



**Assessing the influence of natural resource conservation on the livelihoods of
KwaNibela, KwaZulu-Natal**

By

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A dissertation submitted in fulfilment of the academic requirements for the

Master of Arts degree in Geography

in the

Department of Geography and Environmental Studies

Faculty of Science and Agriculture

at the

University of Zululand, KwaDlangezwa

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February 2020

ORIGINALITY DECLARATION

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DEDICATION

To my mother Nonhlanla Nkala, she is the reason I work hard and strive to succeed in life. My father, Sipho Maseko and grandfather, Petrus Maseko for supporting me throughout the journey. Without their support it would not have been possible to finish this study.

ACKNOWLEDGEMENTS

I would like to express my gratitude, appreciation and acknowledgements to the following people who have significantly contributed to the completion of my research project:

- Dr. I. Moyo for being there from the beginning to the end of this journey and for motivating and inspiring me to work hard and excel.
- The staff members in the Department of Geography and Environmental Studies, University of Zululand, for their contributions to this study.
- The officials of iSimangaliso Wetland Park for allowing me to interview them despite their busy schedules.
- The local people of KwaNibela for sacrificing their time and allowing me to interview them and for sharing their knowledge on the research topic.

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ABSTRACT

The purpose of this study was to assess the influence of natural resource conservation on the livelihoods of the people of KwaNibela, KwaZulu-Natal (KZN). The objectives of this study were to (a) identify the natural resource conservation initiatives and programmes implemented by iSimangaliso Wetland Park, (b) evaluate the extent to which the community of KwaNibela benefited from the natural resources conserved by iSimangaliso Wetland Park (c) explore the perceptions and attitudes of indigenous people towards iSimangaliso Wetland Park conservation strategies. This study adopted a mixed methods approach in order to understand the perceptions of people concerning natural resource conservation and its influence on their livelihoods. The results of the study indicated that the conservation strategy utilised by iSimangaliso Wetland Park is co-management, which means the park collaborates with land claimants in the area in order to preserve natural resources. However, a significant part of the community of KwaNibela did not feel fully involved in conservation since they do not benefit from it and they also felt that they were not fully consulted. The results further revealed that natural resource conservation adversely affects some of the people's livelihoods through limited access to natural resources, such as land for agriculture, banning of hunting activities and predation of livestock by wild animals that escape from the park. These suggests that, although conservation is vital for the preservation of natural resources, there is a need for effective collaborative approaches which should also benefit the community and make them an integral part of conservation programmes. Differently stated, the co-management approaches which are currently followed are not effective and should evolve beyond the level of tokenism. This would ensure that people are fully involved and their livelihoods are enhanced through clearer and fairer benefit sharing arrangements.

Keywords: Community, livelihoods, natural resource conservation, KwaNibela

CHAPTER 1: INTRODUCTION AND ORIENTATION TO THE STUDY

1.1 Introduction

This chapter gives a brief introduction and overview of the study, it consists of a detailed background and the problem statement of the study. It also details the aim and objectives of this study and explains why this study is significant.

1.2 Background of the study

The creation of Protected Areas is seen by some authors as a strategy to protect biodiversity, and the environment, conserve nature and to prevent the over-exploitation of natural resources (Soliku and Schraml, 2018). Protected Areas are defined by the International Union for Conservation (IUCN) as “clearly defined geographical spaces which are dedicated and managed through legal or other effective means to achieve long term conservation of nature with its associated ecosystem services and cultural values” (Soliku and Schraml, 2018). The objectives for the establishment of protected areas differs across different regions. In America land is usually set aside by government, communities, rulers and other stakeholders for its cultural value, religious reasons, and aesthetic beauty and for the preservation of natural resources (Gobalforestatlas.yale.edu.2019). In Africa, the driving force behind the establishment of protected areas and game parks is to safeguard the beautiful scenery and attract tourists, protect the landscapes and prevent the over-exploitation of valuable resource (Soliku and Schraml, 2018).

In Tanzania it has been discovered that in order for conservation to be initiated, information based on changes in the access and use of natural resources by indigenous communities is usually required. Such changes may impose negative impacts on local livelihoods through significant costs such as lack of access to arable land for subsistence agriculture, crop damage and predation of livestock by wildlife which escapes from protected areas (Zafra-Calvo and Moreno-Peñaranda, 2018). The common challenge faced by conservation initiatives is identifying conservation strategies that can preserve natural resources and biodiversity while minimizing limitations on natural resource and negative impacts on livelihoods (Zafra-calvo and Moreno-Peñaranda, 2018). Studies such as that of Mizrahi et al (2019) have

discovered that protected areas which place restrictions on natural resources may impose negative impacts on households which rely on natural resources as their main source of livelihood, unless alternative livelihood activities are provided. In South Africa the study by Fairer-Wessels (2017) established that the failure of protected areas in transforming the socio-economic situation of poor marginalized rural communities is a sign that indigenous communities are losing their power, control and access to natural resources which they depend on to sustain a living.

The uneven participation in the governance of protected areas may lead to elite capture which may cause an increase in the inequitable sharing of Protected Areas' related benefits (Ward et al., 2017). The positive impacts which may be associated with Protected Areas on livelihoods is allowing a sustainable use of natural resources, reducing inequalities and the provision of cultural and livelihood benefits (Ward et al., 2017). Other positive impacts of conservation on livelihoods may be employment creation and trading opportunities which may be created through tourism expenditure (Zafra-calvo and Moreno-Peñaranda, 2018). Protected Areas play a major role in preventing the over exploitation of natural resources but it also mandatory that they empower local people in the process, in order to build a mutual, beneficial relationship with local communities and motivate them to support their conservation efforts (Diawuo et al., 2015). Thus this research aims to assess the impact of natural resource conservation on livelihoods in KwaNibela, in north-eastern KwaZulu-Natal (KZN).

1.3 Problem Statement

Many studies (see e.g. Fair Wessels 2017, Cavanagh and Benjaminsen, 2015, Riehl et al., 2015) have been conducted in the context of South Africa depicting the impact of natural resource conservation on livelihoods. Dabo (2017) asserts that there is lack of sufficient benefits from natural resource conservation strategies to achieve positive impacts on livelihoods. This is due to the various ways through which state officials take advantage of the profits generated from natural resource conservation at the expense of poor communities residing along Protected Areas. The study by Vedeld et al., (2016) state that the fundamental objective of positive contribution to livelihoods by Protected Areas is to improve the quality of life for all, especially the poor and marginalized. However, exclusionary natural resource conservation strategies are a

barrier to achieving such objectives. There is insufficient literature on case studies which assess the influence of natural resource conservation on livelihoods in the context of KwaNibela. This study aims to close the gap by assessing the influence of iSimangaliso Wetland Park natural resource conservation strategies on livelihoods in KwaNibela through the identification of natural resource programmes implemented by the park and assessing the effect of these programmes on local economic livelihoods in the community.

1.4 Aim and Objectives

1.4.1 Aim

To assess the influence of iSimangaliso Wetland Park natural resource conservation initiatives and programmes on local livelihoods in KwaNibela.

1.4.2 Objectives

The specific objectives of the study are to:

- a) Identify the natural resource conservation initiatives and programmes implemented by iSimangaliso Wetland Park.
- b) Evaluate the extent to which the community of KwaNibela benefits from the natural resources conserved by iSimangaliso Wetland Park
- c) Explore the perceptions and attitudes of indigenous people towards iSimangaliso Wetland Park conservation strategies at KwaNibela.

1.5 Research questions

- a) What are the natural resource conservation initiatives and programmes that are implemented by the iSimangaliso Wetland Park.
- b) To what extent does the community of KwaNibela benefit from the natural resources conserved by iSimangaliso
- c) What are the perceptions of indigenous people towards the iSimangaliso Wetland Park conservation strategies in KwaNibela

1.6 Significance of the study

Since this study assesses the impact of natural resource conservation on livelihoods, it will help discover how people who reside in or near protected areas are affected by natural resource conservation in terms of their livelihood well-being. Since this study also explores the perceptions and attitudes of the community of KwaNibela towards natural resource conservation, the findings and recommendations of this study may be useful in assisting policy makers and natural resource conservation agencies to formulate laws and policies that will not have a negative impact on people's livelihoods.

1.7 Outline of the study

The study is composed of seven chapters as follows; Chapter one gives a brief overview of the entire research project, including the problem statement, aims and objectives and the significance of the study. It also gives an outline of chapters included in this research project. Chapter two of this study discusses the conceptual and theoretical framework of this study. The concepts which guide this study are protected areas, natural resource conservation and livelihoods. The theoretical frameworks which guide this study are co-management and the Sustainable Livelihood Approach. The principle of co-management emphasises that co-management programmes are to be established within territorial boundaries which are appropriate within the cultural context of that community or village. Chapter three reviews literature which is in line with the objectives of this study. Chapter four provides a detailed description of the study area, which is KwaNibela, KZN and Chapter five discusses the methodology adopted in the study, which is the qualitative methodology. Chapter six is an analysis and discussion of the results and Chapter seven provides a conclusion of and also suggests recommendations based on the findings of the study.

1.8 Conclusion

This chapter has given a brief overview of the study, it has also outlined the statement of the problem, the aim and objectives of the study. It has also explained why the study is significant and has given a detailed outline of the study. The next chapter discusses the conceptual and theoretical frameworks of the study.

CHAPTER 2: CONCEPTUAL AND THEORETICAL FRAMEWORKS

2.1 Introduction

This chapter focuses on the conceptual and theoretical frameworks adopted by this study. The first part of the study describes the concepts that are employed in the research and the second part discusses the theories which are co-management and the sustainable livelihoods approach and how these are linked to this study.

2.2 Conceptual Framework

The concepts that provide a foundation for this study are as follows:

2.2.1 Protected Areas

Protected Areas (PAs), can be described as regions of land kept specifically for conserving and maintaining biodiversity and natural resources in order for them to be managed and conserved legally through common traditional methods (Mohseni et al., 2017). They are designated to ensure sustainability (Mohseni et al., 2017). PAs are vital for preserving biodiversity in the crisis of global extinction of species and the loss of natural capacity for sustaining the human habitat and the maintenance of ecological balance. In this study, the term PA, will be used to refer to the Protected Area of iSimangaliso Wetland Park in which parts of the study area (KwaNibela) are located. Granted that, PAs are mainly responsible for natural resource conservation and management, this research assesses the impact of this on the livelihoods of people in KwaNibela and this addresses the third objective of this study which is to assess the impact of natural resource conservation programs on the livelihoods of the community of KwaNibela.

2.2.2 Natural Resource Conservation

Natural resource conservation can be described as the maintenance, protection and management of natural resources in the ecosphere, water bodies, habitats and biodiversity (Diawuo et al., 2015). It encourages the wise use of the earth's resources for the survival of all living organisms, by all humanity for the benefit of future generations. Natural resource conservation is significant, since the depletion of natural resources will cause extinction not only of the exploited resource but also those who depend on it (Diawuo et al., 2015). In this study, natural resource conservation refers

to the conservation strategies which are adopted by iSimangaliso Wetland Park in order to conserve and protect natural resources from overexploitation and depletion. The implications of this on this study, is on assessing how the conservation strategies adopted by iSimangaliso Wetland Park affect the livelihoods of people in KwaNibela. This addresses the first objective of this study which is to identify the natural resource conservation initiatives and programmes implemented by iSimangaliso Wetland Park.

2.2.3 Livelihoods

A livelihood refers to capabilities, assets and activities which are vital in making and maintaining a living (Hua et al., 2017). People adapt to different livelihood strategies which are mostly determined by their livelihood assets (Pour et al., 2018). Livelihood assets are significant in enabling households to make a living through their adopted livelihood strategies and achieve their livelihood goals (Pour et al., 2018). A livelihood is multifaceted and may be subject to risks, hazards and opportunities (Mutunga 2012). Thus, it must be resilient to shocks and stresses (Tanle, 2014). Livelihoods can also be regarded as an interface of ecosystem goods and services that give meaning to life and support household needs. They are not only the basis for income generation and food security through significant assets but also the foundation for household well-being (Oestricheir et al., 2014). In this study, the term livelihoods will be used to refer to the activities which involve the harvesting of natural resources that the community of KwaNibela are involved in to sustain their living.

2.3 Theoretical Framework

This study is guided by two theories which are co-management and the Sustainable Livelihood Approach. The adopted theories are further discussed below.

2.3.1 Co-management

Co-management is a co-operative process which incorporates the principles of collaborative problem solving and sustainable environmental management (Miles, 2013). It is believed to be a platform to deal with natural resource change and control the depletion of natural resources. State officials engage with the community to develop rules for conserving natural resources. Co-management organisations seek to decentralise decision making power and accommodate local resource users. It

encourages power sharing and partnerships between resource users and government agencies (Acheson, 2013). It is a new kind of natural resource governance structure with a hierarchy that has different actors that must coordinate in order to be effective (Acheson, 2013). In co-management, social actors negotiate, and clearly define amongst themselves fair sharing of responsibilities and benefits over a territory of natural resources (Nurse-Bray et al., 2018). This is significant to this study since the second objective is to assess whether the community of KwaNibela benefits from the natural resources conserved by the iSimangaliso Wetland Park in the area. Co-management boards are set to manage access and use of natural resources (Natcher, 2013), they may be established for crown owned national and conservation parks. The membership of a co-management board for a Protected Area is established through the agreement between the minister and traditional chiefs (Leaman, 2013). The general structure adopted by a co-management programme is illustrated in Figure 2.1 below.

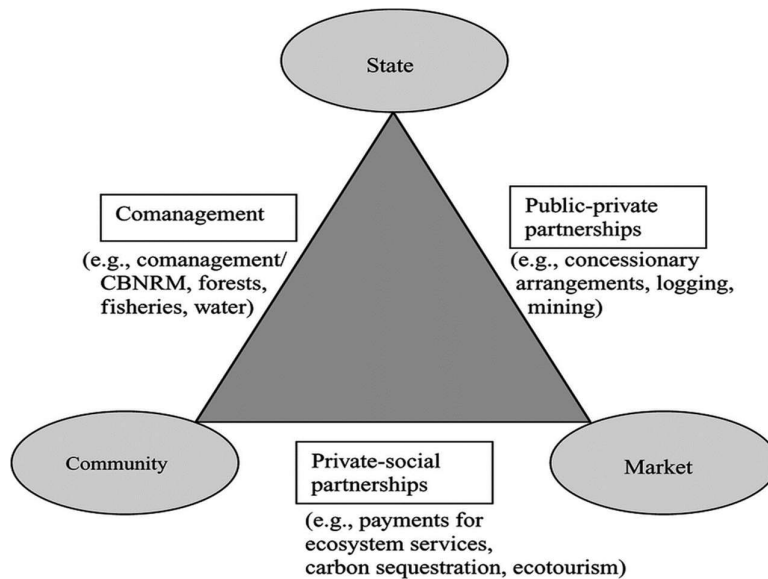


Figure 2.1: The Co-management approach

Source: The Co-management approach (Lemos, Agrawal. 2006 p. 310)

The triangle which connects the state, market and community is regarded as the core of co-management. It includes the cooperation of different agencies which are expected to work in the following sequence; co-management (cooperation between state agencies and communities), public private partnerships (between state agencies

and the market actors) and private-social partnerships (between market actors and the community) as illustrated in Figure 2.1. (Lemos and Agrawal, 2006). As a result, co-management has been regarded as the basic approach for conservation programmes. When such an approach has been adopted, failure occurs only when there is communication break down between stakeholders of a co-management board (Von Essen and Hansen, 2015). Benefits from co-management rely on the co-ordination of efforts from all interested parties involved, it facilitates the planning and co-ordination of natural resource rules and regulations through the collection and sharing of information which is vital for collaborative decision making (Von Essen and Hansen, 2015).

Co-management may be used as a tool to achieve social inclusivity and improve local livelihoods thus strengthening social equity in order to promote sustainability (Wynberg et al., 2014). Its emphasis is on sharing benefits, rights and responsibilities among stakeholders and resource users (Wynberg et al., 2014). Co-management also integrates scientific methods of natural resource management with features of collaborative management to deal effectively with the complex problems associated with natural resource management (Beratan, 2014).

There are many principles of co-management (Levine and Richmond, 2015), but this study shall focus on one. This principle concerns the congruence between appropriation and provision rules and local conditions. This stresses that co-management programmes are to be established within territorial boundaries which are appropriate within the cultural context of that community or village. Thus, social institutions are to be based at village level and the village authority is to be respected by both community members and territorial government (Levine and Richmond, 2015). Village councils exist as social institutions which are meant to engage in the management of decision making and the enforcement of rules and also act as a medium of communication between the government and community (Levine and Richmond, 2015). It can also be influenced by the socio-political context of the community. It also states that the appropriation rules may restrict the time, place, technology and quantity of resource units and is related to local conditions which require labour, material or money (Zhu et al., 2014).

It further emphasises that benefits received by users of the conserved natural resources are proportional to the inputs required for natural resource management and that there may be important considerations of equity and social justice in the exploitation of natural resources. Thus, co-management of natural resources is expected to increase the benefits of natural resource conservation to local people in order to achieve poverty alleviation and equitable income distribution (Tyson, 2017). This principle is linked to the second objective of the study which is to assess the impact of natural resource conservation on livelihoods. In addition, this principle is also linked to the third objective of this study, which is to explore the perceptions and attitudes of the indigenous people of KwaNibela towards the natural conservation programmes adopted by iSimangaliso Wetland Park. The responses from people will indicate whether local people are given a chance to participate in the governing of local natural resources.

2.3.2 Benefits of co-management

It is assumed that co-management allows parties to build capacity for problem solving in order to come up with sustainable conservation solutions with the community (Sinner et al., 2016). It also helps make more effective solutions when dealing with the ecosystem and human wellbeing and thus, it improves the attempt to achieve sustainable development (Plummer et al., 2017). Co-management is also considered to be an approach that can improve natural resource conservation programmes by making them more reflective of local conditions, this may in turn inspire communities to comply with conservation rules (Cinner et al., 2012). Thus, this study shall further examine if the conservation initiatives and programmes reflect the local conditions of the community of KwaNibela and whether the community benefits from these programmes.

It is assumed that co-management also assists in achieving economic progression and may improve social development. Also, it may sustain the environment and enhance social justice (Zhu et al., 2014). Some scholars hold a view that, co-management may also assist in enhancing community ownership over local natural resources and assist in utilizing local, better conservation methods and solutions, (Nurse-Bray et al., 2018). They also hold a view that it may strengthen the capacity of local communities to manage their own resources and help resolve conflicts over

natural resource conservation (Zhu et al., 2014). In this regard, this study shall also examine if the community of KwaNibela is allowed to participate in the conservation programmes implemented by iSimangaliso Wetland Park.

It is also thought that co-management makes it is possible to incorporate both traditional and scientific approaches in natural resource conservation if indigenous communities are allowed to participate. In some cases, co-management may also promote equity and social justice in natural resource conservation by encouraging participatory training to local people (Conservation.org, 2019). This is relevant to this study since one of the objectives of this study is to investigate whether the community of KwaNibela participates and benefits from the natural conservation initiatives of iSimangaliso Wetland Park.

2.3.3 Sustainable Livelihood Approach

The sustainable Livelihood Approach (SLA) is regarded as an integrated set of policies used together with decision making tools that contribute to the livelihoods of people by making them more adaptive and resistant to shocks (Njagi, 2005). It is a holistic framework which may be used to understand the livelihoods of communities in an attempt to alleviate poverty through diversifying livelihoods. This is achieved by seeking to holistically and realistically understand peoples' strengths (assets) and how these are converted into livelihood outcomes (Ferrol-schulte et al., 2013). It forces its users to think holistically about the basis of livelihoods when analysing their strength and weaknesses (Moser et al., 2001). This is in line with this study since one of its objectives is to understand the livelihoods of people in KwaNibela and how natural resource conservation affects them.

The SLA further defines livelihoods as sustainable when they can cope with and recover from stresses and shocks at the same time maintaining capital and assets without undermining the natural resource base (Parmawati et al., 2018). It considers sustainability in terms of available capital (natural, human, social, physical and financial) represented in form of a pentagon in Figure 2.2, and how these are vulnerable to trends and shocks (Morse et al., 2009). The natural capital refers to natural resources such as land, water and livestock. This capital is a major determinant in food and income production. These natural resources should be accessed and

consumed in a manner that allows them to regenerate over time (Parmawati et al., 2018).

However, this capital is vulnerable to shocks such as natural disasters which may affect work and social conditions (Parmawati et al., 2018). In rural communities, the critical asset for the poor is land for agriculture while in urban areas, it is land for housing. Human capital on the other hand, is concerned with ensuring that people are equipped with skill, knowledge and the ability to work. It is also concerned with the health and wellbeing of people so that, they are able to pursue work and achieve livelihood outcomes. It is also considered a supporting factor for other assets (Parmawati et al., 2018).

The financial capital comes from the conversion of production opportunities into cash. It is meant to support jobs and livelihoods. Cash deposits or reserves in the form of livestock and income are regarded as the main source of the financial capital (Parmawati et al., 2018). The physical capital refers to equipment or non-moving infrastructure. This capital is important for the improvement in the standard of living for the communities. It is important for the daily activities of rural communities such as irrigation, transportation and access to media.

It also sustains jobs, lack of physical capital in a community may hinder the access to healthcare and education (Parmawati et al., 2018). Social capital refers to the unity of people at household or community level towards achieving a common goal (Parmawati et al., 2018). The well connectedness of a community can play a major role in times of crisis, through the mutual support given to each other by community members during hard times (Parmawati et al., 2018). It also refers to the norms, obligations and trust embedded in social relations. This capital enables community members to achieve both their individual and community objectives (Moser et al., 2001).

This study shall focus on two capitals, which are the natural and financial capital. This is because the livelihoods of rural people in KwaNibela are mostly dependent on natural resources such as land for agriculture, water for irrigation and livestock and other plant species for their medicinal value. However, access to such resources in KwaNibela is under the management of the iSimangaliso Wetland Park. Thus this study shall assess the impact of the natural conservation programmes of iSimangaliso Wetland Park on the livelihoods of people in KwaNibela.

The other capital this study shall focus on is the financial capital, through the jobs or employment opportunities which may be created by iSimangaliso Wetland Park and income made by community members of KwaNibela through tourism expenditure. Although the structure of the SLA is built around the capitals mentioned above, it requires the understanding of other areas. These include the vulnerability context in which assets exist (the shocks and trends affecting livelihoods) as well organisational structures (organisations from government to private sector), and pressures (policy and legislation which governs natural resource use which defines people's livelihood options). The structures and process determine who gains access to any type of capital and convert them into livelihood outcomes as illustrated in Figure 2.2. (Moser et al., 2001).

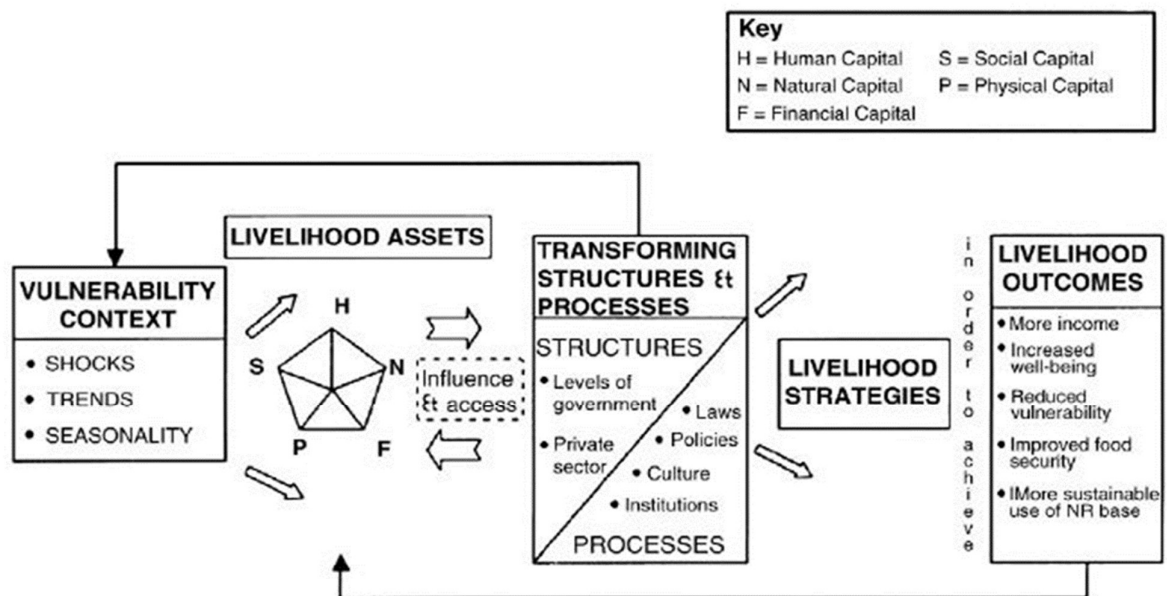


Figure 2.2: The Sustainable Livelihoods Framework

Source: The Sustainable Livelihood Approach (Source: Moser et al., 2001 p 72).

2.4 Conclusion

This chapter has discussed the two theories which has been adopted by this study which are co-management and the Sustainable Livelihood Approach (SLA). Co-management has been described as a decentralized approach to decision making which includes the state, community and market and the SLA has been described as a framework which can be used to discover the strengths and weaknesses of

livelihoods through the five capitals, namely financial, social, natural, physical and human capital. These two theories shall be used as lenses to assess the impact of natural resource conservation on the livelihoods of KwaNibela. The next chapter discusses the literature review in which this study is situated.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This chapter reviews literature on natural resource conservation and its impact on livelihoods. It is divided into four themes which are natural resource conservation initiatives and programmes, natural resource conservation and benefits, and lastly the perception of indigenous communities and people towards natural resource conservation initiatives and programmes.

3.2 Overview of Natural Resource Conservation

Natural resource conservation aims to protect and preserve natural resources that are vulnerable to over-exploitation, in an attempt to sustain them for future use and for the benefit of future generations (Biggs et al., 2019). It is crucial for the maintenance of natural capital and in assuring environmental and ecological sustainability. It encourages mankind to conserve the natural resources and discourages their degradation and over-exploitation in pursuit of economic gains (Emejuru and Dike, 2017). It can be implemented across regions and national boundaries in order to ensure the preservation of these ecologically valuable natural assets and biodiversity (Bixler et al., 2016). The conservation of natural resources has proven to be ecologically effective at protecting and in reducing the degradation of ecosystems, this is considered beneficial to mankind since humans depend on the ecosystem for their survival (Bennet and Dearden, 2014).

In 2007, globally natural resource conservation programmes and initiatives were estimated to have generated approximately 5.7 million dollars, of which 52% came from the tourism sector (Suich, 2010). However natural resource conservation programmes may have a negative impact on the livelihood systems employed by residents in rural areas, since the enclosure of natural resources in the name of conservation may limit indigenous communities' access to natural resources. As natural resource conservation initiatives continue to grow in scope and size, they may face challenges in strengthening and maintaining collaboration with local communities in achieving their conservation objectives due to conflicting interests which may develop over time (Bixler et al., 2016). When conservation initiatives are subject to

economic or political interests they may adopt conservation policies that may impact on local people's livelihoods (Bixler et al., 2016).

In Africa for the past 20 years, local natural resource conservation programmes have been a rural development strategy aimed at economically emancipating the rural economy at the same time conserving the environment (Saunders, 2014). These natural resource conservation programmes seek to address rural poverty by empowering local communities to manage and benefit from their resources through the devolution of power to local resource users (Guenha, 2010). Such programmes mostly seek to give people more control over resources that are important for their livelihoods.

However, such programmes may have disappointing outcomes in their implementation when indigenous people do not agree to the terms of natural resource usage which are presented by conservation agencies (Saunders, 2014). Other studies conducted in Africa have shown that developing countries have not been successful in managing and protecting natural resources that they have nationalized (Mogende and Kolaweke, 2016). This is linked to this study since it seeks to assess how natural resource conservation programmes affect the marginalized poor rural community of KwaNibela, KZN. Thus the aim of this study is to assess the impact of natural resource conservation on livelihoods in the area of KwaNibela which is located next to the World Heritage site known as iSimangaliso Wetland Park.

3.3 Natural resource initiatives and programmes

Natural resource conservation programmes such as the Working for Wetlands, which is a joint initiative of the Departments of Environmental Affairs (DEA), Water and Sanitation (DWS) previously known as Water Affairs (DWA) and Agriculture, Forestry and Fisheries (DAFF) were established with the main objective of conserving sensitive wetlands across South Africa at the same time maximizing employment creation and monetary benefits to local communities (Environment.gov.za, 2019). Such programmes can achieve success through the establishment of Protected Areas that consider the impact of natural resource conservation on the livelihoods of people. This is significant for the sustainability and effectiveness of natural resource conservation

programmes. Conservation programmes that work with local communities are likely to improve the effectiveness of protected areas and meet conservation objectives (Chechina et al., 2018). This study seeks to assess if the Isimangaliso Wetland Park conservation programmes works hand in hand with the community of KwaNibela in an attempt to achieve conservation objectives.

The successful implementation of conservation programmes requires the integration of social processes, political viability and full support of the communities it affects. The participation of local people in conservation programmes means that people are closely involved in the economic, social, cultural and political processes that affect their lives. This participation is regarded as an important element in human development (Deisser and Njunguna, 2016). The problem associated with conservation programmes is that in most cases they are carried out by governmental and non-government organizations who do not consider the socio-cultural systems that participated in the creation of the conserved areas. Thus communities, whose cultural identities contribute to conservation are not taken into account and the role of culture given little attention. In reality economic, physical and cultural identity are the core elements which can drive a conservation programme into a success (Deisser and Njunguna, 2016).

Armondo (2010) argues that non-governmental conservation programmes promote natural resource conservation as a means to generate income from natural resources as most people in Africa are still stricken by poverty. In Kenya, land and other natural resources were regarded as common property, meaning access to natural resources was open to all members of a specific community and decisions made with regards to natural resources were based on communal ethics, norms and beliefs. However, it has been noted that natural resources are declining at an alarming rate yet a high percentage of the country's population rely on natural resources for their livelihood (Birgen, 2015). Thus natural resource conservation programmes are considered significant in combatting the depletion of natural resources in Kenya. This study will further assess if the conservation programmes of iSimangaliso Wetland Park allow the community of KwaNibela to participate in their conservation efforts and have a voice when it comes to the decision making processes with regards to natural resource conservation.

There have been implications on how to achieve a balance between policy and the self-governing of resources by local communities, which may make it hard for conservation programmes to achieve their objectives. Many studies done in Africa show that there is increased lack of decision making capacity at local level, which means that local communities may have limited input with regards to decisions made regarding natural resources conserved in their area (Saunders, 2014). Hansen et al., (2015) further argues that the enclosure of natural resources through conservation programmes may redefine the conditions of access and control of natural resources for indigenous communities and that people residing in places where conservation programmes are being implemented may experience negative impacts on their livelihoods in the name of conservation.

A primary example of this scenario may be the loss of access to natural resources and land for subsistence agriculture. In Uganda policies based on the management of protected areas have accrued substantial costs and reduced benefits for local people due to resource enclosure and reduced benefits for local people (Nakakaawa et al., 2015). Although implementing the enclosure of land and forests is regarded as one of the best resource conservation strategies to prevent the degradation and exploitation of natural resources, it is argued that enclosure as a strategy is often used by policymakers to justify their control over natural resources and benefit at the cost of the majority (Hansen et al., 2015).

Although natural resource conservation programmes across the world are trying to adopt a participatory approach to conservation, in the United States many current conservation policies adopt the idea of the appointed conservation management team as being the primary owner of the land and natural resources that are being conserved. This ultimately gives them power to shape the agendas and set the objectives of natural resource conservation initiatives and programmes, which makes it hard for indigenous people to contest these policies in an attempt to secure their livelihood (Bixler et al., 2016).

In KwaNobela KZN, the iSimangaliso Wetland Park manages and conserves natural resources in the area on behalf of the state. Its major objective is to achieve development by using ecotourism to foster local economic development (Hansen et

al., 2015), thus this study seeks to assess the impact of natural conservation programmes adopted by iSimangaliso Wetland Park and their impact on the livelihoods of indigenous people in KwaNibela. The people of KwaNibela have critiqued the fencing of natural resources which in turn limits their access to land for grazing their livestock and agricultural practises (Hansen et al., 2015). This restricts their access to a significant part of their livelihood especially in health and food security.

3.4 Natural resource conservation and livelihood benefits.

Natural resource conservation is recognized to be interconnected with the socio-economic well-being of local communities (Riehl et al., 2015). Natural resources may serve as a source of income and livelihood for communities, however the increase in the human population also increases the rate of natural resource extraction which may lead to their overexploitation and degradation. This has led to protected areas being established across the world in an attempt to conserve natural resources, ecosystems and biodiversity. (Lamsal et al., 2015). The restriction of people's access to natural resources that have been sustaining their livelihoods for years can be justified from a conservation point of view but conflict may arise when the livelihoods of indigenous people are negatively affected (Lamsal et al., 2015). Currently there are no frameworks to monitor and evaluate benefits at local community and household level, which makes it hard to assess how local communities benefit from natural resource conservation (Guenha, 2010).

The different stakeholders that are involved in natural resource conservation may have different views when it comes to access to natural resources and the sharing of benefits from natural resources (Koehler-Rollefson and Meyer, 2014). One of the ways in which communities can benefit through natural resource conservation is through the creation of jobs and income earned through eco-tourism (Suich, 2010). It has also been noted that emphasizing on the disbursement of economic benefits and the development of local people is a major determinant in the success of any conservation programme. Benefits from conservation may motivate local people to participate in conservation. In Africa, some poor households also get to generate

income from selling handicrafts made from their local natural resources as souvenirs to tourists (Guenha, 2010).

In South Africa, efforts to combat the overexploitation of natural resources has resulted in institutional arrangements that favoured colonialists and labelled indigenous people as poachers. This puts a question mark on how people will benefit from conservation if they are being labelled as poachers (Wilson 2015). This literature is significant to this study since it gives a broader understanding on how indigenous people may benefit from natural resources which are conserved through conservation initiatives and protected areas. Thus this will further assist to address the second objective which seeks to assess if the community of KwaNibela KZN benefits from the natural resources and the conservation initiatives which were established by the iSimangaliso Wetland Park.

In rural areas the absence of jobs and sources of income causes rural communities to remain dependent on natural resources for their livelihood. Thus, the implementation of strict conservation laws in Protected Areas may put a strain on the livelihoods and social wellbeing of people since they may benefit a little or receive no benefits from conservation at all (Chechina et al., 2018). It is believed that if communities are allowed to lead conservation, they can be able to implement their indigenous conservation skills which can ultimately lead to ecological and economic benefits. It has also been noted that natural resource conservation programmes which facilitate the equal distribution of benefits from conservation can contribute a lot to the development of rural livelihoods (Chechina et al., 2018).

Protected Areas that do not require intensive development but are accessible for eco-tourism ventures and where livelihoods do not require heavy extraction of natural resources in order to be sustained have been found to be beneficial to people (Chechina et al., 2018). On the other hand, communities that rely heavily on the extraction of natural resources, may experience increased poverty due to strict conservation law. The integration of livelihood needs and conservation helps ensure that people's livelihoods are considered in conservation and that their needs are met in the process. This causes an increased support for conservation (Chechina et al., 2018).

In some cases, it has been noted that conservation can result in positive impacts for local communities through infrastructure development made possible by tourism development which makes it easier for local entrepreneurs within indigenous communities to access external markets for their products (Kaplan-Hallam et al., 2018). Protected areas can help achieve both conservation and the socio-economic goals of indigenous people through the incorporation of their livelihoods needs in the planning phases of natural resource conservation (Brockington and Wilkie, 2015).

Granting indigenous communities access to natural resources can strike a balance between conservation and the alleviation of poverty in local communities since they can use the natural resources that are of monetary value to generate household income and sustain their households (Chechina et al., 2018). This shows that allowing communities to benefit from conserved natural resources can be significant in the achievement of conservation while addressing the social needs of indigenous communities. Poor rural households are mostly dependent on natural resources for their livelihoods. However, many critics have argued that Protected Areas threaten people's rights and livelihoods by allowing access for some people and excluding others (Brockington and Wilkie, 2015).

The rapid increase in the rural population can however lead to the over-extraction and misuse of natural resources thus the regulation of natural resource usage can be effective in balancing conservation and local livelihood needs (Shen et al., 2015). The exclusion of indigenous people in conservation can lead to their indigenous conservation strategies being overlooked and may threaten their livelihood needs (Davis et al., 2017). Some authors argue that the core of conservation is business oriented and poverty reduction is not its core mandate (Brockington and Wilkie, 2015). The study by Brockington and Wilkie, 2015) have noted that securing local livelihoods is essential to the long-term success of protected areas, thus conservation initiatives which offer tangible incentives to local people are likely to go further in achieving conservation objectives. The impact of conservation can be measured through land and habitat protection, the conservation of species, reduction of threats to natural resources and biodiversity, the improvement in local livelihoods and most importantly, the economic returns from local established enterprises. Conservation enterprises are

regarded as one of the tools which can assist in the distribution of direct benefits from conservation to local communities (Henson et al., 2009).

In developing countries indigenous communities obtain a large share of their household income through harvesting renewable natural resources (López, 2010). In developing countries where food security and poverty alleviation are highly prioritized than conservation it is difficult for communities to understand the value of Protected Areas and the concept of conservation (Lamsal et al., 2015). Due to natural resource conservation and reduced access to land and other natural resources, indigenous communities are forced to also rely on commercial commodities as an alternative. This may lead to indigenous conservation methods being lost through time since people won't be able to put such methods into practise due to the restricted access (Tang et al., 2016). This further leads to changes in livelihood activities of indigenous people through the injection of cash into the local economy thus forcing local people to seek alternative livelihoods in order to sustain their living (Riddell, 2013).

In Africa the eviction of people from their traditional land further perpetuates poverty in the rural setting (Tang et al., 2016). It has been noted that the displacement of local groups from their traditional areas leads to a decline in resource access and the exclusion of indigenous groups in the design, implementation and decision making of conservation programmes (Kaplan-Hallam et al., 2018). Some natural resource conservation programmes have banned traditional hunting activities which may lead to the increase in the level of food insecurity amongst local households (Tang et al., 2016). A case study in Congo has showed that local communities, especially hunters suffer high opportunity costs from reduced access to hunting due to hunting regulations and the banning of hunting activities (Riddell, 2013).

Forced or voluntary relocation of indigenous people to newer environments means that they have to adapt to a new lifestyle which may result in changes in their livelihood practises. This may have a negative impact on their livelihoods because it may take a long time for the households to adopt to a new environment and a new way of living. Whilst trying to adapt, families may suffer adversities such as poverty and lack of access to basic needs (Tang et al., 2016). The rich ecosystems located within protected areas in which indigenous communities resided before being evicted may

be able to provide a foundation for food security and their livelihoods. Indigenous communities usually have a strong attachment to their place and way of life so their eviction from their ancestral land can have a negative impact on their financial, physical and social wellbeing (Coulthard et al., 2017).

However, conservation projects with a little impact in terms of tangible material gains may still be valued by indigenous communities because of their contributions such as a sense of security and sustainable benefits for future generations (Coulthard et al., 2017). In some countries politics from colonial powers still continue to control the flow of people and money to and from protected areas. However, conservation programmes that transcend local culture, are able to allow local people to benefit since they can generate income through hosting unique cultural events for tourists (Coulthard et al., 2017).

Throughout the years, conservation agencies have invested large amounts in alternative livelihoods in order to compensate people for their restricted access to natural resources and to motivate people to participate in conservation as well as in the reduction of threats to biodiversity. Despite that, there is still not enough evidence of positive impacts of conservation on people's wellbeing (Fauna-flora.org, 2019). The link between livelihoods and conservation impacts is often weak. Little or no attention has been paid to creating market systems which can benefit both livelihoods and biodiversity, (Fauna-flora.org, 2019). In South East Asia it has been discovered that most Protected Areas are located on valuable land and enclose resources which are valued for economic development. This makes it difficult for local households to improve their livelihoods and standard of living since they barely have access to resources that may improve their livelihoods and socio-economic wellbeing (Zanzanaini et al., 2017).

In most rural areas livestock farming is the primary land use and source of income for households. In some cases, predators may escape from game parks or protected areas and prey on the local people's livestock, this results in economic losses to the poor rural community (Khan et al., 2018). For example, in central India the study of Nakakaawa (2015) illustrated that the conservation of biodiversity affects people's livelihoods negatively through attacks on humans and livestock. This further leads to

economic losses through the destruction of crops by wild animals. This also further threatens food security in the rural areas and can be an obstacle to achieving conservation. Such scenarios are likely to cause conflict between indigenous communities and conservation agencies and may lead to failure to achieve conservation objectives. Since the loss of livestock can be a serious economic concern for the households who depend on livestock for income generation, some conservation initiatives and programmes have established insurance funds to compensate farmers who lose their livestock due to predators which escape from Protected Areas. This is in order to maintain a positive relationship with local communities (Khan et al., 2018).

Achieving a balance between the objectives of natural resource conservation and livelihood wellbeing of marginalized communities depends on addressing the socio-economic concerns of local communities as well as gaining their support and participation in pursuit of natural resource conservation activities and programmes (Jaafar et al., 2015). Regardless of the negative impacts that natural resource conservation may impose on livelihoods, it is debated that, the establishment of Protected Areas is critical since globally, increasing human populations and poverty have accelerated the degradation of biodiversity as well the depletion of natural resources (Ekpe et al., 2014).

Even though conservation can create employment and lead to monetary benefits for local communities, the elites may still stand to benefit the most. This may demotivate local people to participate in or support conservation (Bennet and Dearden, 2013). Livelihoods can only be considered sustainable if people are able to maintain and improve their livelihoods wellbeing and their livelihood activities do not threaten the natural resource base (Nayak, 2017). However, in poor marginalized areas crisis in livelihoods can increase the consumption levels of households which can lead to increased extractions of natural resources in an unsustainable manner which makes it hard to regulate natural resources (Nayak, 2017). This discussion is relevant to this study since it seeks to assess the impact of conservation initiatives and programmes established by iSimangaliso Wetland Park on the livelihoods of the indigenous people of KwaNibela, KZN.

3.5 The perception of indigenous people towards natural resource conservation

Local perceptions are considered important in the design phase of any natural resource conservation management plan in order for it to be sustainable and socially impactful (Llamazares et al., 2016). In Australia protected areas incentivize indigenous people's access to natural capital which are effective for their livelihood creation, this has led to positive perceptions and attitudes since conservation initiatives in the country cater for the livelihood needs of people (Zander et al., 2014). Across the world the governance and management decisions based on natural resources lack scientific and indigenous knowledge.

This may be an obstacle to the achievement of conservation objectives since people may not support nor participate in conservation initiatives that are alien to their traditional methods of conservation. It may further lead to negative perceptions towards conservation since indigenous people may have negative attitudes and perceptions towards natural resource conservation. This may limit the success of any conservation initiative since success of such initiatives lies in the support and participation of people, if people are not united with conservation agencies then it is likely that conservation objectives may end up not being achieved (Llamazares et al., 2016).

The response of local resource users to conservation policies has the power to lead to changes in the management strategies adopted by any conservation initiative. In most cases, local perceptions in the change of the availability of natural resources can lead to the adoption of the bottom up approach to natural conservation whereby it becomes the responsibility of indigenous people to regulate the harvesting of natural resources in a sustainable manner, with the assistance of governmental conservation agencies (Llamazares et al., 2016). However, in most cases the decrease in natural resources might not be perceived as a threat by local people and this may lead to weakened conservation efforts and a weak chain of collective action. The decrease in the availability of natural resources may potentially have a negative impact on the livelihoods of people which may lead to negative perceptions towards natural resource conservation (Llamazares et al., 2016).

Local perceptions play a major role in the creation of incentives for the sustainable management of natural resources. They may further assist in combating the overharvesting of natural resources and lead to a better understanding of how local resource users perceive natural resource conservation and any changes in the availability of natural resources. Understanding the local perceptions and cultural beliefs of indigenous people may be a critical component in the sustainability of natural resource conservation programmes (Llamazares et al., 2016). Due to intensive competition for land, Protected Areas are under pressure to prove their relevance to society at large. Positive attitudes towards conservation can go a long way in the justification for the establishments of Protected Areas and their significance to society and the environment (Bragagnolo et al., 2016). It has been discovered that negative attitudes and behaviour towards natural resource conservation may lead to high extractions of resources since people may tend not to comply with conservation policies (Bragagnolo et al., 2016).

Conservation activities and initiatives which generate communal benefits and income are likely to be associated with positive attitudes since people's livelihood needs are often considered in the planning and implementation phase. This may lead to the establishment of a positive working relationship between conservation agencies and local communities which might be of great contribution towards the achievement of conservation objectives and goals (Braganolo et al., 2016). The loss of access to resources can be a major impact in the increase of negative attitudes towards conservations since local people may feel that they are being robbed of the opportunity to benefit from natural assets in their traditional land (Braganolo et al., 2016). Communities residing next to protected areas have a higher expectation of benefits from natural resource conservation which include income generation, compensation and the right to access and extract natural resources, if such expectations are not met they may be disappointed and develop a negative attitude towards natural resource conservation (Braganolo et al., 2016).

Conservation initiatives may focus only on the physical aspects of conservation and overlook the cultural and economic aspects of conservation which are valuable to the community. Communities may develop a resentment towards protected areas and

conservation efforts (Deiser et al., 2016). Studies conducted in African countries such as Tanzania, Uganda and Mozambique have shown that if economic development and community participation are not the core values of natural resource conservation initiatives then local people may not support or be interested in conserving and protecting natural resources. If people benefit from conservation their attitudes towards conservation are mostly positive since their perceptions are often shaped by the benefits that they receive in the process of conservation (Emejuru and Dike, 2017)

This shows that the impacts which are imposed on livelihoods by conservation initiatives has a major influence on the people's perceptions towards natural resource conservation. If the impacts are positive then people will have a positive attitude towards conservation but if the impacts are negative, people will have a negative attitude towards natural resource conservation (Guenha, 2010). This literature is significant to this study since the third objective of this study seeks to explore the perceptions and attitudes of indigenous people towards the conservation strategies which are implemented by iSimangaliso Wetland Park.

3.6 Conclusion

This chapter has reviewed literature relevant to this study and formulated themes and subthemes which may provide a foundation for achieving the objectives of this study. Literature based on natural resource conservation and its impact on livelihoods have been critically reviewed in order to help achieve the aim of this study which is to assess the impact of natural resource conservation on the livelihoods of the community of KwaNibela, KZN.

CHAPTER 4: THE PHYSICAL SETTING OF THE STUDY

4.1 Introduction

This chapter provides an overview of the area of KwaNibela KZN, where this study was conducted. It gives a brief history of the study area and also describes the environmental and spatial features of the area. This chapter also describes the demographic and socio-economic characteristics of the area.

4.2 Location of the study area

KwaNibela is located in the UMkhanyakude District Municipality which has four local municipalities namely, Big Five Hlabisa (which combined the previous Big Five False Bay and Hlabisa local municipalities to be formed), Jozini, Mtubatuba and UMhlabuyalingana. KwaNibela is located in the Big Five Hlabisa Local Municipality (Figure 4.1)

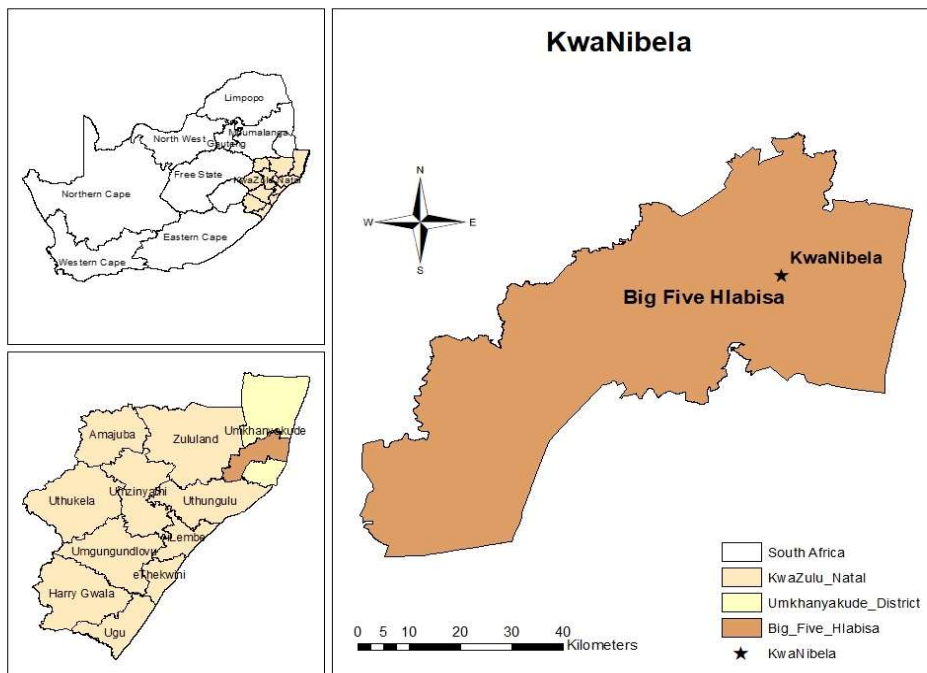


Figure 4.1: Map of KwaNibela

4.3 Brief history of KwaNibela

Archaeological evidence has revealed that between 200 and 300 AD, people with a different lifestyle began entering the area of Zululand including KwaNibela. They kept domesticated animals and practised agriculture. The area is believed to have been one of the hunting grounds for the Zulu nation (Ezemvelo Wildlife, 2011). The area has evidence of stone and middle age cultures as depicted from several rock art sites, evidence also shows that the area was extensively occupied by Iron Age people who practised iron smelting and metal activities (Nsukwini, 2015).

KwaNibela KZN, was also home to the San and Nguni tribes of the middle ages. The area was later dominated by the Zulu nation which is the Mthethwa clan under the leadership of King Dingiswayo until 1818. The throne was later succeeded by Shaka Zulu from 1818 until 1828, who conducted one of the biggest hunting activities in Zululand. During the early 1900's the area experienced an outbreak of the nagana disease which was spread by the tsetse flies, causing massive livestock losses in the area (Nsukwini, 2015).

After the South African democratic elections of 1994 the formation of Protected Areas and game reserves was strengthened through protectionist conservation strategies. This led to the traditional authority for areas such as KwaNibela losing their power to control natural resource use since some of the traditional functions of the chiefs were passed on to the magistrates (Mdiniso and Nzama, 2018). Although the area is still under traditional authority some parts of the area that were fenced through the establishment of Protected Areas were subject to land claims. This occurred as a result of the South African land reform programme which was established in 1994. This programme has three pillars which are land restitution, land redistribution and land tenure reform (Department of Land Affairs 1997).

Land restitution involves returning land which was forcefully taken from people through racial discriminatory laws. Its sole purpose is the restoration of land and the provision of remedies to people who were dispossessed of their land through discriminatory legislation and practise. Land redistribution on the other hand was established to make it possible for the poor and disadvantaged to buy land through the assistance of

settlements/land acquisition grants. It seeks to provide the poor with land for residential and productive purposes in order to improve and sustain their livelihood (Department of Land Affairs, 1997). Land tenure reform aims to bring all individuals occupying land under a unitary, legally accepted system of land ownership. It is meant to assist in resolving tenure disputes and provide alternatives for people who have been displaced. Land tenure reform also seeks to address the difficult land problems that were created in the past, the solution to such problems may lead to new systems of land holdings, land rights and forms of ownership (Department of Land Affairs, 1997).

KwaNibela is a land restitution case, in which after 1994, the people applied to get their land back from where they were removed. This led to co-management agreements between land claimants and neighbouring protected areas being established. The land claimants from KwaNibela and surrounding communities established a claimant community trust which allows for various benefit sharing opportunities between iSimangaliso Wetland Park and land claimants from KwaNibela and neighbouring communities. (iSimangaliso Wetland Park, 2017). Thus this study seeks to assess the implications of natural resource conservation on the livelihoods of the indigenous people of KwaNibela.

4.4 Environmental features and spatial characteristics of KwaNibela

4.4.1 Climate

Hlabisa municipality has a significant climatic variability due to the topography of the area. The proximity of the coast influences the climate and the annual rainfall. Annual rainfall is seasonal with most rain falling between October and March. The mean annual rainfall is significantly higher in the high altitude regions in the Hluhluwe section in the north than in the low-lying western areas in the Umfolozi section in the south. Annual temperatures are also varying, with these being significantly higher in the low-lying western areas in the Umfolozi section (Hlabisa Municipality, 2013).

4.4. 2 Geology

The Big Five Hlabisa municipal area consist of black-clay soils and duplex soils which were derived from a distinct variety of clastic sediments of the *Dwyka*, *Ecce*, *Beaufort* and *igneous* rocks of the *Lebombo* Groups. The area also consists of well-drained soil forms which are commonly found on stony slopes (Hlabisa Municipality, 2013).

4.4. 3 Hydrology

The Big Five Hlabisa municipality has a flat topography. It consists of perennial and non-perennial river systems. The area is drained by the Mzinene River which flows into the iSimangaliso Wetland Park and drains into the Indian Ocean. There is also the Hluhluwe River which is perennial and drains eastwards towards iSimangaliso Wetland Park (Big Five Hlabisa Municipality, 2017). Other rivers include the uMfolozi River which forms the southern boundary of the municipal area and the Nyalazi River which drains the central part of the area and forms the eastern boundary of the area, it drains northwards towards the iSimangaliso Wetland Park. The municipal area is also rich in wetland habitats including floodplains (Big five Hlabisa Municipality, 2017)

4.5 Biodiversity and land use

The grasslands on the slopes within the river valley of the area of species such as *Themeda triand* which is commonly known as red grass, which indicates well developed and undisturbed grass, however some parts of the area consist of wide spread plant species which indicate disturbed grass areas (Hlabisa Municipality, 2013). *Presidium aqualine* also known as *bracken* is also present in the grass land commonly on lower slopes of valleys and there is also evidence that grasslands have been encroached into by trees, mostly *magnifera indica* and various acacia species such as *acacia karoo* and alien invasive species such as *lantana camara* and *chromolaena odorata* (Hlabisa Municipality, 2013).

A large proportion of land in the Big Five Hlabisa municipality is used for agriculture and game lodge activities and is sparsely settled. The north-eastern parts of the municipality are occupied by fairly densely settled rural traditional communities which are Makhasa, KwaNibela and Mnqobokazi (Municipalities.co.za, 2019).

4.6 Demographic and socio-economic characteristics of KwaNibela

According to the Census (2011) Kwanibela falls under the UMkhanyakude District, about sixty percent of the area's population is comprised of the youth. Forty-six percent of the people in the area have never received formal education. The majority of households in the area survives with less than eight thousand Rands per month. The area is characterised by a high rate of unemployment and over eighty percent of people in the area live below the poverty line (Hlabisa Municipality, 2013). The area is located adjacent to the iSimangaliso Wetland Park, which is one of the major tourist attractions in KwaZulu Natal, thus tourism is the main economic activity in the area. The tourism industry is responsible for most of the employment opportunities that are created in the area thus contributing to the socio-economic wellbeing of people in the area.

Agriculture is also one of the important economic activities in the area, it occurs mainly in the form of subsistence and small scale agriculture. Livestock farming, particularly goats and cattle is one of the key survival strategies and economic activities in KwaNibela. The large number of cattle in the area has the potential to make the area one of the suppliers of cattle and cattle based products in King Cetshwayo District Municipality (Hlabisa Municipality, 2013).

4.7 Conclusion

This chapter has outlined the history and physical setting of the Big Five Hlabisa Municipality, which is the municipal area that KwaNibela falls under. It has been discovered that the area is within the subtropical humid region and has a flat topography. The area has grasslands and wetlands and the land is mostly used for agriculture and game lodge activities.

CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY

5.1 Introduction

This chapter seeks to broadly explain the research design and methodology adopted in this study in order to achieve the aim and objectives of this study. The chapter consists of four components namely research paradigm, research design, research methodology and the guiding ethical principles and considerations.

5.2 Research paradigm

The term research paradigm originated from the Greek word *paradeigma* which simply means pattern. It denotes a conceptual framework used by a community of scholars and scientists to adopt a convenient model which is effective for examining problems and finding solutions to research problems (Thomas, 2010). It is an integrated cluster of concepts, variables and problems attached with corresponding methodological approaches and tools which shape a research project (Thomas, 2010). It implies a pattern, structure and framework or scientific or academic ideas. Research paradigms also reflect our beliefs about the world we live in and want to live in (Thomas, 2010).

Since a paradigm defines the researcher's worldview, it means that it constitutes the abstract beliefs and principles that shape how the researcher sees the world he/she sees, lives in and wants to live in. It is the conceptual lens in which a researcher examines the methodological aspects of his research project in order to formulate the research methods that will be used and how data analysis will be approached (Kivunja et al., 2017). In light of this, the study adopted pragmatism as a research paradigm. Pragmatism as a research paradigm finds its philosophical foundation in the historical contributions of the philosophy of pragmatism. Thus, it embraces plurality of methods. It aims to bridge the gap between the scientific method and structuralist orientation of older approaches and the naturalistic methods and freewheeling orientation of newer approaches (Kuashik and Walsh, 2019).

As a research paradigm, pragmatism is based on the proposition that researchers should use the philosophical and methodological approach that works best for the particular research problem that is being investigated. It is often associated with the

mixed methods approach (Kuashik and Walsh, 2019). This research paradigm is appropriate for this study since it adopted the mixed method approach in attempt to address the research problem. The mixed method approach is appropriate for this study because the data that has been collected and analyzed consists of both quantitative and qualitative viewpoints based on the perceptions and experiences that people of KwaNibela have towards natural resource conservation.

5.3 Research design

A research design is the blueprint or detailed plan of how a researcher seeks to complete a research study. It is a plan, structure and strategy of investigation which is utilized by the researcher to obtain answers to research problems. It entails a detailed outline of what the researcher will do from writing the hypothesis and their operational implications to the analysis of data obtained by the researcher (Kumar, 2011). It is intended to provide an appropriate framework for the study, it determines how relevant information for a study will be obtained (Sileyew, 2019). It also shows how the major parts of the research study work together in an attempt to tackle and answer research questions. It seeks to maximize the validity of the research findings (Sileyew, 2019).

This study adopted the mixed method approach since it is concerned with deeply understanding and interpreting the meaning that the participants of this study have on the influence of natural resource conservation programmes on their livelihoods. According to Schoonenboom and Johnson (2017) mixed method research combines elements of qualitative and quantitative research approaches through the collection, analysis and interpretation of both quantitative and qualitative viewpoints. There are three types of mixed methods research designs, which are explanatory sequential design, exploratory sequential design and the convergent parallel design.

The explanatory sequential involves a two phased approach in which the researcher collects quantitative data first, analyses the results and then uses them to plan the qualitative phase of the research. Its overall intent is to have the qualitative data help explain in more detail the quantitative results (Creswel, 2014) The exploratory sequential design entails exploring qualitative data, analyzing it and then using the findings in the quantitative phase of the study. In this case the quantitative results are

built on the qualitative database (Creswel, 2014). The intention of this design is to develop better measurements with specific samples of a population and see if data from few individuals in the qualitative phase can be generalized to a large sample of a population in the quantitative phase (Creswel, 2014). The convergent parallel design involves the collection of both quantitative and qualitative data at the same time, separate analysis of both (qualitative and quantitative data) and the comparison of the results to see if they confirm or disconfirm each other (Creswel, 2014). The key assumption of this approach is that both qualitative and quantitative data may provide different types of information, which is often the detailed qualitative views of the participants and scores on the quantitative information (Creswel, 2014).

This study followed the convergent parallel design, which is constituted of three phases/stages. In line with the three stages in the convergent parallel design, the researcher first collected both qualitative and quantitative data at the same time. In the second stage the researcher analysed the collected data through comparing and integrating both qualitative and quantitative data. And finally in the third stage the researcher interpreted the results of the study and drew a conclusions and recommendations from the results. The diagram below (Figure 5.1) summarizes the convergent parallel design.

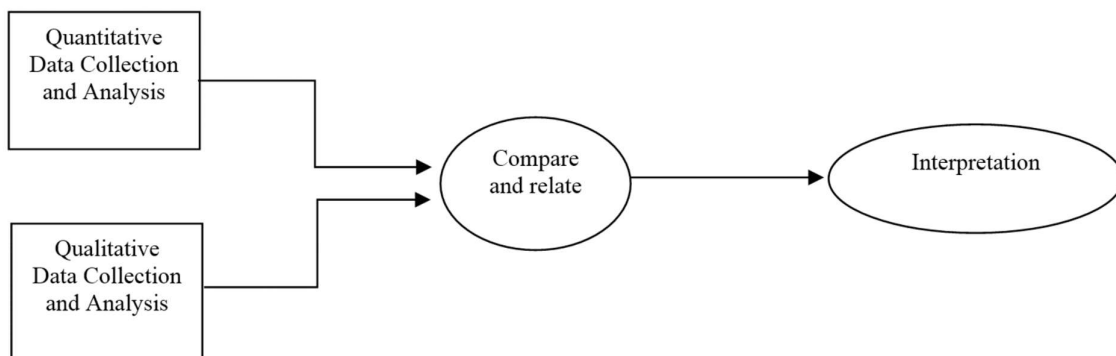


Figure 5.1 The Convergent parallel design

Source: Demir and Pismek (2018 p. 124)

5.4 Research methodology

In line with the convergent parallel research design explained in the preceding section, this part discusses the quantitative and qualitative sampling, data collection and analysis.

5.4.1 Quantitative research

This involves the emphasis of objective measurements and mathematical, statistical or numerical analysis of data collected through questionnaires, polls or surveys. The main focus quantitative research is gathering statistical data and generalizing it across groups of people in attempt to explain a particular phenomenon (Babbie, 2010).

5.4.1.1 Quantitative sampling

Sample selection is one of the most important stages of a mixed method study (Sharp et al., 2012). According to the (Stats SA) Statistics South Africa (2020) KwaNibela which is part of Hluhluwe has an estimated population of 3830 people.

The sample size (n) of this study was calculated according to the formula:

$$n = \frac{z^2 * p * (1-p) / e^2}{1 + (z^2 * p * (1-p) / (e^2 * N))}$$

Where: z = 1.645 for a confidence level (α) of 90%, p = proportion (expressed as a decimal), N = population size, e = margin of error.

$$z = 1.645, p = 0.5, N = 3830, e = 0.12$$

$$n = [1.6452 * 0.5 * (1 - 0.5) / 0.122] / [1 + (1.6452 * 0.5 * (1 - 0.5) / (0.122 * 3830))]$$

$$n = 46.9796 / 1.0123 = 46.41$$

$$n \approx 47$$

The sample size is equal to 47. However, for the purpose of this study 3 more people were added, making it a total of 50 (47+3= 50). Thus, 50 individuals from the community of KwaNibela were sampled.

5.4.1.2 Quantitative instrumentation and data collection

Before data was collected, a pilot study was conducted in 2018. This assisted the researcher in designing a questionnaire. A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from a population, they can be carried out face to face, by telephone or electronically (McLeod, 2018). The questionnaire was divided into several sections which collected data aimed addressing the objectives of the study. The questionnaire included both open and closed ended questions which allowed the researcher to engage with the deeper and subjective meaning of the influence of conservation on the livelihoods of KwaNibela. In other words, as a response to the third objective of this research, exploratory questions were included in the questionnaire so as to explore the perceptions and attitudes of the people in KwaNibela towards iSimangaliso Wetland Park conservation strategies in KwaNibela. This is why in the analysis section (Chapter 6) there are verbatim quotations from the community members. This questionnaire was administered face to face with the community of KwaNibela. For the quantitative phase of this study the community members were chosen through random sampling. Random sampling is a type of probability sampling in which every individual in the desired population has an equal and independent chance of being chosen for the study (Onwuegbuzie and Collins, 2007).

5.4.1.3 Quantitative data analysis

The quantitative data and demographic information obtained from the questionnaire was coded into different subthemes and then analysed using the Statistics Package for the Social Sciences (SPSS), there after the data was exported into Microsoft word to generate descriptive statistics such as bar graphs, pie charts and tables.

5.4.2 Qualitative Research

Qualitative research involves an interpretive and naturalistic approach to its subject matter. This means that researchers study things in their natural setting and attempt to interpret the phenomena in terms of the meanings people assign to them (McLeod, 2019).

5.4.2.1 Qualitative sampling

For the qualitative phase of this study three representatives from the iSimangaliso Wetland Park were selected using purposive sampling. According to this method, which belongs to the category of non-probability sampling, samples are selected on the basis of their knowledge, relationships and expertise regarding a research subject (Langos, 2014). Purposive sampling represents a group of different non-probability sampling techniques. It is also referred to as judgemental, selective or subjective sampling. It relies on the judgement of the researcher when selecting the units that are to be studied. Usually the sample being studied is usually smaller when compared with that of probability sampling (Rai et al., 2004).

The main goal of purposive sampling is to focus on particular characteristics of a population that are of interest, which can best enable the researcher to answer research questions (Rai et al., 2004). The iSimangaliso Wetland Park and authorities were selected on the grounds of their knowledge and participation in environmental conservation programmes in the study area. The main advantage of purposive sampling is that it can provide the researcher with the justification to make generalizations from the sample that is being studied (Rai et al., 2004). Purposive sampling was appropriate for this study since it assisted in gathering relevant information and different perspectives from different authorities from iSimangaliso who possessed special knowledge and information on the research topic without any form of bias.

5.4.2.2 Qualitative instrumentation and data collection

For the qualitative phase of this research in-depth interviews were conducted with the officials from iSimangaliso in order to gather data which aimed to address the first objective of this study. According to Langos (2014) in-depth interviews are personal unstructured interviews which aim to identify participant's emotions, feelings and opinions regarding a particular research subject. The main advantage of personal interviews in this study is that they involved personal and direct contact between the researcher and participants, in the form of conversations, which lasted between 10 and 15 minutes each. The in-depth interviews were directed by an interview guide,

which assisted the research to focus on the first objective of the study during the interview sessions.

5.4.2.3 Qualitative data analysis

Content analysis was used to analyse the qualitative data which was gathered from the questionnaires and in-depth interviews. This involved reading through the collected data, categorizing it into themes and subthemes, so as to be able to make comparisons (Langos, 2014). The main advantage of content analysis is that it helps in reducing and simplifying collected data while at the same time producing results that can be presented using quantitative techniques. Figure 5.2 below summarises the methodology which was adopted in this research.

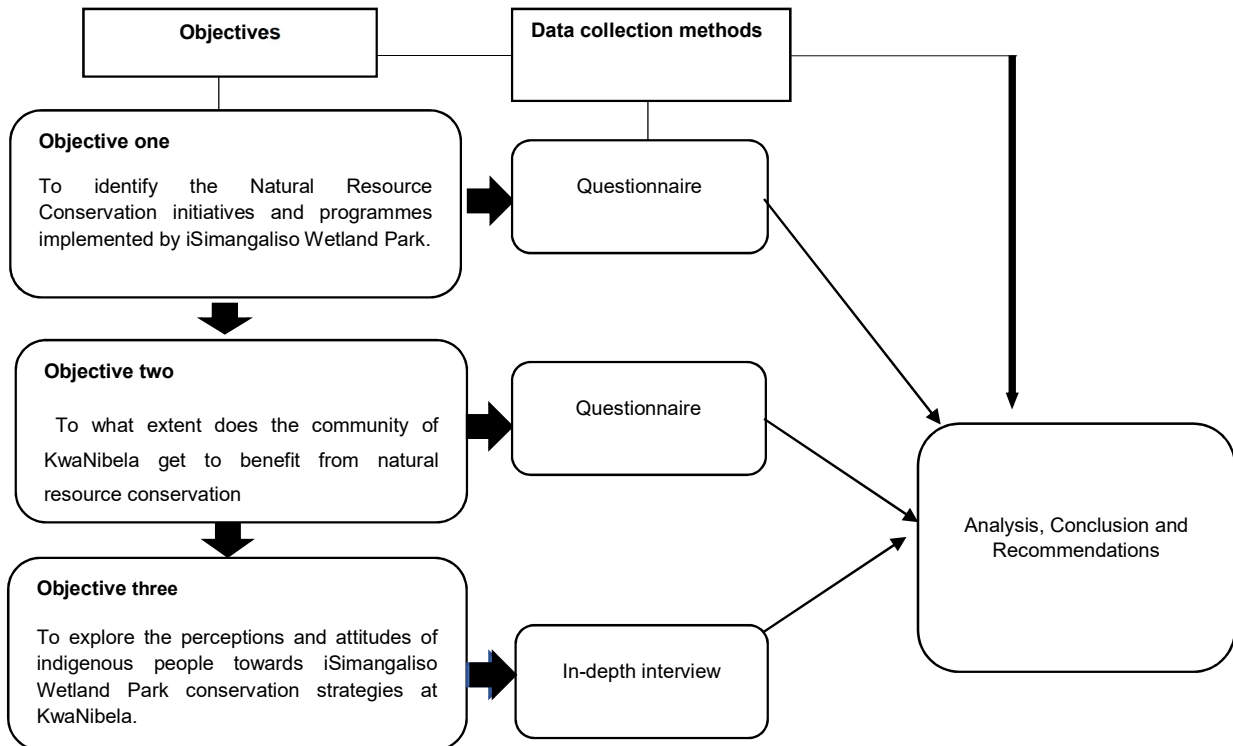


Figure 5.2: Summary of research methodology

5.5 Guiding ethical principles and considerations

This study adopted the core principles from the universally accepted basis of research ethics as follows:

5.5.1 Respect for persons

This principle strove to ensure the autonomy of the research participants and to protect them from exploitation of their vulnerability. It ensured that all research participants were respected (Mack et al., 2005). In this study all the participants were treated with respect and they willingly participated in this study. This is why a consent form was used as explained below.

5.5.2 Consent form

Informed consent is a mechanism to ensure that people understand what it means to participate in a research study so that they can consciously decide if they want to participate or not (Mack et al., 2005). In this study participants were asked to willingly sign a consent form to show their willingness to contribute to the study. The researcher explained to the participants that their contribution is voluntary and that they could withdraw their participation anytime.

5.5.3 Beneficence

This principle requires commitment in ensuring that the risks associated with research (psychological and social risks) are minimized and that the benefits that should accrue to the research participants are maximized (Mack et al., 2005). In this study the information from the participants was treated with high confidentiality in order to ensure their safety and to prevent them from being vulnerable. The consideration of ethics in this research was observed in the following;

5.5.4 Justice

This principle requires a commitment to ensure fair distribution of risks and benefits from research. It stresses that the participants should also benefit from the knowledge gained (Mack et al., 2005). Thus the findings of this study shall be presented to the community of KwaNibela through a meeting which shall be organized by the researcher at the conclusion of the research. As certification of the ethical compliance of this research, the researcher applied for and was granted an Ethical Clearance Certificate by the University of Zululand Research and (UZREC).

5.6 Conclusion

This chapter has discussed the methodological procedures that were undertaken in order to address the objectives of the study. It has elaborated on the research paradigm, research design, research methodology and ethical considerations of the study.

CHAPTER 6: ANALYSIS AND DISCUSSION

6.1 Introduction

This chapter analyses and interprets the data which was collected from the study area. It aims to elaborate on the findings in line with the aim and objectives of the study. The first part discusses the demographic characteristics of the respondents, followed by an analysis of the impact of natural resource conservation on livelihoods and the perception of the people of KwaNibela on natural resource conservation.

6.2 Socio-demographic information

The results of this study indicate that the majority of the participants (28%) were people who were between the ages of 21 and 30. This group was dominantly populated by the unemployed youth of the area. The second largest population were individuals who were between the ages of 51 and 60 as well as those between the ages of 10 and 20 at 16%. The third highest population of participants were people who were between the ages of 31 and 40 at 12%. The least percentages of participants that contributed to this study were individuals who were between the ages of 61 and 70 at 8%, and who were 80 years and older at 4% (Figure 6.1)

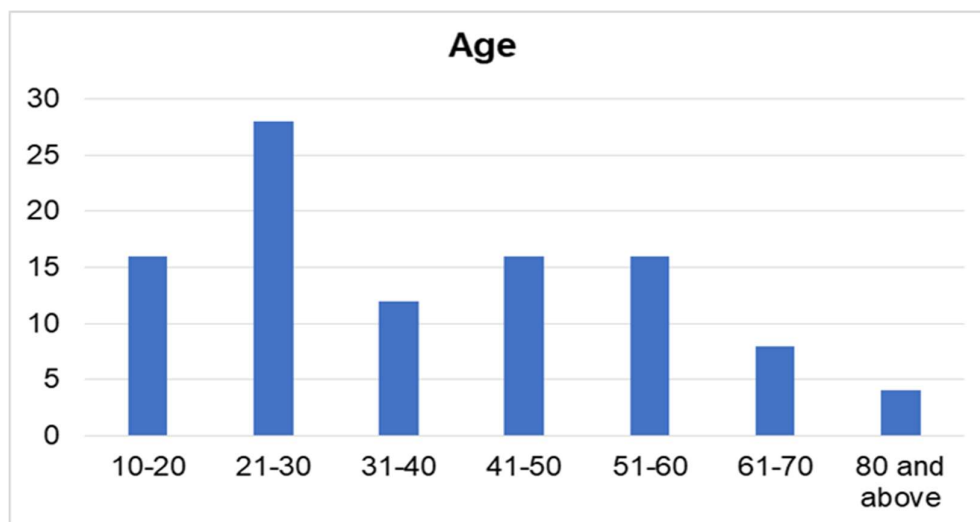


Figure 6.1: Age of participants

The gender characteristics of the study participants show that the highest population that were females (52%) and males were at 48 % (Figure 6.2).

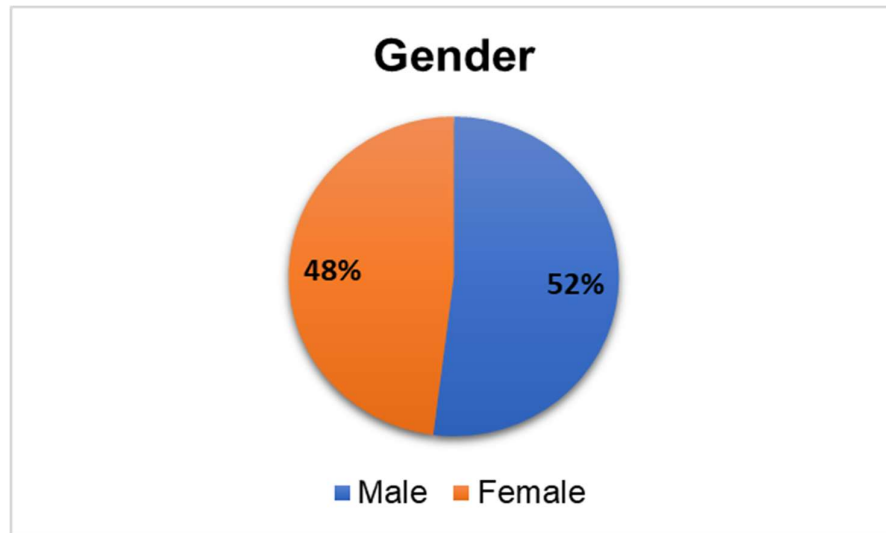


Figure 6.2: Gender characteristics

The results of this study indicated that a majority of the participants came from households with family members ranging from 6 to 10 (64%). Twenty-four percent of the participants came from households with family members that range from 1 to 5. Participants that came from households with family members that are between 11 to 15 and those who had family members that range from 15 to 20 both had an equivalent percentage of 6% (Figure 6.3).

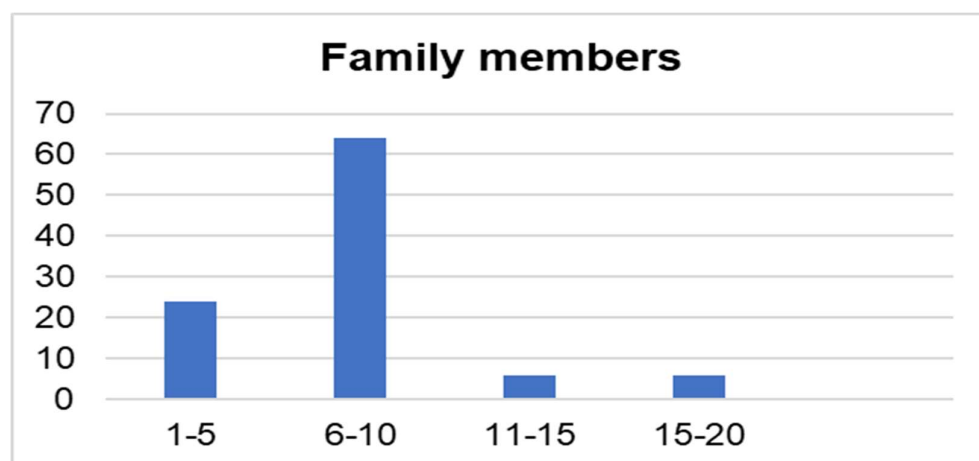


Figure 6.3: Number of family members

The results of this study indicates that 52% of the study participants obtained high school education and that 24% of the participants received primary education. Only 14% of the participants received tertiary education and 6 % of the participants received secondary education. Four percent of the study participants received no formal education as illustrated (Figure 6.4).

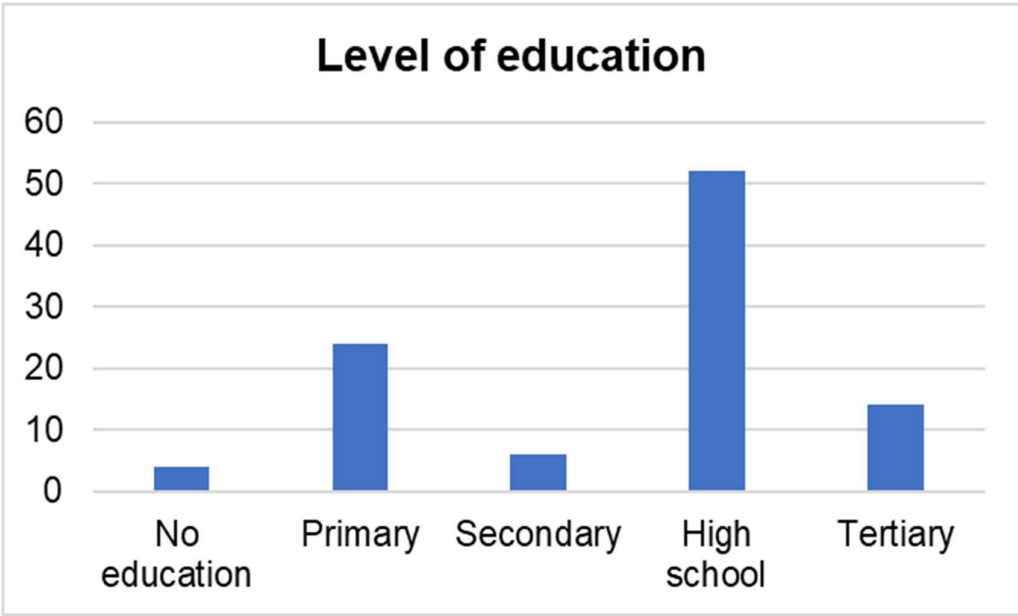


Figure 6.4: Level of education

The employment statistics of the study participants indicated that a higher percentage (60%) of the study participants were unemployed whilst 28% of the participants stated that they are employed. Only 12% of the study population stated that they are self-employed (Figure 6.5).

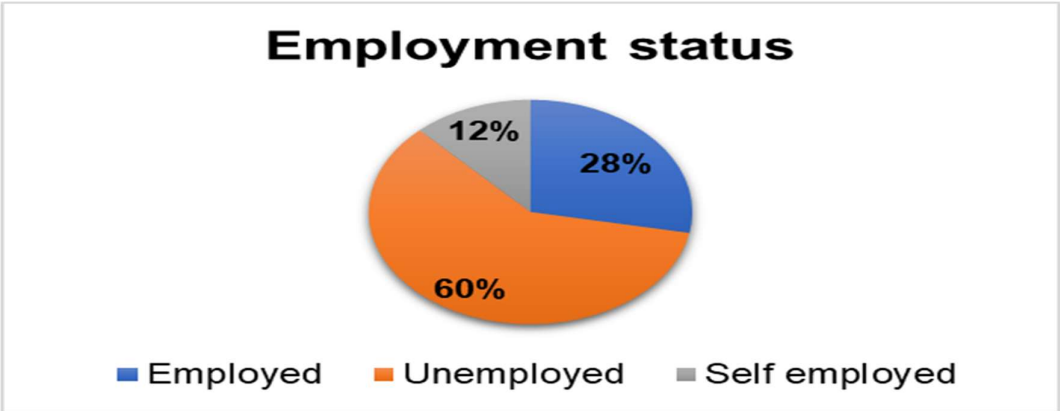


Figure 6.5: Employment status

A further analysis of these employment categories revealed that, 14% of the respondents were qualified educators, 6% were security guards, 4% were gardeners and 6% were self-employed craft workers. Two percent of the participants were municipal workers, 4% were electricians who are self-employed. Other occupations consisted of bakers (2%) and traditional healers (2%). Judging from these results, one can reach a conclusion that the area of KwaNibela has a high unemployment rate and may be subject to high levels of poverty, and that a majority of people in the area pursue low paying jobs to earn a living. Figure 6.6 below show the craft market signage of the Mbhedula craft market where local craft workers in the area of KwaNibela sell their craftwork and Figure 6.7 shows an example of the craftwork and art sold by local people.



Figure 6.6: The craft market where Local self-employed craft workers sell their Craft work.

(Source: Researcher 2019)



Figure 6.7: craft work products which are sold by local people to tourists.

(Source: Researcher 2019)

6.3 Natural resource conservation initiatives and programmes implemented by iSimangaliso Wetland Park

After interviewing the officials from iSimangaliso Wetland Park it was discovered that the natural resource conservation programme implemented by the park is co-management. “After the establishment of the land reform programme, people launched claims for hectares of land within the park, so we signed a co-management agreement with the land claimants in order to make the management of natural

resources more inclusive by involving the community in decision making processes that involve the management of resources” (Interview with iSimangaliso Wetland Park official, September 2019). This means that the park works together with the community and the land claimants (people who claimed land within iSimangaliso Wetland Park) in pursuit of conservation through its structured environmental education programme. Based on this, the park invites local schools to the park and exposes learners to information about the importance of conservation. The park also hosts annual activities where school children get to assist the park in removing litter and eliminating alien vegetation from the wetlands around the area (Interview with iSimangaliso Wetland Park official, September 2019).

The officials were also asked if the community of KwaNibela gets to participate in conservation programmes such as natural resource protection and whether they (the community) have access to these natural resources. The officials responded by stating that the community participated in conservation through decision making processes that affected natural resources and biodiversity. It was stated that the community was consulted through the kings and chiefs when decisions around natural resource conservation had to be made (Interview with iSimangaliso Wetland Park official September 2019). An example of such a decision was the expansion of the park. Before such a decision was made, chiefs of the affected areas were consulted and the park reached the decision together with the local authority of the area and the community. Thus the chiefs serve as a medium of communication between the park and the surrounding communities (Interview with iSimangaliso Wetland Park official, September 2019). This attests to the statement made by Archeson (2013) that co-management should decentralise decision making power in order to accommodate local communities and resource users and form partnership between local resource users and government agencies. The park also allows local people to participate in its inclusive conservation programmes such as skills development programmes in the areas of arts and crafts, hospitality and tourism, and land rehabilitation.

However, the community did not feel that it benefited fully from the resources. “We do not benefit in any way from iSimangaliso Wetland Park, they took our ancestral land from us in order to gain control of our natural resources” (Interview with community member, September 2019). They (the community) also did not feel they were properly

and/or fully consulted. These issues are discussed in the following section (the impact of natural resource conservation). Thus the complaint by the community may be taken to mean that the conservation programmes by iSimangaliso Wetland Park were not effective to the extent of meeting the goals of co-management and including the community in environmental conservation programmes. The fact that the Park officials and the community had different views regarding involvement in conservation programmes as well as consultation suggests that there is a gap, both in the relations of these stakeholders as well as communication lines. The officials of iSimangaliso Wetland Park further stated that the iSimangaliso Wetland Park offered bursaries and scholarships to local learners who wished to pursue careers in conservation and environmental management. After completing their studies some of the bursary and scholarship beneficiaries are then trained by the iSimangaliso Wetland Park. Unfortunately, not all the beneficiaries get employed since the iSimangaliso does not "have the capacity to employ many people at the moment" (Interview with community member, September 2019).

6.4 The impact of natural resource conservation on livelihoods

During the piloting phase of this study 22 interviews were held with the community of KwaNibela. The results from the pilot study corroborated the main study in terms of showing that a majority of the people in KwaNibela felt that natural resource conservation had a negative impact on their livelihoods since there were no direct benefits received from conservation and the restrictions placed on natural resources make it hard for people to sustain a living since a majority of the population depends on natural resources to sustain a living. After analysing the data which was coded from the responses of the whole study population (50) it was discovered that only 30% of the participants benefit directly from conservation and that the majority of the participants (70%) feel that they do not benefit from conservation as illustrated in Figure 6.8, below.

The type of conservation benefits that a smaller percentage of the participants of this study stated that they received from natural conservation is through tourism expenditure. This occurred when eco-tourists bought their products such as souvenirs thus contributing to their (community) livelihood through monetary income and employment opportunities which are created by iSimangaliso Wetland Park. "Through

selling craftwork to tourists who come to visit the park, some of us are able to generate income and sustain a livelihood. But it is difficult since we make money during the peak season when many tourists visit iSimangaliso. During the off season we do not make enough money to meet our daily needs” (Interview with community member, September 2019). This corroborates with the claim made by Suich (2010) that one of the ways in which communities can benefit from natural resource conservation is through job creation and income earned through eco-tourism. This further supports the statement made by (Guenha, 2010) that poor rural households generate income through selling handicrafts to tourists who visit protected areas. Employment creation assist the livelihoods of the community through monetary income which assists them in meeting their basic necessities such as groceries.

This is in line with the Sustainable Livelihoods Framework (SLF), which is the theoretical framework adopted by this study (see Chapter 2, Section 2.3.3. Sustainable Livelihood Approach). This is because employment creation and monetary income are sources of financial capital. This type of capital is one of the capitals that this study has focused on. As advanced by the SLF, financial capital improves livelihood through assisting families in meeting their needs and to sustain their living. This was found to be the case in this research, because as explained above, some community members get to generate income from conservation through tourism while others get employed by the park and thus secure an income from their employment and sustain their families.

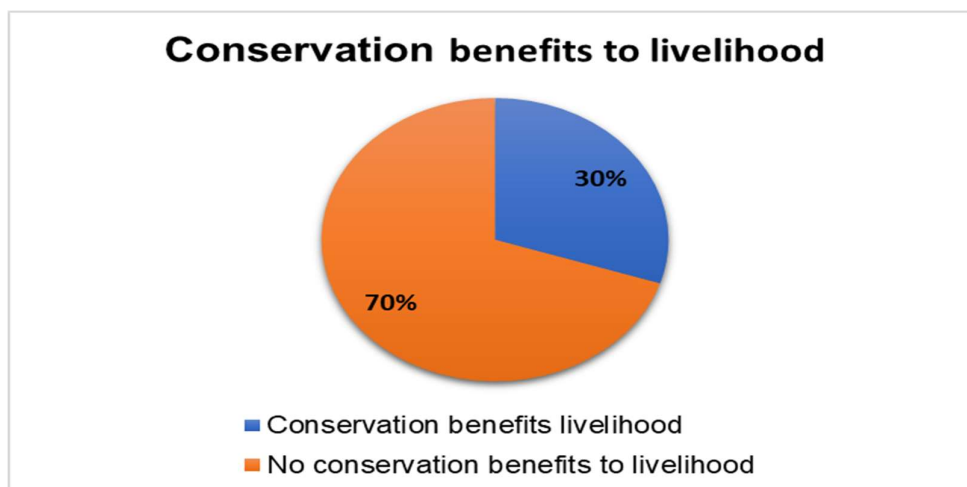


Figure 6.8: Benefits from conservation

Some community members stated that the iSimangaliso Wetland Park caters for their children's education through scholarships and bursary programmes. "iSimangaliso has funded some children in our community to pursue higher education, that is an investment in our community" (Interview with community member, September 2019). The officials of the iSimangaliso Wetland Park were further asked what measures were taken to ensure that conservation contributes to the livelihoods of the community of KwaNibela and they stated that through the bursaries offered to the youth they were certain that after the beneficiaries completed their studies they will be equipped with the skills to compete in the job market and be able to sustain and financially support their families (Interview with iSimangaliso Wetland Park official September 2019). This confirms the view that investments in education (investment in human capital), assists people in meeting their basic needs (Munanura et al., 2018).

In addition, through the financial and skills development assistance, such as the Rural Enterprise Accelerator Programme (REAP) which is aimed at providing mentorship and capital assistance to local entrepreneurs, the park is confident that these business owners will be able to generate income and meet their families' livelihood needs and create further employment opportunities. "As iSimangaliso we support local entrepreneurs through financial support and further offer workshops in which we train them to improve their business management skills, this is of paramount importance since local entrepreneurs create employment opportunities in the community" (Interview with iSimangaliso Wetland Park official September 2019). If this is viewed through the lenses of the SLF, it can be taken to suggest that, the iSimangaliso Wetland Park invests in the human capital of the community since the sponsored entrepreneurs and local employees are equipped with skills and knowledge that may enable them to achieve livelihood outcomes. But, these benefits were enjoyed by fewer members of the community (see Figure 6.8), which in the final analysis actually undermines the whole process.

According to the results of this study, the reason why the majority of the people do not benefit from natural resource conservation is due to the lack of direct benefits from natural resource conservation and lack of information on how their livelihoods can benefit from conservation (Interview with community member, September 2019). The loss of livestock due to predators which escaped from the park without compensation

is another major reason why the indigenous people of KwaNibela feel like their livelihoods do not benefit from conservation. This is because;

“Predators escape from the park and feed on our livestock, the worst part is that one is not allowed to harm the predator that has destroyed livelihood but have to call the iSimangaliso officials to come and fetch the predator. In cases where community members harmed the predator they were arrested which I find to be unfair since we are not compensated for the loss of our livestock” (Interview with community member, September 2019).

This confirms the statement made by Khan et al., (2018), that conservation may detrimentally affect people’s livelihoods through attacks on livestock. Thus communities suffer economic losses since the majority of poor rural households depend on their livestock for income generation. Other participants stated that they feel as if only the elite and well connected get to benefit from conservation (Interview with community member, August 2019). One of the goals of co-management is to assist local communities to achieve economic progression, improve social development and enhance social justice. This shows that the iSimangaliso Wetland Park conservation programmes fail to live up to this goal of co-management since a majority of the community members feel that they do not benefit from conservation.

Further, the fact that some individuals feel that only the elite benefit shows that there may be some social injustice in the distribution of benefits from conservation. The lack of jobs and limited access to natural resources are also some of the reasons that the community of KwaNibela feels that conservation does not benefit their livelihoods. “iSimangaliso evicted us from our land and took control of our resources but they do nothing for the community in return, they don’t employ people in our community but one finds that outsiders get employed” (Interview with community member, August 2019). Moreover, the majority of the participants stated that natural resource conservation impacts on their livelihoods negatively due to lack of access to natural resources which they depend on for their livelihoods. The restrictions placed on natural resources also makes it hard for the community to access plants for medicinal purposes. “As a traditional healer, the lack of access to natural resources make it hard for me to find certain herbs I use to heal people in the community” (Interview with

community member, August 2019). This gives justification to the statement made by Lamsal et al., (2015) that the restriction on people's access to natural resources that sustain their livelihood may lead to local communities being against conservation.



Figure 6.9: Restricted access to grazing land

(Source: Researcher 2019)

The banning of hunting activities also adversely affected the livelihoods of the community since some participants stated that they depended upon hunting for food security before the implementation of conservation. Hence one community member asserted that;

“We used to hunt and share what we catch with community members before hunting was declared illegal. This has caused food insecurity in the community. The banning of hunting was not necessary because, through indigenous knowledge systems which has been passed on from our forefathers, we used to hunt in a sustainable manner that allowed the population of the species we hunted to repopulate” (Interview with community member, August 2019).

The restricted access to land for grazing is also a major issue since people's livestock are forced to graze on land which they regard unsustainable for livestock agriculture as illustrated in Figure 6.10 above. Other respondents from KwaNibela felt that conservation does not benefit the community because they lack access to land for farming (the issue of access or lack of natural resources in iSimangaliso Wetland Park by the community of KwaNibela is discussed further below). Figure 6.11 below illustrates some of the agricultural plots that are not fertile enough for subsistence

agriculture that the people of KwaNibela are forced to use due to lack of land for farming. This supports the statement made by Parmawati et al., (2018) which asserts that land for agriculture is a critical asset for rural communities since agriculture is mostly the main source of income and food security. Some of these respondents felt that there is lack of direct financial benefits from conservation. These participants also stated unemployment is a major reason why they feel there is no benefits from conservation. Others stated that they feel that conservation takes rather than gives to the community because people were evicted from their traditional land when the iSimangaliso Wetland Park was established.



Figure 6.10: Plots unsustainable for subsistence agriculture

(Source: Researcher 2019)

Some of these participants also stated that limited community participation in conservation is the reason why they felt that conservation does not address their needs. “The community has no say when it comes to management of natural resources, iSimangaliso Wetland Park has never consulted with the community in attempt to design and implement natural resource conservation programmes that can address our needs” (Interview with community member, August 2019). The lack of access to natural resources makes living difficult for families who depend on natural resources. Most of the respondents who asserted that they do have access to natural resources stated that they only access them through tourism ventures and are not

allowed to cultivate nor use them. Co-management seeks to strengthen the capacity of local communities to manage their own resources and help resolve conflict over natural resource conservation (Zhu et al., 2014). However, the fact that a majority of the respondents stated that they do not have access to natural resources shows that the community does not manage its resources, this shows that the implementation of the co-management approach by the park is not quite successful.

The participants of this study were asked if they think there is equal distribution of benefits from conservation within the community. The results of this study revealed that a majority of the participants feel that there is unequal distribution of benefits from conservation because they received little or no benefits from conservation (Interview with community member, August 2019). Some participants stated they feel the benefits of conservation are distributed unequally because they feel that only kings, traditional chiefs and people who are politically connected benefit from conservation (Interview with community member, September 2019). This gives ground to the statement made by Coulthard et al., (2017) that politics may directly or indirectly influence the flow of money and benefits which are accumulated through conservation.

Another reason why the participants of this study believe there is unequal distribution of benefits from conservation is because there are no specific criteria for the selection of beneficiaries who are to benefit from conservation. This is corroborated by the statement made by Ward et al., (2017) which asserts that Protected Areas which adopt co-management as a conservation strategy face a risk of elite capture, whereby only a few individuals get to benefit from conservation. Without any specific criteria for the selection of beneficiaries few individuals may get to benefit more at the expense of others.

The results of this study further revealed that due to lack of benefits from conservation, people are involved in alternative livelihood activities in order to sustain their families. This supports the statement made by Riddell (2013) which asserts that the lack of access to natural resources and the injection of cash into the rural economy may in some cases, force people to seek alternative livelihood options in order to sustain their living. Table 6.1 below illustrate the alternative livelihood activities that the community of KwaNibela is involved in.

Table 6.1: Alternative livelihood activities

Activity	Frequency	Percent
None	34	68
building houses	3	6
Forestry	2	4
Education	1	2
Traditional healing	1	2
Piece jobs	2	4
Craftwork	3	6
Agriculture	4	8
Total	50	100

The results further revealed that 6% of individuals who stated that they are involved in alternative livelihood activities build traditional houses for local people in the community of KwaNibela, 4% are involved in forestry and sell wood to small enterprises, 2% stated they are unqualified educators and teach matric students science and maths after school hours and on weekends in order to generate income. Two percent are involved in traditional healing, while 4% stated they pursue piece jobs to make ends meet. Six percent of the participants stated that they were involved in craftwork as an alternative livelihood activity besides their professional occupation in order to generate extra income and 8% were involved in agriculture as an alternative livelihood activity.

These individuals are mostly small scale farmers who sell their harvest and livestock to local people in order to supplement their household finances. The SLF states that livelihoods can only be sustainable if they are able to recover from stress and shock and recover its capabilities and assets (Ward et al., 2017). In this scenario the establishment of the iSimangaliso Wetland Park can be seen as a shock due to the sudden strict conservation rules that the park introduced thus restricting households from harvesting natural resources and prohibiting certain livelihood activities. The fact that most respondents are not involved in alternative livelihood activities shows that their livelihoods are not sustainable since they failed to recover from this shock and adopt a new method of survival.

6.5 The perceptions of indigenous people on natural resource conservation

The participants of this study were asked how they perceive natural resource conservation. According to the results of this study as illustrated in Table 6.2 below, 48% of the respondents had a positive attitude towards natural resource conservation. This is because they stated that, it was effective in ensuring the sustainability of biodiversity and the preservation of natural resources. Hence, it was highlighted that, “conservation benefits the community through the preservation of valuable natural assets for the community and conserves nature and biodiversity so that future generations can also benefit from nature” (Interview with community member, August 2019). Others stated that conservation assists the community through employment and income generated from tourism related activities and that it sponsors the local tribal court.

A further 6% of the respondents had a negative attitude towards natural resource conservation since they perceive it as an institutionalised strategy that the elites use to deprive the indigenous people access to natural resources. This was because “only the traditional authorities and politically connected individuals get to benefit from the natural resources conserved by iSimangaliso” (Interview with community member, September 2019). This confirms the statement made by Bragagnolo et al., (2016) which asserts that the loss of access to natural resources may lead to local communities having a negative attitude and perception towards natural conservation, since people may feel that they are being robbed of the opportunity to benefit from natural resources of their traditional land. Eighteen percent of the respondents had a negative perception towards natural resource conservation due to lack of access to benefits, while 16% of the respondents were not happy with natural resource conservation since it does not contribute to their livelihood.

Other respondents (8%) who had a positive attitude towards conservation stated that, it was because it kept them safe from the wild animals which are enclosed within iSimangaliso Wetland Park and 4% stated that they are happy with natural resource conservation since it contributes to the tourism sector within the country. These results support the claim made by (Guenha, 2010), that if the impacts of conservation are positive, people will have a positive attitude towards conservation but if the impacts are negative, people will have a negative attitude towards conservation.

Table 6.2: Perceptions on natural resource conservation

Perception	Frequency	Percent
Natural Resource Conservations (NRC) is effective in terms of ensuring sustainability	24	48
Do not support NRC since it deprive people access to natural resources	3	6
Do not support NRC due to lack of access to benefits	9	18
NRC does not contribute to our livelihood	8	16
Safety from wild animals	4	8
Contributes to the tourism sector	2	4
Total	50	100

The reason why a significant number of the respondents do not support natural resource conservation is due to the restrictions imposed upon natural resources and the limited participation that the community has regarding decision making in conservation issues. This confirms the view that, the challenges of implementing co-management include institutional barriers, the involvement of all relevant stakeholders, conflict throughout the planning process and equity issues related to collective decisions or unequal distribution of benefits (Ward et al., 2017). Another reason these individuals do not support conservation is because they feel that it does not benefit the community. The participants of this study were also asked if there has ever been a conflict between the local community and iSimangaliso Wetland Park. The results indicated that 36% of the participants stated there has been conflict and 64% stated that there has never been conflict between the park and the community.

The responses from the participants of this study indicated that the reason there has been conflict between the community of KwaNibela and iSimangaliso Wetland Park is because predators escape from the park and feed on their livestock (Interview with community member, September 2019). Land tenure related issues have also caused conflict since people were evicted from their traditional land without compensation.

The community stated that “we were forcefully removed from our land without notice, and we were dumped in an area which does not have sufficient natural resources to support our population” (Interview with community member, September 2019). Other respondents stated the mistreatment of community members in the name of conservation also causes conflict.

The banning of hunting activities has also sparked conflict due to the fact that some community members relied on hunting for food security and the enclosure of natural resources is another factor that caused conflict since some people in the community stated they depend on those natural resources for a living (Interview with community member, September 2019). This confirms the statement by Riddell (2013) which asserts that households that rely on hunting for their livelihoods may suffer high opportunity costs due to reduced access to hunting because of strict hunting regulations and the banning of hunting activities. These results also give ground to the statement made by Lamsal et al., (2015) which asserts that the restriction of people’s access to natural resources can be justified from a conservation point of view, but conflict may arise when the livelihoods of local people are not catered for in the process.

6.6 Conclusion

This chapter has presented the findings and interpreted the results of this study. The results show that, iSimangaliso Wetland Park follows co-management in its approach towards natural resource conservation programme. It was uncovered that natural resource conservation adversely affects the livelihoods of the community of KwaNibela through the lack of access to natural resources. The chapter also established that some members of the community of KwaNibela have a negative perception towards conservation due to the lack of access to natural resources as well due to predators escaping from the park and feeding on the community’s livestock. Overall, the members of the community in KwaNibela think that the iSimangaliso Wetland Park does not enhance their livelihoods. With regards to the aim of the study these results were sufficient to prove that natural resource conservation has a negative impact on the livelihoods of the community in KwaNibela, which is why a majority of the study population was not satisfied with the conservation programmes that are implemented

by the iSimangaliso Wetland Park. The next chapter concludes the whole study and also makes some recommendations.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The study consisted of seven chapters. Chapter one provided a background to the study in order to provide an orientation to the research. Chapter two explored the contextual and theoretical perspectives to the study. Chapter three critically reviewed literature relevant to the present research. Chapter four presented the physical setting of the study. The study was based on assessing the influence of natural resource conservation on the livelihoods of the community of KwaNibela KZN, a small rural area within the UMkhanyakude District Municipality. The chapter briefly explained the history of KwaNibela in terms of its earlier inhabitants and the tribes that once settled there during the earlier civilization. The chapter also revealed the environmental features and spatial characteristics of the area and explained the demographic and socio-economic characteristics of the area. Chapter five described the research design and methodology which were followed in the collection and analysis of data on which the findings of this research stand. Chapter six provided a critical analysis and interpretation of the data in response to the objectives of the study. In line with this analysis, the following issues emerged, which respond to the objectives of this study as presented in Chapter 1, Section 1.4.2.

7.2 Natural resource conservation initiatives and programmes implemented by Isimangaliso Wetland Park

In accordance with the first aim of the study, the results of this study revealed that iSimangaliso Wetland Park entered into a co-management agreement with the land claimants from surrounding communities for the purposes of natural resource conservation. This means that the park should collaborate with the surrounding communities in the management of natural resources. However, the community members of KwaNibela did not feel that they benefited in full from the resources conserved by the park. They also did not feel that they were properly and/or fully consulted regarding the conservation decisions made by the park. This shows that the conservation programmes of iSimangaliso Wetland Park were not effective to the extent of meeting the goals of co-management and in including the community in its conservation programmes.

7.3 Influence of natural resource conservation programmes on the livelihoods of the community of KwaNibela

With regards to the second objective of this study, the results show that natural resource conservation negatively influences the livelihoods of the indigenous people of KwaNibela. The community members stated that this was due to the lack of access to natural resources which they depended upon in order to secure their livelihoods. Given that, co-management seeks to strengthen the capacity of local communities to manage their own resources (Zhu et al., 2014), the scenario described in the preceding section shows that the iSimangaliso Wetland Park falls short in achieving the goals of co-management. The banning of hunting activities is also another reason why the livelihoods of the people of KwaNibela suffer due to conservation. The predation of livestock by predators that escape from the park also causes economic losses to the livelihoods of households in the area. This confirms the observation by Khan et al., (2018) that conservation may have detrimental effects people's livelihoods through attacks on livestock thus leading to economic losses since the majority of poor rural households depend on their livestock for income generation. Restricted access to land for agriculture also adversely affects the livelihoods of the people in KwaNibela as they mostly rely on agriculture to sustain their living.

7.4 Perceptions and attitudes of indigenous people towards Isimangaliso Wetland Park conservation strategies at KwaNibela

In response to the third objective, results of this study show that some of the people in KwaNibela have a positive perception and attitude towards natural resource conservation since it is effective in ensuring the sustainability of natural resources. Another reason why some people in the area were happy with conservation is because fencing keeps the community safe from wild animals and contributes to the tourism sector. However, some individuals have negative perception of natural resource conservation since it does not contribute to their livelihoods and due to the lack of access to benefits from natural resource conservation. Another reason why people do not support natural resource conservation is due to the limited access to natural resources. This supports the argument made by (Guenha, 2010) that if the impacts of

conservation are positive, people will have a positive attitude towards it but if the impacts are negative, people will have a negative attitude towards conservation.

7.5 Recommendations

Based on the findings of the study as discussed in Chapter 6 and summarised in the preceding section of this chapter, the following recommendations can be made, that the iSimangaliso Wetland Park should:

- a) Support local small scale farmers and subsistence agricultural practitioners through agricultural workshops. Farmers will get to be equipped with skills and methods which may enable them to be successful in farming and also offer the farmers necessary farming equipment in order to increase their success rate in terms of agricultural production. This may be effective since the majority of the people in KwaNibela depend on agriculture to sustain their living and for food security.
- b) Engage with communities through organising community meetings in order to allow the community to raise their concerns and grievances with regards to the conservation methods implemented by the park. This may assist the officials of the park in identifying how the conservation policies of iSimangaliso Wetland Park affect local communities and assist them in formulating better and more inclusive conservation policies.
- c) Compensate families who lose livestock due to predators that escape from the park through a formal structured procedure where by the affected families get to lay formal complaints with the assistance of the local traditional authority. After receiving complaints, the park should evaluate the damage and get to decide on a fair amount which can be compensated to the owners who have lost their livestock due to predation.
- d) Support local craft workers by building a craft market where local craft workers can get to sell their craftwork to tourists who visit the park in order to assist them to generate more income and sustain their livelihoods. The park should also advertise and expose the craft market to tourists through brochures and posters in order to attract more tourists to the craft market. This will help increase the number of potential customers who may buy from the local craft workers

7.6. Conclusion

This chapter has concluded this study by showing that, overall PA (iSimangaliso Wetland Park) has a negative influence on the livelihoods of the community members of KwaNibela. This is because most of the participants were of the view that not only are they not fully involved in the conservation programmes, but also that, these programmes did not always influence their livelihoods. As a result, there is need for iSimangaliso Wetland Park and the community of KwaNibela to forge a truly collaborative approach to the management of the resources in the park so that the benefits accrue to both parties. There is need to for the co- management of the iSimangaliso Wetland Park to materialise at a more practical level in which the people feel that they are partners and not subjects. As partners, they should fully benefit from the natural resources in the Park and by these means ensure that they attain sustainable livelihoods. These are issues which constitute some of the recommendations which this research has made.

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APPENDICES

APPENDICE A: ORIGINALITY DECLARATION

Full Names and Surname	Zwelakhe Thulasizwe Mascot Maseko
Student Number	201421677
Title of dissertation/thesis	Assessing the influence of natural resource conservation on the livelihoods of KwaNibela, KwaZulu-Natal

I acknowledge that I have read and understood the University's policies and rules applicable to postgraduate research, and I certify that I have, to the best of my knowledge and belief, complied with their requirements.

In particular, I confirm that I had obtained an ethical clearance certificate for my research (Certificate Number UZREC 171110-030 PGM 2018/566) and that I have complied with the conditions set out in that certificate.

I further certify that this research thesis is original, and that the material has not been published elsewhere, or submitted, either in whole or in part, for a degree at this or any other university.

I declare that this research thesis is, save for the supervisory guidance received, the product of my own work and effort. I have, to the best of my knowledge and belief, complied with the University's Plagiarism Policy and acknowledged all sources of information in line with normal academic conventions.

I have subjected the document to the University's text-matching and/or similarity-checking procedures.

Candidate's signature	
Date	

APPENDICE B: QUESTIONNAIRE

I Zwelakhe Maseko kindly ask for your assistance in my Masters' research based on assessing the influence of natural resource conservation on livelihoods in KwaNibela, Kwa-Zulu Natal by willingly answering this questionnaire. Be assured that all answers you provide will be kept with strictest confidentiality.

Consent form

I State that the research has been explained to me and that I voluntarily accept to answer the questions in the questionnaire. The researcher explained to me that I can withdraw my participation at any time.

Signature:

Section A: Biographical and Demographic information.

1. Questionnaire

2. Age

3. Gender

Male:

Female:

4. How many family members are in your household?

.....

5. Level of education

.....

6. Indicate your current employment status with an "X" BELOW

Employed	
Unemployed	
Self-employed	

7. What work do you do? (occupation)

.....

.....

8. How many family members are employed in your household?

Section B: Benefits from natural resource conservation

1. Do you and your family in any way benefit from the natural resource conservation programmes implemented by iSimangaliso Wetland Park?

YES ☐ No ☐

2. If the answer to the above question is yes, how do you benefit?

.....

.....

3. Do these benefits contribute to your livelihood?

Yes ☐ No ☐

3.1 If the answer to the above question is yes, how?

.....

.....

4. Are you satisfied with these benefits?

Yes ☐ No ☐

4.1 If the answer to the above question is yes, how?

.....

.....

4.1.2 If the answer to the above question is no, why?

.....

.....

5. Do you think that there is an equal distribution of benefits from natural resource conservation between the community of KwaNibela and iSimangaliso Wetland Park?

Yes ☐ No ☐

5.1 If the answer to the above question is yes, how?

.....

.....

5.1.2 If the answer to the above question is no, why?

.....

.....

Section C: Impact of natural resource conservation programmes on livelihoods

1. Do you think that natural resource conservation in iSimangaliso Wetland Park contributes to your livelihood?

Yes ☐ No ☐

1.1 If the answer to the above question is yes, how?

.....

.....

1.2 If the answer to the above question is no, why?

.....

.....

2 Has the conservation programmes of Isimangaliso Wetland Park affected your livelihood?

Yes ☐ No ☐

2.1 If the answer to the above question is yes, how?

.....

.....

3 Do you depend on natural resources for your livelihood wellbeing?

Yes ☐ No ☐

3.1 If the answer to the above question is yes, why?

.....
.....

4 Do you have access to natural resources?

Yes ☐ No ☐

4.1 If the answer to the above question is yes, how?

.....
.....

5 Are there other activities you are involved in which also contribute to your livelihood?

Yes ☐ No ☐

5.1. If the answer to the above question is yes, what are those activities?

.....
.....

Section D: Perceptions and attitudes towards natural resource conservation.

1. What do you think of the natural resource conservation initiatives and programmes implemented by iSimangaliso Wetland Park?

.....
.....

2. Are you happy with the natural resource conservation programmes implemented by iSimangaliso Wetland Park?

Yes ☐ No ☐

2.1. If the answer to the above question is yes, why?

.....

.....

.....

2.2. If the answer to the above question is no, why?

.....

.....

.....

3. Do you think that the natural resource conservation programmes implemented by Isimangaliso Wetland Park benefit the community at large?

Yes ☐ No ☐

3.1. If the answer to above question is yes, how?

.....

.....

.....

3.2. If the answer to the above question is no, why?

.....

.....

.....

4. Do you support the conservation of natural resources?

Yes ☐ No ☐

4.1. If the answer to the above question is yes, why?

.....
.....
.....

4.2. If the answer to the above question is no, why?

.....
.....
.....

5. Are there any conflicts between the community of KwaNibela and Isimangaliso Wetland Park, with regards to the management of natural resources?

Yes ☐ No ☐

5.1. If the answer to the above question is yes, what is the source of this conflict?

.....
.....
.....

APPENDICE C: INTERVIEW GUIDE

I Zwelakhe Maseko kindly ask for your assistance in my Masters' research based on assessing the influence of natural resource conservation on livelihoods in KwaNibela, Kwa-Zulu Natal by willingly answering this questionnaire. Be assured that all answers you provide will be kept with strictest confidentiality.

Consent form

I State that the research has been explained to me and that I voluntarily accept to answer the questions in the questionnaire. The researcher explained that I can withdraw my participation at any time.

Signature:

Section A: Natural resource conservation initiatives and programmes implemented by iSimangaliso Wetland Park.

- 1. What are the natural conservation initiatives and programmes implemented by iSimangaliso Wetland Park?**

.....

.....

- 2. Is the community of KwaNibela allowed to participate in the conservation of natural resources?**

.....

.....

- 3. Is the community of KwaNibela allowed to access natural resources? Why?**

.....

.....

- 4. Do the implemented natural resource programmes allow the community of KwaNibela to benefit from natural resource conservation? If yes how?**

.....

.....

- 5. What measures are taken to make sure that natural resource conservation in iSimangaliso Wetland Park contributes to livelihoods?**

.....

.....

- 6. Has iSimangaliso Wetland Park encountered conflict with the community of KwaNibela in the process of conservation?**

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.....

APPENDICE D: ETHICAL CLERANCE CERTIFICATE

**UNIVERSITY OF ZULULAND
RESEARCH ETHICS COMMITTEE**
(Reg No: UZREC 171110-030)



RESEARCH & INNOVATION

Website: <http://www.unizulu.ac.za>
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ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2018/566				
Project Title	ASSESSING THE IMPACT OF NATURAL RESOURCE CONSERVATION ON LIVELIHOODS IN KWANIBELA, KWAZULU-NATAL				
Principal Researcher/ Investigator	Z Maseko				
Supervisor and Co-supervisor	Dr I Moyo				
Department	Geography				
Faculty	ARTS				
Type of Risk	Low Risk- Data collection from people				
Nature of Project	Honours/4 th Year	Master's	x	Doctoral	Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project. The Researcher may therefore commence with data collection as from the date of this Certificate, using the certificate number indicated above.

Special conditions:

- (1) This certificate is valid for 1 year from the date of issue.
- (2) Principal researcher must provide an annual report to the UZREC in the prescribed format [due date- 10 December 2019]
- (3) Principal researcher must submit a report at the end of project in respect of ethical compliance.
- (4) The UZREC must be informed immediately of any material change in the conditions or undertakings mentioned in the documents that were presented to the meeting.

The UZREC wishes the researcher well in conducting research.


Professor Gideon De Wet
Chairperson: University Research Ethics Committee
Deputy Vice-Chancellor: Research & Innovation
10 December 2018

