinos such as “shoot-to-kill” which manifested in South Africa wherein a day was celebrated over a death of five poachers shot by rangers in a reserve (Adams, 2013). The “shoot-to-kill” mechanism is often encouraged in nature reserves and national parks as a way of mitigating rhino poaching (Adams, 2013). Adams (2013) stated that in India Kaziranga national park forest guards receive an incentive along with their salary as a reward if they wound or even worse, kill a poacher found poaching in the park (Adams, 2013). On another case, South Africa witnessed a total of 232 suspected poachers in 2011 (Adams, 2013). These negative experiences impede the practice of centralised management approach in nature reserves, which has led to inadequacy in conservation objectives, consequently led to most donors to withdraw from supporting nature conservation (Benjaminsen & Svarstad, 2010).

The negative consequences of this approach has also reduced the ability of local communities to stand up for others like poachers and criminals in nature reserves, rather the local communities themselves are contributing towards those illegal activities (Torri, 2011). The local communities are not motivated to protect something they do not have ownership of and do not benefit in any way from its practice. Therefore, most of the people committing illegal activities in nature reserves are from the local communities. The lack of access to the natural capital also results in those activities. This is due to that most nature reserves are often established in rural areas inhabited by poor communities with characteristics of high levels of poverty (Ferraro, Hanauera & Sims, 2010). Therefore, natural capital plays a vital role in sustainability of those local people (Mariki, 2013). Alleviating poverty is the major goal for local communities. However, the practice of nature conservation in most developing worlds has prohibited the local communities from utilizing the natural capital in their surroundings for survival (Mariki, 2013). Biodiversity contributes to local livelihoods directly by providing food, medicine, craft, building materials and generate recreational returns (Bouma, Bulte, & van Soest, 2008). But, when the natural capital is being conserved and restricted it becomes difficult for people in rural areas who depend highly on forests for livelihoods to sustain themselves.

Therefore, the approach is not supported by social advocates because it neglects the human welfare of local communities. Roe & Elliot (2004) argued that protecting natural capital alongside poor communities who will ultimately benefit from the practice can build social capital, improve accountability and reduce poverty (Roe & Elliot, 2004). In contrast, excluding people from nature conservation can increase conflicts, resentment and poverty.

All these challenges hindering the practice of centralised management approach manifested with the exclusionary of local communities in nature reserves. Therefore, to gain the support and interest of local communities; community-based approach was introduced in the management of nature reserves (Mariki, 2013). This came after the exclusionary approach failed to produce conservation outcomes as people's participation, their support, aspirations and concerns are crucial for reaching conservation goals (Berkes, 2004; Badola *et al*, 2012). As experienced in Peninsular Malaysia, community participation received less attention from the managers of the protected areas, as a result the model failed to realise the potential of creating sustainable community within or around the nature reserve (Ahmad, Abdullah & Jaafar, 2012). Therefore, the management of the nature reserve were pressured to introduce a more participatory approach management to conservation (Ahmad, Abdullah & Jaafar, 2012).

2.2.2. Community-based Management Approach

Prior to the failure of the centralised management approach, there was a sudden recognition of the important role of local communities in nature conservation. To ensure that there is inclusion of local people, the IUCN published a World Conservation Strategy in 1980 to promote participatory approach in nature conservation (SANParks, 2012 citing IUCN, 1980). The strategy emphasised that dealing with environmental problems requires a long-term efforts and the integration of environmental and development objectives while ensuring that there is participation of different countries and all ordinary citizens of the society (IUCN, 1980). The kind of development that the IUCN strategy calls for is the one that improves the quality of human life while simultaneously ensuring vitality and diversity

of nature (IUCN, 1980). In order to practice inclusionary conservation, Conservation on Biological Diversity (CBD) was sworn in Rio de Janeiro Earth Summit held in 1992 as the international instrument that binds countries to develop participatory biodiversity conservation strategies (SANParks, 2012). Since then to date, protected areas were urged to involve local communities in nature conservation.

The introduction of the role played by local communities in conservation has become universally accepted in nature conservation around the world. Protected area management has since shifted to a more participatory management discourse (Bajaracharya *et al*, 2007). Developing countries such as South Africa, Nepal, China and Ghana provide good examples of this paradigm shift in the management of protected areas (Bajaracharya *et al*, 2007; Lehrer, 2008; Benjaminsen & Svarstad, 2010; Pelsler *et al*, 2011). Over the years, such countries introduced policies which incorporate social, political and environmental aspects while ensuring that local communities take part in the management of nature reserves as a response to the CBD strategy. However, the practice of community-based conservation remains a challenge for most nature reserves. Therefore, this section focuses on the principles and challenges of community-based management approach.

2.2.2.1. Principles of Community-based Management Approach

“Planning without citizen participation is neither democratic nor wise ... their practical wisdom and support make plans capable of implementation, their knowledge of local conditions fills gaps in the planners’ data and information, and their varied interests diminish the tendency of planning to embody a single purpose” (Henry Jackson, U.S. Senator, 1952–1983 cited in Nolen, 2008: 45).

Most nature reserves in the world seem to have understood the wisdom and logic captured by Senator Jackson (Nolen, 2008). That is, over the years there has been a massive shift in nature conservation from centralised management approach to participatory management (Bajaracharya *et al*, 2007). Efforts to integrate conservation and development by bringing local communities in conservation practices has been recognised in both developed and developing economies (Torri,

2011; Andrade & Rhodes, 2012; Daim *et al*, 2012; Mariki; 2013). Across the world, most countries made it a legal requirement for public participation in environmental protection. This was done by introducing frameworks and legislation which seeks to encourage community participation in environmental protection. Therefore, environmental protection in such countries is governed by “people power” and “popular control” wherein there is entirety and collectiveness in operations, control, management, monitoring and decision-making process in nature reserves (Bajaracharya *et al*, 2007; Torri, 2011). Thus, that shift was referred to as community-based management in conservation concept and practice. Theoretically, it was found that there are elements which made the bottom-up approach popular and dominant in conservation community (Benjaminsen & Svarstad, 2010). Firstly, the community-based approach manifested through the influences of the Brundtland Report titled “Our Common Future” with reference to the relationship between environment and development (Benjaminsen & Svarstad, 2010). Additionally, the approach was introduced due to the increasing pressure posed by social advocates and human rights activists on nature reserves to shift conservation practices into a more participatory approach (Bajaracharya *et al*, 2007; Benjaminsen & Svarstad, 2010). Furthermore, the entry of the bottom-up approach in nature conservation was influenced by developmental policy from a centralised approach to the involvement of local communities in conservation (Benjaminsen & Svarstad, 2010). Different conservation organisations therefore started incorporating local communities in their policies for environmental protection.

Community-based conservation as one of the nature conservation approaches seeks to protect nature by encouraging environmental stewardship while incorporating development and environmental goals. Thus, this approach is idealised by development-conservation nexus by ensuring that a win-win situation is achieved (Berkes, 2004). The approach emphasise that conservation should shift from being a property of centralised authorities and state-centric movement to be at the community level (Hulme & Murphree, 1999). However, Berkes (2006) stated that community-based management conservation is more than just about communities; rather it is about governance that starts from the bottom (Berkes, 2006). Therefore,

the core of this approach is at the denial that rural communities are the degraders of the natural environment (Hulme & Murphree, 1999).

Additionally, this approach sees local people as the major role players in conservation, as they have the ability to protect and be responsible for natural capital (Torri, 2011; Kaminski, 2010). In developing countries such as Africa, different occurrences of human-wildlife co-existing has been observed (Gandiwa *et al*, 2013). However, this can only be possible if local communities are involved in the management and decision-making of conservation efforts (Gandiwa *et al*, 2013). Therefore, nature reserves should encourage community involvement in planning and management, as it has been evident that when local communities are incorporated in conservation efforts and the natural capital and activities translate into tangible benefits for them, they will have a sense of ownership thus have a positive attitude towards conservation (Pelser *et al*, 2011). That was after the realisation that the support of local people especially those neighbouring nature reserves is a vital element for continuous goals of conservation (Badola, *et al*, 2012; Sirivongs & Tsuchiya, 2012; Owino *et al*, 2012). Therefore, the participation of local people in nature conservation management deliberate a possible means to achieve both development and conservation goals by ensuring sustainability while the people receive economic benefits (Kaminski, 2010; Andrade & Rhodes, 2012; Daim *et al*, 2012). This has been possible in China wherein the government continuously pay the community members around Wolong national park subsidies for their efforts to monitor and protect natural capital in the park leading to improvement in human welfare and ecological success (Lehrer, 2008).

Specifically, community-based approach views the local communities as the managers and owners of natural capital and therefore must be connected to nature (Torri, 2011). This is central to the assumptions of the approach. On minimum, the community-based approach has three assumptions (Kaminski, 2010). Firstly, the approach assume that local communities are best stewards to protect natural capital (Kaminski, 2010). Another assumption is that people will protect natural capital only if there are tangible benefits for them and the cost of the protection in less than the benefits received, and lastly people will conserve resources that are linked directly to

their standard of living (Kaminski, 2010). Overall, it is assumed that when the people's quality of life is improved through conservation efforts, their energies and commitment will be placed at ensuring a healthy environment. The assumptions of the approach stated by Kaminski (2010) are supported by two major elements of community-based discourse (Benjaminsen & Svarstad, 2010). First, it is stated that it is necessary to allow local people adjacent to nature reserves to take part in the management of those areas, secondly the local communities must then benefit from that process (Benjaminsen & Svarstad, 2010). Therefore, the set-up of community based approach involves governance, community participation, benefit sharing, equity and compensation for conservation related community costs (Benjaminsen & Svarstad, 2010; Torri, 2011; Kothari *et al*, 2013). Overall, the approach seeks to make nature conservation inclusive and publicly accessible (Kothari *et al*, 2013), through a variety of forms such as community outreach, integrated conservation and development projects (Gandiwa *et al*, 2013). This will then ensure that development and conservation goals are simultaneously achieved and equally prioritized. However, in practice reaching the conservation-development nexus is just a pipe dream for most nature reserves. Scholars have argued that, although the approach has a potential to enhance human welfare and protect biodiversity, there are various challenges which makes it difficult to reach its mandate (Berkes, 2004; Benjaminsen & Svarstad, 2010; Mariki, 2013). This approach has not led to desirable outcomes, therefore has led to debates in conservation community over the capability of the approach to reach conservation goals while incorporating social, political, economic and environmental aspects (Berkes, 2004).

2.2.2.2. Challenges of Community-based Management Approach

Over the years, there has been an increasing concern that community-based management is not working in nature conservation (Berkes, 2004; Benjaminsen & Svarstad, 2010; Mariki, 2013). Benjaminsen & Svarstad (2010) has put forward a claim that community-based conservation has nothing to do with communities; however the entry of community-based approaches in environmental protection seems to be driven by the ideologies to sign local communities into conservation not for a win-win situation but to lip-service development-conservation nexus and to

protect the integrity of protected areas for a run-away victory. The claim continue to state that most nature reserves use the community-based conservation impression to attract funding from state aid agencies, different companies as well as wealthy people (Benjaminsen & Svarstad, 2010). Such occurrences have led to a belief that community-based conservation is used to make local communities accept conservation while preservation principles are still being followed in nature reserves. Consequently, the practice of community-based conservation remained untested and questioned by different scholars. Frequently, scholars question whether community conservation has produced desirable results towards conservation and development goals (Berkes, 2004; Benjaminsen & Svarstad, 2010; Mariki, 2013), which Berkes (2004) answer by stating that the practice of the approach is a *problematique* due to its multi-level and complexity in nature conservation.

Theoretically, different challenges have been identified which led to the failure of community-based management conservation; however, Berkes (2004) identified two major positions of the failure. The first failure is the improper implementation of the approach (Berkes, 2004). This is not due to the weakness of the concept itself, however due to lack of decentralisation of responsibility and authority to the local communities (Berkes, 2004). Kothari *et al* (2013) have found that bureaucratic barriers in Costa Rica have limited participatory approach. This catastrophe was driven by the resistance of most protected areas to move from centralised management to conservation that encourages participatory management (Benjaminsen & Svarstad, 2010). Such nature reserves did not include in their agenda community participation, empowerment and institutional building (Berkes, 2004). Furthermore, (Benjaminsen & Svarstad, 2010) stated that the poor devolution of power has led to political and economic marginalization. Most often the challenges of community-based management are political. This is due to that the approach is central to poor laws and legislation implemented by government towards community participation and benefit sharing (Benjaminsen & Svarstad, 2010). Consequently, corruption has been identified to be another major challenge in the practice of this approach (Jansen 2009; Benjaminsen & Svarstad, 2010; Mariki, 2013). Jansen (2009) stated that the people who manage and control the natural capital are in a powerful position to have an easy access to the revenues generated from the

tourism activities and other conservation efforts. Additionally, Benjaminsen & Svarstad (2010) discovered that in Tanzania some individuals at the management level used a proportion of revenue from tourism initiatives for personal benefits which led to extensive corruption in the wildlife sector. On the other hand local communities hardly generated significant benefits from that process (Benjaminsen & Svarstad, 2010; Mariki, 2013).

Additionally, it was discovered that most nature reserves fail to understand how and to what extent should the local communities be involved in conservation both productively and successfully (Nolen, 2008). This is due to that, the understanding of community participation is ambiguous and often misunderstood by international communities (Niedzialkowski, Paavola & Jedrzejewska, 2012). Niedzialkowski *et al*, (2012) highlighted that the way in which participation is understood in literature and in practice differ. Therefore, in order to have a better understanding of how to incorporate local communities to nature conservation, it is essential to focus on the three major understanding of participation (Niedzialkowski *et al*, 2012). Firstly, participation stresses power-sharing with a goal of enforcing democracy in policy making. The second understandings is that participation has to focus on improved quality in decision-making and lastly ensuring that participation is a pragmatic tool for achieving governmental objectives (Niedzialkowski *et al*, 2012). These understandings emphasise that local communities are no longer seen as passive recipients in nature reserves, rather they are major beneficiaries of the whole system of conservation (Andrade & Rhodes, 2012; Niedzialkowski *et al*, 2012). However, most of those nature reserves do not meet this ideal of public participation. That is, whereas it allows for public control and participation in nature conservation, local communities' voices and concerns are never heard. In most instances the roles of the local communities in nature conservation are often undermined (Bajaracharya *et al*, 2007). Thus, makes the conservation-development nexus a pipe dream for most countries (Sebola & Fourie, 2007).

In addition to the poor implementation of the approach, Berkes (2004) identified a second failure as the complexity of conservation and development as two broad phenomena with different objectives and therefore cannot be linked.

Conservationists have argued that community-based conservation gives higher priority to social considerations over biodiversity (Berkes, 2004). A number of conservationists still see local communities as a threat to biodiversity and therefore should not be incorporated in operation and management of protected areas. The conservationists thus, argued that management of natural capital controlled by the central agencies is the best option to reach conservation goals (Benjaminsen & Svarstad, 2010). The argument continues to state that the attempt of this approach to bring in local communities to nature conservation will lead to exploitation of natural resources as Andam *et al* (2010) highlighted that local people tend to overuse natural resources. Forest clearing and instinct of wildlife have been recorded in developing countries due to the allowance of local communities to have full domination over biodiversity (Andam *et al*, 2010). That has therefore been used as an excuse to deprive local people the opportunity of using natural capital in most protected areas and the resistance to support community-based conservation. However, social advocates argued that financial benefits of conservation is modest wherein local communities suffer more to conservation than the benefits derived, therefore biodiversity tends to get priority over poverty alleviation (Benjaminsen & Svarstad, 2010). The process of development and conservation are thus seen to be in conflict with each other.

Apart from the two major failures of community managed approach identified by Berkes (2004), Torri (2011) stated that the practise of the approach is central to inequalities as compensation is not directed to the most affected groups. Due to the different age groups, gender, caste and class within the local communities, it is not easy to answer the question of who should participate and who should benefit? (Simelane *et al*, 2006; Torri, 2011). Thus, inequality has been viewed as major challenge in the whole process of community-based management approach. Gandiwa *et al* (2013) further stated that there is a gap in the location of costs and benefits of conservation in the local communities. In some instance, the most privileged groups in the society benefit more from the process, while others continue to experience the costs that come with conservation. This can be as a result of poor implementation of policies for benefit sharing. Despite these challenges, community-based management approach is still a dominant in conservation practices.

In order to address community-based approach, Berkes (2004) highlighted that asking whether the approach is working or not is a wrong question, however it should be determined if local communities are willing to participate in nature conservation (Berkes, 2004). Adetoro, Lawal & Jeny-Oni (2011), stated that although some nature reserves have mechanisms to bring local communities closer to conservation efforts, not all neighbouring communities are ready for participation. There are some factors which prevent local communities from participating in nature conservation. Adetoro *et al* (2011) highlighted that illiteracy, taboo, poverty, lack of awareness, religious belief and bureaucracy are among others the contributing factors to lack of community participation in nature conservation. Therefore, it is crucial that awareness be given to local communities about conservation and its benefits to the rural communities. Local communities have to take part in the management and operations of the nature reserves, which include choosing the community representatives, budgeting, selecting nature reserve committee and managing wildlife. Although awareness programmes are being introduced in some nature reserves, the ideal of public participation in nature conservation adhere to fail to produce desirable outcomes for community-based management approach.

In recent years, it was then discovered that although local communities have special skills which include local knowledge systems, culture and the indigenous knowledge experience of local environment and socio-economy essential for conservation (Bajaracharya *et al*, 2007), their efforts alone is not enough for the success of nature conservation and economic development as they lack expertise especially financial, managerial and economic. Therefore, there was a need for integrated efforts in nature conservation. That is, different parties should be incorporated in nature conservation to ensure a balanced decision-making process and benefit sharing. Collaborative management approach was then introduced in nature conservation community to answer to the failure of centralised management approach and the complexity of the community-based management approach.

2.2.3. Collaborative Management Approach

Collaborative management is a modern approach to natural resource management and conservation (Mariki, 2013). The approach has recently been seen as the most promising method to engage local support in conservation while simultaneously ensuring biodiversity protection (Foggin, 2012). Foggin (2012) stated that although the approach take different forms and names such as co-management, shared governance or joint management, the emphasis is that genuine partnership is required. As similar to the major principle of community-based approach, collaborative management also encourages a more people-centred approach to nature conservation. However, unlike community conservation the involvement of the local people is done through co-operative arrangements with the government and other stakeholders as equal partners and has equal decision- making powers based on the agreed ratio (De Koning, 2009). Due to the novelty of this approach, its discourse and practice is not clear in the academic community wherein it is commonly confused with community-based management approach. Therefore, for the purpose of the study, this section focus on the principles and challenges of collaborative management approach, in order to have an insight on the concept, its practice and challenges.

2.2.3.1. Principles of Collaborative Management Approach

Collaborative management approach invokes a deeper meaning than it just being about encouraging local community participation in nature conservation. The approach is defined as a “partnership by which various stakeholders agree on sharing among themselves the management functions, rights and responsibilities for natural capital in protected areas” (Foggin, 2012:17). Those stakeholders can include among others local communities, reserves management, government departments, donors, NGOs and conservation organizations such as IUCN, WWF, the nature conservancy and conservation international (Foggin, 2008; De Koning, 2009; Benjaminsen & Svarstad, 2010). This approach seeks to move the government designed and management nature reserves towards a collaborative management, involving equal decision-making, and benefit sharing (Kothari *et al*,

2013). Therefore, by discouraging policies and practices of conservation being a 'monopoly' of elites and conservationists (Kothari *et al*, 2013). Rather the collaborative management approach focus on the role of all citizens and other conservation stakeholders by creating meaningful partnerships (Foggin, 2008; De Koning, 2009; Kothari *et al*, 2013). Kothari *et al* (2013) highlighted that democracy and equitable governance are among others the core principles of collaborative management approach, wherein decisions with regard to administration, management and regulation are taken in a decentralised manner (Vasile, 2008). Thus, the approach works best when all the stakeholders have the same degree of power (Kothari *et al*, 2013).

The practice of collaborative management approach has since been found in many countries (Kothari *et al*, 2013). The Richterveld national park in South Africa provides the appropriate example for this approach, wherein the park is managed co-operatively by the local Nama people and the South African National Parks (RSA, 2009). Additionally, when the drive to land restitution in South Africa manifested after the apartheid era, the Makuleke people and protected areas agency, SANParks mandated a joint management with benefits going to local people. The Sanjiangyuan National Nature Reserve in Western China has also introduced the collaborative management approach seeking to create an enabling environment within which the livelihoods of the Tibetan nomadic pastoral communities could be sustained while concurrently enhancing the outcomes of wildlife conservation (Foggin, 2012). The project comprised of stakeholders such as Norwegian Agency for Development Cooperation, Ford Foundation, community associations, Sanjiangyuan national nature reserve, Provincial Forestry Department, private foundations along with individual sponsors (Foggin, 2012). Furthermore, the national parks in France are jointly managed by local officials, community representatives and political leaders (Kothari *et al*, 2013). Thus, this approach does not only emphasise nature conservation, but it's applicable to all different aspects relating to the broad field of sustainable development (Foggin, 2012).

With collaboration management it is assumed that local community development in the nature conservation can be achieved through partnerships and collaboration of

multi-stakeholders (Andrade & Rhodes, 2012; Sirivongs & Tsuchiya, 2012). That is, all stakeholders in nature reserves must be consulted in the planning, operations and management of the conservation areas (Foggin, 2008; De Koning, 2009; Foggin, 2012). After realising that it will be impossible to conserve natural capital without the commitment of the local population and other stakeholders; it was essential to create networks wherein agreements will be met to simultaneously reach successful conservation goals (Sirivongs & Tsuchiya, 2012). The strength of the approach thus relies on the mutual reinforcement that all the stakeholders bring to drawing board (Foggin, 2012). In that regard, the approach discourage payments given to local communities for their service rendered in the nature reserves, however focus on the supporting actions, mutual understanding and togetherness in decision-making (Foggin, 2012).

The ideology of this approach is that, when there is cooperation among the different stakeholders and genuine partnerships are created, it is likely that they will work together toward common agreed goals (Foggin, 2008). That is, essential for conservation as the conflicting interests of local communities and conservationists will be put on the table and mechanisms to reach a “win-win” solution be initiated. It can therefore be argued that, in a circumscribed conservation effort limited goals are achieved; but, adoption of a co-management system to nature conservation will lead to greater exchange of information among the partners, consequently encourage on-going learning cycle which will expand the scope of individual partner in the process (Foggin, 2008). Furthermore, through good communication channels the stakeholders will thus learn from each other.

Additionally, the collaboration management approach seeks to changes the stakeholder relationships from opposition to cooperation in nature reserves (Zhou *et al*, 2014). That is, continuous communication and feedback be encouraged for conservation sake. Instead of achieving ones interest at the expense of the other, mutual agreement should be met in conservation efforts. Thus, ensuring that conflict resolutions is the cornerstone by ceding the local communities rights to land and resources, protection of human and civil rights, channels to be involved in decision-making (Torri, 2011). Basically, it open for concerns of the local communities,

understand their issues with regards to the costs and benefits of conservation practises, as well as to identify common interests among the different stakeholders involved and benefits for all (Torri, 2011). The core element of this approach is thus the collaboration that can be achieved through togetherness by combing the strength and overcoming the weaknesses of the different stakeholders (Kothari *et al*, 2013). De Koning (2010) citing (Berkes, 1997), stated that collaborative management works in four different conditions, which are appropriate institutions, trust within the stakeholders involved, legal protection of local rights to access and ownership of natural capital and economic incentives for the local people. These conditions however are central to the type of collaborative management adopted in nature conservation.

Theoretically, it was found that there are different types of collaborative management which determine the principles of the approach in nature conservation (De Koning, 2009). This can range from the agreement between government and landowners who are mostly the local communities, wherein the government make regular consultations with the land owners, however makes the final decisions, to the one that the land owners are given most of the power to make decisions (De Koning, 2009). Firstly, De Koning (2009) stated there is ad hoc benefit sharing which often occurs when the protected areas are state owned and are adjacent to local communities. In thus model, the government has full power over decision-making and provides local people with benefits from conservation. There is also consultation benefit sharing which is central to community participation as the government consults with the communities before making final decisions. Another type of collaborative management is lease wherein the land owners are consulted in the management of protected areas through steering committee. There is also part lease wherein land owners are consulted on conservation matters and they are paid for use of the land. Additionally, collaborative management approach can be in a form of co-operative, this encourages negotiation and power sharing among the different stakeholders (Berkes, 2007; De Koning, 2009). All the different types of the approach focus on working together to achieve development and conservation goals. Kothari *et al* (2013) stated that if the collaborative management is appropriately managed, desirable conservation-development outcomes can be produced. This is

due to the diversity of skills, expertise and knowledge that the different stakeholders bring to conservation efforts (Foggin, 2008; Kothari *et al*, 2013). However, collaborative management approach was found to be placing a great burden on the local communities without providing the expected benefits (Cronkleton, Pulhin & Saigal, 2012). Consequently, result in the failure of the approach to produce desirable effects to conservation and development. Various challenges have been recorded in literature which led to the inability of the approach to reach its goals (Zhou *et al*, 2014).

2.2.3.2. *Challenges of Collaboration in Nature Conservation*

There is an impressive progress of collaborative management approach as a discourse in many countries. However, the control of nature reserves still remains the duty of central government, wherein the practice is central to conventional style of protected areas (Kothari *et al*, 2013). Similar to the failure of community-based approach, the changes in policy and laws from the centralised approach to collaborative efforts are not effectively implemented in nature reserves. Kothari *et al* (2013) found that although in conservation discourse there has been a shift to an integrated efforts, national laws and legislation remain unamended and the exclusionary approach is still a dominate in conservation. Kothari *et al* (2013) stated that the government has reluctantly showed interest in sharing power with local communities and on the other hand, the local people continue to lack the capacity to use the powers entitled to them. Therefore, the ordinary citizens' role in the collaboration is mostly passive. Foggin (2012) stated that local communities' voices are often neglected in the development-conservation dialogues that affect their quality of life and thus make community participation unattainable. Cronkleton *et al* (2012) argued that the reason for poor community participation in collaborative efforts is the expected start-up costs. It was found in Bolivia, the Philippines, India and Guatemelan Peten that the legal frameworks and institutional arrangement of the approach created onerous start-up costs that became barriers for some local communities to take part in joint management (Cronkleton *et al*, 2012). This was due to that, the procedure of being part of collaborative management in conservation entails complex requirements for approval involving technical and administrative

obstacles, legal costs to defend property rights and capital investments which rural communities tend not to afford (Cronkleton *et al*, 2012). Consequently, this makes the poor communities subject to manipulation by the other stakeholders.

Additionally, Cronkleton *et al* (2012) identified the use of uniform and inflexible legal frameworks as another challenge of the collaborative management approach. The collaborative conservation attempt to achieve conservation objectives using the 'one-size-fits-all' approach usually aggravate challenges as the different stakeholders involved have competing interests, various issues, demands and aspirations (Cronkleton *et al*, 2012). For instance, the local communities need the natural capital for survival and livelihoods sustainability and also to actively participate in nature conservation (De Koning, 2009; Ahmad *et al*, 2012), while the elites encourage conservation for economic greed (Zeka, 2008), and the interests of the government is to achieve efficiency and sustainability in natural resource management (De Koning, 2009). Zhou *et al* (2014) has found that the Snake Island-Laotie Mountain National Nature Reserve has recently experienced such challenges wherein there is poor balance in conservation and local community development due to conflicts and inadequate power sharing among stakeholders especially in the decision-making process. Zhou *et al* (2014) stated that there are no policies enforcing citizen participation in nature conservation and most nature reserves in China are still managing natural resources top-down. On the other hand, the inflexible frameworks limit negation, innovation and adaption due to the general system used with consistent standards and lack of transparency (Cronkleton *et al*, 2012; Zhou *et al*, 2014).

The uniform and inflexible legal frameworks also impede the balanced distribution of costs and responsibilities in nature conservation (Cronkleton *et al*, 2012). In collaborative management, the local communities are required to make up-front investment to protected areas; however there is dearth of obligation from the state agencies to also contribute to those investments (Cronkleton *et al*, 2012). The procedure to get collaborative management approved is a long process, which is a burden of the local communities with less assistance from the other stakeholders. Firstly, the local communities have to generate required information for the

management plan and then wait for the approval from the government which take long period (Cronkleton *et al*, 2012). After receiving approval for the management plan, the local communities have to continue to submit documents to maintain the approval. On the other hand, the rewards for their hard work take time before they can be distributed amongst the community members (Cronkleton *et al*, 2012).

Although the approach brings harmony in natural resource management, the results are less a win-win situation rather a “runaway victory” for the government and agencies. Kothari *et al* (2013) argued that collaborative approach still has a long way to go before it can become a norm in most countries. Therefore, most conservationists are reluctant to adopt it in most nature reserves. However, Cronkleton *et al* (2012) stated that the collaborative management approach can still be shaped by adjusting the regulatory frameworks, institutions and agencies to allow more autonomy in the management of protected areas by local communities and other stakeholders, so as to reach development-conservation goals and produce desirable effects for local economic development.

2.3. Components of Local Economic Development

Local economic development is not a new phenomenon (Patterson, 2008). The strategy has been implemented and became popular for over a decade in most industrialized economies (Patterson, 2008). Theoretically, majority of developed and developing countries have in recent years shifted their focus to transformation of the local environment to promote business as part of the enterprise development and through it, ensure that the local economy is growing to precipitate employment opportunities, improve human welfare and reduce incidents of poverty (Hindson & Meyer-Stamer, 2007). All these aspects form broad elementary components of LED (Parker, Kirkpatrick, & Figueira-Theodorakopoulou, 2008). Patterson (2008) indicated that LED as a strategy went through three different phases to arrive at where it is currently. On inception, Patterson (2008) stated that LED strategy was mainly based on marketing local enterprises to external investors through the use of incentive systems such as tax breaks and the reduction of costs of certain public goods, as well as enhancing infrastructure development so as to attract investors to

the localities. Then, as the popularity of the LED strategy grew in literature, there was a paradigm shift to endogenous economic possibilities, with the aim of making it possible for existing businesses to compete in the global market and also support emerging entrepreneurs and encourage business start-ups (Patterson, 2008). Such economic potentials were promoted through “entrepreneurship development and training programmes, business support and business linkage mechanisms, providing access to finance, skills development, rural development and sectoral development approaches” (Patterson, 2008: 3). Then, in the late 1990s, a more inclusive approach to LED was introduced (Patterson, 2008). The major focus was to promote local economic development through creating a conducive environment within which individuals, communities and sectors could grow businesses to enhance economic development. Thus, the third face aimed to afford business personnel and entrepreneurs a competitive local business environment, encouraging and supporting networking and collaboration between businesses and public/private and community partnerships, facilitating workforce development and education, focusing inward investment to support cluster growth and supporting quality of life improvements (Patterson, 2008). Commonly, all the phases focussed significantly at alleviating poverty, unemployment and promote economic development and growth in local communities.

Local economic development consists of a variety of components such as income generation, job-creation, establishment of business partnerships, enhancement of entrepreneurs, as well as increased economic growth/output, an enabling local development environment and improved market opportunities, which take place within localities through direct participation of members of the community (Terluin, 2003; Iorio, & Corsale, 2010). It is imperative that the local people achieve the capacity to deal with the threats associated with poverty, diseases, food insecurity, starvation, malnutrition, malnourishment, harsh market dynamics, illiteracy, and so on, in the local development environment in order for LED to take hold (Parker *et al*, 2008). Additionally, the local population has to gain the capacity to make productive use of the opportunities available. The establishment of an enabling local development environment is, therefore, of fundamental importance for stimulating LED; that is, other components of LED would remain elusive if an enabling local

development environment is not established (Fannin, Hughes, Keithly, Olatubi, & Guo, 2008; Agenor, 2010; Pal, 2010; Chatterjee & Mahbub Morshed, 2011). Enabling local development environment is thus an umbrella for the other components by increasing employment and market opportunities, while simultaneously enhancing income generation by encouraging infrastructure development in the rural communities. That allows local communities to develop and realise their potential. Agenor (2010) highlighted that encouraging public investment for rural communities in a form of infrastructure development creates an enabling environment for development. Roads and transport makes it easy to access the market and encourage investors to bring business to poor communities with a possibility of starting partnerships with the local businesses and creating employment opportunities. Therefore, investing in infrastructure development is crucial to reach the LED objectives. Infrastructure development also minimise the cost of production through telecommunications, transportation and usage of electricity (Agenor, 2010). Commonly, rural infrastructure such as roads, transportation and transmission lines which connect rural communities to urban cities enable the local people to take part in economic activities which will bring income to their households such as businesses, job opportunities and different kinds of livelihoods. Not only does it offer economic potential to the people and also reduce the cost of production, infrastructure also increase returns on private investment by attracting investors to rural communities (Pal, 2009). (Agenor, 2010) observed that lack of infrastructure is a major hindrance to development and growth in most developing and underdeveloped countries. Lack of access to electricity, poor roads and transport has found to hinder development and constraint on trade expansion (Agenor, 2010). This was stated by Agenor (2010) citing (Yoshino, 2008) that in Sub-Saharan Africa, the poor quality of public infrastructure with regard to disruptions of electricity experience by most of the firms had an adverse effect on exports. Additionally, lack of electricity in rural communities lead to dependence on traditional fuel system such as charcoal, firewood, cow dung, and crop residues for cooking and heating, thus increase cases of indoor air pollution and incidences of sicknesses from the smoke inhaled (Agenor, 2010).

Moreover, Agenor (2010) continued to argue that in recent literature, poor infrastructure may have hindered development and progress indirectly through a variety of channels, most notably by affecting health outcomes. That is, lack of clean drinking water and sanitation hinders human health and therefore productivity. Therefore, a provision for public goods such as roads, power, water and sewerage, irrigation, transportation and communications should be at the forefront of the development agenda in rural areas (Chatterjee *et al*, 2011). Public investment should be used as a panacea to development and growth challenges (Parker, 2007; Agenor, 2010). Agenor (2010) stated that, infrastructure raises the economy's ability to produce health services; in turn, greater access to health services enhances workers' productivity, and therefore output. But, the challenge that most local communities face is the reactive response of the state in the public services delivery. Therefore, Chatterjee *et al* (2011), insinuated that the already common practice of privately provision of infrastructure services in the industrialized economies, be introduced in underdeveloped and emerging economies were public goods remains state domain. Chatterjee *et al* (2011) based their argued on that the rapid demand for services, the observed public service protests and the increasing public dissatisfaction with the performance and quality of state-provided services should be the driving force to privatise public infrastructure. Therefore, it is no longer the state alone responsibility to provide public goods, as there has been a major shift to privately owned enterprises (Pal, 2009; Chatterjee *et al*, 2011). Rural community based industries such as tourism; mining and agriculture have equal responsibility to support public service provision in local communities. Protected areas can also contribute in reaching those components of local economic development. However, the challenge is that there is limited empirical data that support the economic impact of protected areas on local communities (Sims, 2010); therefore it is seemly to understand different existing arguments in literature on the effects of nature conservation on local economic development.

2.4. Effects of Nature Conservation on Local Economic Development

Most nature reserves in the world are established in poor rural communities, wherein alleviating poverty is one of the biggest challenge facing the policy makers and

planners. Due to the increasing pressure on government to alleviate social ills in rural communities, most countries rely on nature reserves to provide for economic benefits that will significantly reduce poverty and improve human welfare (Iorio & Corsale, 2010). In African countries such as Zimbabwe, South Africa and Botswana tourism has been used as a vehicle for poverty alleviation, create employment opportunities and improve the livelihoods of poor communities (Binns & Nel, 2002; Roe & Elliot, 2004; Chiutsi & Mudzengi, 2012). Natural reserves in such countries are considered to be a potential means for economic development, economic growth and regeneration of poor rural areas (Roe & Elliot, 2004; Iorio & Corsale, 2010). Theoretically, nature conservation has a capability to improve the social and economic well-being of the local communities (Sims, 2010). This includes capital investment, job-creation, market linkages, commercial opportunities for small businesses and diversification of markets (Snyman & Spenceley, 2012).

Essentially, nature conservation has emphasized sizeable community benefits in terms of job and market opportunities, generation of income, facilitation of entrepreneurship and business, and the creation of an enabling local development environment within which locals would acquire the ability to make productive use of available opportunities and to resist the threats associated with poverty, deprivation, social exclusion and inequality. The entry of nature reserves in rural communities holds a promise to create an enabling environment within which people will develop. Due to the ideal that most nature reserves are based in remote areas, with less development, high unemployment rates, and increasing poverty levels (Snyman & Spenceley, 2012), it is crucial thus for those nature reserves to bring expected benefits to the local communities (De Koning, 2010). Ramukumba *et al* (2012) stated that the tourism industry as an important sector in nature reserves can be used as a strategy to achieve the objectives of local economic development which are poverty alleviation and employment creation. Additionally, it was highlighted that the tourism industry has developed over the years to currently becoming the world's second largest industry (Ramukumba *et al*, 2012). Therefore, expectations for the industry to create economic values to rural communities have also expanded (Ramukumba *et al*, 2011).

With regard to job-creation, nature conservation can provide both direct and indirect opportunities (Snyman & Spenceley, 2012). Direct employment include among others rangers, lodge workers, guides and the other direct participation in the tourism industry, while the indirect employment can include crafters, local suppliers and transport industry (Snyman & Spenceley, 2012). The creation of employment opportunities is central to the success of nature reserves to provide local livelihoods to the local communities (Snyman & Spenceley, 2012). Apart from creating direct employment, nature conservation through the tourism industry is a backbone for other sectors such as hospitality and transport, wherein people can find employment opportunities (Mishra, & Padhi, 2013). Literature has documented a significant number of cases where the tourism sector created jobs for the local communities (Ramukumba *et al*, 2012; Snyman & Spenceley, 2012; Mishra, & Padhi, 2013). As illustrated in India, the tourism industry employs the highest number of people as compared to other industries and also contributed massively towards foreign exchange earnings (Mishra, & Padhi, 2013). However, most nature reserves experience challenges in hiring people from the rural communities, taking into consideration that most nature reserves are located in rural communities with poor educational facilities. The tourism industry requires skills that are not possessed by majority of the people in rural areas. Therefore skills training and training is essential for the local communities to ensure growth.

The nature reserves ability to create employment for the local communities does not only affect the people who are working in those nature reserves (Synman & Spenceley, 2012), however also benefit the households of those people. The workers will generate income from offering their services to the nature reserve and support their families with that income. That will enable the local communities to be able to move out of the poverty trap. The local communities can also derive income from payments of lease fees or revenue shares for the use of their land (De Koning, 2010). Additionally, income generated from the nature reserves will also be used to support local businesses. Nature conservation can also have desirable effects on local development environment in the host communities. That is, nature reserves can contribute towards various infrastructure uses that will benefit local communities (Mishra & Padhi, 2013). This includes among others means of transportation, health

care facilities, sports centre, educational facilities and restaurants to cater for the foreign visitors (Parker, 2007; Agenor, 2010; Chatterjee *et al*, 2011; Mishra & Padhi, 2013). The development of infrastructure can then directly induce other productive activities (Mishra & Padhi, 2013), such as luring business investment to the local communities and job-creation.

In addition to that, the nature reserves can also support small business enterprises and provide livelihoods to the local communities through the provision of training and development. Snyman & Spenceley (2012) stated that skills training, development and the empowerment of the local communities and other indirect benefit derived from nature reserves was found to have improved rural livelihoods. Skills development provided by the nature reserves can also promote entrepreneurial opportunities to the local communities. Entrepreneurship is recommended as a sustainable option to stimulate sustainable tourism as it places the local communities at the centre of conservation planning, operation and management (Chiutsi & Mudzengi, 2012). This will allow the local communities to generate direct income from tourism initiatives. The local communities can open their own hospitality enterprises with the skills offered by the nature reserves. It was further stated that the significance of nature reserves to create entrepreneurial opportunities for the local communities, enables them to participate in business ventures such as accommodation provision, transport service, catering to tourists and as tourist guides (Sebola & Fourie, 2007).

Furthermore, nature reserves can support local businesses by encouraging the tourists to support local economies and buying goods and services that are made in the local communities by locally-owned businesses. This can also include support for sustainable local crafts and other small initiatives. Nature conservation will then in that regard open market opportunities for the local businesses and entrepreneurs wherein their products will be marketed and derive income for their households. The nature reserves can also develop partnerships and joint ventures with the community members for benefits of all. Not only does nature conservation support business partnerships, create jobs, encourage market and entrepreneurship opportunities, it also plays a critical role in enhancing human development in local communities.

The tourism industry has also emerged as an instrument for sustainable human development (Mishra & Padhi, 2013), with a focus on gender equality and career development. That includes enlarging the people's choices in a broader sense by creating an environment in which people can develop and reach their full potential. This can only be done by expanding income and human choices through the distribution of economic wealth and various resources such as human, physical, social and natural resources. All the LED components that nature reserves contributes to the local communities through the tourism industry raises the country national income and contribute significantly towards gross domestic product (GDP) (Mishra & Padhi, 2013). The increase in the number of people migrated to reside closer to nature reserves observed in Latin America and some African countries is evident that there could be available opportunities for the local communities (Sims, 2010). Also evidence exists in some cases that nature reserves has had actually reduced poverty and increased household income (Sims 2010; Andam *et al*, 2010). It was also found that investing in social welfare encouraged sustainable natural capital use and alleviated poverty in some countries such as Bolivia, Costa Rica, Indonesia, and Thailand (Andam *et al*, 2010; Sims 2010). However, there are various challenges facing nature reserves in bring desirable effects to local communities with regard to LED.

The challenges facing most nature reserves especially in developing countries to make economic impact include the high cost of taxes, levies and government fees, lack of skilled labour, insufficient economics of scale to develop viable market linkages, and the fact that some job opportunities might not be having good working conditions and might not be well paying (Snyman & Spenceley, 2012). Therefore, for nature reserve to contribute towards LED, there need to be a "visionary leadership, availability of resources and effective strategies that prioritise conservation as central to economic development" (Ntonzima & Binza, 2011: 668). However, by reviewing different literature on nature conservation and the socio economic impact of the local communities (Andam *et al*, 2010; Sims, 2010; Torri, 2011; Snyman & Spenceley, 2012), it can be argued that nature conservation does

not always convey desirable benefits to local communities. Rather it can bring a greater burden to local people without providing the expected benefits.

Social advocates argued that, although an establishment of a new local nature reserve holds a promise to significantly create employment and income generating activities along with an increased entrepreneurial and business opportunities (Ferraro & Hanauer, 2010; Sims, 2010; Phillips & Roberts, 2013), from a societal perspective, an increased number of tourists in local communities can result in disruption of local peace and exclusion of local people from cultural and traditional activities (Phillips & Roberts, 2013). Therefore, the social advocates documented negative effects of nature conservation on the socio-economic wellness of the local communities (Sims, 2010). They highlighted that it is either conservation is incorporated to development where a “win-win” situation can be achieved or the establishment of nature reserves be prevented in rural communities, where dependency on natural capital is prevalence (Andam *et al*, 2010; Sims, 2010; Torri, 2011; Snyman & Spenceley, 2012).

It is arguable that the process of conservation limits agricultural development and extraction of natural capital (Andam *et al*, 2010). That is, large amounts of land is being conserved and left unused, restricting the people from agriculture practices. In the process of conserving those lands, local communities are often banished and denied access to natural capital (Akosim *et al*, 2010). This has in many instances resulted in impoverishment for the local people. Sims (2010), have argued that conservation areas restrict economic development opportunities and increase poverty for the local people due to the restrictions imposed on access to natural capital, particularly land which the people use for agricultural practices to avoid food insecurity. Immediately when the resources are demarcated, the local people forfeit their traditional rights to utilise natural capital inside protected areas (Akosim *et al*, 2010).

Additionally, it has been argued that land use restriction can result in loss of employment opportunities, loss of natural capital ownership rights, loss of livelihoods, social differentiation, poverty, economic stagnation and inequality (Daim,

et al, 2012; Owino *et al*, 2012). Norton-Griffiths & Southey (1995) came to a conclusion that the environmental protection benefits are lower than costs, as people lose to conservation efforts more than the benefits they get. Shymsundar & Kramer (1996) has found that households neighbouring nature reserves in Madagascar lost their livestock and their farms to conservation practises. Additionally, various studies have discovered that in central Africa, local people in rural communities have in 2006 generated 67% of their household income from activities related to natural capital such as hunting and gathering as compared to agriculture, labour and other employment activities which did not have a significant effect to the people's income (Cernea & Schmidt-Soltau, 2006; Coad, Campbell, Miles & Humphries, 2008). Such occurrences illustrate how vulnerable communities can be affected by the exclusionary approach often adopted in nature reserves. Furthermore it was discovered that restrictions in access to resources can affect the health of the local people due to the significant changes in their diets (Coad *et al*, 2008). Foppes & Ketphanh, 2004 stated that leaves, fruits and vegetables provide local communities with vitamins and minerals required for a balanced nutrition. It has been argued that establishment of nature reserves may affect community health due to the limited access to indigenous medical plants, reducing protein intake from wild fruits and nutritious wild meat (Coad *et al*, 2008). This will lead to a dependency on purchased items which will affect household income.

As noted before, some nature conservation practices can be dangerous to the neighbouring communities especially wildlife conservation (Torri, 2011; Daim *et al*, 2012). Human-wildlife conflicts often occur in villages neighbouring nature reserves. Animals tend to get out of the reserved areas and roam around the communities, destroying people's vegetation, livestock and even endangering the lives of the local people (Daim *et al*, 2012). Less attention is given to support and compensations for the cost endured due to human-wildlife conflicts (Torri, 2011). Apart from human-wildlife contact, social advocates have found that tourism activities often affect the privacy and the harmony of local communities (Phillips & Roberts, 2013). Problems of increased crimes in local communities neighbouring nature reserves have been reported around the world (Phillips & Roberts, 2013). That is, due to lack of employment opportunities, an increase in foreign tourists in rural communities

attracts criminals as they carry economic valuables (UNEP, 2011). The UNEP 2011 report has also found that the tourism industry in the third world countries have provided easy access to sexual exploitation in rural communities.

Social advocates also highlighted that it is a challenge for most nature reserves to introduce economically sustainable enterprises in the rural communities that improve the quality of life while simultaneously ensuring that the natural environment is not exploited (Phillips & Roberts, 2013). As Phillips & Roberts (2013) argued that in conservation industry, biodiversity and economic concerns frequently drive operations and decisions, while social issues associated with poverty and inequality are often neglected. Therefore social advocates conclude that nature conservation is harmful for the local communities. Literature however highlighted both negative and positive effects of nature conservation on the socio-economic conditions in the local communities. The major challenges which hamper nature conservation to make an effect to local communities include lack of community participation and commitment among various stakeholders, lack of a clear management approach and the conflicting interests of stakeholders (De Beer & Marais, 2005; Sammy & Opio, 2005; Collins & Snel, 2008).

2.5. Conclusion

This chapter has demonstrated that there is a mismatch between the discourse and practice of nature conservation in most nature reserves. In recent years, the participatory approach towards nature conservation dominates the presentations of conservation especially in Africa; however the practice is in consistence with the centralized managed approach. This mismatch therefore makes it almost impossible for nature conservation to have desirable effects towards LED as the fortress principles are still applicable in some nature reserves. Although, desirable effects of nature conservation towards LED were documented in other countries, this includes job-creation, infrastructure development, economic growth and entrepreneurial opportunities; the practice requires active participation of the local communities. Allowing local communities to be involved in planning and implementation of conservation initiatives has more chance to reach conservation goals. The above

discussion highlights that nature reserves are yet to contribute towards local economic development because their practice is devoid of community development principles. The next chapter examines the South African contexts and experiences on the effects of nature conservation on LED.

CHAPTER 3

NATURE CONSERVATION AND LOCAL ECONOMIC DEVELOPMENT IN SOUTH AFRICA

3.1. Introduction

Nature conservation in the democratic South Africa has now captivated conservation with a human face largely due to the shift of environmental protection from fortress conservation to protection that encourages anthropogenic disturbance (Biggs, Turpie, Fabricius & Spenceley, 2011). In the apartheid era, local communities were completely excluded from protected areas merely because they were seen as a threat to biodiversity. However, over the years the state realised a need to concurrently attain community development and biodiversity conservation (Biggs *et al*, 2011). Therefore, nature conservation through tourism initiatives was placed at a cornerstone to alleviate social ills and improve the local people's standard of living. Although that is the case, local communities in South Africa continue to experience complex developmental challenges such as poverty, unemployment, inequality, poor infrastructure and shortage of skills. Thus, nature reserves seem not adhere to the ideal of protecting biodiversity, while ensuring that the local communities reap significant benefits to enhance human welfare. It is befitting therefore, to discuss nature conservation and local economic development in the South African context, focusing on nature conservation approaches adopted in the nature reserves, local economic development practice and the effects of nature conservation on LED in South Africa for the purpose of this chapter.

3.2. Nature Conservation Approaches and Practice in South Africa

South Africa is among others, the world richest country in biodiversity following Indonesia and Brazil, housing an estimated 10% of the world's wildlife and vegetation (Pelser *et al*, 2011). Out of the available biodiversity, 80% of those species do not exist anywhere else in the world (Pelser *et al*, 2011; Abdu-Raheem & Worth, 2012). South Africa is also blessed with different types of landscapes and

ecosystems which include deserts, tropical forests, marine and coastal bodies (Abdu-Raheem & Worth, 2012). Additionally, the country boost with 22 officially proclaimed national parks (Dahlberg *et al*, 2010; Pelser *et al*, 2011), public nature reserves managed by provincial and local governments, and private nature reserves managed by private landowners. Similar to other developing countries in the world, South Africa adopted the preservation ideology to environmental protection, wherein the local communities were excluded from decision-making processes and utilization of natural capital (Watts & Faasen, 2009; Pelser *et al*, 2011). The traditional approach to conservation in South Africa which emerged in the 1930s was influenced by the apartheid philosophy that had no respect for basic human rights (Watts & Faasen, 2009; De Koning, 2010; Pelser *et al*, 2011). Pelser *et al* (2011) stated that the approach resulted in displacement of local communities for conservation, social conflicts, local communities' resentments and negative attitudes towards conservation, increased levels of poverty and environmental degradation. Consequently, the pressure to introduce a more participatory management in conservation emerged in South African environmental protection (Simelane *et al*, 2006; Pelser *et al*, 2011). However, it has been highlighted that the paradigm shift in conservation from the fortress to the participatory management is just a popular pronouncement with the practice entailing preservation philosophies (Benjaminsen & Svarstad, 2010). Additionally it was observed that the adopted approach to nature conservation in South Africa is not a uniform system, rather the practice differs from one protected area to the other. This section focuses on the approaches to nature conservation adopted in South Africa.

3.2.1. Apartheid Fortress Approach

Historically, land in South Africa was managed under the customary laws and people were allowed to move freely in their surroundings (Dahlberg *et al*, 2010). However, in the seventeenth century the European colonisation privatised all the land in South Africa and indigenous people lost their rights to access land and other natural capital (Dahlberg *et al*, 2010). Over the years, a decline in legal rights to access and utilization of natural capital was observed (Dahlberg *et al*, 2010). The decline came with the ideas that Africans are too ignorant and do not appreciate the beauty of the

natural environment, therefore have no rights to access natural capital (Igoe, 2004). Additionally, Africans were perceived to be degraders of the natural environment. Thus, policies and frameworks were introduced to alienate people from nature (Watts & Faasen, 2009; Dahlberg *et al*, 2010; Pelsler *et al*, 2011). This include the Native Land Act of 1913 (Dahlberg *et al*, 2010) and the Group Areas Acts of 1950 (Watts & Faasen, 2009).

It is therefore noteworthy that the system of nature conservation in South Africa was driven by the racial segregation amongst whites and non-whites population (De Koning, 2010). Watts & Faasen (2009) stated that the segregation was a result of the apartheid frameworks and economic philosophy towards nature conservation. The black communities, which are known to be experiencing extreme poverty and inequality, were denied access to natural capital that they required for survival (Berkes, 2004). The only access which the majority of non-white South Africans were allowed was limited to specific areas under the non-popular Group Areas Acts No 41 of 1950, which was enforced by the then national government (Watts & Faasen, 2009). The act emphasised that the most developed areas in South Africa which had natural capital must be reserved for the white population, while the blacks, Indians and coloureds were assigned to poor rural communities (Watts & Faasen, 2009; Dahlberg *et al*, 2010). Thus, a huge proportion of land in South Africa was granted to the white people, while the majority of the black population which constituted 80% of the then total population only occupied 16% of land (Dahlberg *et al*, 2010). Consequently, this led to overcrowding, land degradation, diseases, shortage of food and funds which even by today majority of the black population still experience (Watts & Faasen, 2009). Additionally, the Group Areas Act also restricted entry to non-whites population to own or run businesses in the developed areas occupied by the white population (Watts & Faasen, 2009; Dahlberg *et al*, 2010).

In the nineteenth century, colonial hunting laws were similarly introduced in South Africa to limit hunting activities by the black Africans (Dahlberg *et al*, 2010). Moreover, protected areas were created to exclude local people from natural resources (Dahlberg *et al*, 2010). Furthermore, the South African apartheid government promulgated the National Parks Act of 1926 wherein the SANParks

agency was introduced to oversee the management of natural capital in the country, with a mandate of protecting nature for its intrinsic factors (Dahlberg *et al*, 2010; Pelser *et al*, 2011). From then to the post-apartheid era, the practice of nature conservation in South Africa was a subject of harsh mechanisms to deny local communities access to natural capital. Watts & Faasen (2009) revealed the use of “keep out or you will suffer” law enforcement approaches in national parks and nature reserves to prevent black African from accessing the protected areas. Igoe (2004) stated that the acts were used to set aside natural capital for the enjoyment of the Europeans who are perceived to appreciate nature for its beauty and for its own sake. Therefore, the practice of nature conservation in South Africa was often accused of being a playground for the most privileged groups of the society at the expense of the rural population (Zeka, 2008; Watts & Faasen, 2009). Basically, the poor rural communities were denied access to the natural capital, while the white settlers hunted wild animals freely for food, trade, pleasure and trophy (Watts & Faasen, 2009). Surprisingly, the same system was still categorised as nature conservation. The question however could be that, do we call that practice conservation? And if yes, what exactly are we conserving? It can then be argued that natural capital in South Africa is a commodity for poor communities, while a luxury for the most privileged groups. As a result, the black majority population viewed the conservation practice negatively (Watts & Faasen, 2009).

The system of establishing national parks and nature reserves in South Africa was also against human rights practice (Pelser *et al*, 2011). Majority of the protected areas are established on land formerly owned or occupied by local communities (Watts & Faasen, 2009; Dahlberg *et al*, 2010; Pelser *et al*, 2011). In the process of those formations, local people were forcefully displaced and denied access to the resources which they significantly depended on for survival before the establishment of those nature reserves (Paterson, 2009). The popular case in the South African history of displacement for conservation is the removal of the Makuleke community in the Kruger National Park, wherein the park was idealized as wilderness area (Kalamandeen & Gillson, 2006). Not only did the apartheid fortress approach affect the Makuleke people, numerous cases of displacement were reported over the years in South Africa (Kalamandeen & Gillson, 2006; Watts & Faasen, 2009; De Koning,

2010). That exclusionary approach have commonly become ambivalent, rive with dilemmas that breed conflicts between local communities and the management of the protected areas (Watts & Faasen, 2009). Additionally, the fortress approach resulted in the negative perception and attitudes towards nature conservation by the local communities (Watts & Faasen, 2009). Consequently, South Africa's protected areas experienced increasing loss of biodiversity due to illegal poaching and logging, as well as destruction to natural capital. Those negative occurrences made it almost impossible for South African protected areas to reach its mandate to protect biodiversity, maintain critical ecological processes and ecosystem services. Therefore, there was accord on the need to develop a more human-centric approach to manage natural capital in South Africa which will afford ordinary citizens an opportunity to take part in activities, operations and management of protected areas so as to reap significant benefits (De Koning, 2010; Pelser et al, 2011).

3.2.2. Participatory Management Approach

The South Africa's response to the urgent need to incorporate local communities in nature conservation manifested when the country took part as one of the signatories at the Convention on Biological Diversity in 1992 regarding sustainable development (SANParks, 2012). Within the three main goals of the Convention which includes "conservation of biological diversity (or biodiversity); sustainable use of its components; and fair and equitable sharing of benefits arising from genetic resources" (DEAT, 1998: 11), the South African government was under pressure to introduce legal frameworks to ensure sustainable resource use, local participation and benefit sharing in protected areas. The paradigm shift came in the right time for South Africa as two years after the involvement in the Convention; the country had its first democratic elections which afforded ordinary citizens an entry in government affairs (Spenceley, 2003; Pelser *et al*, 2011). This meant that the different racial groups which were previous segregated from conservation efforts could be allowed to take part in the management of natural resources. From then to date, the practice of nature conservation in South Africa has generated interest to community-based conservation efforts which rhetorically focus on ordinary citizen's participation and the need to enhance human welfare (Paterson, 2009; Pelser *et al*, 2011). To deliver

on its promise of an integrated conservation-development nexus, the South Africa's government have developed a national policy on the conservation and sustainable use of the South Africa's biological diversity which seeks to involve the public in conservation affairs as a response to the requirement by the United Nations Convention on Biological Diversity (RSA, 1997a; DEAT, 1998). Moreover, a strategy and action plan was developed for conservation of biological diversity to achieve the goals and objectives of the national policy (DEAT, 1998). The national policy presents the vision of South African as: "*a prosperous, environmentally conscious nation, whose people are in harmonious coexistence with the natural environment, and which derives lasting benefits from the conservation and sustainable use of its rich biological diversity*" (DEAT, 1998:3). This vision is to be achieved through focusing on three priorities which include the eradication of poverty, the sustainable development of the economy and the social development of the people (RSA, 1997a; DEAT, 1998). To reach those priorities, the different bodies involved in natural resources management also shifted their focus from preservationist conservation to one that seeks to enhance community development (Pelser *et al*, 2011).

The South African National Parks (SANParks) as a leading conservation authority in all national parks of South Africa adopted a more proactive approach to conservation that embraced a community-based model with the aim to reconcile conservation and economic development (Simelane *et al*, 2006; Pelser *et al*, 2011; Pelser *et al*, 2013). The agency transformed itself in the democratic South Africa from managing natural resources using the concept of Social Ecology to focus on People and Conservation with the objective of creating opportunities for local communities' neighbouring national parks so that they derive extensive benefits (SANParks, 2012). With the vision of connecting national parks to society, SANParks have since post 1994 focussed on making national parks more accessible to tourists in order to ensure that conservation remains a viable contributor to social and economic development in rural areas (SANParks, 2008). From then to date, the agency has been driven by its mission of developing, managing and promoting a system of national parks that represents biodiversity and heritage assets by applying best practice, environmental justice, benefit sharing and sustainable use (SANParks, 2008; Dahlberg *et al*, 2010).

To achieve that mandate, the SANParks supported by the government through the Department of Environmental Affairs and Tourism has also increased the area of land under its protection by 360 000 hectares (SANParks, 2012). Simultaneously, the number of staff in the different parks especially those dealing with social issues were increased to ensure transformation in community involvement, economic benefits for local development and resources accessibility (Dahlberg *et al*, 2010).

In contrary to the fortress conservation, the SANParks system of protected areas in South Africa shifted to embrace the principle of a harmonious cooperation between protected areas and the local communities (Pelser *et al*, 2011). To ensure such accord, SANParks introduced various initiatives for benefit sharing in the local communities such as environmental education, recreational and cultural opportunities, health programmes, performing arts and crafts projects, understanding of traditional medicine use and various economic opportunities (DEAT, 2009; SANParks, 2012; Pelser *et al*, 2013). The shift in conservation practice was not only an illusion of the South Africa government; however the change was supported by legal and policy frameworks of environmental conservation (Pelser *et al*, 2011). That is, the National Environmental Management: Protected Areas Act no 57 of 2003 was amended in 2006 to recognise the importance of local communities in nature conservation through the entry of People and Parks programme by SANParks (Pelser *et al*, 2011).

The People and Parks programme was firstly introduced in 2003 through a World Parks Congress held in Durban (Pelser *et al*, 2011). This came after the realisation of the impact caused by fortress conservation and the pressure on government to manage land reform, rural development and conservation concerns (DEAT, 2009). Moreover, the 2003 congress have realised the importance of communities in conservation and have affirmed that protected areas can reduce poverty in South Africa while ensuring sustainable development (DEAT, 2009 cited by Pelser *et al*, 2011). Therefore, the People and Parks Programme is placed at a forefront to response to these concerns, embodying the Department of Environmental Affairs and Tourism's efforts to address land reform, conservation and rural development in an integrated manner (DEAT, 2009). The People and Parks programme is guided

by the Freedom Charter slogan signed at 1955 which emphasise that “the people shall govern” (DEAT, 2009: 3). This slogan has been a critical driving force behind the shift towards democratic governance in the management of protected areas and has provided guidelines to the Department of Environmental Affairs and Tourism in their efforts to put people at the centre of policies and programmes in protected areas (DEAT, 2009). With accordance to the new conservation system in South Africa, protected areas are to contribute to socio-economic development of local communities (Pelser *et al*, 2011). However, due to the political dispensation in South Africa, majority of protected areas experienced an increase in land claims which posed a pressure on protected areas to introduce a more collaborative management approach in the management, operation, control and decision-making of resource management (Dahlberg *et al*, 2010). In recent years, it has been observed that some protected areas in South Africa introduced co-management approach towards nature conservation with an effort to bring local communities and other stakeholders in the affairs of protected areas (Dahlberg *et al*, 2010; De Koning, 2009; De Koning, 2010).

3.2.3. Co-management Approach

The South African government has after 1994 introduced land reform legislation which focused on returning land to people and communities which was unjustly lost after 1913 (Dahlberg *et al*, 2010). The legislation allows the people to lodge claims to gain back ownership rights over their land, to receive alternative land or opt for other compensation for the lost land (Dahlberg *et al*, 2010). However, it was discovered that the land restitution affect many of South African protected areas and also conflict with the international commitment of protected areas to meet the 10% international target for terrestrial biodiversity cover (Dahlberg *et al*, 2010). De Koning (2010) has stated that the settlements of those claims have been observed to have a massive impact on local economic development in rural areas. Therefore, majority of protected areas developed co-management as a tool to balance land reform and conservation in South Africa (Paterson, 2009). The Department of Environmental Affairs and Tourism also transformed the People and Parks programme to respond to the increasing concerns of land restitution (DEAT, 2009). The programme realised the importance of local communities in nature conservation and that communities

and conservation can be achieved simultaneously, thus made it possible for co-management agreements to be developed in South African protected areas (DEAT, 2009). The process was reinforced by encouraging a management authority that comprises of structures of government, local communities and individuals to jointly manage protected areas (Paterson, 2009).

The development of co-management agreements in protected areas is aimed at allowing communities to play a critical role in the management of protected areas as well as take an active role in creating economic opportunities in and around protected areas (DEAT, 2009). This was done by establishment of park forums and public participation forums, environmental education; cultural heritage, the Expanded Public Works Programme (EPWP), SANParks special projects, Small Medium and Micro Enterprises (SMME) and projects aimed at the sustainable utilization of resources found within national parks (DEAT, 2009). Through the People and Parks Programme, eighteen parks have established representative forums to ensure public participation in park management and functioning joint management bodies (DEAT, 2009). The joint management bodies include the Kruger National Park which is under a contractual park managed jointly by SANParks and the Makuleke community (Dahlberg *et al*, 2010). Other national parks which are jointly managed include the Kgalagadi Transfrontier Park and Richtersveld National Parks (DEAT, 2009; Paterson, 2009; Dahlberg *et al*, 2010). The process of land restitution did not only affect national parks, De Koning (2010) has also observed land claim settlement and co-management agreements in nature reserve such as Mda, Mabusa and Mkhombo Dam nature reserves in the Mpumalanga province as well as Manyeleti game reserve with their neighbouring communities.

The South African government has supported such initiatives to bring different stakeholders into conservation. In 2007, the then respective Ministers of Environmental Affairs and Land Affairs has signed the memorandum of agreement which provide a mechanism to facilitate a collaborative national approach to the resolution of land claims within protected areas, the environmental protection of protected areas under claim and the optimum participation and benefit sharing of claimants and communities (DEAT, 2009; Paterson, 2009; De Koning, 2010). The

agreement produced the National Co-management Framework which acts as a guideline in the implementation of agreements in the protected areas (DEAT, 2009). Additionally, the People and Parks programme established a task team to oversee different stakeholders entering into co-management agreements and to provide guidelines to the partners (De Koning, 2009). According to De Koning (2009), the team was chaired by the Mpumalanga Tourism and Parks Agency and comprised of members of Ezemvelo KwaZulu-Natal Wildlife, South Africa National Parks and the Department of Environmental Affairs and Tourism. The South African policy and legal framework directions in environmental governance has also shifted from state-centric regulatory to cater for collaborative relationships and community conservation (De Koning, 2009; Watts & Faasen, 2009; Dahlberg *et al*, 2010; Pelsler *et al*, 2011). This co-management approach, as practised in South Africa, is in line accordance with the collaborative management approach discussed in chapter 2.

3.2.4. Legal Frameworks for South Africa's Environmental Management

The 1994 political dispensation in South Africa manifested with a number of new policies and laws for natural resource management (De Koning, 2009; Watts & Faasen, 2009). Those policies include the Constitution of the Republic of South Africa, National Environmental Management Act of 1998, Protected Areas Act of 2003, and other policies aimed at incorporating local communities in environmental governance and cater for co-management agreements (De Koning, 2009; Paterson, 2009; Pelsler *et al*, 2011). The legal frameworks have shifted the priorities of the government from controlling and protecting natural capital to policies that emphasise the sustainable utilisation of resources, benefit sharing and addressing the disparities in resource access as a result of apartheid (Spenceley, 2003). Due to the influence of international debates and the commitment made at the United Nations Convention on Biological Diversity, the South Africa policies and laws governing resource management support the principles of equity, social justice, community participation, environmental sustainability, accountability and transparency (De Koning, 2009). Inevitably, a conclusion could be drawn to the effect that the South African legislative instruments provide for the opportunities for execution of participatory and co-management approaches, as adopted in principle.

3.2.4.1. The Constitution of the Republic of South Africa

The Constitution of the Republic of South Africa, 1996, as the supreme law of South Africa has for the first introduced the development-conservation nexus and placed ordinary citizens at the centre of environmental protection and also encouraged resource use by the local people (Watts & Faasen, 2009). Chapter two of the constitution emphasise that citizens have the rights to equality, freedom and security, environment that is not harmful to their health or wellbeing (RSA, 1996b). The Constitution allows for ordinary citizens to utilise natural resources to enhance economic and social development at a sustainable manner which will allow the future generation the same opportunity (RSA, 1996b). That is, section 24 of the Constitution grants rights to every person to have environmental security which will protect their wellbeing and their rights to participate and enjoy the benefits that come with the healthy and well protected environment (RSA 1996b cited in Watts & Faasen, 2009). Additionally, the Bill of Rights entails other rights which are associated with environmental governance and management which include property, housing, health care, food, water and social security, access to information and other administrative action (RSA, 1996b). The Constitution emphasise that the national government should commit to land reform by ensuring that provision is made to communities dispossessed of their property after 1993 due to apartheid practices to have their property returned or to equitable redress to their property and natural resources (RSA, 1996b). Such equitable redress has called for the establishment of co-management agreements in property ownership inclusive of land as stated in the Protected Areas Act of 2003 (DEAT, 2009).

The Constitution on section 24 further places government under a legal duty to act as a responsible custodian of environment governance. These calls for government to come up with reasonable legislative and other measures to prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development (RSA, 1996b). Moreover, sections 231 to 233 of the Constitution emphasise enforcement and decisions of international agreements. This includes ensuring that the government meet their promises which are made with international

bodies concerning environmental governance such as the United Nations Convention on Biological Diversity to incorporate local communities in environmental management and establishing community conservation efforts. Watts & Faasen (2009) stated that such constitutional directive has been enhanced into the National Environmental Management Act (NEMA) of 1998.

3.2.4.2. National Environmental Management Act of 1998

The NEMA act of 1998 makes a reference to the citizens' environmental rights as protected by the Constitution of the Republic of South Africa (RSA, 1998b). The objective of this act is "to provide co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state" (RSA, 1998b: 2). That is, the act provide duties to the state to ensure that the citizen's environmental rights are respected, protected and promoted in order to guarantee social, economic and environmental rights and meet basic needs of the previously disadvantaged communities (RSA, 1998b). Chapter 2 of the act provide national environmental management principles to guide the interpretation, administration and implementation of this act and other laws concerned with the protection or management of the environment (RSA, 1998b).

The act focuses on all various aspects of the environment and provides guidelines to facilitate and promote public participation in environmental governance and activities that ensures a healthy environment (RSA, 1998b). Furthermore, the act emphasise that environmental management must place ordinary citizens and their needs at the forefront so to serve their physical, psychological, developmental, cultural and social interests equitably (RSA, 1998b). The act acknowledges the need for people to have an opportunity to develop an understanding, skills and capacity necessary for achieving equitable and effective participation in environmental management and governance. Additionally, emphasise is being placed at community wellbeing and empowerment which must be promoted through environmental education, the raising of environmental awareness, sharing of knowledge and experience as well as other

appropriate means (RSA, 1998b). The NEMA act also emphasise that decisions with regard to resource use must be taken in an open and transparent manner, and people should be able to access information with accordance to law (RSA, 1998b).

3.2.4.3. National Environmental Management: Protected Areas Act of 2003

Another South African legal framework which emphasise the incorporation of local communities in environmental management is the Protected Areas Act of 2003. The Act recognises the need for South African protected areas to shift from the centralised approach towards a more human-centric approach to conservation (Paterson, 2009). Such shift is reflected in the objective of the act which stresses intergovernmental co-operation and public consultation in matters concerning protected areas and the purposes for declaration of protected areas (RSA, 2003). The National Environmental Management: Protected Areas Act of 2003 provides guidelines for co-management and community-based natural resource in protected areas (RSA, 2003). Section 42 of the act highlight that the management authority may enter into an agreement with another organ of state, a local community, an individual or other party for co-management agreements and it also provide guidelines on the establishment of those agreements (RSA, 2003). Additionally, section 41 of the act specifies a requirement for a management plan for protected areas which should be established through public participation, implementation of community-based natural resource management and co-management agreement (RSA, 2003). In section 39, the act emphasise that the management plan of the protected areas must incorporate the applicable aspects of the integrated development plan (IDP) of local municipalities in which those protected areas are situated (RSA, 2003). The act also makes provision for the People and Parks Programme by encouraging co-management agreements to be developed between claimants and protected area management authorities (DEAT, 2009; De Koning, 2009). Moreover, the act provides guidelines to consolidate the initial strategies and priorities stated in the Biodiversity White Paper of 1997 into concrete recommendations which emphasise sustainable use and equitable benefit sharing (DEAT, 2009).

3.2.4.4. White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity (1997)

Another legal policy which emphasise the importance of local communities in environmental governance is the White Paper on the Conservation and Sustainable Use of Biological Diversity. The Biodiversity Policy presents a vision for South Africa towards environmental management and the commitment of the government to ensure an environmentally conscious nation wherein the people can coexistence in harmony with the natural environment, and also derive benefits to satisfy their basic needs (RSA, 1997a). To support of the vision of government, the policy also presents a series of guiding principles that provide a foundation for implementing, guiding the application, assessment and further development of the biodiversity policy and strategy (RSA, 1997a). The white paper does not address transformation issues per se, but it set out a number of goals, strategies and priorities for conservation, sustainable use and equitable benefit sharing (DEAT, 2009). Furthermore, the policy clearly states the priorities of government as the eradication of poverty, sustainable development of the economy, and the social development of the people (RSA, 1997a).

2.2.4.5. White Paper on Environmental Management Policy (1997)

The White Paper on Environmental Management is a government's national policy on environmental management (RSA, 1997b). The policy sets out the vision, principles, strategic goals and objectives and regulatory approaches that government will use for environmental management in South Africa (RSA, 1997b). The policy clearly states the new environmental vision of government to move from the exclusionary approach to conservation that involves local communities (RSA, 1997b). Additionally, the policy seeks to unite the people of South Africa in working towards a society where all people have sufficient food, clean air and water, decent homes and green spaces in their neighbourhoods that will enable them to live in spiritual, cultural and physical harmony with their natural surroundings (RSA, 1997b). The policy was developed through comprehensive participatory process known as the Consultative National Environmental Policy Process (CONNEPP) (RSA, 1997b).

This was to allow all stakeholders inclusive of ordinary citizens in South Africa equal opportunity to contribute in developing the environmental policy. The white paper, amongst other things, recognises sustainable development as the accepted approach to resource management (RSA, 1997b). Indeed, all these pieces of legislation hold a common denominator, which is the prioritization of participatory and collaborative efforts. That is, in case the apartheid approach has persisted in practice, it should be read as illegal and deviant from the ongoing democratic dispensation in South Africa. Hence, the next subsection distils some of the major challenges to the implementation and practice the specific conservation approaches.

3.2.5. Challenges Facing Protected Areas in South Africa

The commitment of the South African government to reach a win-win situation in conservation whereby ordinary citizens are incorporated in resource management is clearly stated in the Republic of South Africa's Constitution, various legal frameworks and also the SANParks vision and direction (Dahlberg *et al*, 2010). However, the practice of a win-win situation remains a challenge for protected areas in South Africa (Dahlberg *et al*, 2010). Various authors have observed a gap between the policy and practice of community conservation and the co-management agreements within South African protected areas (Paterson, 2009; Benjaminsen & Svarstad, 2010; Dahlberg *et al*, 2010). Paterson (2009) identified several challenges experienced in protected areas. For the purpose of this section, Paterson's work is pertinent as it highlights key challenges faced by protected areas in South Africa. This includes among others "poor conservation planning, adoption of an exclusionary approach to conservation, non-cooperative' governance, management problems and resource constraints" (Paterson, 2009: 6).

3.2.5.1. Poor Conservation Planning

The effort of the South African government to achieve conservation with a human face has been central to the challenge of poor conservation planning. Paterson (2009) stated that the co-management efforts in South Africa have failed to strike a

balance between conservation and land reform as requirements by South African legal frameworks. This was due to lack of clear direction with regard to management plan and benefits sharing in the national policy. Therefore, management authority remained at the forefront for the management of protected areas (De Koning; Paterson, 2009). De Koning emphasized that such practices contradict with the international definition for co-management which calls for equal partnership, sharing of authority, responsibility and decision-making. Furthermore Paterson (2009) has found that few resources or benefits were given to local communities. Critics have argued that this is as a result of misguided, poor planning and inflexible application of co-management and community-based conservation (Cousins & Kepe, 2004; Paterson, 2009). Cousins & Kepe (2004) have found that community-based efforts has failed in South Africa's poorest rural region in the Eastern Cape Province due to inability of government to provide a clear structure of 'who decides' and 'who benefits' from conservation. It was also observed in South Africa that majority of protected areas are, even in the new conservation paradigm adopt the exclusionary conservation agenda (Paterson, 2009). Benjaminsen & Svarstad (2010) argued that the approach to conservation in South Africa is still a clear case of fortress conservation due to the failure of shift to pragmatic community conservation. The government response on the challenge highlighted that "South Africa did not actively participate in the Convention negotiations and has largely been isolated from discussions around its issues" (RSA, 1997b: 11). As a result, majority of the agencies working towards community conservation and co-management efforts lack awareness and understanding of the complex issues required to incorporate ordinary citizens into conservation efforts (RSA, 1997b).

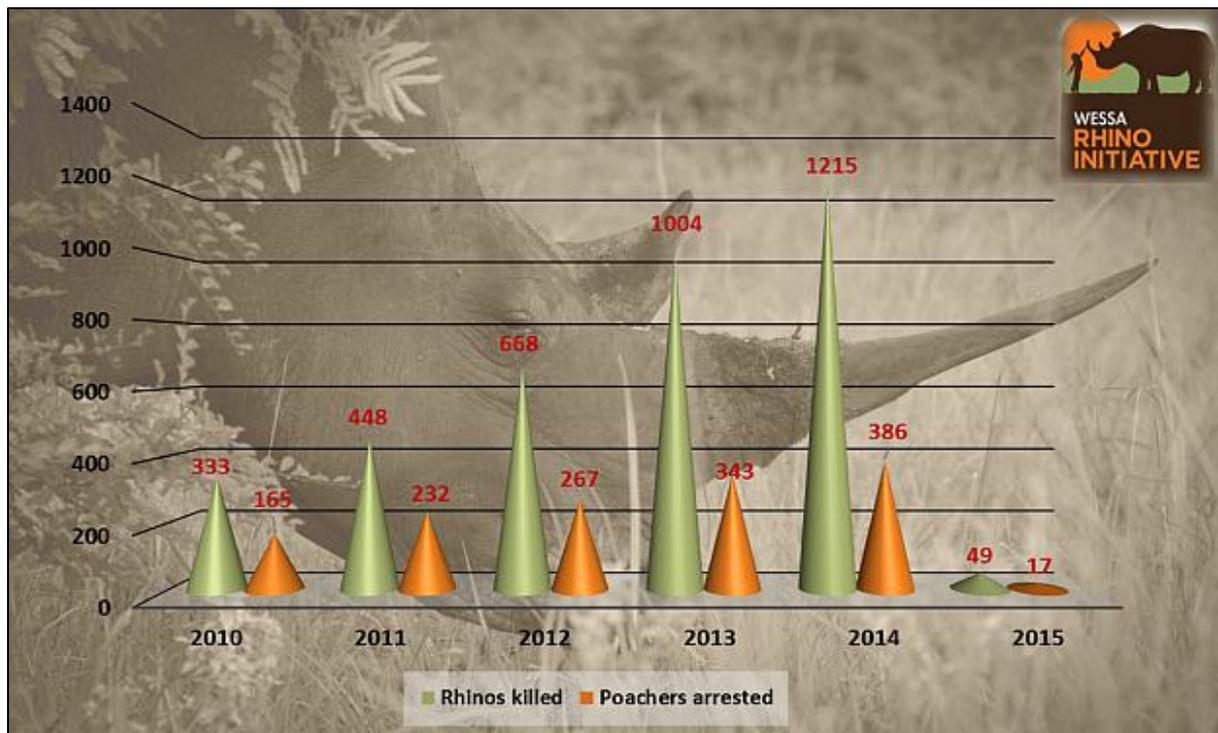
Another issue which hinders proper implementation of co-management and collaborative efforts is the incompatibility of mandates in protected areas. The National Environmental Management: Protected Areas Act of 2003, have detailed the systems of protected areas in South Africa (RSA, 2003). This comprises of national parks, nature reserve, special nature reserves, protected environments, world heritage site, marine nature reserves, forest nature reserves and forest wilderness areas and mountain catchment areas (RSA, 2003). However, the act does not emphasise the mandates of those protected areas (RSA, 2003). The

SANParks management plan (2012) stated that the mandate and status of national parks is different from those of provincial protected areas and other nature reserves and therefore the roles and responsibilities of protected areas varies. It is thus not clear to some nature reserves as to what extent should local communities be involved in conservation planning.

3.2.5.2. Exclusionary Approach to Conservation

The exclusionary approach which was previously adopted in the South African protected areas and which its ideologies are still being practiced in some nature reserves has left negative attitudes and resentment towards conservation. As a result, the local people practice illegal logging, poaching and destruction to natural capital as a way to retaliate to the exclusions (Watts & Faasen, 2009). In the recent years, South Africa has witnessed an increase in rhino poaching and natural capital destruction which has been costly to the state and the management authorities. Statistics released by the Wildlife and Environment Society of South Africa and the Department of Environmental Affairs in January 2015 have showed that there has been an increase in rhino poaching in South Africa since 2010 (figure 1) and the incidences continue to increase every year (WESSA, 2015). Generally, the underlining factor for poaching and destruction to natural capital have been found to include “home consumption, commercial gain, trophies, pleasure and thrill in killing wildlife, claim a traditional right to hunt, or have negative dispositions toward legal authorities” (Duffy & St John, 2013: 2). However, in rural areas, the key motive for poaching is discovered to be poverty (Duffy & St John, 2013). Watts & Faasen (2009) have observed illegal poaching and harvesting of wild fruits in Tsitsikamma National Park as retaliation to the park’s “no-take” policy on fishing, lack of benefits sharing and community participation. The increasing poaching and distraction to natural capital is thus evident to the practice of exclusionary approach in protected areas (Watts & Faasen, 2009).

Figure 1: Rhino poaching and arrests statistics in South Africa



Source: Wildlife and Environment Society of South Africa (WESSA) (2015).

The figure 1 above highlight an upward trend in the number of rhinos killed compared to the number of poachers arrested which demonstrate the depth of the challenges relating to community participation and collaboration in conservation. Inescapably, communities appear to harbour a sense of alienation from nature reserves because the poachers live among members of the communities and, to a large extent, they are known. Yet, killings of rhinos have persisted with upward pressure. Hence, there is a sense of exclusionary governance of nature reserves. The exclusionary approach also resulted in the current crises of land restitution facing most protected areas in South Africa due to the previous system of displacements (De Koning, 2009).

3.2.5.3. *Non-cooperative' Governance*

The South African governance consists of various organs of government including the three spheres of national, provincial and local (RSA, 1996b). Although the Constitution provide a guideline for those spheres to co-operate in harmony for the

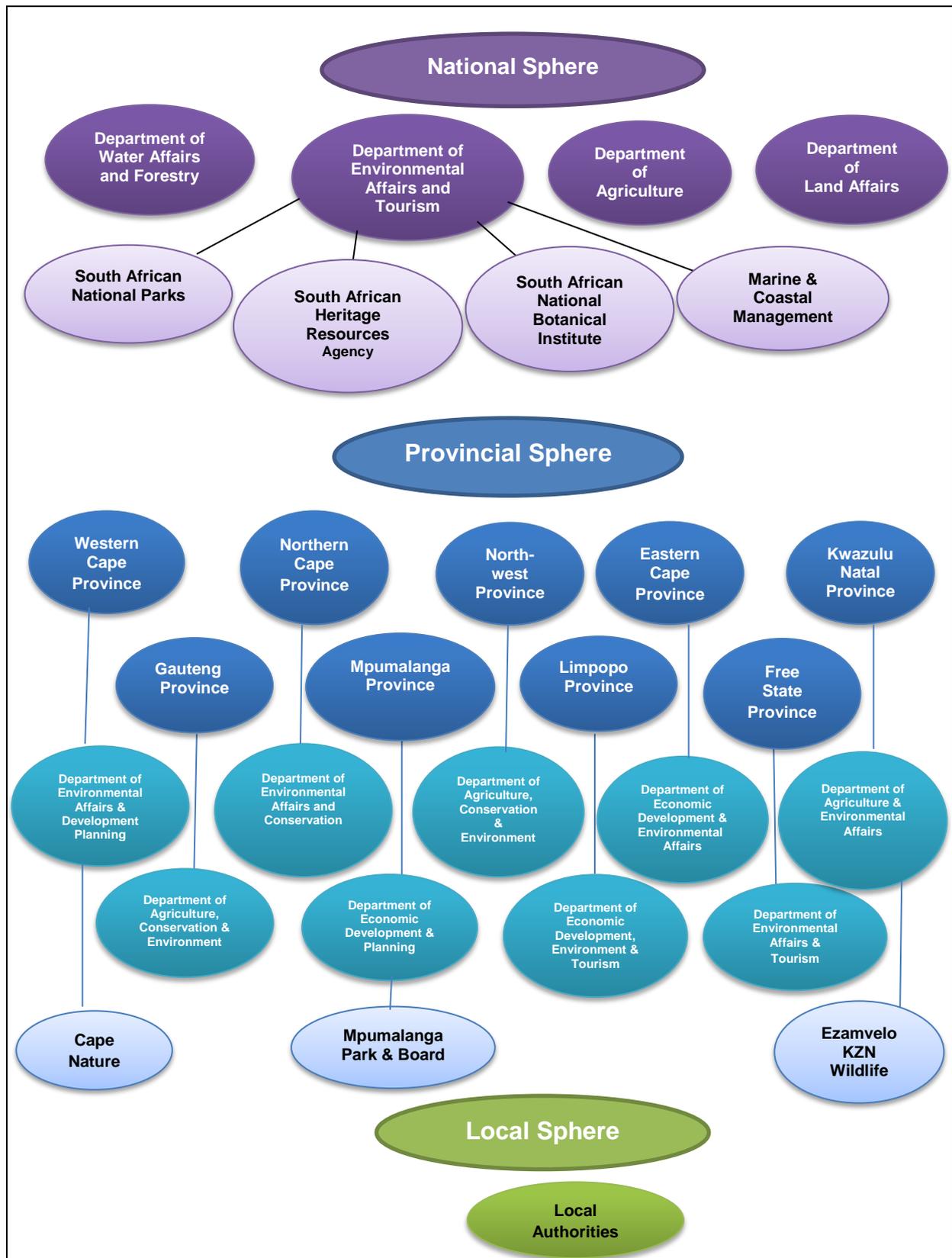
sake of the people (RSA, 1996b), there is often a challenge to integrate all the different frameworks and responsibilities especially with regard to resource management. As noted before, the Protected Areas Acts emphasise that there should be integration between the management plans for protected areas and the integrated development plan to ensure the alignment of activities in protected areas and the proposed developmental activities of the neighbouring municipalities (RSA, 2003 cited in De Koning, 2009). However, the Constitution outlines the legislative and executive responsibilities of national and provincial governments as to concurrently be accountable for the natural capital and overall environment (RSA, 1996b). Concurrent accountability signifies that both national and provincial governments have joint power to constitute functional areas identified as of national and provincial competence (DEAT, 1998). Within that arrangement, the Department of Environmental Affairs and Tourism is placed at the front position to lead the protection of the environment and is also responsible for developing national environmental policies and for co-ordinating the various functions of government organisations both at national and provincial levels (DEAT, 1998; Paterson, 2009). Other national level role players which are responsible for the conservation and sustainable use of biological diversity include the Departments of Agriculture, Land Affairs, Water Affairs and Forestry as well as the South African National Parks (SANParks) and National Botanical Institute (figure 2) and at provincial level, the major responsibility lies with the nine provincial environment and nature conservation departments (DEAT, 1998: 14). Paterson (2009) stated that the powers for the management and control of protected areas are assigned to the Minister of Environmental Affairs and Tourism and the provincial MECs, while the actual functions are performed by the relevant provincial government departments, assisted by a range of statutory authorities. Those statutory authorities include the two branches of the DEAT which are the Marine and Coastal Management Branch, which is functional in the context of marine protected areas and the Biodiversity and Conservation Branch which is based in the context of terrestrial protected areas (Paterson, 2009). To ensure that those statutory authorities function properly, they are assisted by two key statutory authorities, South African National Parks (SANParks) and the South African National Biodiversity Institute (SANBI), which report directly to the Minister (Paterson, 2009). Additionally, three predominately

provincial authorities support the various provincial departments which are Cape Nature, Mpumalanga Park & Board and Ezemvelo KZN Wildlife (DEAT, 1998; De Koning, 2009; Paterson, 2009).

The framework and legislation however, neglect the responsibilities and roles of the local government in the management of protected areas in South Africa. The Constitution of South Africa only highlights the objectives of local government as to promote a safe and healthy environment which will enhance social and economic development (RSA, 1996b). Additionally, the developmental responsibilities of the municipalities are stated as to structure and manage its administration, budgeting and planning processes to satisfy the basic needs of neighbouring communities (RSA, 1996b). However, the legislative frameworks do not provide clear guidelines for the role and responsibilities of municipalities in environmental governance and management of protected areas (Paterson, 2009). Considering that majority of protected areas in South Africa are situated in rural communities, wherein the local government is expected by law to promote local economic development (RSA, 1996b), such exclusion in the institutional framework can lead to poor planning of conservation, non-cooperate governance, lack of benefits sharing and poor participation.

Furthermore, Paterson (2009) have highlighted that the government's attempt to manage protected areas in South Africa using the various national laws, provincial Acts and provincial regulations as well as the numerous national departments, provincial environmental departments, local authorities, statutory authorities and private landowners could lead to the failure to implement conservation practice. The various authorities departments which are being placed at the forefront of environmental management have different jurisdictions and the laws established to manage natural resources which advocate diverse criteria and procedures for designing, establishing and managing protected areas (Paterson, 2009). Therefore, this led to confusion, unnecessary overlaps and duplication as well as wasteful state expenditure (Paterson, 2009).

Figure 2: Institutional framework for protected areas management in South Africa



Source: DEAT (1998); Paterson (2009).

3.2.5.4. Management Conundrums

Another challenge facing South Africa's protected areas was identified to be management problems (Paterson, 2009). Paterson (2009) stated that there is often legislative fragmentation in environmental governance which create contradictions and insufficiencies in the management of South Africa's protected areas. It was observed that the government did not introduce a uniform regime for managing protected areas and appointing the mandatory management authorities (Paterson, 2009). Thus various management approaches are adopted, ranging from the prescription of formal and strict requirements, and the imposition of discretionary requirements, to the absence of any form of statutory management regime (Paterson, 2009). Additionally, Paterson (2009) found no coherent framework for selecting, appointing and holding management authorities to account. Therefore, such lack thereof has led to many protected areas to be poorly managed (Paterson, 2009). Furthermore, in areas where an attempt to have a coherent framework was made, it was discovered that management is poorly coordinated between a range of institutions, resulting in variable and often conflicting policies and practices (Paterson, 2009). Paterson (2009) further states that protected areas are often managed in isolation from communities adjacent to protected areas and therefore provision for sharing responsibilities with the landowners and communities is often neglected.

3.2.5.5. Resource Constraints

Lack of resources is another key challenge to properly manage protected areas in South Africa (RSA, 1996; Paterson, 2009). The White Paper on Tourism (1996a) highlighted that the government has limited view about the potential of tourism and nature conservation to enhance economic and social development, consequently has led to marginalised resources to develop and promote the sector. The funding for conservation in South Africa is provided by the national government, which means that conservation has to compete with other aspects of housing, health, education, security and welfare needs for funding provision (Paterson, 2009). Due to the demand for resources to cater for such other needs, Paterson (2009) highlighted

that the budgetary allocation for conservation has therefore decreased. Subsequently, management responsibilities and duties have in certain circumstances been neglected due to resource constraints and has placed majority of the protected areas is in jeopardy (Paterson, 2009). Additionally, it was found that the government does not financially support some of the protected areas especially the privately owned nature reserves (Spenceley, 2003), which are dominant in the rural communities therefore makes it difficult to make an optimal contributions towards local economic development due to lack of funds to implement community projects. Paterson (2009) thus highlighted that proper funding of protected areas, specifically those under provincial management, is an urgent matter that need serious attention (Paterson, 2009).

3.3. Local Economic Development Practice in South Africa

Since the democratic dispensation in South Africa, transformation has been a key issue in development planning within the three spheres of government (Spenceley, 2003; Patterson, 2008; Ntonzima & Binza, 2011; Koma, 2012; Ramukumba *et al*, 2012). Such transformation came with a new vision and transition for the government to implement the mandates of a developmental state (Patterson, 2008; Ntonzima & Binza). Therefore, the rise in local economic development is one of the significant moves associated with that transition to developmental local government (Ramukumba *et al*, 2012). The national government has decentralized authority and developmental leadership to local government to ensure a developmental state (Ramukumba *et al*, 2012). That is, the South African local government has been placed at the forefront to adopt LED processes which will contribute towards eradicating poverty, job-creation and enhance the local economy (Ntonzima & Binza, 2011, Koma, 2012; Ramukumba *et al*, 2012). Thus, numerous legislative frameworks were developed as an indication of the decentralisation of authority to local government to adopt LED and through it improve local economies. This include the Constitution of the Republic of South Africa, 1996; the White Paper on Local Government of 1998; the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) and Reconstruction and Development Programme (RDP). Such key policies

have also contributed directly and indirectly to the LED debate in South Africa (Department of Provincial and Local Government, 2006 cited in Patterson, 2008).

The basis for policy frameworks associated with LED was firstly initiated in the South African Constitution (Patterson, 2008). The Constitution of the Republic of South Africa, 1996 have clearly stated that the local government has to ensure that social and economic development is stimulated in local communities (RSA, 1996b). In the process of the developmental transition, the Reconstruction and Development Programme (RDP) document has also made an implicit reference to the concept of LED by introducing and supporting community-based schemes and initiatives aimed at improving the local economy and quality of life (ANC, 1994 cited in Patterson, 2008). From then to date, development policy became pragmatic and targeted measures meant to promote the first and second economies that give a direct provision for pro-growth and encourage pro-poor LED (Patterson, 2008; Ramukumba *et al*, 2012). Patterson (2008) stated that the most significant policy in this regard is the Local Government White Paper (1998) which defines major challenges experienced in local government, therefore mandate local municipalities to provide suitable mechanisms to deal with challenges such as skewed settlement patterns, backlogs in service delivery and spatial segregation. Various other policies were also introduced to inspire pro-poor LED and this includes the Local Government: Municipal Systems Act, 2000 which replaced the Local Government Transition Act of 1993 (RSA, 2000). The act also provides direction to municipalities in dealing with various challenges and acknowledges a need to introduce the Integrated Development Planning (IDP) process in order to enhance economic development, address spatial and transport planning, promote infrastructure development and regulate appropriate funding mechanisms in the municipalities (Patterson, 2008). It is thus compulsory for all local municipalities to draw up a five year IDP, which must contain an LED strategy (Cohen, 2010). Koma (2012) stated that credible IDPs should include LED plans which provide strategies and programmes required to enhance economic growth, job-creation and poverty alleviation.

Local economic development is an emerging approach in South Africa which is aimed at creating more equitable economic growth (Ntonzima & Binza, 2011; Ramukumba *et al*, 2012). The strategy is integrated, multi-disciplinary approach aimed at poverty alleviation through pro-poor and pro-growth or market-led by promoting economic growth through market competitiveness and investment attraction (Ramukumba *et al*, 2012). Within this context, LED seeks to utilize local resources and skills to ensure economic transformation and poverty alleviation (Ramukumba *et al*, 2012). However, it has been observed that the LED strategy from the 1994 to the mid 2000 focused mostly on community economic development projects which were proven unsustainable and did not show any significance to the real long-term impact on poverty alleviation (Cohen, 2010). Furthermore, there was no clear direction on what LED is and what kind of strategies will be appropriate for long-term interests to reduce poverty and enhance economic development (Cohen, 2010). Patterson (2008) stated that it was only in 2000 that the government provided guidelines to the municipalities which gave directions to LED institutional arrangements and strategies and provided opportunities for implementation of action plans which focused on LED.

The post 2000 LED strategy manifested with the LED Guidelines to Institutional Arrangements (2000) and the Draft LED Policy of 2002 which calls for a more community-orientated approach, grassroots initiatives and participation to LED, aimed at pro-poor growth and target previously underprivileged people and marginalized communities (Patterson, 2008; Cohen, 2010). The Department of Provincial and Local Government also realised that municipalities are not directly responsible for creating jobs as assumed, rather are the key role players in creating a conducive environment within which infrastructure and quality services are provided especially in rural communities so as to attract investment opportunities (DPLG, 2006; Cohen, 2010). Furthermore, DPLG (2006) emphasised that municipalities should enhance LED by drawing resources locked in the various government support instruments into the localities, given that the municipalities have been given a leading role in stimulating LED. The DPLG has therefore illustrated that over the years, most municipalities have managed to draw support from the Sector Education and Training Authorities (SETAs) to address skills shortages in their

localities through skills development initiatives. The municipalities have also gained support from the Department of Trade and Industry's Small Enterprise Development Agency and other agencies at the department as well as the national sector departments to contribute in the municipalities' agenda to create entrepreneurial opportunities and small businesses, enterprise development, market opportunities and job-creation to stimulate the local economy in their localities (DPLG, 2006; Patterson, 2008).

The paradigm shift in the LED strategy from the emergence to the post 2000 guidelines and democratisation in South Africa emerged with various initiatives which were observed in the activities of government, Community-based Organisations (CBOs), Non-government Organisations (NGOs), and foreign donor agencies that support LED (Patterson, 2008). Patterson (2008) has identified a number of successful LED initiatives provided by the national, international NGO's and various departments of the South African government. In the context of South Africa, LED is clearly presented by the Department of Provincial and Local Government which according to Patterson (2008: 16) has a "Chief Directorate dedicated to LED" and has introduced various programmes which adhere to the principles of LED. Such programmes include among others, the Project Consolidate, the Municipal Infrastructure Grant, the Urban Renewal Programme and the Integrated Sustainable Rural Development Programme which are strongly link to LED (Patterson, 2008; DPLG, 2004; DPLG, 2006). The programmes focus mainly on poverty alleviation, anti-corruption, job-creation through Expanded Public Works Programme, infrastructure upgrade, economic growth, public participation and encouraging public private partnerships and involvement (DPLG, 2004). Another government department which support the LED programmes include the Department of Trade and Industry. The department has retained a collective responsibility with other departments for enhancing economic growth and job-creation initiatives through the introduction of the Integrated Small Enterprise Development Strategy in 2006 which has been aligned to the LED National Policy Framework (Patterson, 2008). The ISDES promote economic growth and job-creation through four critical elements which include policy and planning, women empowerment, enterprise development, and improve coordination within the nine provinces (Patterson, 2008). Other

additional initiatives which focus on LED practice in South Africa include the Local Government SETA (Patterson, 2008; Cohen, 2010). The programme seeks to address the skills shortage in South Africa and empower previously marginalised and underprivileged majority, thus introduced programmes that focus on training interventions and learnerships in LED related fields (Patterson, 2008).

Apart from the government initiated programmes, LED programmes in South Africa have also been supported by foreign donor organisations (Patterson, 2008; Cohen, 2010). One of the countries that have supported LED in South Africa is Germany which focused mainly on local government and good governance (Cohen, 2010). The German Agency for Technical Cooperation was introduced to assist the South African municipalities in understanding the LED approaches and instruments; definition of LED, policy and guidelines; institutional and human capacity building; support and implementation mechanisms as well as dissemination and application of lessons learned (Patterson, 2008; Cohen, 2010). Additionally, the European Union play a critical role as the largest source of funding for LED initiatives in South Africa (Patterson, 2008; Cohen, 2010). The EU support programmes which concentrate on increasing the aptitude required for a more operative LED were observed in three provinces of South Africa including KwaZulu Natal, Eastern Cape and Limpopo Province (Patterson, 2008; Cohen, 2010). The programmes implemented through collaboration between the EU and the three provinces include the Gijima Kwazulu Natal Programme, the Limpopo Local Economic Development Programme, Thina Sinako Programme in the Eastern Cape and the Learning Monitoring and Research Facility programme implemented through the Gijima Programme (Patterson, 2008). The Thina Sinako Programme in the Eastern Cape has opened many opportunities for LED initiatives in the province (Department of Economic Development and Environmental Affairs, 2004). Between 2004 and 2014, the Eastern Cape Province has witnessed 102 LED projects implemented through the Thina Sinako Programme, which comprises of 30 projects in manufacturing, 40 in agri-processing and 32 in tourism, making the Eastern Cape one province in South Africa that has witnessed successful LED practice (Department of Economic Development and Environmental Affairs, 2004). Patterson (2008) has stated that the EU support of the LED programmes has resulted in success stories on the ground within each province

wherein local people are taking part in LED across the various sectors of economy. However, Cohen (2010) has discovered various challenges facing municipalities around South Africa in the implementation and practice of LED.

The LED practice is central to the challenges of lack of understanding the LED strategy, lack of participation by the affected groups, lack of alignment of LED to the IDP process, skills shortages, inadequate infrastructure, lack of economic diversity and lack of access to finance and support to emerging entrepreneurs with no insurance (DPLG, 2006; Cohen, 2010; Koma, 2012). Koma (2012) stated there is lack of clarity in roles and responsibilities among national, provinces, and local government, civil society and the private sector towards LED, thus result in the different role players having their own understanding and interpretation of the LED policy. Furthermore, Cohen (2010) has found that although the LED policy was broadly adopted, the institutional response towards the requirements of “pro-poor” development has been interpreted differently from one location to the other. That is, in large metropolitan areas, the approach to LED is directed at creating a more conducive, supportive and competitive business environment, promote infrastructure development, the regeneration of inner city and township areas, and research around and institutional support to new sectors with high growth and employment potential (Cohen, 2010). On contrary, the rural communities and the smaller centres responded to the requirements of LED through increasing “service delivery, extension of the social grant system, public works and SMME initiatives” (Cohen, 2010: 3). Such occurrence creates inequalities and confusion in the practice of LED and therefore makes it difficult for other industries such as tourism to have desirable effects towards LED. However, Binns & Nel (2002) has emphasised that a wide range of areas seeks to drive development through tourism development as a surrogate to nature conservation as part of their LED programs.

3.4. Effects of Nature Conservation on Local Economic Development in South Africa

The political dispensation in South Africa emanated with the public and political pressure on government to create employment opportunities, alleviate poverty as

well as stimulate investment and economic transformation (Spenceley, 2003; Ramukumba *et al*, 2012). Spenceley (2003) stated that addressing such socio-economic development needs seemed impossible due to the government's limited financial resources. Therefore, the government has channelled nature conservation subsidies into initiatives that stimulate growth and poverty alleviation in South Africa (Spenceley, 2003). Since then to date, nature conservation through the use of tourism has been identified as a key sector with potential to enhance economic growth, alleviate poverty and address all other components associated with local economic development (Binns & Nel, 2002; Ntonzima & Binza, 2011; Ramukumba *et al*, 2012). Within that context, nature reserves have shifted from being treated as islands in communities to be an integral part of the socio-economic environment (De Koning, 2009). This section therefore discusses the effects of nature conservation on local economic development in South Africa.

South Africa is blessed with various protected areas (Pelser *et al*, 2011) and should contribute optimally towards LED through job-creation, market opportunities, generation of income, facilitation of entrepreneurship and business, enhancing economic growth and the creation of an enabling local development environment. Evidently, the tourism industry as symbiosis to nature conservation in South Africa has materialized as a leading economic sector and has largely contributed towards Gross Domestic Product (GDP), and has offered significant employment and enterprise development opportunities (Binns & Nel, 2002; Rogerson, 2002; Ntonzima & Binza, 2011; Ramukumba *et al*, 2012). Since the early 2000 LED Guidelines for institutional arrangements, the government has established a Local Economic Development Fund (LEDF) which aims at funding various rural tourism initiatives in rural areas aimed at poverty alleviation, fostering entrepreneurship, job-creation and economic growth (Rogerson, 2009; Cohen, 2010). Additionally, the South African government has also introduced the Integrated Sustainable Rural Development Strategy (ISRDS) as an economic policy that focus on making rural communities profitable, create sustainable employment, encourage entrepreneurship opportunities and establishment of SMMEs (Spenceley, 2003; Cousins & Kepe, 2004). The White Paper on Tourism, 1996 has in support of the ISRDS highlighted that the tourism sector creates opportunities for the small entrepreneurs, promotes

awareness and understanding among different cultures, breeds a unique informal sector, helps to save the environment, creates economic linkages with agriculture, creates linkages with the services sector and provide dignified employment opportunities in different part of South Africa (RSA, 1996a). Thus, various LED programmes have been documented in South Africa which directly link to nature conservation and tourism (Binns & Nel, 2002; Rogerson, 2002; DEAT, 2009; Pelser *et al*, 2011). The numerous protected areas in South Africa have also made it their mandate to promote local economic development in neighbouring communities (DEAT, 2009; Pelser *et al*, 2011).

The South African National Parks as an agency for environmental management in South Africa has implemented various programmes which seek to create jobs, entrepreneurial development and other components of LED (DEAT, 2009). The government and SANParks have in the late 1990s initiated Expanded Public Works Programme which focuses on job-creation and community development (DEAT, 2009; SANParks, 2012). The EPWP initiated four programmes which are precisely devoted to job-creation and to ensure that the environmental sector also support LED initiatives (DEAT, 2009; Pelser *et al*, 2011). Such programmes comprises of *People and Parks* (focusing on infrastructure), *Working for Wetlands* (wetland rehabilitation), *Working for Water* (alien vegetation removal) and *Working on Fire* (fire control and prevention) (Pelser *et al*, 2011). The Department of Environmental Affairs and Tourism, 2009 has discovered that the programme employs 2000-8000 people annually, depending on circumstances. The EPWP has also facilitated the development of small and medium sized enterprises and local contractors which provide services to various national parks (DEAT, 2009). For example, the DEAT has witnessed a labourer in an EPWP team who started a DTM construction company in Mapungubwe (DEAT, 2009; SANParks, 2012). In 2000, another contractor started an alien-clearing initiative and offers services to the national parks in South Africa.

The EPWP has also facilitated business partnerships for national parks and secondary industries to support park related projects (DEAT, 2009; SANParks, 2012). Some examples include the Knysna Furniture Factory which produces

furniture for SANParks tourist units as well as school desks and benches; the Mata Mata fence contractor and stacked poles supplier who supplies poles to parks for fencing; community curio outlets around the country; several car washes in Kruger; hop-on guides in Addo Elephant National Park and the outsourcing of retail opportunities to several communities across the country (DEAT, 2009: 7). Therefore, SANParks does not only contribute to nature conservation in South Africa but has a positive contribution to different sectors of economy (SANParks, 2012).

Other nature conservation related programmes which are aimed at producing desirable effects to LED have been recorded in South Africa (DEAT, ND). The department of Environmental Affairs and Tourism has since 1996 partnered with the Deutsche Gesellschaft für Technische Zusammenarbeit, a German company and established a training and support for resource management programme to assist poor communities to improve their quality of lives through sustainable, responsible and wise use of the natural resources (DEAT, ND). The programme manifested with various initiatives intended to integrate conservation and development for local economic development in Richtersveld, Kruger National Park in the Makuleke Region, Blyde River Canyon Nature Reserve in Mpumalanga province and the Bourke's Luck Centre (DEAT, ND). Additionally, the White paper on Tourism highlighted that nature conservation through the tourism industry open market opportunities for South African ventures as the country receive over four million local and international visitors per year who bring ready market to the doorstep of the country (RSA, 1996a). The white paper further highlight that various enterprises and conservation agencies are taking part in ecotourism ventures in the country which is a catalyst for development in the field of tourism development (RSA, 1996a). The government documents have a good story to tell about the effects of nature conservation on local economic development in South Africa. However, the 1996 White Paper on Tourism highlighted numerous challenges facing protected areas in making an optimal contribution towards LED (RSA, 1996a).

The challenges faced by protected areas include inadequate environmental management, lack of infrastructure particularly in rural areas, lack of appropriate institutional structures, lack of training and market access, inequalities, lack of

community involvement and barriers to entry (RSA, 1996: 5). The white paper stated that nature conservation and LED in South Africa is central to inequalities (RSA, 1996a). That is, the past inequalities and abuse of power resulting in exploitation of local cultures and communities (RSA, 1996a). Additionally, such inequalities have led to economic exclusion especially to the black population which consequently led to lack of market opportunities, lack of access to finance which unable emerging entrepreneurs to capitalise on the available entrepreneurial opportunities provided by the tourism sector and as a result inability to establish business partnerships with other industries to enhance LED (RSA, 1996a).

It is recognized that although various programmes are implemented for nature conservation to produce desirable effects on LED, South Africa continues to experience numerous social challenges (Human Sciences Research Council, 2014). Most importantly of these challenges is the level of poverty, unemployment and inequalities affecting the large majority of the population (HSRC, 2014). Furthermore, creation of employment opportunities, infrastructure development, education and public health are recognised as need for attention on the priority list (HSRC, 2014). The HSRC (2014) has highlighted that the poorest provinces in South Africa are Limpopo, Eastern Cape and KwaZulu-Natal (KZN) and predominantly lack most of the basic amenities. The Africa Scope also indicated that the six mostly rural local municipalities with the highest level of poverty in South Africa are Bushbuckridge (Mpumalanga), Imbabazane and Umzimkhulu (KwaZulu-Natal), Albert Luthuli (Mpumalanga) and Ingwe and Impendle (KwaZulu-Natal) (Schwabe, 2011). Unsurprisingly, the best-known national parks, nature reserves and game reserves are located in and on the borders of those municipalities and provinces (De Beer & Marais, 2005). Moreover, the HSRC (2014) has discovered that households in those poorest provinces depend on grants, allowances and remittances as sources of households income as compared to the richest provinces (Gauteng and Western Cape Provinces) wherein majority of the households depend on financial capital, physical capital and entrepreneurial returns as their main sources of income. Such observation enlighten that the protected areas in the poorest regions of South Africa are not contributing optimally towards LED as expected by government. The increase in the unemployment rate experienced in the second quarter of 2014 also

indicated that protected areas in South Africa are not doing well in reducing poverty and unemployment (StatsSA, 2014a). Therefore, the effects of nature conservation on LED remains scarcely tested due to the failure to reduce poverty and unemployment.

The Department of Finance in the Gauteng Province has reviewed the potential of the tourism industry towards economic development and LED in South Africa (DOF, 2012). The findings of that review highlighted that the tourism industry contributed 23.4 percent (which is an estimated 553 712 individuals) of the total employment in the South African economy between 2006 and 2009 (StatsSA, 2011 cited in DOF, 2012). However, in 2008 the Pan African Research & Investment Services indicated that the tourism industry in South Africa did not make it to the list of dominating sectors contributing to the economy. The review also highlighted that in 2011 the tourism sector contributed only 5 percent to the total GDP of South Africa (DOF, 2012). Thus, looking at the population of South Africa which was estimated at 54 million in the mid-2014 (StatsSA, 2014b), the contribution made by the tourism industry is very low to significantly reduce unemployment rate and poverty in South Africa. The Department of Environmental Affairs and Tourism national biodiversity strategy and action plan acknowledged that the South African GDP does not factor nature conservation in its equation. That is, South Africa is experiencing economic growth, without an increase in jobs, with worsening poverty, and with declining natural capital (DEAT, 2005).

The inability of nature conservation to make contributions towards LED is also observed to be the commercialising of protected areas to privately owned enterprises (DEAT, 2005). The Department of Environmental Affairs and Tourism (2005) indicated that an estimated 13% of South Africa's land surface is privately owned and managed in the form of conservancies, private game reserves, and mixed game farms (DEAT, 2005). Spenceley (2003) stated that the privately owned and operated nature reserves in South Africa have been massively increasing over the years. However, their commitment and support to neighbouring poor communities and promoting LED is shallow (Spenceley, 2003). Ironically, majority of those game and nature reserves are located in rural communities wherein alleviating

poverty and reducing unemployment is on the mandate of the local municipalities (De Beer & Marais, 2005). However, SANParks (2012) highlighted that the mandate of privately owned nature reserves, national parks and state-owned nature reserves are not the same. While the national parks, provincial nature reserves and communal nature reserves can contribute to local economic development through job-creation, income generation, market and entrepreneurial opportunities, business partnerships and economic growth for local communities, the same cannot be said about the private nature reserves as they are not compelled by any government structure to enforce such functions (SANParks, 2012). According to the ICUN categories of protected areas, private nature reserves are under management and ownership of privately-owned individuals which can include groups of individuals, non-governmental organizations (NGOs) and commercial companies who run private protected areas for the purpose of owners profit, research entities or religious entities (ICUN, 1980). Therefore, at the core of the negligible effects of nature conservation on LED in South Africa are the issues of the discrepancies in the competent authorities for implementation and incompatibility of mandates.

3.6. Conclusion

This chapter reveals that the government of South Africa and the conservation entities recognise the role of nature conservation on LED in the local communities. This is highlighted by the government's attempt to link conservation to poverty alleviation, job-creation, income generation and other components of LED by establishing various legislative frameworks aimed at bringing ordinary citizens closer to conservation efforts and to benefit thereto. However, it was discovered that whereas the implementation of conservation management occurs at both the national and provincial levels, that for LED straddles these scales into the local, thereby creating discrepancies with the competent authorities. These discrepancies may compromise the effects of nature conservation on LED. It would be farfetched to assert that nature conservation in a democratic South Africa may be operating sub-optimally, notwithstanding the benign approaches and legislative instruments adopted. The next chapter analyses the effects of nature conservation on LED using evidence from Timbavati.

CHAPTER 4

ANALYSIS AND INTERPRETATIONS OF THE EFFECTS OF NATURE CONSERVATION ON LOCAL ECONOMIC DEVELOPMENT IN TIMBAVATI

4.1. Introduction

Nature reserves have emphasized community benefits in terms of job and market opportunities, generation of income, facilitation of entrepreneurship and business, and the creation of an enabling local development environment within which community participation through “popular control” and “people power” will be emphasised. The survey conducted in Timbavati Village appears to reveal that the local communities do generally benefit from the nature reserve. However, the challenge is that not everyone benefits equally in that regard and although there are community participation mechanisms in the village, the initiatives are poorly understood and implemented. Therefore decisions for the management and operation of the nature reserve are mostly taken at the top-down level with less input from the villagers. The respondents also showed lack of understanding about nature conservation activities in the nature reserve. This chapter then discusses the findings that emerged from the study in terms of the effects of nature conservation on local economic development in Timbavati, Mpumalanga Province. The intention is to summarize a collection of empirical information and discuss the findings to answer the research questions of the study. The empirical data for the study was obtained from administered questionnaires, completed by 99 residents of Timbavati Village. A total of 120 questionnaires were received, however, only 99 questionnaires were completed correctly according to the required criteria of the study. The findings are provided in both qualitative and quantitative manner. The presentation and interpretation of data was further explained with the help of graphs, frequencies and statistical information.

This chapter is structured into five sections including the introduction. The second section put an emphasis on the demographic profile of the respondents. The specified nature conservation approaches adopted by the nature reserves are analysed in section two. Then section three focuses on community participation and

involvement in decision-making on the operations and management of the nature reserve. The fourth section analysed the effects of nature conservation on local economic development. The effects of the nature reserve on local economic development is analysed through the reserves ability to contribute towards job-creation, income generation, local development environment, market opportunities, entrepreneurial opportunities, business partnerships and economic growth. The last section focus on the views of the respondents on their notion as to whether the nature reserve has desirable/undesirable effects on local economic development and also what could be done to enhance those desirable/undesirable effects.

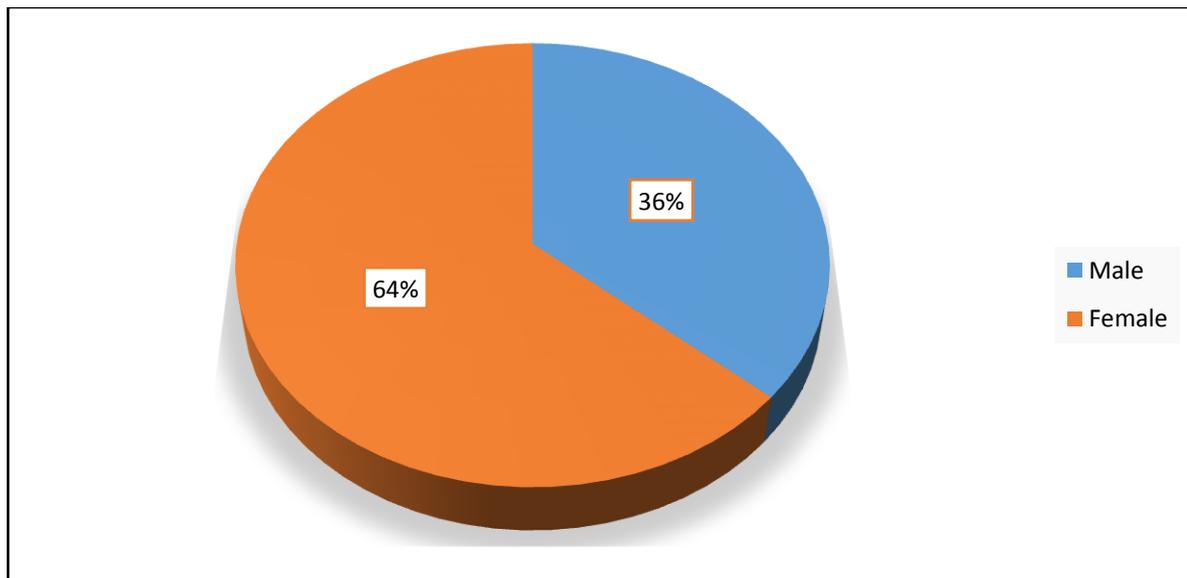
4.2. Demographic information of the respondents

This section presents information on the demographic profile of the respondents looking at their gender, age and educational level. The aim of this analysis is to determine the demographic profile of the respondents and evaluate the influence on the findings of the study. This is due to that gender, age, and educational level influence the expected benefits from nature reserves by the host communities.

4.2.1. Gender Composition of the Members of Timbavati Village

Since the introduction of participatory management approach in nature conservation, understanding gender has been one of the critical social variables in the attempt of protected areas to involve local communities in conservation. This is due to the requirement to understand the aspects that affect relations between men and women such as cultural norms and values, socioeconomic and ecological factors, which in most instances determine the roles and responsibilities, access, management and control of natural capital, participation in decision-making processes and taking advantage of economic opportunities. Figure 3 below demonstrates gender composition of the members of the village who took part in the survey.

Figure 3: Gender of respondents

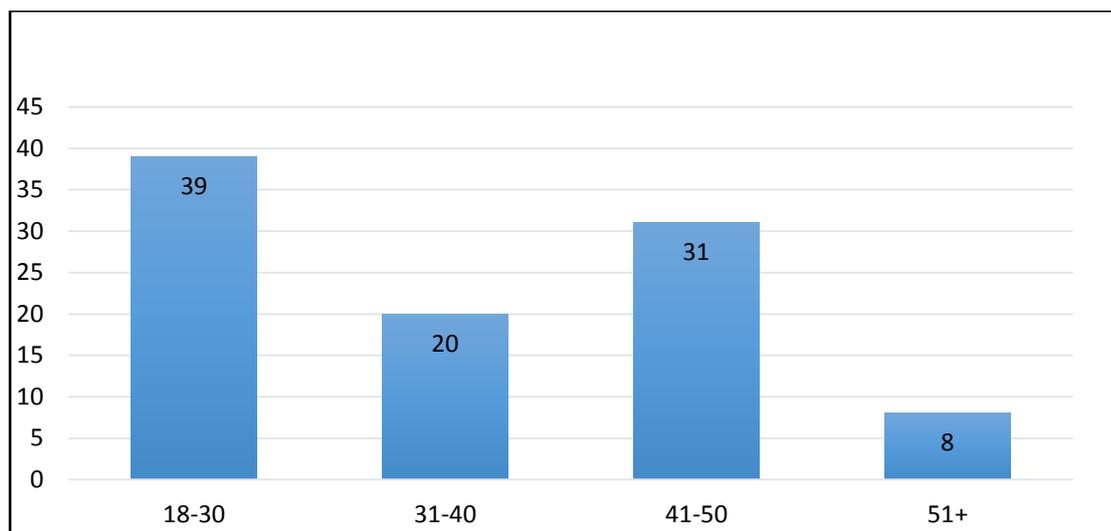


Majority of the respondents who took part in the survey were females (64%). Male respondents constituted 36% of the sampled population. This indicates that the village is female dominated, the ones who experience the hardships that come with poverty, unemployment, inequality and poor infrastructure in the village. Due to cultural and traditional norms, there is usually a difference in the management and control of natural resources in rural communities. Women have generally experienced greater restrictions, particularly with regard to ownership and access to land as well as participation in decision-making. From the findings of the study, it is noteworthy that females should be the major target group with regard to the desirable effects of LED. However, it was discovered that there is no consideration on gender issues when implementing community projects by the nature reserve. The study also found that majority of the people employed by the nature reserve are men due to the frequent need for guards and rangers in the nature reserve. Therefore, literature stated that benefit sharing in nature reserves is central to inequalities due to that benefits are not directed to the most affected groups, who are in this case females (*Supra*, 36). Such inequalities also manifest with the age groups of the beneficiaries as it is not easy to incorporate the various needs, wants, aspirations and satisfactions. The different age groups (figure 4) and the gender disparities affect the ability of nature reserves to make an optimal effect on LED (*Supra*, 37).

4.2.2. Age Categories of the Members of Timbavati Village

Age is another important aspects required to better understand and forecast the needs, interests and aspirations of local communities in nature conservation (Torri, 2011). The age categories determine the expected conservation benefits by local communities from nature reserves ranging from job and entrepreneurial opportunities, poverty relief, recreation, infrastructure, skills development and access to natural capital. Figure 4 below reveals age categories of the respondents who took part in the study.

Figure 4: Respondents by age groups



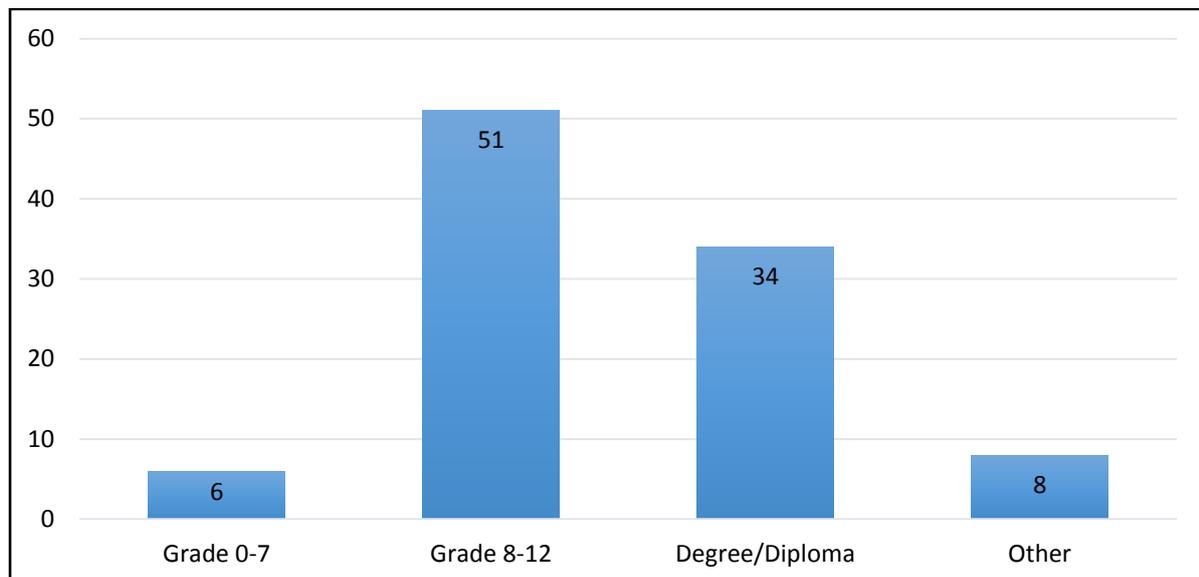
As before stated, an age category is crucial to understand the benefits expected by villagers from the nature reserve. The different age groups have their own expectations from nature conservation. That is, the older age group expect restitution of their land which they have been previously excluded from. But the younger generations on the other hand expect the nature reserve to provide recreational, educational and health facilities, access to the nature reserve for its aesthetic purpose, provision of jobs, entrepreneurial opportunities and business partnership. The finding of the indicates that majority (39%) of the respondents are youth ranging from 18-30 years, following by those who fall in the 41-50 years age group, 31-40 years age category (20%) and finally, the 51 years old and above category. The

findings shows the village is dominated by youth, therefore the nature reserve need to focus on creating jobs, entrepreneurial opportunities and the other components of local economic development, while ensuring sustainable human development through skills and training.

4.2.3. Educational Level of the Respondents

The aim of this analysis was to determine the respondents' level of education. It is essential to understand the educational background of the respondents because in nature conservation, especially the tourism industry, there is a specific education level required in order to take advantage of opportunities. Enhancing education is thus one aspect of nature conservation and LED. The figure 5 below illustrates the educational levels of the Timbavati residents.

Figure 5: Educational level



It was found that most nature reserves fail to hire employees from the neighbouring communities due to their lack of skills required in managing nature reserves and lodges (*Supra*, 48). Another factor is that people with better education understand nature conservation much better than those with basic literacy. Therefore the findings of the study show that the majority of the respondents have basic education (51%), those who managed to continue with their studies to a diploma/degree level

constitute 34% of the sampled population. Those who have no education or managed to study until grade 7 constituted 6% and those who indicated other constituted 8%, which include post graduate studies. The findings show that the Timbavati village is dominated by individuals with basic education and this can be challenging for the nature reserve because tourism industry requires professional skills and a higher level of education. Education also is essential for securing a permanent and sustainable employment, which majority of the respondents' lack. The lack of higher education qualifications in the village can be caused by the lack of higher educational institutions in the Province especially those that focus on nature conservation. The villagers have to travel to other provinces to acquire higher learning which due to their socio-economic condition might not afford. The Bushbuckridge Local Municipality LED strategy 2010 supported the findings of the study as it was stated that educational level is very poor in the municipality as Bushbuckridge has the lowermost level of education from grade 12 and above, additionally the municipality has been found to be having the poorest pass rates in Mpumalanga Province in terms of the Senior Certificate. A much deeper analysis of the findings have revealed that the majority of the respondents who highlighted that the nature reserve has desirable effects towards LED, were those that have matric certificates and those that studied beyond basic education. This could be that those respondents understand nature conservation and its benefits to local communities. Additionally, the findings revealed that the majority of respondents who stated that they have matric certificates derive their income from sources related to the nature reserve as they are employed as environmental monitors in Timbavati nature reserve. Apparently, the effects of nature conservation on LED are dependent upon the levels of education of the prospective beneficiaries. Hence, determination of the effects of the Timbavati Nature Reserve on LED cannot be generalized.

4.3. Approaches to Nature Conservation in Timbavati Nature Reserve

The Timbavati Nature Reserve was established in 1956 with an effort to preserve the area that was undergoing degradation. This was after realising the insensitive land uses in the area, especially crop and cattle farming that were causing soil erosion and destruction of indigenous plant species. The reserve covers an area of 53 392

hectares, comprising 50 privately owned farms, and houses approximately 12 luxury guest lodges, this include safari lodges (Motswari, Kings camp, Kambaku lodge, Bateleur mobile camp, Shindzela tented camp, Simbavati river lodge, Tanda tula safari camp and Umlani bush camp) and self-catering camps (Jaydee, Leadwood private camp, Rockfig, and Walkers river camp). The reserve is situated between the Kruger National Park (KNP) on the eastern boundary and the Klaserie and Umbabat Private Nature Reserves to the north. In 1993, the fences separating Timbavati nature reserve and Kruger National Park were removed to encourage wildlife migration. This was done as a way of recognising the importance of the reserve and its role of protecting biodiversity.

The nature reserve as resembling other protected areas in South Africa has traditionally adopted an exclusionary approach to nature conservation. That is, local communities were prohibited from natural resources use and there were no human incursions in the land now comprising of the nature reserve. The aim of the nature reserve was to protect biodiversity for inherent and intrinsic value. The study has found that the reserve is actually a privately owned nature reserve, managed by a by a group of landowners who joined together in conservation. Therefore, according to the IUCN management categories (*Supra*, 18), the nature reserve is not compelled by government regulation to permit increased human use. However, due to the political dispensation in South Africa and the change in the approach to environmental protection, most protected areas were pressured to integrate biodiversity to economic development. The nature reserve also went through such paradigm shift. The Timbavati approach to nature conservation became inspired by the community-based approach discussed in chapter 2 with a purpose to incorporate social, political and environmental aspects while ensuring community participation (*Supra*, 30). Through its motto “in the spirit of *Ubuntu*”, the nature reserve has formed initiatives as part of community uplifting efforts. This include among others, the Timbavati foundation and environmental school.

4.3.1. Timbavati Foundation and Environmental Bush School

The Timbavati nature reserve formulated Timbavati foundation with the primary objective of reaching out to the rural communities in Hoedspruit and neighbouring areas through funding education, training and sustainability programmes. Within the four pillars of the foundation, which include conservation and environmental awareness, community upliftment and social care, education and health care, the Timbavati foundation is currently actively involved in the Timbavati Bush School (figure 6), various sustainability programmes in neighbouring communities as well as in outreach and educational programmes. Community upliftment and the social care of people living in surrounding communities forms an integral part of the Foundation's mandate. The bush school, founded by a member of the reserve is situated within the nature reserve. Initially, the bush school was meant to benefit the children of the staff within the reserve. However, as the reserve's mandate to reach out to the neighbouring communities such as Sigagule, Acornkoek, Hoedspruit, Timbavati and Werverdin among others, the bush school was expanded into a broader community-oriented initiative that currently involves 29 High Schools and an increasing number of Primary Schools. The bush school features a fully equipped lecture hall and rooms that accommodate 24 students (figure 7). The facility also includes staff accommodation as well as volunteer accommodation. The expanded bush school aimed at educating local communities about the importance of nature conservation, rhino protection and recycling initiative. One staff member observed: *"by increasing the number of students in nature conservation, we are more optimistic that we can help spread the word about the value of conservation in the local communities"*. To achieve that mandate environmental education safaris at the bush school camp, educational sessions at high schools, weekly educational sessions at primary schools, quarterly field trips for primary school learners as well as teacher workshops and training are organised by the Timbavati foundation to educate learners about conservation and environmental awareness.

Figure 6: Timbavati foundation environmental school entrance



Figure 7: Learners accommodation at Timbavati bush school



Other projects that Timbavati foundation initiated include the following:

- Conservation bursary schemes to study at the SA Wildlife College
- Support for Phelwana Clinic
- Education on self-sustainability
- Funding of Healing Hearts NGO for orphans and destitute people
- Construction of netted vegetable gardens in local schools
- Greening of school grounds including planting indigenous trees
- Hosting soccer tournaments and other various environmental initiatives

Accordingly, the projects are for the benefits of Timbavati Village and the neighbouring communities around Acornhoek and Hoedspruit towns. However, in literature it was found that community-based approach tends to exclude other community members in benefit sharing and has failed to incorporate conservation and development (*Supra*, 33; 34). Therefore, it was important for the purpose of the study to analyse the responses of the members of Timbavati village with regard to community participation, control and access to natural capital in the reserve for a clear analysis of the approach adopted by the nature reserve.

4.3.2. Community Participation and Involvement in the Management and Operations of the Nature Reserve

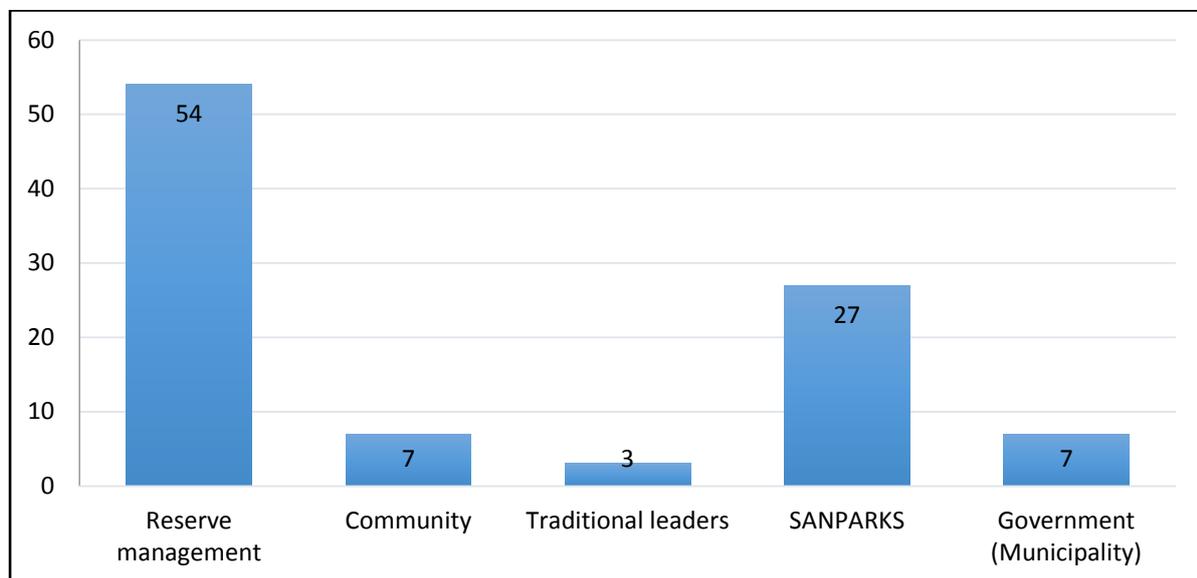
Community participation is crucial in nature conservation to ensure that the local people have power to raise their issues as most nature reserves are located in their surroundings. The participation has to be governed by “people power” and “popular control” wherein there is entirety and collectiveness in operations, control, management and decision-making process in the nature reserves. This will create a sense of ownership and taking onto considerations that the concern of local communities is essential for achieving conservation goals. Participation of local communities in conservation also develops an interest and awareness for people to take part in nature conservation. This section of the analysis focus on the leadership of the nature reserve, access to natural capital, community involvement in decision-making, community ownership of the nature reserve, effectiveness of community

participation in decision-making process to determine if the nature reserve is binding to the principles of community-based conservation by putting people at the forefront of conservation.

4.3.2.1. Leadership in the Management and Operations of the Nature Reserve

There are different role players in the management and operation of nature reserves. However, there is a board that has to make decision with regard to activities of the reserve. The aim of this analysis was to determine the major role player responsible for the management and operations of the Timbavati Nature Reserve as to have a better understanding of community involvement in the nature reserve. The study found that the fences that once separated the properties in the Timbavati Nature Reserve and the western boundary of the Kruger National Park have been removed to allow free movement of wildlife and this raises a question of who really manage and control the nature reserve (figure 8).

Figure 8: Leader of the nature reserve operations and management



The findings show that the nature reserve is controlled by the reserve management (54%). The nature reserve is privately owned and managed by a by a group of landowners who joined together in conservation, therefore the management control all activities of the nature reserve. Some of the respondents stated that the nature

reserve is being controlled by SANParks (27%). The response may be based on the knowledge that SANParks was introduced by the South African National Parks Act as an agency to oversee the management of natural resources in the country. Additionally, Kruger National Park is under the management of SANParks and the fence separating Kruger and the reserve was long removed. However, the study has found that privately owned nature and game reserves are not controlled by the agency but by the management as they are mostly established for conservation and for own profit. Only 7% of the respondents are of the opinion that the community is control the nature reserves. From a deeper analysis, it was discovered that a small proportion of the community members are involvement in the decision-making process in the reserve. When asked if they have ever taken part in any decision-making process regarding the activities of the nature reserve, some respondents stated that they have attended meetings where decisions in relation to choosing the community representatives, budgeting, selecting reserve committee and managing wildlife were taken. However, this leadership structure is biased towards the reserve management and SANPARKS, whilst undermining the voice of the communities to a negligible 10% of the leadership. Evidently, decisions made through such a leadership structure would not always be in the interest of community participation and/or benefit. Besides, the majority of those respondents highlighted that their participation was mostly passive (figure 9). Further analysis indicated that majority of the respondents felt that there is no ownership by the community in the in the management and management of the nature reserve on the grounds that although some people do attend the meetings, not everyone is afforded that opportunity. The local communities' lack of ownership in the nature reserve will limit the people's rights to access the natural capital in the reserve. The study also found that decision on the trophy hunting activities in the reserve is taken by the management board without the inputs of the local communities.

Some respondents indicated that government lead the management and operations of the nature reserve (7%). The study has found that government department has no responsibility or control over private nature reserves in South Africa; however established agencies in each province to be responsible for developing strategies, policies and to monitor the implementation of those policies and strategies. In

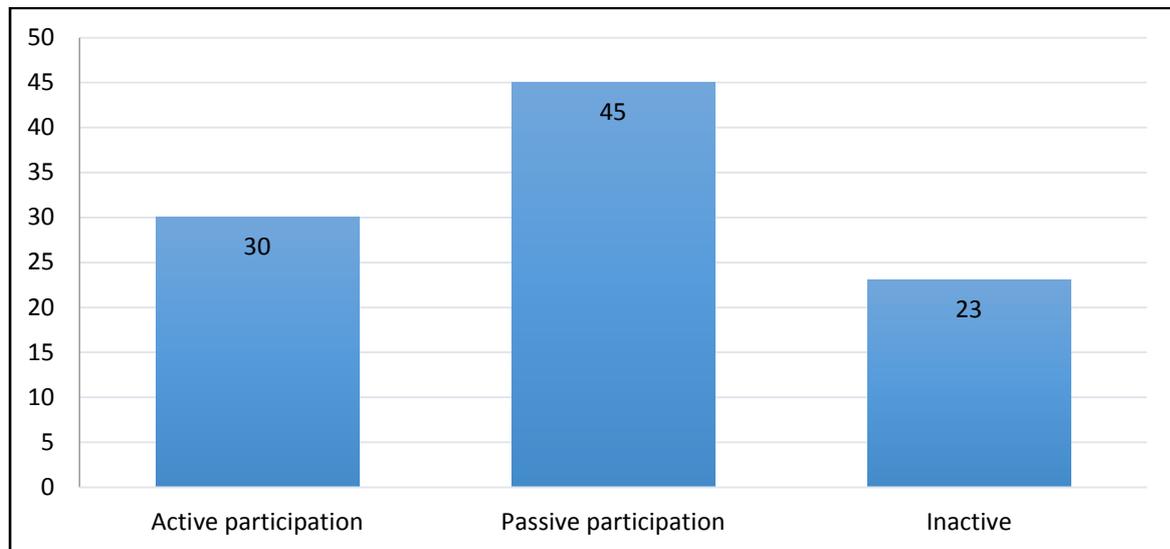
Mpumalanga Province, the Mpumalanga Tourism and Parks Agency does those duties and be responsible for issuing licences for hunting in the nature reserves. A small proportion of the respondents (3%) are of the opinion that the traditional leaders are responsible for the operations and management of the nature reserve, however from the interview with the key informants, it was learned that the traditional leaders only give permission for benefit sharing opportunities in the village. The responses of the community members could be based on the fact that they hear about the nature reserve and its benefits from the traditional authority. From personal observation, it was noticed that the traditional leaders of the village reside far from Timbavati, in another village. This can hinder the benefit sharing mechanisms from the nature reserve, because the chief might not be aware of the needs of the people and the challenges they are facing.

4.3.2.2. Participation in the Management and Operations of the Reserve

In the new approach to nature conservation, local communities are viewed as the major role players in the management and operations of nature reserves (*Supra*, 31). However, in some nature reserves community participation is not being taken into consideration in the management and operation of the reserves. The main purpose of information in this regard was to find out if community members of Timbavati village participate in the nature reserve's affairs and if the nature reserve does consult with the community members on the reserve issues.

The respondents were asked in the survey to describe the role of the community in the management and operations of the nature reserve. The study found out that the local communities are passive (45%) when coming to participation in management and operations of the nature reserve. As the Warden stated, participation of the local communities is inadequate in the nature reserve. This could be due to lack of communication dissemination between the reserve and the communities and the people working at the foundation are the ones who communicate benefits to the communities without forming community representatives.

Figure 9: Community participation in the management and operations of the nature reserve

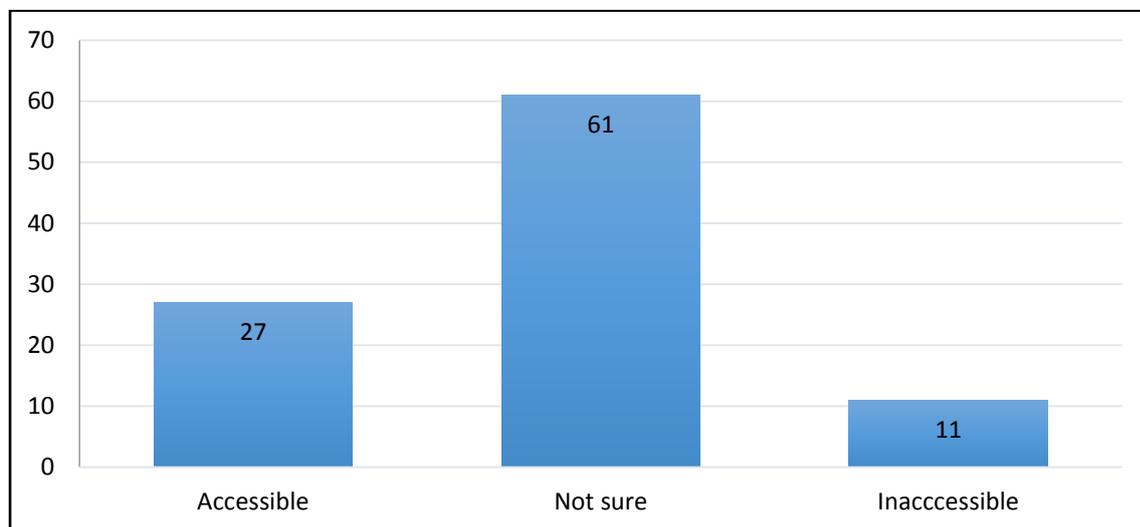


Some respondents often complained about the reserve management not visiting their village. The respondents showed interest in forming a good relationship with the reserve but have never been given an opportunity. This discovery provides the nature reserve with an opportunity to implement communication dialogues and participatory processes to enhance community participation. It is noticeable from the graph that at least 30% of the respondents stated that there is active participation in the nature reserve. Those respondents further mentioned that they attend awareness campaigns which are sometimes hosted by the reserve and they get a chance to raise their concerns. However, it was discovered that the people who attend those campaigns are mostly school teachers as they learn about the existence of those campaigns when attending debates and environmental education for learners in the nature reserve. In contrary to that, some respondents mentioned that participation in the nature reserve is inactive (23%) as their concerns are never taken into account and they are never given a platform to discuss issues and be involved in decision- making processes. From a deeper analysis, the study has found that majority of the respondents who highlighted that participation is inactive were mostly people with low educational status, due to their lack of knowledge on nature conservation they never get a chance to raise their concerns.

4.3.2.4. Access to Natural Capital in the Nature Reserve

As stated in the literature, local communities require natural capital for survival. However due to the mandate of most nature reserves to protect biodiversity, access to natural capital is often restricted. The purpose of this analysis was to find out if the nature reserve allows the local communities to access natural capital in the reserve. The study revealed that there is lack of knowledge about access to the natural capital in the reserve. Figure 10 below demonstrate the responses with regard to accessibility of resources in the reserve.

Figure 10: Accessibility of natural capital in the nature reserve



It could be deduced from the above graph that majority of the respondents are not aware of the access control mechanisms used in the Timabavati nature reserve for the local communities to access natural capital. This could be due to ineffectiveness of community participation (figure 10) and lack of information dissemination in the reserve. Sixty one percent (61%) of the respondents indicated that they are not sure if the nature reserve allows for local communities to access the natural capital in the reserve. Some of the respondents indicated that the natural capital is not accessible in the reserve (11%) and 27% mentioned that natural capital is accessible. These responses could be influenced by the fact that the nature reserve is fenced, therefore entry or harvesting natural capital in the nature reserve without permission is considered to be illegal, and those who enforce that practice, might face undesirable

actions. The reserve also is patrolled by rangers to ensure that illegal activities do not take place in the nature reserve. On the other hand, those who can afford to pay to harvest natural capital in the reserve are access.

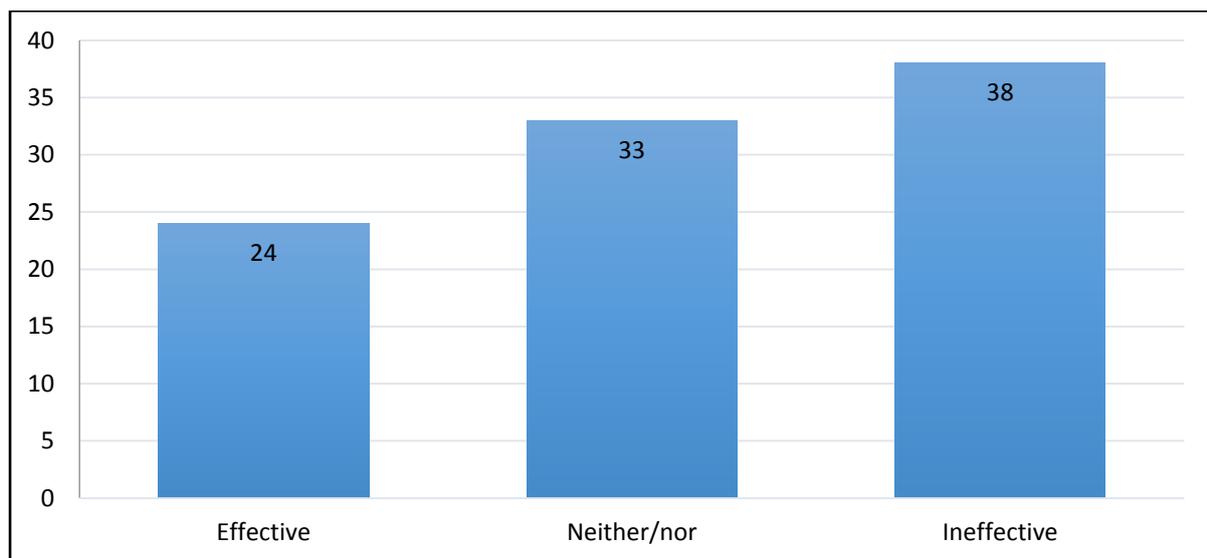
The study learned that the nature reserve used to allow the local communities to visit the reserve and cut tree in the thinning session, but the local communities ended up harvesting other resources which they did not give permission to harvest. Therefore, restrictions were put in place to stop the local communities from harvesting. This kind of behaviour can be caused by the approach which was previously used in the nature reserve where local communities were excluded from conservation activities, therefore have created the greed and anger to the local communities. A key informant has mentioned that at one time while they were attending a debate at the foundation, it was mentioned that the reserve does not allow for people to harvest trees for firewood, even when the trees dry off they say that "*they allow nature to take its cause*", the woods will fall on the ground and fertilise the soil. Additionally, hunting in the nature reserve is prohibited for local communities, however, the nature reserve allows for trophy hunting. The manager mentioned that they derive 70% of their income from trophy hunting in the reserve. This practice has raised eyebrows and debates in protected areas around Mpumalanga Province with Paul Kruger safaris starting a petition to stop the hunting of white rhinos at Timbavati. Such occurrences could highlight that the nature reserve is established for profits earnings for the landowners. With regard to access to the natural capital for local communities, the respondents also highlighted that there are various challenges they experience in their attempt to visit the reserves especially for pleasure. The respondents stated that due to the prevalence of poverty in the village, they lack money and transport to visit the reserve. The study has found that there is no access to transport to reach the headquarters of the nature reserve and the Timbavati foundation. Those who work in the nature reserve have to depend on lifts from people who visit the reserve. The road is also not conducive for smaller cars. It was also found in the study that to enter the nature reserve for pleasure, visitors have to pay R120 per vehicle at the gate as an entrance fee. Looking at the socio-economic status of the village, the people might not afford. The study has learned that the school learners and their teachers get free access to the reserve when attending

debates and environmental education, such initiative could be extended to the community to encourage participation.

4.3.2.3. Effectiveness of Community Participation and Involvement in Decision-Making

In literature, it was stated that the understanding of community participation is ambiguous and often confused in nature conservation (*Supra*, 35). Thus, the purpose of this analysis was to examine the effectiveness of community participation in decision-making and the satisfaction of the respondents with regard to involvement and participation in the nature reserve.

Figure 11: Effectiveness of community participation in decision-making



The majority of the respondents mentioned that community participation in decision-making and operations of the nature reserve is ineffective in the nature reserve (38%). This can be caused by the passiveness of the villagers with regard to participation. Those who mentioned that community participation is effective in the nature reserve (24%) could be those who have indicated that they have taken part in several decision-making activities in the nature reserve, including choosing community representatives, budgeting, selecting nature reserve committee and managing wildlife. The study found that the reserve practice a centralised structure in

terms of decision-making processes especially with regard to natural capital use and benefit sharing. Therefore, due to lack of ownership of local communities, the people are not able to influence the operations of the nature reserve. Additionally, the study found no mechanisms designed by the nature reserve to enhance community involvement in the operation and decision-making of the nature reserve. Most community members have had little influence over plans to revitalise the design and operations of the nature reserve. Furthermore, the respondents were asked to highlight if they were satisfied with the level of community participation and involvement in the management and operations of the nature reserve. Majority of the respondents showed dissatisfaction with regard to participation especially in decision-making processes. The analysis of this section indicate that Timbavati nature reserve failed to come up with a participatory approach to incorporate social, economic, political and environmental aspects in conservation. This makes it almost impossible for the nature reserve to contribute optimally towards local economic development.

4.4. Local Economic Development Activities in Timbavati Village

Local economic development consists of various activities which create an enabling local development environment in rural communities such as infrastructure development, availability of different industries, small business enterprises, open market access, informal business ventures and other public amenities such as education, health facilities, security system, micro credit and social network of support. Such activities make it possible for creation of jobs, income generation, establishment of business partnerships, enhancement of entrepreneurships, as well as increased economic growth/output an enabling local development environment and improved market opportunities (*Supra*, 50). The purpose of this analysis was to identify LED activities in the Timbavati Village and the potential of those activities to produce LED components.

Theoretically, modern services such as tarred roads, piped taped water, transportation, electricity, and sewage systems provide opportunities for local communities to take part in eco-tourism related business initiatives and attract

tourists to the community (*Supra*, 46; 48). However, from observation and informal discussion with the members of Timbavati Village, it was discovered that there is lack of such amenities in the village. The tarred roads are having potholes and the bridges have cracked due to heavy rains in the area with no on-going municipal maintenance. Additionally, it was observed that there is lack of public transportation and a taxi rank in the village. Timbavati Village is situated in a remote area and thus taxis do not travel to that side more often, the commuters mostly depend on a public bus which pass by the village once a day to town and those who miss the bus get lifts from people with private transports or wait for taxis used by people from other nearest villages such as Sigagule and Ka-zitha. It was highlighted that upgrading basic infrastructure is one of the primary issue to be addressed as part of the Bushbuckridge Local Municipality Integrated Development Plan and Spatial Development Framework (BLM, 2010). However, this far the municipality is still failing to deal with such issues. The poor roads and transport infrastructure in the village has been observed to hinder possible partnerships between the local businesses and investors which could create employment opportunities for the local people. The quickest way of creating jobs in rural areas is through investment in production; however the study found that there are no production industries in the village with a potential to create sustainable employment. The study has further observed that there is poor expansions and support of local businesses in the village; therefore it was found that the local population travel to Acornhoek, to access goods and services required by the local people. Thus, Acornhoek serves as a business hub for the surrounding communities and includes extensive shopping areas, business district, Mapulaneng Technical College, Tintswalo Hospital, train station, police station, commercial banks, post office, several schools, several churches, and many other services. However, looking at the level of income in the village (table 2), it is challenging for most villagers to access the markets as they might not afford to pay for public transport to do their shopping.

The socio-economic and geographic condition of the area makes it almost impossible for the village to be marketed as an attractive investment location for larger enterprises to establish manufacturing, wholesale and storage enterprises in the area. Therefore, there is poor access to the market for the local communities. As

a result the village is unable to create job opportunities for local people and increase investment and economic growth. In addition, this also unable local people to establish sustainable small businesses. The study has found that there is lack of support for entrepreneurs and small businesses establishments and access to markets in the Bushbuckridge local municipality. From informal interviews with the local communities, it was found that most of the small businesses in the village have collapsed due to lack of support from the municipality and provincial business support agencies. The study discovered that there are four spaza shops in the village, three situated in the western side of the village, on the road to Timbavati Nature Reserve; the other one situated closer to Acornhoek. Additionally two liquor stores were observed in the village. The key informant highlighted that those spaza shops were not doing well financially and only sell essential small products which does not offer sustainable income to the owners. Apart from financial constraints, another challenge that led to the failure of small businesses in the village was observed to be lack of business and financial skills. The businesses are said to be established by individuals who are trying to make a living. From the analyses on the educational level of the respondents (see figure 5), it is noticeable that majority of the people have basic education which can be challenging to manage a business for a sustainable long term profit. The educational level also affects the enhancement of entrepreneurship in the village. The respondents of the survey showed lack of entrepreneurial skills required to undertake in entrepreneurial opportunities and to sustain a healthy economy and environment. The observational data has indicated that there is lack of entrepreneurial activities in the village such as catering for tourists, tour guides, transport services, trade, food processing, bed and breakfast arrangements and so on. Majority of such activities are found in the Acornhoek Town. The only observed activity in the village was the establishment of day cares for looking after children. However, the respondents stated that due to poverty in the village, those day cares are not sustainable.

The Bushbuckridge Local Municipality proposed a number of interventions in order to enhance business competitiveness, access to market opportunities, entrepreneurial skills development and funding, however none of those initiatives were ever implemented in the village and/or neighbouring communities (BLM, 2010). The study

has also observed that there are no street vendors in the village. One respondent highlighted that due to lack of infrastructure and recreational activities in the village, it is rare to see people walking around the streets and thus they rarely get customers. Majority of the vendors from the village sell their products in Acornhoek or Hoedspruit Town. The vendors in Acornhoek were observed to be selling vegetables and fruits in the taxi rank to the commuters. It was further stated that most of the villagers who do handy work always travel to Hoedspruit to sell the crafts and clays there. When asked the reason behind that, one respondent stated that the tourists who visit the nature reserve use that road from Hoedspruit Airport to the reserve and that increase access to the market. Nonetheless, the income received from those activities seems not to make a significant effect on the wellbeing of the people and the economic growth. The majority of the respondents stated to derive their income from social assistance, working at the Acornhoek Complex and others started their own crèches in the village. The analysis of the study has illustrated that the village is still experiencing abject poverty. The LED strategy for the Bushbuckridge Municipality where the village is situated indicated that between 2010 and 2014 the unemployment rate was at 50% and as a result 75% of the population were living below the minimum living level which makes Bushbuckridge one of the poorest areas in South Africa (BLM, 2010). The observational fieldwork in the village revealed conclusively that there is a dearth of LED activities. The few households that practice some kinds of LED would have located them at Acornhoek and Hoedspruit Towns. This dearth of LED is therefore linked to the lack of monetary economics in the village. Therefore, the study gathered information from the village members to have a clear understanding regarding the effects of the nature reserve on LED and the findings are captured in the next section.

4.5. Effects of Nature Conservation on Local Economic Development

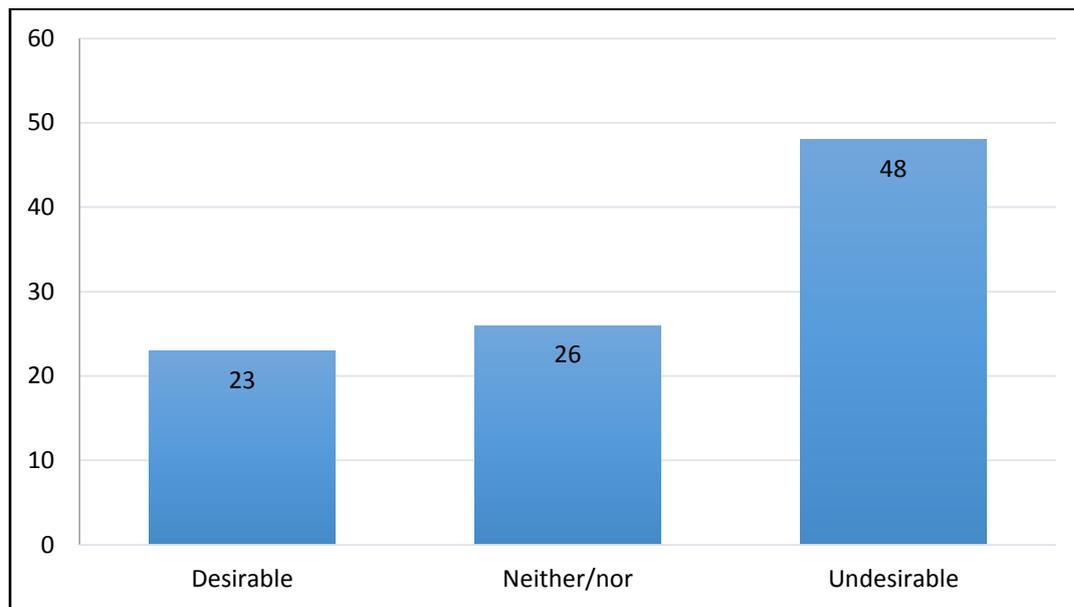
Literature has highlighted that nature conservation has the potential to produce desirable effects towards LED with regard to job-creation, market, business and entrepreneurial opportunities, improving economic growth and creating an enabling local development environment within which local communities can develop (*Supra*, 45). The desirable effects of nature conservation can be observed when local

communities take part in the affairs of the nature reserves while simultaneously reaping significant economic benefits. Theoretically, it was discovered that a landscape similar to that of Timbavati Nature Reserve with mammal species including the Big Five and other species of bird life has a potential to attract tourists and therefore contribute optimally towards LED for the neighbouring communities (*Supra*, 9). Therefore, this analysis seeks to investigate the effects of Timbavati Nature Reserve on LED in the Timbavati Village.

4.5.1. Timbavati Nature Reserve on Local Development Environment

The significance of a nature reserve to establish an enabling local development environment is a fundamental importance for stimulating LED and to produce desirable effects to the other LED components such as job-creation, income generation, market, business and entrepreneurial opportunities and improving economic growth. This can be done by encouraging public investment in rural communities in a form of infrastructure development, establishment of income generating initiatives and other public amenities. To find out the effects of nature reserves on local development environment, the members of Timbavati Village were asked in the survey to state whether the Timbavati Nature Reserve produce desirable/undesirable effects towards local development environment. The responses of the survey participants are captured in figure 12 below. It is noticeable from the graph below that majority of the respondents (48%) stated that the nature reserve has undesirable effects towards local development environmental in the village. The study observed poor infrastructure development in the village, this include poor roads, poor access to educational facilities, poor healthcare services, lack of industries and projects which can offer employment and income generation opportunities to the local people. However, 23% of the respondents highlighted that they have observed positive outcome of the reserve with regard to creating a local development environment.

Figure 12: Effect of the nature reserve on local development environment

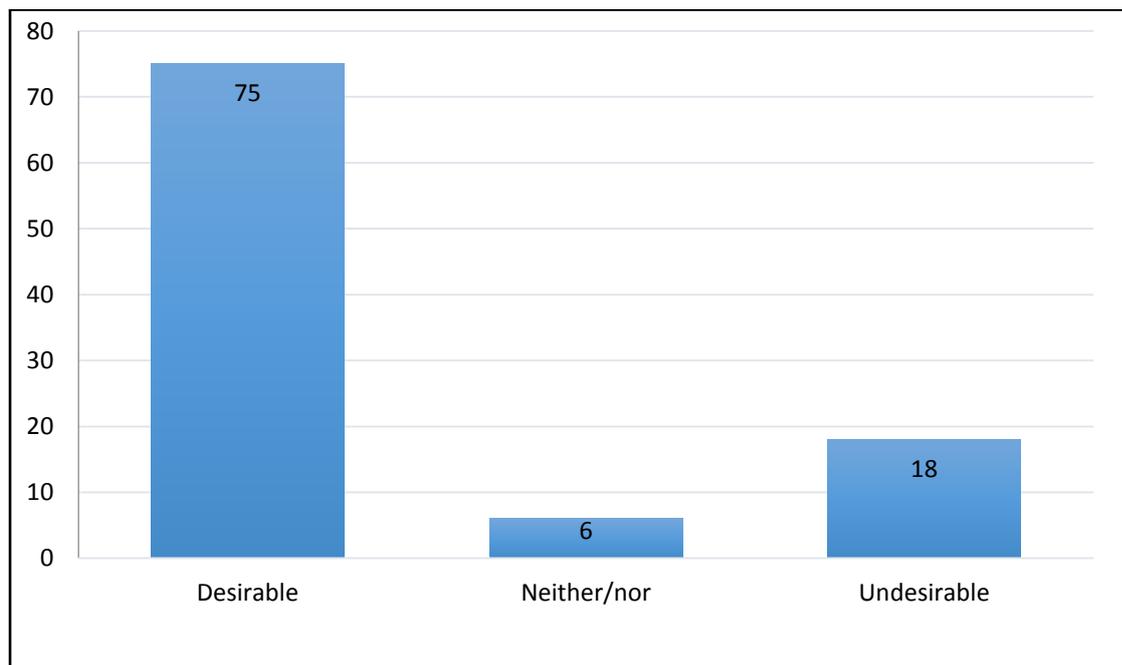


Additional 26% of the respondents stated that they are not aware of the benefits the nature reserve provides to the local communities and 3% of the respondents stated that they had no appropriate answer to the question. The desirable effects were based on the nature reserve's ability to enhance human development. The study has found that the nature reserve keeps the CVs of the learners who used to attend bush school so that they can help them find employment. Additionally, when the reserve hires rangers, they use a simple test to accommodate those with low educational level. One employee of the reserve mentioned that they organise a race and the person who is physically fit to run the race from the beginning until conclusion will be hired. Furthermore, during the reserve visitations for data collection, the reserve was in a process of creating netted school gardens, hosting school tournament and building a library for a primary school in the village. One of the employees highlighted that unlike other protected areas in South Africa where they just give economic incentives to the local communities to sustain their lives, the Timbavati Nature Reserve practice a "hands-on" intervention to community uplifting. However, the study has found that the projects currently undertaken by the nature reserve focus on the local schools. Thus, the people at home might not see a change in living experiences; consequently might assume undesirable effects towards local economic environment.

4.5.2. Nature Reserve on Job-Creation

Nature reserves have a crucial role to play in creating employment opportunities for the local communities. The residents of Timbavati Village were asked, through questionnaires to state whether the nature reserve has desirable effects towards job-creation for the local communities. Figure 13 below demonstrate their responses.

Figure 13: Effect of the nature reserve on job-creation



Employment in the reserve presented a central point of benefit for the local communities. That is, majority of the respondents (75%) stated that the nature reserve hire most of the workers from the village, therefore the nature reserve is desirable in enhancing job-creation. In contrary, 18% of the respondents are of the opinion that the nature reserve does not contribute to job-creation in the village. Additionally, 6% of the respondents selected neither/nor and from further analysis it was obvious that those respondents were not aware of activities taking place in the nature reserve. Majority of the respondents stated that with regard to job-creation, the reserve annually open a call for rangers from the local communities. Additionally, the Timbavati Nature Reserve issue out conservation bursary schemes that afford learners an opportunity to further their studies at the South African Wildlife College

and when they graduate, they get placed in the nature reserve as environmental monitors. One employee in the reserve stated that the reserve sometimes give bursaries to learners interested in studying hospitality and tourism and after graduation are placed in the different lodges of the reserve. If these initiatives can be spread across the local communities, it could produce desirable effects for income generation (figure 14). However, the study has found that such initiatives are not being advertised in the local newspapers or radio and those who take part hear about the programmes when attending the environmental education and debates in the reserve. The study found that the environmental programmes are for the local learners and their teachers and therefore the information on various opportunities in the reserve do not reach the local communities at large due to strict access to the reserve.

The management of the nature reserve stated that in the year 2014 the reserve hired 12 rangers and 2 environmental monitors. However, looking at the estimated population of the village, it can be argued that the number of employment opportunities observed in that year is too small to convince the members of the village that the reserve has desirable effects toward job-creation. The study has further discovered that there is limited capacity of staff at the nature reserve as the manager highlighted that he does a work of three people (manager, ranger and administrator). Looking at the educational level of the respondents, it could be possible that the nature reserve did not find a candidate suitable to reduce the workload of the manager. The key informant mentioned that the reserve hire people only when there is a need and thus few people from the village work in the reserve. To check the reliability of the responses given by the key informant and some of the respondents, the study asked the respondents through the questionnaire to state the sources of their households' income to check as to whether they relate to the nature reserve or not. Table 1 below highlight those findings. Majority of the respondents stated that their income is derived from sources not related to the nature reserve that constituted 76.4% of the respondents. From further analysis of the findings, it was discovered that those respondents work as teachers at the local schools, work at the hospital, at the nearby complex and at the farms around Hoedspruit.

Table 1: Sources of household income of the respondents

Sources of income	Frequency	Percent
Related to the nature reserve	16	16.2%
Not related to the nature reserve	76	76.4%
Other	7	7.1%
Total	99	100.0%

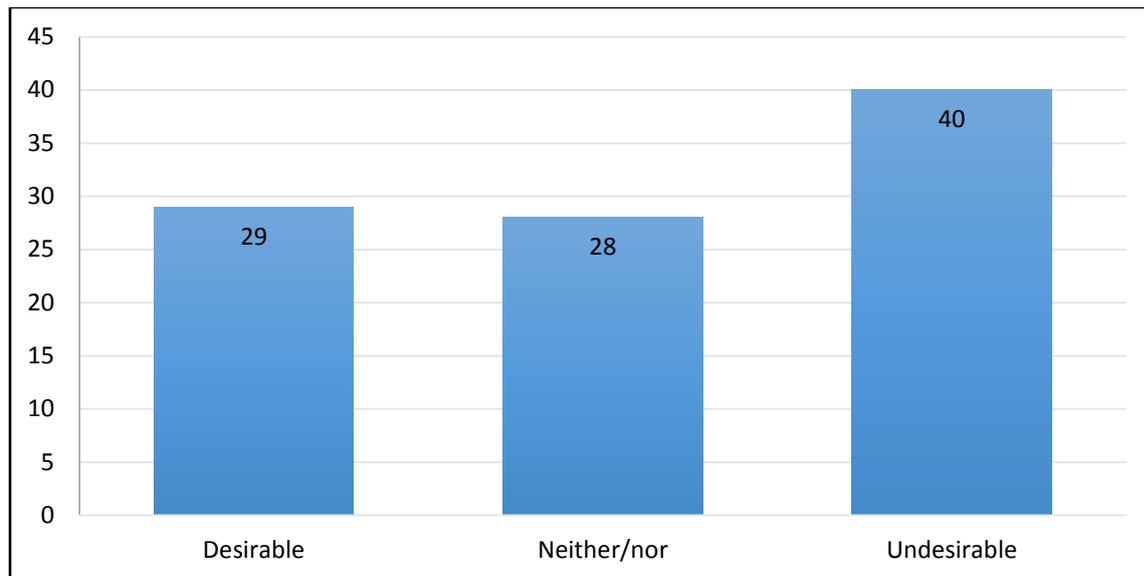
It is noticeable from the table that at least 16.2% of the respondents receive income from sources related to the nature reserve. Additional 7.4% of the respondents indicated that they prefer not to mention their sources of income. The extent of income sources unrelated to the nature reserve is overwhelming, implying that the effects of conservation on this LED dimension is negligible.

4.5.3. Nature Reserve on Income Generation in Timbavati Village

The significance of nature reserves is to identify significant income generating opportunities for local communities, wherein local people could deal with threats associated with poverty, food insecurity, malnutrition and other social problems. The aim of this analysis was to determine if the Timbavati Nature Reserve produce desirable effects towards income generation in the village. Figure 14 below demonstrate the responses with regard to the effects of the nature reserve on income generation in Timbavati Village.

Majority of the respondents (40%) stated that the effect of the reserve on income generation is undesirable in the village. In contrary, 29% of the respondents were of the opinion that the effect of the nature reserve on income generation is desirable. Other respondents (28%) indicated that they were not sure about such effect in the village. The study has found that there is lack of income generating projects in the village. The observational data has highlighted that the village lack initiatives such as SMMEs, entrepreneurial opportunities and other industries where local people can generate income.

Figure 14: Effect of the nature reserve on income generation



On a further analysis however, it was observed that the nature reserve create employment opportunities for some of the village members. Additionally, the study has found that the reserve provides training to school learners with regard to recycling material and how they can generate income from such initiatives. Other initiatives were stated to be village visits by the tourists. The tourists pay money to see the traditional dance and taste the traditional food in the village. Moreover, the tourists are encouraged to visit the traditional *Sangomas* wherein they pay to be told of their future. The nature reserve advertises such initiatives in their website as stated:

“the Timbavati Local Village tour is not complete without visiting the traditional Sangoma and local herbalist and having them throw the bones and explaining in depth the meaning of each bone and what it holds for the future. Additionally, enjoy a realistic experience of interacting with local people, eating and tasting various traditional foods and participate in cultural activities of village life”.

Such activities can bring revenue to the village. Nonetheless, the study has observed that most of the initiatives in the reserve are not making any change in the living standard of the local people. Firstly, it was discovered that most jobs in the tourism industry mean long working hours, less pay and lack of sustainability. The people undertake on those jobs mainly because they want to move out of the poverty trap. Additionally, the recycling programme initiated by the reserve only

accommodates school learners and those with access to the nature reserve. Thus the study went further to analyse the total household income of the respondents to check if the reserve is making any difference in the income of households. The findings of that analysis are presented on the table 2 below.

Table 2: Total household income

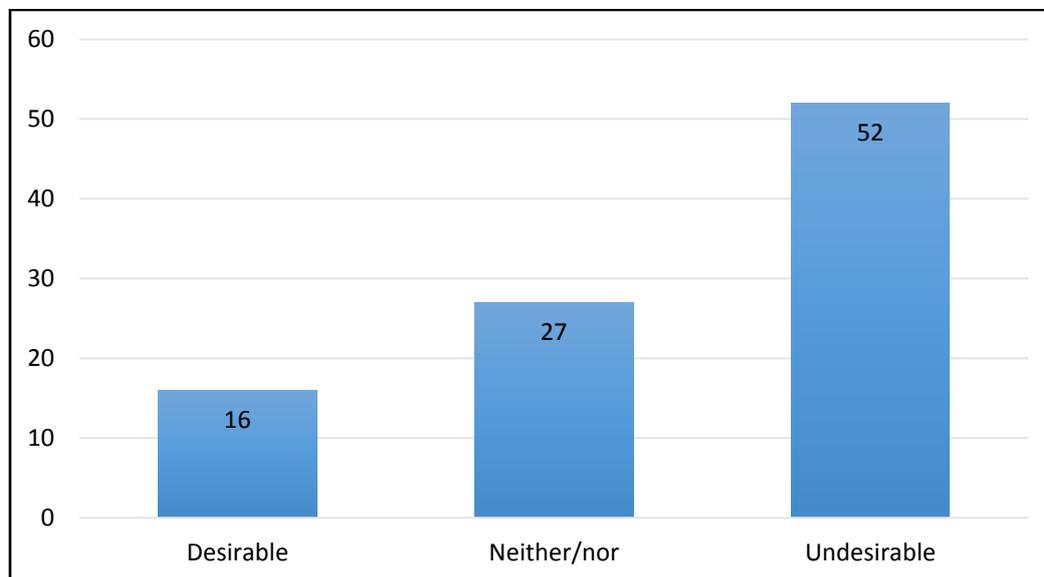
Total household income	Frequency	Percent
No Income	33	33.3%
R1- R1 500	21	21.2%
R1501- R3 500	19	19.2%
R3501- R4500	17	17.2%
Above R4500	8	8.1%
Inapplicable	1	1.0%
Total	99	100.0%

The findings of the study demonstrate that majority of the respondents (33.3%) have no income. Those who earn between R1-R1500 constituted 21.2% of the respondents. Additional 19.2% of the respondents stated that they earn less than R3500 and 17.2% of the respondents constituted those who earn between R3501-R4500. The study has discovered that the respondents who earn more than R4500 constituted the smallest proportion (8.1%) of the sample population. An additional 2% of the respondents preferred not to give information about their household income. From the analysis, it was noticeable that majority of the population live below the South African upper-bound poverty line of R577 per month. Therefore this means that those local people are likely to experience vulnerabilities associated with poverty and inequality due to lack of access to natural capital. This are among the respondents who mentioned that they are unemployed and those that receive government grants. From a deeper analysis of data, the study found that the respondents who indicated that their source of income is related to the nature reserve stated that their level of income is between R1500 and R3500. This could include those who work as rangers and also environmental monitors.

4.5.4. Timbavati Nature Reserve on Market Opportunities

A nature reserve has a potential to improve market opportunities for the local businesses and entrepreneurs wherein products can be marketed local, national and international (*Supra*, 45). This can include support for sustainable local crafts and other small initiatives in the village. The participants of the survey were asked to state whether the nature reserve has positive effects on market opportunities in the village and their responses are demonstrated on figure 15 below.

Figure 15: Effect of the nature reserve on market opportunities

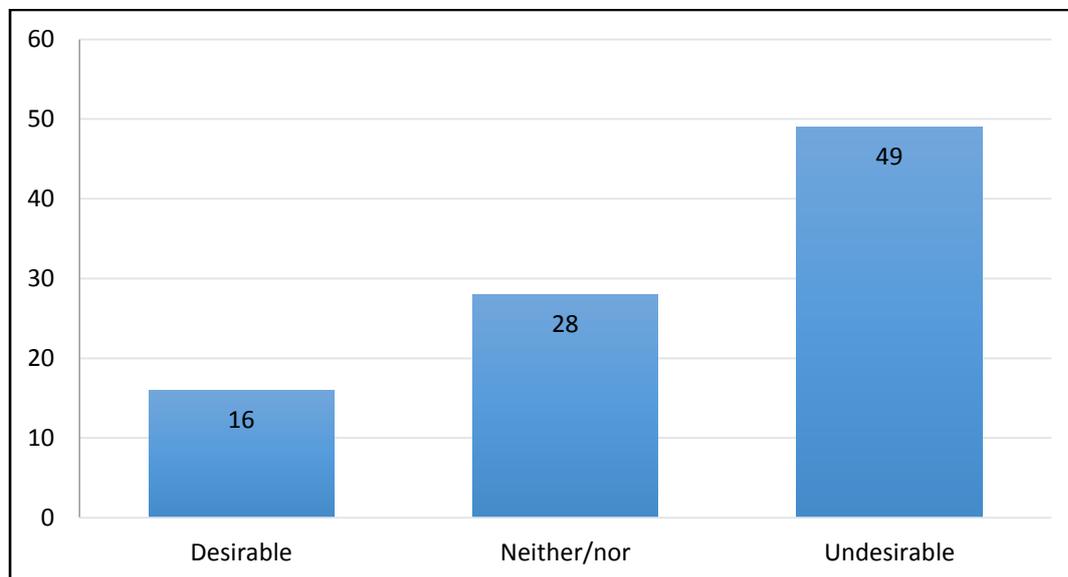


The findings of the study highlighted that the nature reserve does not contribute towards market opportunities in the community. Majority of the respondents indicated that the nature reserve has undesirable effects on market opportunities (52%). And additional 27% indicated that they are not sure and 16% of the respondents indicated that it does create desirable effects for market opportunities because local communities can go and sell their crafts to tourists in the reserve. Nonetheless, this can be challenging due to strict access to the reserve. Market access can be through providing information about customers and successful strategies of marketing products, creating entrepreneurial opportunities and encouraging business partnerships. However, such opportunities were hardly observed in the village or in the nature reserve.

4.5.5. Nature Reserve on Entrepreneurial Opportunities

Nature reserves have a significant role to play in creating entrepreneurial opportunities for local communities so that local people can take advantage of business opportunities such as accommodation provision, transportation services, catering, trade, tour guides and cultural entertainments. The respondents were asked to state whether the nature reserve have effects on entrepreneurial opportunities. Figure 16 below demonstrate the findings of the study.

Figure 16: Effect of the nature reserve on entrepreneurial opportunities



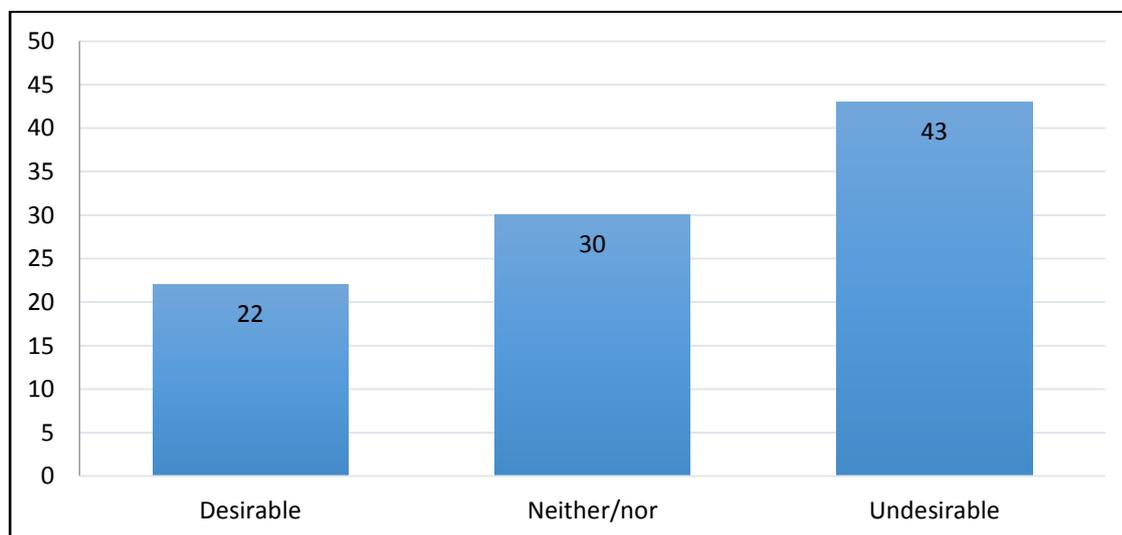
Majority of the respondents indicated that the reserve is undesirable (49%) in creating entrepreneurial opportunities for the local people. Some of the respondents (28%) were not sure if the reserve support emerging entrepreneurs or open an opportunities to those who are interested in starting businesses. A small proportion of the respondents (16%) highlighted that the reserve is desirable in entrepreneurial opportunities by stating that the local communities should take advantage of the village visits and lessons given to learners about recycling to start businesses. However, looking at the educational level of the respondents in figure 4, it can be deduced that the local people lack potential to take advantage of such opportunities. Additionally, the study found that tourists mostly prefer to visit Acornhoek and Hoedspruit Towns rather than the surrounding villages. This could be due to lack of

amenities such as sewages, transportation, clean drinking water and so on. The strict access to the nature reserve and lack of community participation was also found to hinder local communities to identify entrepreneurial opportunities in the reserve.

4.5.6. Timbavati Nature Reserve on Business Partnerships

An open access to the market, injection of outside support to entrepreneurial opportunities and adequate public infrastructure can create an enabling environment to encourage business partnerships. Thus, a nature reserve can play a significant role on encouraging business partnership by supporting entrepreneurship, SMMEs and also allowing local people to take part in the affairs of the reserve so that they can identify business opportunities. Figure 17 below demonstrate the findings of the study derived from the questionnaire on the effects of the nature reserve on business partnerships.

Figure 17: Effect of the nature reserve on business partnerships



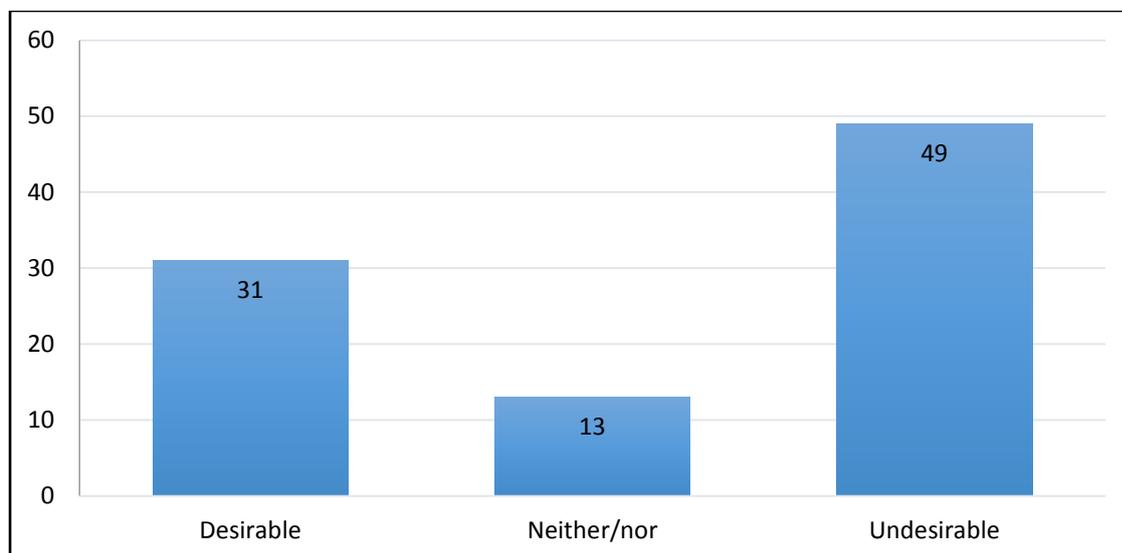
Majority of the respondents (43%) stated that the nature reserve does not encourage business partnerships in the village. However, it was noted from the figure above that 22% of the respondents are of the opinion that the nature reserve support business partnerships in the village by working with the local schools to ensure

continuous learning process. Some of the respondents 30% stated that they were not aware of such effect in the village. The study has found that there is no documentation of any business partnerships between the nature reserve and the village. However, the reserve supports the local schools and also advertises in their website about village visits to encourage local spending but they cater for the preference of the tourists. Furthermore, the study observed that there are very few struggling business ventures in the village which are not related to the nature reserve.

4.5.7. Nature Reserve on Economic Growth/Output of the Village

The purpose of this analysis was to determine whether the nature reserve have an effect towards economic growth/output. Nature reserves ability to create jobs and enhancing market, business and entrepreneurial opportunities holds a promise to an improved economic growth/output. Figure 18 below demonstrate the findings of the study on the effect of the nature reserve towards economic growth.

Figure 18: Effect of the nature reserve on economic growth/output



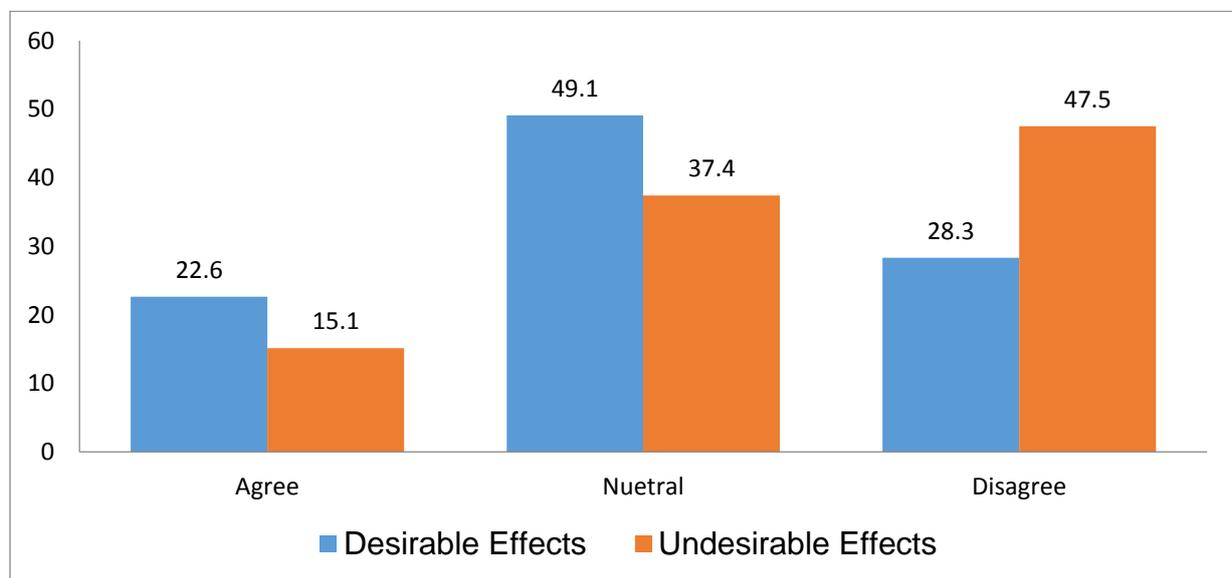
It is noticeable from the above figure that majority of the respondents (49%) are of the opinion that the nature reserve does not have desirable effect towards economic growth. This could be due to the inability of the nature reserve to support income

generating initiatives, entrepreneurship, market opportunities, business partnership and poverty relief programmes in the village. Consequently, could lead to undesirable effects on LED in the village (figure 19). However, 31% of the respondents stated that some households managed to escape poverty trap because of the nature reserve and therefore have contributed towards economic growth. Additional 13% of the respondents were not sure if such effect occurs in the village.

4.5.8. Effects of the Timbavati Nature Reserve on Local Economic Development in Timbavati Village

The rationale for the establishment of a nature reserve has emphasized community benefits and desirable effects towards LED. However, literature has found that nature reserves can have both desirable and undesirable effects towards LED in local communities (*Supra*, 51). The members of Timbavati Village were asked through the use of questionnaires to state whether the nature reserve produce desirable/undesirable effects towards LED in the village. The responses are therefore demonstrated by figure 19 below.

Figure 19: Effects of the nature reserve on local economic development



It is really difficult to make a general judgement about the effects of Timbavati Nature Reserve on LED in Timbavati Village. It is noticeable from the figure 19 above that 26.6% of the respondents agreed that the nature reserve have desirable effects towards LED and the same or close percentage would be expected on the

disagreement that the reserve has desirable effects. However, the figure highlight that 28.3% of the respondents disagreed that the nature reserve produce desirable effects. Similarly, the opinion of respondents on the undesirable effects of the nature reserve show contrast opinions. The respondents who agreed that the nature reserve have undesirable effects on the village constituted 15.1%, however 47.5% disagreed that the nature reserve produce undesirable effects. Nevertheless comparing the percentage (47.5%) of those that disagree with a notion that the reserve produce undesirable effects and those that agree that the nature reserve produce desirable effects (22.6%), there is a huge difference which means that by disagreeing with the opinion that the Timbavati Nature Reserve produce undesirable effects does not mean they agree that it produces desirable effects. Thus, the figure highlight that majority of the respondents were neutral on both the statements.

The study has learned that the respondents have recognised the role played by the nature reserve, however have observed negligence in other components of LED according to their expectations. One member of the village said: "*the nature reserve supports some communities but it is not enough*". The respondents highlighted that the nature reserve contributes towards job-creation and educational awareness in the village but those initiatives only target the learners and few of the village members. The study has found that local communities often complain about the nature reserve discounting poverty relief programmes in the village. However, the General Manager/Warden highlighted that they can only "*do as much*" but there should be a mutual relationship between the local communities and the nature reserve. He further stated that the nature reserve often experience challenges in making desirable contribution towards LED which includes lack of resources, inadequate community participation, poor relationship between local communities and the reserve and restrictive government legislature. The study has found that the nature reserve support several other villages is the Acornhoek and Hoespruit areas and due to resource constraints, the effects made could just be a drop in the ocean. The study has also found that there is lack of socio-economic impact reports in the reserve and therefore even if the reserve makes contribution in the village, majority of the local people will not know of such contributions. Although, yearly publications

about the success stories of the reserve are available in the internet, it was discovered that it is not easily accessible to poor rural communities.

When asking about benefits sharing in the reserve, the General Manager stated that they do not share monetary benefits with the local communities, however they support community projects. This can be caused by the reserve dependency on its own to make an income, as it was found that there is lack of government support towards private conservation practices. The study has also observed that the Timbavati Nature Reserve is situated in two provinces, the one part of the reserve is in Mpumalanga Province and the other part is in Limpopo Province. This was highlighted to cause discrepancies in benefits sharing and commercial hunting in the reserve. One employee of the reserve highlighted that when people want to hunt in the Limpopo side, they have to report to the Limpopo Parks Agency Board and permission to hunt in the Mpumalanga side has to be acquired from the Mpumalanga Parks and Tourism Agency Board. This often results in long paper work and procedures due to the different mandates and jurisdictions between the two park agencies. In the pool of such challenges, majority of the respondents believe that involving the community members in decision-making process, regular visits by the reserve management to the community, teaching community members about nature conservation and creation of more jobs would promote LED in the village and enhance the local economy.

4.6. Conclusion

The findings of the survey conducted at Timbavati Village highlighted that the local communities adjacent to the nature reserve benefit with regard to job-creation and income generation, however those benefits are not equally distributed amongst the households. It was further found that there are no mechanisms designed for community participation, communications and consultation channels between the village and the nature reserve. Findings of this study have shown to be consistent with the findings of several of the literature on the effects of nature conservation on LED. The study concludes that for local communities to support conservation efforts, the nature reserve should allow meaningful local participation in decision-making

process, equitable sharing, management and operation of the reserve. The next chapter titled conclusions and recommendations focuses on the findings of the survey, wherein recommendations will be drawn and discussed.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

The study reported in this dissertation set out to investigate the effects of nature conservation on local economic development in Timbavati, Mpumalanga Province. In order to achieve its purpose, the study focused on the following themes: approaches to nature conservation, the components of LED and the effects of nature conservation on LED. The study went further to explore in depth the problems and challenges associated with nature conservation and LED in the village. At the end of this chapter possible mechanisms are suggested for addressing those challenges. Thus this chapter focuses on the findings of the study, the conclusions and also recommendations for further analysis and to ensure desirable effects of nature conservation towards LED.

5.2. Findings

The study focused on the effects of nature conservation on LED in Timbavati located within the Bushbuckridge Local Municipality, Mpumalanga Province. Nature reserves have a significant role in emphasising community benefits and to have desirable effects towards LED. In that regard the study has found the following:

- From a theoretical perspective, nature conservation is used as a policy instrument to protect natural capital, alleviate poverty, create employment opportunities, enhance economic growth through tourism activities and achieve other components pertinent to LED. However, the study found a mismatch in the vision and the practice of nature conservation to have desirable effects on LED. This is also evident in the approaches to nature conservation adopted in nature reserves. The participatory approach dominates the presentations of the conservation discourse, however the fortress ideologies is pragmatic.

- In the South African context, policies and legislative frameworks are implemented for community-based and co-management approaches, wherein the need to use nature conservation as a key sector with potential to achieve local economic development is clearly stated. The study has found a gap in policy intent and practice of the effects of nature conservation on LED. The study has also discovered that whereas the implementation of conservation management occurs at both the national and provincial levels; implementation of LED straddles these scales into the local, thereby creating discrepancies with the competent authorities to link conservation to LED. It would be farfetched to assert that nature conservation in a democratic South Africa may be operating sub-optimally, notwithstanding the benign approaches and legislative instruments adopted.
- The Timbavati Nature Reserve have adopted community-based approach as one of the approaches to nature conservation, however it was discovered that the nature reserve seem not to adhere to the principles of community-based conservation due to the nature reserve's strict access to natural resources, inadequate participation, poor communication channels with the local communities and lack of community involvement in decision-making.
- The study also discovered that the nature reserve is privately owned which implies that decisions are taken by the centralised board of members with less or no inputs from the local communities. Moreover, the centralised management is associated with the exclusionary approach which was adopted in most protected areas in South Africa. Therefore, the management system in the nature reserve is associated with the traditional exclusionary approach rather the intended collaborative management.
- The study has observed inequalities in the distribution of resources in the different villages. The reserve target local schools and with less effects to the other members of the communities. The study also learned that the nature reserve allows for trophy hunting in the reserve for individuals willing to pay for their hunting activities; however the local communities which are

associated with poverty are not afforded the same opportunity due to their lack of capital to utilize nature resources in the nature reserve.

- Local economic development comprises of various activities which create an enabling environment. The study has observed a dearth of LED activities in Timbavati Village, especially those associated to the nature reserve. The members of the village migrate to towns to undertake on LED activities due to lack of infrastructure and modern amenities in the village, consequently resulting in brain drain.
- The study has found that Timbavati nature reserve has a potential to contribute optimally towards LED. However, it was found that only few people from the village work in the nature reserve. Additionally, the income level of the local people who stated that they work in the nature reserve is low. With regard to the effect of the nature reserve to income generation, the study has observed that there are no economic activities in the village which can derive income for the people, majority of the people are living below the South African poverty line. The reserve also does not have positive effects towards market and entrepreneurial opportunities in the village. Furthermore, the economic growth in the village seemed to be undesirable. The study has finally found that the effects of the nature reserve towards LED in the village are not desirable due to the reserve's failure to address LED components in the village.
- The study further found that for a nature reserve to have desirable effects on LED, there are different issues involved such as educational level, age and gender. The findings of the study highlighted majority of the people in Timbavati Village have low level of education which hinders their ability to take part in entrepreneurial activities, start small business enterprises, realise market potentials and establish business partnerships. Additionally, the study observed that the village is populated by women and youth, therefore does not often take part in economic activities.

5.3. Recommendations

Based on the critical issues raised, the following recommendations are made:

- The South African government should put measures in place to bridge the gap between policy and practice with regard to the effects of nature conservation on LED as to allow nature reserves to have desirable effects towards LED.
- The Timbavati Nature Reserve should develop relationships with local communities based on empowerment, trust, respect, co-operation and partnerships. Additionally, the management of the reserve should introduce participatory processes to enhance effective community participation and involvement in decision-making which will allow communication and consultation channels with the local communities. There has to be improved knowledge sharing and information dissemination in the reserve and the local communities. Some of the respondents of the study complained about the management of the nature reserve not visiting the villages, thus the management should ensure that sequences of community visits are scheduled in order to create trust and friendship with the local people.
- The Timbavati Nature Reserve should move away from adopting the principles of preservation ideologies. Access to natural resources should be allowed in a sustainable manner and the mandate of the reserve should be to promote human welfare rather than to make profit for the management. The local communities should also benefit from the natural capital conserved in the reserve for their livelihoods and also welfare, so that they can support conservation efforts.
- The problem of economic exclusion and inequalities on resource sharing should be dealt with in the nature reserve, all the people in spite of having wealth or not should be treated the same and receive same benefits from the reserve. The projects and opportunities in the nature reserve have to be communicated to all the members of the society. Additionally, the nature

reserve has to ensure that mechanisms for benefit sharing are introduced so that everyone in the community can benefit equally. When recruiting people, the reserve should ensure that people are employed in an equitable and transparent manner. Furthermore, if the nature reserve allows for trophy hunting, the local communities should also be allowed access to utilize the natural resources to avoid illegal harvesting.

- The nature reserve should give an injection to the village with regard to LED activities wherein the environment can allow the local people to take part in LED components and grow the local economy. The reserve should formulate partnerships with the municipality to ensure that they provide infrastructure and basic amenities to the village to attract businesses, tourists, entrepreneurial opportunities and other various economic activities to the village.
- The Timbavati Nature Reserve should promote pro-poor conservation that will focus on poverty alleviation, job-creation and economic growth for the local communities and use nature conservation as a key economic growth alternative in the neighbouring communities.
- The nature reserve should create market opportunities, increase the creation of small businesses, facilitate entrepreneurships and business partnerships, introduce and support income generating activities, create an enabling development environment so as to enhance economic growth and alleviate poverty for the local people.
- For the members of Timbavati Village to be able to capitalise on all the opportunities that are provided by the nature reserve, it is significant that they acquire relevant training, which may include business and skills development. Education and extension training is also essential for the youth and women of Timbavati Village so that they can be capacitated. Therefore, the management of the reserve should ensure that provision is being made for ongoing skills training programmes for the local people and those working in the reserve to improve their skills so as to take advantage of ascending

opportunities. The local communities highlighted that they were not aware of what nature conservation was all about; therefore the nature reserve should ensure workshops are provided to the local communities to learn about nature conservation and the importance of sustainable natural resource management. Furthermore, the nature reserve should support educational programmes such as conservation awareness, educational tours, workshops and training, and conservation education. Social development projects such as adult literacy and awareness camps should also be introduced and supported.

- Finally, the Bushbuckridge Local Municipality should involve the nature reserve and the local communities in their IDP and LED meetings so that they can be able to come up with ideas on how to take advantage of the opportunities in the reserve to make lasting contribution to the local economy. The national government should also integrate the local government in management of protected areas and provide guidelines on how to integrate social, economic and environmental aspects to reach a conservation-development nexus. The national government should also introduce policies to support and fund privately owned nature reserves as they are dominant in rural communities.

5.4. Conclusion

This chapter focused on the findings and recommendations of the study. The study concludes that the effects of nature conservation on LED are undesirable in the local community as unemployment, poverty and economic stagnation persist due to the mismatch between the theory and policy intent of nature conservation and LED. Therefore, this gap should be investigated for future studies, so that the contributing factors of that mismatch can be studied further and recommendations be made to ensure conservation-development nexus. Majority of nature reserves are unable to shift from the traditional exclusionary approach to people-centred approach. That is, nature reserves around the world continue to expand, however people continue to

experience abject poverty, harsh markets, economic exclusion and other various social challenges. Thus, lack of integration, coherence, local ownership, poor community participation and unequal benefits sharing are recorded as some of the challenges hindering nature reserves to make an optimum effect on LED. The study recommends that nature reserves should no longer be treated as islands in local communities but as a strategy to integrate various aspects of the environment and development both theoretically and in practice. To this extent, it is only planning in a coordinated manner that can ensure sustainable benefits and enhance local economic development.

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Appendix A: Households Survey Questionnaire for Timbavati Village, 2014

The questionnaire is designed to survey households for the research project titled: “The Effects of Nature Conservation on Local Economic Development in Timbavati, Mpumalanga Province”

This research project is registered with the Department of Development Planning and Management, University of Limpopo, Turfloop Campus

Please assist by providing information required in this questionnaire. The questionnaire is designed to collect information on the opinions of the people on the effects of nature conservation on local economic development

We Guarantee You Anonymity

Instruction: Mark with an **X** where applicable

Section A: Biographical information of respondents

1. Gender

Male	Female
1	2

2. Age group

18-30	31-40	41-50	51+
1	2	3	4

3. Educational level

Grade 0-7	Grade 8-12	Degree/Diploma	Other
1	2	3	4

If other, specify

4. Sources of income

Related to the nature reserve	Not related to the nature reserve	Other
1	2	3

If other, specify

5. For how long have you been residing in the village?

0-15 years	16-30 years	31-40 years	41 years and above
1	2	3	4

6. Total monthly income of the household (Tick one with an X)

No Income	R1-R1500	R1501- R3500	R3501- R4500	Above R4500
1	2	3	4	5

Section B: Approaches to nature conservation in Timbavati nature reserve

7. What value does this nature reserve serve?

Community human welfare	Both	Wilderness
1	2	3

Explain.....

8. Would you agree/disagree that this nature reserve is successful in serving that value?

Agree	Neutral	Disagree
1	2	3

Explain.....

9. How accessible/inaccessible is the natural capital in the nature reserve to the community?

Accessible	Not Sure	Inaccessible
1	2	3

10. How would you describe the management approach in Timbavati Nature Reserve?

Centralized Management	Collaborative/Partnership Management	Community-driven	None of this
1	2	3	4

11. How would you describe the role of the community in the management and operations of the nature reserve?

Active Participation	Passive Participation	Inactive
1	2	3

12. How satisfied are you with community involvement and participation in the management and operations of this nature reserve?

Satisfied	Neutral	Unsatisfied
1	2	3

13. Describe the decision making processes and operations in which the community has been involved with the nature reserve

None	Choosing community representatives	Budgeting	Selecting nature reserve committee	Managing wildlife
1	2	3	4	5

14. How effective is community participation in the decision making process and operation of the nature reserve?

Effective	Neither No	Ineffective
1	2	3

15. How much ownership of the nature reserve does the community hold?

No Ownership	Partial Ownership	Full Ownership
1	2	3

16. Who leads the nature reserve management and operations?

Reserve management	Community	Traditional Leader	SANPARKS	Government (Municipality)
1	2	3	4	5

17. Would you describe the management and operations of this nature reserve as manifestation of people power?

Yes	Not Sure	No
1	2	3

Explain.....

18. Would you describe the management and operations of this nature reserve as manifestation of popular control?

Yes	Not Sure	No
1	2	3

Explain.....

Section C: Effects of nature conservation on Local Economic Development

19. How would you describe the effect of this nature reserve on job-creation in the community?

Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....

20. How would you describe the effect of this nature reserve on income generation in the community?

21. Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....

22. How would you describe the effect of this nature reserve on local development environment in the community?

Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....

23. How would you describe the effect of this nature reserve on market opportunities in the community?

Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....

24. How would you describe the effect of this nature reserve on entrepreneurship opportunities in the community?

Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....
.....

25. How would you describe the effect of this nature reserve on business partnerships in the community?

Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....
.....

26. How would you describe the effect of this nature reserve on economic growth/output in the community?

Desirable	Neither/Nor	Undesirable
1	2	3

Explain.....
.....

27. How agreeable/disagreeable are the notion that this nature reserve has desirable effects of this nature reserve on local economic development in the community?

Agree	Neutral	Disagree
1	2	3

Explain.....
.....

28. How agreeable/disagreeable are the notion that this nature reserve has undesirable effects of this nature reserve on local economic development in the community?

Agree	Neutral	Disagree
1	2	3

Explain.....

Section D: Recommendations

29. In your opinion, what could be done and by whom to enhance the desirable effects of this nature reserve on local economic development in the community?

.....

30. In your opinion, what could be done and by whom to redress the undesirable effects of this nature reserve on local economic development in the community?

.....

Thank you for your cooperation.



Appendix B: Interview Schedule for the Management of Timbavati Nature Reserve and Key Informants in the community

Master of Development in Planning and Management Research Project

Research Project Title: The Effects of Nature Conservation on Local Economic Development in Timbavati, Mpumalanga Province.

The interview is for research purposes and we would appreciate if you could participate. As part of the nature reserve management and community leadership, you are requested to provide an overview of the effects of this nature reserve on local economic development. We guaranteed anonymity and that the results of the survey will be used for academic purposes only.

1. Would you describe this nature reserve's value as instrumental or intrinsic?
2. Would you say the nature reserve achieved its founding purpose?
3. How would you describe the management approach of the nature reserve?
4. How would you describe the role of the community in the management and operations of the nature reserve?
5. What are the mechanisms that are put in place to facilitate community participation?
6. How effective is community participation in the reserve?
7. How would you describe the effect of this nature reserve on job-creation in the community?
8. How would you describe the effect of this nature reserve on income generation in the community?
9. How would you describe the effect of this nature reserve on local development environment in the community?
10. How would you describe the effect of this nature reserve on market opportunities in the community?
11. How would you describe the effect of this nature reserve on entrepreneurship opportunities in the community?
12. How would you describe the effect of this nature reserve on business partnerships in the community?
13. How would you describe the effect of this nature reserve on economic growth/output in the community?
14. Overall, how would you describe the effect of this nature reserve on local economic development in the community?
15. In your opinion, what could be done and by whom to enhance the desirable effects of this nature reserve on local economic development in the community?
16. In your opinion, what could be done and by whom to redress the undesirable effects of this nature reserve on local economic development in the community?

Thank you for your cooperation

Appendix C: Consent Letter for Data Collection: Mnisi Traditional Council



MNISI TRADITIONAL COUNCIL

REF : 6 / 2 / 2
ENQ : Nemukula .G.
TELL : (079) 5653 036



PRIVATE BAG X1403
HLUVUKANI
1363

DATE: 2014 - 08 - 22

TO WHOM IT MAY CONCERN.

1. This is to confirm that Ms Martina Segage, Lecturer and Master Candidate from the University of Limpopo has been granted permission to survey in Timbavati Nature Reserve.
2. This office has no objection that the above mentioned person get the assistance required.

Chieftaincy



Appendix D: Turnitin Originality Report

Turnitin Originality Report
Dissertation by Martina Segage
From Dissertation (2014_T1_POVERTY + SOCIAL DEVELOPMENT)

- Processed on 27-Jul-2015 13:26 SAST
- ID: 557964945
- Word Count: 47215

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THE EFFECTS OF NATURE CONSERVATION ON LOCAL ECONOMIC DEVELOPMENT IN TIMBAVATI, MPUMALANGA PROVINCE by MARTINA SEGAGE 200907588 RESEARCH DISSERTATION Submitted in fulfilment of the requirements for the degree of MASTER OF DEVELOPMENT IN PLANNING AND MANAGEMENT in the FACULTY OF MANAGEMENT AND LAW (School of Economics and Management) at the UNIVERSITY OF LIMPOPO Supervisor: Prof JP Tsheola 2015 i DECLARATION I declare that the dissertation submitted to the University of Limpopo, for the degree of Masters in Development Planning and Management is my own work and has not previously been submitted at any University or other educational institutions; where use has been made of the work of others, it was acknowledged accordingly in the text.

_____ Initials & Surname (Title) _____ Date
Student Number: _____ ii DEDICATION This dissertation is dedicated to my mother, Francina Segage and my father, Daniel Segage, thank you for the love, support, prayers, and encouragements during my studies. Special gratitude to my mother for the sacrifices she made to ensure that I get better education. If it was not for her courage I would not be here. iii ACKNOWLEDGEMENTS I would like to sincerely forward my gratitude to the following people: ? ? The Almighty Lord for giving me intellect, strength and wisdom to be able to embark on this study. My Supervisor Professor JP Tsheola for the support, guidance, encouragement and patience throughout the study, I really enjoyed the learning process. ? ? Mr TS Madzivhandila for the mentorship and encouragement during the course of the study My father, my mother, my sisters, brothers, nieces and nephews for their love, support, encouragement, your understanding and for tolerating my absence while undertaking the study. ? ? Mr Joel Sithole, Mr Mushwane and Mr Mhaleni; I am extremely indebted to all the help, support, and most of all your friendships. The Warden of the Timbavati Private Nature Reserve, Jacques Brits, for permission to conduct the research, all his support and assistance during the project. ? ? ? ? ? To the employees of Timbavati Foundation, I appreciate your support and kindness you showed. The residents of Timbavati Village for allowing me to conduct this study and your cooperation. The tribal authority of Timbavati Village for granting me permission to conduct the study and for their contribution in the research. Mr Khosa of Bushbuckridge Local Municipality, I am grateful for the information and support during the project. My beloved fellow students and friends for their love, support and being a shoulder to cry on while undertaking the study. Lastly, special appreciation goes to the University of Limpopo for the financial support during the field trips for the completion of this research project, I am really grateful. iv ABSTRACT The rationale for the establishment of nature reserves and protected areas has emphasized community benefits in terms of job and market opportunities, generation of income, facilitation of entrepreneurship and business, and the creation of an