



UNIVERSITY OF ZULULAND

Analysing the impact of Covid-19 on the livelihoods of communities adjacent to Protected Areas: Machibini community and Hluhluwe Imfolozi Park

By

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[202073228]

A research project submitted in fulfilment of the requirements for:

Master of Arts in Geography

Department of Geography and Environmental Studies

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University of Zululand

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2022

ORIGINALITY DECLARATION

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In particular, I confirm that I obtained an ethical clearance certificate for my research (Certificate Number UZREC 171110-030 PGM 2021/192) and that I have complied with the conditions set out in that certificate.

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ACKNOWLEDGEMENTS

I am truly grateful to the following people who contributed significantly to this project, making it possible for me to complete it.

- To my Lord and Saviour, Jesus Christ I give glory for giving me the strength to complete this project.
- My supervisor Prof I. Moyo for being patient with me and for his guidance throughout this project.
- My parents for their support throughout this journey, and I am truly grateful.
- My colleagues, Makhosazane and Buhle and my dear friends, Londeka and Ntsiki whose words of encouragement kept me afloat when I felt like I was drowning and would not make it.

DEDICATION

I dedicate this dissertation to my family, whose love and continuous support gives me the courage to pursue my dreams. This dissertation is also dedicated to my late grandparents, His Grace, Bishop T.T Madlala, MaMyeni and MaNtuli, how I wish they were still alive to witness how far I have come.

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LIST OF ACRONYMS

CAMPFIRE - Community Areas Management Programme for Indigenous Resources

CBC - Community-Based Conservation

CBNRM - Community-Based Natural Resource Management

Covid-19 - Coronavirus disease 2019

DFID - Department for International Development

FAO - Food Organisation Agriculture

HIP - Hluhluwe Imfolozi Park

ILO - International Labour Organization

IUCN - International Union for Conservation of Nature

MPA - Marine Protected Areas

PA - Protected Areas

PAOP - Protected Areas Outreach Programme

PE - Political Ecology

SLA - Sustainable Livelihoods Approach

SLF - Sustainable Livelihoods Framework

UNDP - United Nations Development Programme

WCPA - World Commission on Protected Areas

WHO - World Health Organization

WTO - World Tourism Organization

ABSTRACT

This study aims to analyse how the Covid-19 pandemic affected the livelihoods of the Machibini community adjacent to Hluhluwe Imfolozi Park (HIP). Its objectives are to a) analyse the livelihood activities of the Machibini community before the Covid-19 pandemic, b) evaluate the impact of Covid-19 on the livelihood activities of the Machibini community, c) evaluate the local community's access to resources found within the HIP during the pandemic, d) explore the coping strategies utilised by the community members to deal with the impacts of Covid-19 and, e) propose strategies which can be implemented to assist rural communities to respond to disasters. To achieve this a qualitative research methodology was used in which the community members, the traditional authority of the Machibini community as well as the HIP park official were interviewed. The findings show that the Machibini community engage in various livelihoods. While some livelihoods require resources from the HIP, others do not. The pandemic affected the livelihoods of the respondents in different measures. Some respondents lost their only income-generating schemes, while others managed to maintain their livelihoods. The results also show that the respondents were granted access to the park to extract the resources they needed although the harvesting period was cut short during the pandemic. To cope with the challenges brought about by the pandemic, some respondents engaged in entirely new livelihoods such as selling chickens and fast foods. Based on these findings, the study recommends that the Hluhluwe Imfolozi Park (HIP) and the traditional authority must work together to establish a system that will ensure that information about the availability of employment opportunities in the park is disseminated to every part of this community. In this way, everyone has a fair chance of getting employment. It is also imperative for the park to make their employees' contracts permanent. The Machibini community also needs life skills programmes and other necessary facilities that will foster their livelihoods. The community members, through the assistance of the park, can open an online store that is featured on the HIP's website since there is a larger audience there to sell their handicrafts to. This way, even if the people's crafts are not sold physically due to disruptions such as the Covid-19 pandemic, they will be available and sold on this online platform.

Keywords: Covid-19, livelihoods, protected areas, local communities, Machibini, Hluhluwe Imfolozi Park

CHAPTER 1: ORIENTATION TO THE STUDY

1.1. Introduction

Protected areas (PA) are areas that are used to counteract biodiversity loss. In most cases, these areas exist alongside various rural communities (Mkhwanazi, 2018). With the establishment of PAs, many communities encountered the challenge of being evicted from the areas that they owned (Mdiniso and Nzama, 2018). The Land reform program came about at the dawn of the democratic era to ensure that communities such as these regain access to their former land through three various programs which are land redistribution, land restitution and land tenure reform (Cliffe, 2000). Queiros and Mearns (2017) state that the success of PAs lies in the positive attitudes of the local communities towards conservation and through the benefit-sharing approach. Benefit-sharing can be achieved by granting local communities access to the natural resources found within the PAs, through infrastructural development in the local communities, and education and training initiatives.

Communities adjacent to PAs are mostly rural, having livelihoods that are based on natural resources found within these PAs. Livelihoods can be defined as the various activities that people engage in to sustain themselves. People use their capabilities, assets, and income and engage in various activities so that they attain their basic needs (Chambers & Conway, 1991; Attfield et al., 2004). Since the communities located adjacent to PAs are mostly rural, they are in most cases illiterate and unemployed. They, therefore, engage in activities that are linked to the skills and resources that they have. The most common livelihoods are crop production, animal husbandry and fishing (Kapur, 2019). Agrarian communities depend highly on natural resources, some of these being found within the PAs.

Globally PAs are working on integrating the benefit-sharing approach into their management. For instance, in the Philippines, the North Negros National Park does not deprive the local community of access to the park to do activities such as farming. The locals are also not withheld from using non-timber products such as fruits, leaves and the bark of the trees for medicine (Chechina et al., 2018). Women from communities near the Mole National Park, a PA in Ghana, have livelihood activities which include shea picking, which they then process into shea butter (Abukari, 2020).

The Khanyayo community located near the Mkhambathi Nature Reserve in the Eastern Cape, South Africa, is a rural community that is reliant on natural resources found within the reserve. Seasonally some community members collect grass for thatching their huts from the reserve (Querios & Mearns, 2019).

People must have livelihoods that are sustainable, meaning that a person's livelihood should be able to withstand certain shocks. Various shocks can prevent certain livelihoods from being sustainable, instead, causing them to be precarious. Berchoux et al., (2019) highlight that shocks can either be external or internal. External shocks can be natural hazards such as droughts and floods, these are most likely to affect the rural communities which are dependent on agriculture as a livelihood, this being the case with some people living next to PAs. The outbreak of the Corona virus can be seen as an internal shock that has threatened the lives of many people and their livelihoods as well. Statistics from the International Labor Organization (ILO) revealed that because of the pandemic, 50% of the workforce risked losing their livelihoods, with 1,6 billion people who form part of the informal economy also at risk of losing their primary source of income (International Labour Organization, 2020). This study focused on the Machibini community which is adjacent to the Hluhluwe Imfolozi Park (HIP), and it examined how the Covid-19 Pandemic affected the livelihoods of the Machibini community. This was done in terms of analyzing how the pandemic affected the way the community accessed resources from the HIP.

1.2. Background of the Study

In December 2019 there was an outbreak of what seemed to be pneumonia among people in Wuhan China. It was discovered that this was caused by the SARS-Cov 2 virus. The World Health Organization (WHO) identified this as a new type of Corona Virus 2019 (Covid-19) and in March 2020 was declared a pandemic (Hockings et al., 2020). Covid-19 has affected and altered the lives of people from all walks of life.

PAs are utilised as tools to counteract biodiversity loss. The operation of PAs was also affected by the pandemic, especially with the lockdown that was declared worldwide to curb the spread of the virus. PAs had to close temporarily, and this meant that no tourists were visiting these areas, causing their revenue to decline drastically (Hockings et al., 2020). This had negative implications on the PAs as they utilise the

revenue they generate for various things, among these is the development of their local communities.

HIP was set apart as an area for the conservation of game in 1895 (Brooks, 2000). This PA was previously divided into two areas with Hluhluwe Game Reserve forming the northern part and Imfolozi Game Reserve forming part of the southern region. Conservation areas now use a different approach from the one used during the colonial and apartheid era which was exclusionary. Conservation areas now include local communities and have measures in place that aim at developing these communities and diversifying their livelihoods. This helps in creating a harmonious relationship between the two parties (Adeleke & Nzama, 2013).

Mkhwanazi (2018) revealed that HIP uses Community Based Conservation (CBC) as an approach to ensure that there are socio-economic benefits for the local communities and that this is in conjunction with the protection of biodiversity. The park has various programs which include the Rhino Ambassadors Program, Sifundimvelo Education Programme and the Ezemvelo RBM Cup Program. The Park also employs some community members. In addition to this, HIP has markets at its entrances where community members can sell various items to tourists. These initiatives have played a role in diversifying the livelihoods of the communities adjacent to HIP. However, even with all these initiatives that were implemented, the surrounding communities are still restricted from accessing the resources found within the park (Mkhwanazi, 2018).

Communities living adjacent to PAs were negatively affected by the pandemic (McGinlay et al., 2020). With the lockdown in place PAs have been forced to make salary cuts and in some cases, retrench employees. This contributed to the high unemployment rate in communities adjacent to PAs (Hockings et al., 2020). The indigenous communities that are dependent on PAs and the resources found within these areas had their livelihoods disrupted and threatened (Hockings et al., 2020). Therefore, this study examined the impact of Covid-19 on the livelihoods of the Machibini Community focusing on how this pandemic affected the way community members accessed resources found within the boundaries of the HIP.

1.3. Problem statement

The communities that are adjacent to PAs in most cases are rural (Nzama & Mdiniso, 2018). They are unemployed; therefore, they utilize their skills and the resources at

their disposal to sustain themselves. Some of these resources are found inside PAs. Unfortunately, parks have regulations that restrict the local community members to access resources found within the park's boundaries. A study conducted by Mkhwanazi (2018) on the Khanyayo Village adjacent to the HIP revealed that community members were denied access to the resources found within the PA as 98% of the participants stated that they were not allowed to fish in the park or even get timber to use for building houses. The rest of the participants (2%) stated that they do enter the park to harvest grass that they utilize for multiple things such as thatching their houses, and making brooms, mats, and baskets (Mkhwanazi, 2018).

Indeed, significant research has been done on communities that are adjacent to PAs. A study conducted in the National Marine Parks in Thailand showed that local communities who were dependent on fish harvesting in areas that were demarcated as PAs were prohibited from harvesting. However, this did not stop the local communities from harvesting illegally since they considered fishing as their livelihood (Querios & Mearns 2019). Thondhlana and Cundill (2017) conducted research in 13 reserves in South Africa. Out of the 18 communities that were selected, 12 community leaders stated that they were restricted access to the resources found within the PAs. While some studies show how local communities have restricted access to the resources found within PAs, some studies bring to light that there are communities that have access to natural resources. For example, studies done in the Mbarang'andu Wildlife Management Area and the Njianne-Somanga-Pombwe-Jaja Community Fisheries Management Area show that the communities adjacent to these PAs have access to natural resources (Franks & Booker, 2015). In the study area, there had been no research undertaken to investigate how the Covid-19 Pandemic may have influenced the local community's access to the resources found within the PA. Given this, it was important to analyse how Covid-19 influenced the local communities' access to resources found within PAs focusing on the Machibini community and the HIP. Taking into consideration that the HIP utilizes Community Based Conservation as an approach to the running of the park, it was vital to assess how the park interacted with the local communities during the pandemic.

Analyzing the impact of Covid-19 on the livelihoods of people surrounding a PA like the HIP is pertinent because the outbreak of diseases has adverse impacts on the

livelihoods of people. For example, Ebola an infectious disease that spread in West Africa managed to kill up to 9000 people by February 2015, resulting in a decrease in the number of people who visited the conservation areas. This inevitably affected the revenue generated by the conservation areas like parks resulting in a decrease in the income of those working in and around the conservation areas (Egbetade et al., 2015). The local communities were affected as there was a decrease in the support provided by the conservation areas in West Africa. This study has brought into sharp focus the need to understand the impact of Covid-19 on the Machibini community adjacent to HIP.

1.4. Aim and objectives

1.4.1. Aim

This study aims to analyse how the Covid-19 pandemic affected the livelihoods of the Machibini community adjacent to the HIP.

1.4.2. Objectives

- a) Analyse the livelihood activities of the Machibini community before the Covid-19 pandemic.
- b) Evaluate the impact of Covid-19 on the livelihood activities of the Machibini community.
- c) Evaluate the local community's access to resources found within HIP during the pandemic.
- d) Explore the coping strategies utilised by the community members to deal with the impacts of Covid-19.
- e) Propose strategies which can be implemented to assist rural communities to respond to disasters.

1.4.3. Research questions

- a) What were the livelihood activities of the Machibini community before the Covid-19 pandemic?
- b) What is the impact of the Covid-19 pandemic on the livelihood activities of the Machibini community?
- c) Did the local community have access to resources found within HIP during the pandemic?

- d) What are the coping strategies utilised by the community members to deal with the impacts of Covid-19?
- e) What strategies can be implemented to assist rural communities to respond to disasters?

1.5. Significance of the study

The communities that are located in proximity to PAs are in most cases poverty-stricken. The number of illiterate people is high, and this is a contributing factor to the escalating unemployment rate in these areas (Mkhwanazi, 2018). Consequently, local communities utilise the skills and resources they have to sustain themselves. Some of the livelihood activities that these communities engage in depend on the resources that are found within PAs. This has sometimes not worked in favour of the local communities as they were restricted access to these resources, furthermore the Covid-19 pandemic has had negative implications on people, altering their normal way of life. This study highlights the impact of Covid-19 on the livelihood activities of the Machibini community. It also explores the coping strategies of this community and those that were assigned to assist communities to deal with disasters.

1.6. Outline of the study

This study has six chapters. The first chapter introduced the study and provided the background of the study, the problem statement, the aim, the objectives, the significance, and the outline of the study. The second chapter outlines the theoretical framework of this study, with political ecology and the Sustainable Livelihoods Approach (SLA) being the two theories that were applied by the study. Political ecology looks at the politics that were involved concerning the Machibini community accessing resources found within the HIP during the pandemic. The SLA is used to analyse the livelihoods of the Machibini community. Chapter three elaborates upon the literature that is specifically related to the aim of this study. This chapter reviews the literature on PAs, livelihoods, livelihoods of communities adjacent to PAs and the Covid-19 pandemic. Chapter four covers information on the physical setting of the Machibini community and HIP, looking at aspects such as the climate of the region, the topography, the vegetation found in that area and the socio-economic conditions of the Machibini community. This chapter also detailed the methodology utilised for this research project. This study utilises a case study research design and is qualitative in its approach, which is fitting for this as it assisted the researcher to find out how the

pandemic affected the Machibini community. Chapter five presents the analysis and interpretation of the collected data in line with the objectives of the study. Using the study's findings (which were aligned with the study's objectives), recommendations were provided in chapter six which sought to assist the Machibini community, ensuring that they have sustainable yet diversified livelihoods.

1.7. Chapter Summary

This chapter has introduced the study by providing the background of the study. The problem with regards to the study area was stated, and the aim of the study and its objectives were provided, in addition to this the significance of the study and the outline of the whole research paper was given. The upcoming chapter will be based on the theoretical framework of the study.

CHAPTER 2: THEORETICAL FRAMEWORK

2.1. Introduction

This chapter discusses the conceptual and theoretical frameworks of this study. It is divided into two main parts in which the first describes the main concepts which underpin the study. The second explains the theoretical frameworks which guide the study, and these are Political Ecology (PE) and the Sustainable Livelihoods Approach (SLA).

2.2. Conceptual framework

A conceptual framework can be defined as important concepts in the study that assist in exploring the research problem (Adom et al., 2018). The concepts which underpin this study are, Protected Areas (PAs), park-adjacent communities, livelihoods, sustainable livelihoods, and the Covid-19 pandemic.

2.2.1. Protected Areas

Protected areas (PAs) can be defined as areas that have prominent features within their boundaries, these can either be the animals found in them, a mountain or the type of vegetation in that area (Triboi, 2021). PAs have been left in their most natural form and their establishment plays the essential role of limiting biodiversity loss (Brook, 2000). HIP, which is the study area for this research, played a role in saving the southern white rhino population from the brink of extinction by offering a breeding facility for them (Mkwanazi, 2018).

2.2.2. Park-adjacent communities

These are a group of people who share the same location and interact together. These communities are close to PAs and in most cases utilise resources that are found within the boundaries of these PAs for their livelihoods (Akinyemi & Mushunje, 2020). The Machibini community which is the study area is a community that is adjacent to HIP.

2.2.3. Livelihoods

The term livelihood refers to the ability of a person to engage in activities that enable them to get their necessities of life. Livelihoods also include the assets that people possess such as the resources that they have (Chambers & Conway, 1991). People's capacity to sustain themselves is dependent on the availability of resources and their access to these resources. Communities that are adjacent to PAs such as the

Machibini community are in most cases rural communities with illiterate and therefore, unemployed members. These people then have to utilise their skills and the resources found at their disposal to sustain themselves. In some cases, their livelihoods are derived from resources found inside PAs such as the HIP (Mkwanazi, 2018; Nsukwini, 2015).

2.2.4. Sustainable livelihoods

According to Serrat (2017), livelihoods are deemed sustainable when they can withstand the test of shocks and can recover from them. Chamber and Conway (1991) emphasize the importance of people having sustainable livelihoods. Such livelihoods ensure that the use of resources by the current generation does not minimize the future generation's ability to access the same resources. In other words, these livelihoods must not deplete the natural resource base. The Covid-19 pandemic is an external shock that has put a strain on people and their livelihoods, this study analysed how the Covid-19 pandemic affected the livelihoods of communities adjacent to PAs focusing on the Machibini community and HIP.

2.2.5. Covid-19 pandemic

The Coronavirus disease 2019 (Covid-19) is a respiratory illness that is easily spread via air droplets. The coronavirus appears crown shaped under a microscope due to the presence of glycoprotein spikes on its surface (Gennaro et al., 2020). The virus started in Wuhan China at a local market, and it is said to have a zoonotic origin specifically from bats which happened to be sold at the market. The virus spread at a fast rate, those who had the virus had flu-like symptoms such as a sore throat and a runny nose. In March 2020 the World Health Organisation (WHO) declared the coronavirus a pandemic (WHO, 2021). The spread of the virus has affected the lives of people drastically. This study analysed how the virus affected the livelihoods of the Machibini community which is adjacent to HIP.

2.3. Theoretical frameworks

A theoretical framework can be defined as a blueprint that sets out the structure of the research process. It is the foundation for the research from which all the knowledge stems (Grant & Osanloo, 2016). It is an explanation of how things will work as the research project proceeds (Collins & Stockton, 2018). Two theoretical frameworks

were used in this project, namely Political Ecology (PE) and the Sustainable Livelihoods Approach (SLA).

2.3.1. Political ecology

PE can be traced back to the 1970s and 1980s and it has roots in geography and anthropology. As a field of study, it has gathered scholars from multiple disciplines such as geography, environmental sociology, environmental history, and development studies (Robbins, 2012). PE explains the relationship that exists between people and the environment, whilst concurrently looking at the politics involved concerning accessing resources (Batterbury, 2015). It seeks to explain the politics involved concerning the environment, specifically looking at the management of the environment and its resources (Robbins, 2012). Furthermore, PE also looks at the actors who have control over resources and the way that they control people's access to environmental resources. How the environment and its resources are controlled has often led to issues about equity and sustainability. Watts (2000) adds that it also affects the livelihoods of communities and their sustainability. When analysing the relationship between PAs and the communities adjacent to them it becomes clear how PA authorities are actors who are in charge and utilise their power to control how the communities adjacent to them can access and utilise resources located within these PAs.

PE has five main theses that attempt to explain some aspects of the environment and society. The first thesis is the degradation and marginalization thesis. This thesis looks at the societal and economical processes that result in the exploitation of natural resources which results in limited resources being available. This causes the poor to have difficulty accessing resources. The decrease in the natural resource base has been largely blamed on the poor since they directly utilise natural resources, however, PE reveals that it is the economic processes that have resulted in the massive extraction of natural resources leading to degradation (Robbins, 2012).

The second thesis looks at environmental conflict and exclusion. It explains that the restrictions put on resource utilisation by those in authority have often caused conflict. This is because the marginalized do not understand why they are restricted from utilising common resources, so they use them anyway. The third thesis looks at environmental subjects and identities. It explains identities and different groups in

society that impact the livelihoods of people and the issues that relate to their livelihoods (Robbins, 2012). The fourth thesis is the political objects and the actor's thesis. This explains that there are non-human objects that influence political and economic systems. For example, climate and seasonality will impact the availability of food resources.

The fifth thesis is the conservation and control thesis which looks at how the measures made by conservationists to protect the environment and its resources have resulted in some people losing access to those resources thereby affecting local livelihoods (Robbins, 2012). Social systems are dependent on the resources provided by the environment. Some structures mediate and control the distribution of these resources. Power plays an important role when it comes to accessing resources (Robbins, 2012). Some people are constrained from utilising resources as they please due to the restrictions imposed by those who have control over them. The fifth thesis under PE highlights that marginalised groups have various interests towards resources as some of them utilise them for their livelihoods, however, there are struggles that they encounter with accessing these resources (Tilzey, 2020). Those who manage PAs have the challenging task of ensuring that the environment and its resources are protected while ensuring that there are tangible benefits received by tourists and local communities (Nsukwini, 2015).

The conservation and control thesis is about how the instigators of PAs have control over resources and various landscapes. PAs were established to preserve biodiversity. However, what transpired from conservation initiatives has not always been positive as they created a divide between the communities that formerly occupied those areas and the environment. These communities were forcefully removed since it was believed by the conservationists that they contributed to the biodiversity loss that was taking place. Neumann (1998) cited in Robbins (2012) states that conservationists had this idea of creating an Edenic wilderness where there would be no humans inhabiting that area. Robbins (2012) states that PAs operated at the expense of the livelihoods of local communities as these communities could no longer freely utilise some resources that were vital for their livelihoods. This negatively affected communities and caused them to have negative perceptions towards conservation initiatives. Communities would trespass the boundaries that were put up either to hunt, collect firewood or let their cattle graze within the borders of PAs.

Robbins (2012) states that putting restrictions on the common resources leads the communities to rebel and to use the resources more which puts the ecological system at risk. The areas that communities were moved to were less conducive for them and their livelihoods to thrive since they were smaller and most of the resources that the communities needed for their livelihoods were located within the confines of the PAs.

This final thesis links with this particular study as this study looks at conservation areas and the communities adjacent to them, focusing on HIP and the Machibini community. The conservation and control thesis was utilised to see how HIP may have influenced the Machibini community's access to the resources within its borders before the pandemic and even during the pandemic. This aligns with the first and third objectives of the study. The first objective of the study sought to find out the livelihood activities of the Machibini community. The third objective sought to find out whether the Machibini community had access to resources found within HIP during the pandemic.

2.3.2. Sustainable livelihoods approach

Change and uncertainty are common characteristics in people's lives. The process of change takes place rapidly and makes people find themselves in unprecedented situations. Although projections may be made about the future, one cannot be certain about them. When change occurs, some will be affected more than others (Chambers & Conway, 1991). People must, therefore, have ways of sustaining themselves when change happens. Sustainable livelihoods can be defined as livelihoods that can withstand shocks and do not overexert the natural resources base. This will enable future generations to be able to use the same resources (Chambers & Conway, 1991). Rural communities that are adjacent to PAs are poverty-stricken and unemployment is rife (Mkhwanazi, 2018). The occurrence of disasters such as the recent Covid-19 pandemic has had negative impacts on such communities, putting great pressure on their livelihoods.

The issue of poverty is rather complex and there is no one size fits all approach that can be applied to alleviate poverty. According to Chambers and Conway (1991) the important question to be asked when utilizing the SLA in rural communities is; using the resources and skills that people have, how can these communities be assisted to have decent livelihoods that are going to be sustainable without diminishing the natural resource base? Certain basic concepts are included when applying the SLA which

are; production thinking, employment thinking and poverty line thinking. Production thinking has to do with the problems that poor people encounter concerning producing food which leads to food insecurity and subsequently malnourishment among them. This also includes people's inability to access produced food since they can't afford it. Employment thinking, which is the second theme, looks at the widespread unemployment in rural areas. Unemployment in rural areas is unlikely to be made better by simply providing jobs for the poor since many of the people in these areas are illiterate. However, to yield better results, people need to look at the skills and resources they have and work with what is at their disposal (Chambers & Conway, 1991).

Finally, the extent to which people are deprived will determine whether they fall above or below the poverty line. Poverty line thinking is the third theme and refers to improving the economic state of the people until they are above the poverty line (Chambers & Conway, 1991). The various means that people make to sustain their lives can be termed livelihoods. People use their capabilities, their assets, and income and engage in various activities to ensure that they attain their basic needs (Chambers & Conway, 1991; Attfield et al., 2004). It is of paramount importance that people have sustainable livelihoods, this means that a person's livelihood should be able to withstand certain shocks.

2.4. Fundamentals of the SLA

The SLA has fundamentals which are important concepts that form part of the approach. These fundamental terms are capabilities, equity, and sustainability (Chambers & Conway, 1991).

2.4.1. Capability

This refers to the ability of a person to engage in a type of activity. When people are well-nourished and healthy they will be able to engage in more labour (De Sagte, 2002). In addition to this, livelihood activities include people having the ability to deal with changes such as those brought about by the pandemic.

2.4.2. Equity

Equity ensures that people have equal access to resources. Those who do not have access to resources must gain access since they are the means to derive their livelihoods (Chambers & Conway, 1991).

2.4.3. Sustainability

Sustainability refers to meeting the needs of people through the use of resources, ensuring they are used in such a manner that the resource base is not depleted and that future generations can also utilise them. This means that longevity is at the core of sustainability (Chambers & Conway, 1991).

All these three terms combine in defining what sustainable livelihoods are. The SLA is an old approach that has been used as a strategy for mitigating the issue of poverty, which is so rife, especially in Third World countries (De Haan, 2012). This approach has been used by organizations such as the United Nations Development Programme (UNDP) and the Department for International Development (DFID) (Haug, 1999). During the late 1990s, the study of livelihoods became the main focus of development studies. The DFID is a development agency that places sustainable livelihoods at the core of its poverty alleviation policies. This organization developed the Sustainable Livelihoods Framework (SLF) which is at the center of the SLA and has been widely incorporated by various development agencies that are also working towards reducing people's vulnerability and poverty alleviation (De Haan, 2012).

The livelihoods framework (Figure 2.1) is context-specific, which means that it does not follow a specific set of guidelines when it is used as an approach to alleviate poverty in an area, however, the framework is uniquely used in every case to fit the conditions of those people. People have access to different resources, so whenever the livelihoods framework is applied it seeks to establish resilient livelihood strategies and to find ways to diversify the livelihoods of communities. All this is sought to be achieved through utilising the resources that the people already have (De Stage, 2002).

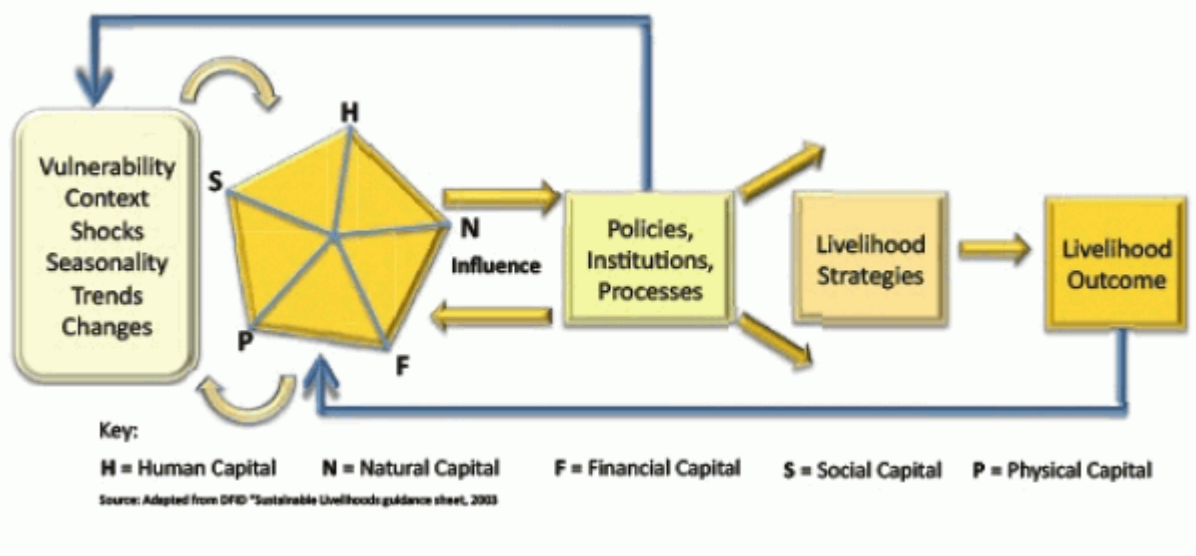


Figure 2.1: Sustainable Livelihoods Framework

2.5. Vulnerability context

The DFID’s livelihood framework seeks to make meaning of various settings of people’s lives, particularly those who are living in poverty. There are external factors that affect people, these factors either stand against the prosperity of people’s livelihood activities or enable them to continue pursuing their livelihood activities (De Sagte, 2002). The external forces that inhibit the success of livelihoods could be the occurrence of natural hazards and disasters such as pandemics. The external forces that promote the success of livelihood activities can be said to be the forces of access and control. This refers to the institutions that have control over resources and people’s access to resources, these institutions do sometimes deny people to access vital resources that they need for their livelihoods. In light of this study, the Covid-19 pandemic represents the external forces that work against the success of livelihoods of the Machibini community. The institution that has control over the resources and people’s access to resources is HIP authorities.

The vulnerability context links to the second and third objectives of this study. The former evaluates the impact of Covid-19 on the livelihood activities of the Machibini community and the latter evaluates whether the community had access to the resources found within HIP during the pandemic. The closure of PAs During the pandemic may have caused Park authorities to restrict the local communities from accessing resources that they use for their livelihoods. The framework aims at understanding how people deal with such external stressors that affect them thus

including the fourth objective which explores the coping strategies utilised by the community members in dealing with the impacts of the Covid-19 pandemic.

2.6. Capital Assets

This framework considers the capital assets of the household or the area that is being studied. Capital assets can either allow people to engage in various livelihood strategies or act as constraints prohibiting them from engaging in certain livelihood activities (Serrat, 2017). There are five different assets that the framework explains: human capital, physical capital, social capital, financial capital, and natural capital. Human capital refers to the ability of a person to do work that will earn them a living, it is the skills and knowledge that a person possesses which play a role in enabling them to do certain livelihood activities (Serrat, 2017). In this particular study, it would refer to the ability of the Machibini community to engage in certain livelihood activities, for example, the community members use their skills to make artefacts that are sold to the tourists. Some of the resources they use are found within the boundaries of the park. Human capital also refers to the community members being in good health so that they can be active in labour. The pandemic may have affected the health of some community members in such a way that they were no longer physically capable of participating in some livelihood activities.

Infrastructure plays an important role in the sustenance of some livelihood activities, Serrat (2017) refers to this as physical capital. There is some essential infrastructure that enables people to pursue certain livelihoods. For instance, roads, transport, water and the availability of energy. Another form of capital asset is social capital. This refers to the social resources that allow communication and the transfer of knowledge among people, for example, the relationships that exist among people and institutions (De Sarte, 2002). With this study, social capital refers to the relationship existing between the HIP authorities and the community members of Machibini. This relationship would determine how people can easily access information about the vacancies which are available in the park and resources the local communities have access to.

Serrat (2017) states that another asset base is financial capital. These are the financial resources that people have such as remittances or grants from the Government. This can play a role in helping people to start businesses. Finally, the asset base which enables people to pursue certain livelihood activities is the natural capital. This refers

to the resources that are freely provided by the environment such as land, water and wildlife. People do not always have access to environmental services since these resources are not under their control and they may need permission to use them. This is the case with the Machibini community. They do not have full access to the resources freely provided by the environment since they are under the HIP's jurisdiction. The framework seeks to find ways of expanding the resources and their use by the communities without exhausting these resources.

The capital assets link to the first objective of the study, which seeks to find out the livelihood strategies of the Machibini community members. The community members use their skills and the resources that are at their disposal. Community members utilise grass found within HIP on a seasonal basis to make baskets and mats which they sell to tourists, they also use the land for agriculture while some practice animal husbandry (Mkhwanazi, 2018). The livelihoods framework seeks to find ways that can diversify the livelihoods of the community members and make them more sustainable.

2.7. Transforming Structures and Processes

The vulnerability context and the capital assets are not the only factors that have an impact on the livelihood strategies of people. There are some structures and processes that are in place which also influence the livelihood activities of people such as policies established by the government which aim to assist people, especially those who are in a state of poverty. Institutions then ensure that the policies are implemented in these areas (Serrat 2017). This study sought to find out whether there were any programmes implemented in the Machibini community to assist the people during the time of the pandemic and whether the HIP and Traditional Authority of the Machibini community had tried any means to assist the community in association with other organizations. It is imperative to analyse whether the programmes are pro-poor and if they are assisting the people to be able to work around the shocks affecting their livelihoods. The transforming structures and processes link to the fifth objective which looks at the strategies that can be implemented to assist rural communities to respond to disasters.

2.8. Livelihood outcomes

The purpose of the Livelihoods Approach is to ensure that even when people's livelihoods are challenged by external shocks, they can withstand them (Serrat, 2017).

The approach works towards people having diversified livelihood strategies and that as they utilise the resources available to them, they do not exhaust them. The diversification of livelihoods is of paramount importance for multiple reasons; it reduces the vulnerability of people while increasing household income and reducing pressure on the natural resource base since not just one resource is being utilised (De Sagne, 2002). Therefore, using the SLF helped to zoom into the livelihoods of the Machibini community and find out which of their livelihood activities were affected by the pandemic and how. In addition, the study analysed how the community members responded to the challenges brought about by the pandemic.

2.9. Chapter Summary

This chapter outlined the conceptual framework of this study by explaining the important concepts in this study namely, PAs, park-adjacent communities, livelihoods, sustainable livelihoods and the Covid-19 pandemic. This chapter also discussed the theoretical framework of this study which is constituted of two theories, which are PE and the SLA. The next chapter reviews the literature linked to the objectives of this study.

CHAPTER 3: LITERATURE REVIEW

3.1. Introduction

This chapter links the literature to the objectives of the study. The chapter elaborates upon the following: Protected Areas (PAs) and Livelihoods of communities adjacent to them, pandemics and the impacts they have on PAs and their local communities. The chapter ends with a discussion on the coping strategies that are utilised by communities that are in the vicinity of PAs to deal with the impacts of the Covid-19 pandemic.

3.2. The evolution of Protected Areas (PAs)

PAs are environmental habitats that have been designated for biodiversity conservation. Apart from PAs being utilised as tools to protect certain habitats that have distinct characteristics, they also house important resources and provide ecosystem services (IUCN, 2010; Phongchiewboon et al., 2020). These services can be defined as the tangible and intangible benefits that people acquire as a result of the presence of these conserved areas. The tangible benefits may include food and wood while the intangible benefits may include climate change mitigation and carbon sequestration (Hummel et al., 2017; Xu et al., 2017).

The establishment of PAs has in most cases been based on a top-down approach which does not take into consideration social and cultural aspects. Du Toit et al., (2004) refers to this approach as the “Fortress approach”. According to Mdiniso and Nzama (2018) this form of conservation strategy was influenced by the belief that humans were the cause of the resource depletion that was taking place in these areas, as a result, human interference in these confined areas was decreased tremendously. According to Paterson (2009) local communities were forcefully removed from their land and they had no say in how the PAs were managed. This really put a strain on the relationships between PAs and local communities, as the local communities developed negative perceptions towards PAs. PAs have followed the traditional way of nature conservation fashioned by Yellowstone National Park, which was the first PA to be established (Andrade and Rhodes, 2012). Yellowstone National Park was designated as a PA by the United States Government in the year 1872 (Yui, 2014). The idea of conservation then spread across the world beginning with the region of Oceania, where Australia followed the pattern initiated by America and established the

Royal National Park in 1879. Subsequently, New Zealand followed suit and established the Tongariro National Park in 1894. Europe had its first PA established in Sweden in the year 1909 which was the Abisko National Park.

The Franklin Delano Roosevelt National Park was the first PA to be established in Uruguay, South America in the year 1915. Mount Arayat National Park was Asia's first PA, and it was established in 1933. In the following year, Japan had its first PA established which was Setonaikai (Yui, 2014) in 1934. The First PA in South Africa, being also the first conservation area in the African continent, was the Pongola Natural Reserve, which was established in 1894 (Brett, 2019). It was followed by Hluhluwe Imfolozi Park and iSimangaliso Wetland Park in 1895 (Adeleke & Nzama, 2013; Mdiniso & Nzama, 2018).

PAs play the important role of protecting natural habitats and the variety of species found within them. Hockings et al., (2020) mention another vital role played by PAs, that of being a barrier between people and animals. This is important because it decreases the chances of a spillover of pathogens from animals to people which would lead to the spread of diseases. Baldwin and Fouch (2018) state that PAs have the potential to function beyond their traditional role of conserving nature. According to Baldwin and Fouch (2018), PAs also can address the needs of communities that are found near them given that some of these communities are in most cases rural and impoverished (Ayivor et al., 2020; Mojo et al.,2020).

This view about PAs is contrary to how PAs of the colonial era operated. PAs in the colonial era applied an exclusionary approach as part of their management strategy since they believed that the people who previously inhabited these areas contributed to the decrease in biodiversity (Abukari, 2020; Andrade & Rhodes, 2012). As a result, with the establishment of PAs in the colonial era, many communities were forcefully removed from the land that they owned. This had negative repercussions on the communities that were adjacent to these PAs as strict regulations were imposed, prohibiting them from accessing resources that were found within their borders which were important to their livelihoods.

The exclusionary approach utilised by PAs was one of the provocations that led to the hostility existing between PAs and the local communities (Oldekop et al., 2016). Trouwborst & Blackmore et al., (2020) observe that what added to the conflict between

local communities and PAs is also the issue of wildlife escaping from PAs and not only damaging the crops of the local community members but also at times harming people. The land use rights of the local communities were infringed upon and altered (Sarker et al., 2017). This resulted in some of the communities having to adjust their livelihoods to be in alignment with the policies of the PAs (Phongchiewboon et al., 2020). However, in some cases, communities did not adjust their livelihood strategies to a degree that they would be in alignment with the regulations of the PAs especially if the rules and regulations did not work in their favour. Rather, these community members did activities that threatened the resources and the conservation objectives of some PAs. For instance, a study conducted in the Kakum National Park in Ghana revealed that local community members engaged in illegal activities such as logging and poaching, revealing how local communities had livelihoods that were not in alignment with the regulations of PAs (Ayivor et al., 2020). Therefore, the presence of these rules and regulations does not always yield the expected positive results whereby the environment and its resources are protected.

Considering the increasing exploitation of the environment's finite resources, the exclusionary approach utilised by PA authorities such as the setting of stringent rules concerning the utilisation of resources found within PAs is justifiable (Oldekop et al., 2016). However, with the high demand for resources by these rural communities, PAs must find a way that would enable people to utilise these vital resources such as zoning. Herrera-Montes (2018) asserts that this strategy is crucial as it resolves the conflict between PAs and the local communities. The Zoning system separates PAs into fragments for different uses, for instance, a portion can be designated for human activities including resource extraction. This approach is especially needed during times of pandemics when there is a higher demand for natural resources as it ensures that resources are used sustainably.

Over the years there have been many attempts to improve PAs, focusing on how they are managed. The International Union for Conservation of Nature (IUCN) was established in 1948 and spearheaded the protection of nature. The IUCN is a global partnership that provides scientific knowledge which aims to assist people to work towards the proper maintenance of the natural habitat and the sustainable use of its resources (IUCN, 2010). The World Commission on Protected Areas (WCPA) is a commission of the IUCN which was established in 1960. In this gathering, reviews are

done on PAs from a global perspective and a new way forward is charted. The first World Congress on National Parks gathering focusing on PAs was in 1962 and it was held in Seattle, Washington. Its main focus was on laying the foundation and establishing a framework for the Commission (IUCN, 2010). The second World Conference of National Parks was in 1972 and it was held in Yellowstone, United States of America. At this conference, a way of categorizing PAs was established. This was very crucial since how a PA is managed depends on which category it is (IUCN, 2010).

The third World National Parks Congress was held in Bali Indonesia in the year 1982. In this meeting, a new way for PAs was adopted whereby ways of integrating people and PAs were established. The integration would be made possible by focusing on the needs of local communities and trying to find means for their socioeconomic development. It was also at this conference that the term 'PA' was introduced and utilised in place of 'national park' (IUCN, 2010). The fourth World Congress on National Parks and PAs was in 1992, at Caracas Venezuela. The theme for this particular conference was "Parks for Life" and it covered various topics such as sustainable development, climate change, rural communities and conflict management (IUCN, 2010).

The fifth IUCN Parks Congress was held in Durban South Africa in the year 2004 where over 157 different countries descended on the Southern tip of Africa. Here, the commission channelled the new paradigm for PAs which was initiated in the third Parks Congress in Bali. It sought to be inclusive of local communities and their needs. PAs started theoretically working towards reducing poverty in the communities around them. The focus was on ensuring that people who live within the boundaries of PAs gain benefits from the PAs (IUCN, 2010). The sixth Worlds Parks Congress on PAs took place in Australia in November 2014. The theme for this particular meeting was "Parks, people, planet: inspiring solutions". This conference addressed various issues that were related to PAs which include finding ways of reaching conservation goals, responding to climate change, respecting indigenous cultures and knowledge, as well as supporting the lives of people (IUCN, 2014).

Examining the meetings that have been held around the world and what they entail, especially from the World Parks Congress that took place in Bali Indonesia in the year

1982, it can be gathered that the mandate of PAs has evolved from being sites that protect natural habitats and all that is within them to places that integrate people and also consider the needs of communities in and around them. PA authorities possess great power, especially the owners of private PAs, as they decide the approach for managing their PAs and to what extent they will implement the strategies proposed by the IUCN. The PA authorities control everything that is located within the premises of PAs, the decisions they make can either have positive or negative impacts on local communities and their livelihoods.

3.3. PAs and livelihoods

Mphande (2016) refers to livelihoods as the activities that people engage in, the assets that they possess and the access to the resources that they make a living out of and therefore sustain themselves. The activities that people engage in have to do with finding shelter, getting clothes and other resources including water. In rural areas, it is very common to find households that sustain themselves through farming. Mphande (2016) posits that 90% of rural communities sustain themselves through subsistence agriculture.

Chambers and Conway (1991) state that three core factors are involved in a livelihood of an individual, the first being the actual person and all the enablers of their livelihoods which are formally known as capabilities. The second factor is the intangible assets which are claims and access. Claims can be described as the solicitations made by people to those who possess the power and the means to enhance livelihood capabilities which can either be tangible or intangible. Access refers to people's ability to reach resources that are a prerequisite for their livelihoods. Finally, the third factor involved in a person's livelihood is the tangible assets which are the physical resources that are a necessity for his livelihood (Chambers & Conway, 1991).

Elbakidze et al., (2018) also state factors that are similar to the ones mentioned above. The crucial factors that constitute a livelihood and play an important role in sustaining people are the assets, activities and access to resources. People must have sustainable livelihoods. When livelihoods are sustainable it means that they are resilient and can withstand any form of shock which could potentially hinder the success of their livelihoods. These assets are of paramount importance for establishing and maintaining the livelihoods of people and ensuring that they are

sustainable. The first asset is natural capital which refers to the natural resources that people utilize for their livelihoods. The second form of asset is social capital, which refers to the relationships and interactions among people who are beneficiaries as they assist them with their livelihoods. The third asset is financial capital this being the financial enablers that people use to kickstart their livelihoods and to make ends meet. The fourth asset is human capital which consists of the knowledge and the skills that a person possesses, making them able to carry out their livelihoods. The last asset is the physical capital which can be in a form of shelter, roads, electricity and any other anthropogenic object or invention that assists livelihoods to thrive (Elbakidze et al., 2018). According to Chambers and Conway,(1991); Elbakidze et al., (2018) it is important to point out as many factors as they need to be taken into consideration when looking at the livelihoods of communities adjacent to PAs. It reveals that having resources is not enough, people need to have access to those resources and the capability of making those resources work for them. The various forms of capital which have been explained above briefly also play a vital role in ensuring the success of people's livelihoods.

3.3.1. The livelihoods of communities adjacent to PAs

Communities that are close to PAs are also referred to as local communities. The people forming part of these communities are in most cases rural and unemployed. As a result of being unemployed, they use their skills and the resources that are at their disposal to sustain themselves. The resources that they utilise for their livelihoods are in most cases natural and are located within PAs (Moyo & Cele, 2020; Mdiniso & Nzama, 2018; Snyman & Bricker, 2019).

PAs can either have positive or negative impacts on the livelihoods of communities that reside in or close to them. Local communities are positively affected when the PAs are managed such that they yield socio-economic benefits for them. These benefits include providing employment for some community members and improving the infrastructure of the local areas through the revenue they generate from tourism. Even though PAs have positive impacts on local communities, there are also costs which come with the PAs and unfortunately, they are incurred by the local communities. Some studies have identified the negative impacts of PAs being that they inhibit local communities to access resources that are vital for their livelihoods (Mangu, 2018; Thondhlana & Cundill, 2017). In addition to this, some studies also

brought to light other costs incurred on local communities as a result of them living near PAs, for instance, wild animals destroying the crops of the local communities, animals hurting people and sometimes even going to the extent of killing them (Trouwborst & Blackmore et al.,2020; Mojo et al., 2020).

A study conducted by Jones et al., (2020) showed that European PAs have had positive impacts on local communities, achieving economic development, especially through tourism. The local communities were also allowed to access resources within the parks which were vital for their livelihoods. Research that was conducted in Cambodian PAs in Southeast Asia, looked at communities located inside PAs and the neighbouring communities. These communities were granted access to PAs. The community members were harvesting resins from the parks, which are non-timber forest products and sold them. The money they acquired helped them to sustain themselves which reveals how important the resources are to these communities (Clements et al., 2014).

A study conducted in the North Negros National Park in the Philippines, also in Southeast Asia revealed that local communities needed to access the resources found within the PA for their livelihoods. The local communities utilised the forest products such as the bark of the trees, the seeds, fruits and the leaves. Apart from the forest resources, the local communities hunted wildlife. Some community members farm while others have guesthouses that accommodate tourists when they come to visit the PA. Some community members have stores that sell essentials to the local community members (Chechina et al., 2018).

In Africa, there are community members that reside near PAs who engage in bushmeat hunting, this is prevalent in central Africa (Roe et al., 2015). Local communities also practice subsistence agriculture. In addition to this, bee keeping and see weed farming are also livelihood activities that communities engage in. The community members that live near Ngare Ndare Forest in Kenya utilise the firewood found inside the park and their cattle graze inside the park (Roe et al., 2015). This reveals the number of ways that communities find ways of sustaining themselves utilising the resources found within PAs. However, local communities do not always have the freedom of accessing the resources that they need for their livelihoods due to the implementation of restrictions on PAs (Charles, 2021). For instance, in South

Africa, the Tsitsikamma National Park which is a Marine Protected Area (MPA) restricted the local communities from accessing the marine resources which were critical for their livelihoods, and about 8 communities had their food security affected. When the PA was established in 1964, community members who had permits could fish in selected parts of the PA. Unfortunately, in the year 2000, the PA strictly prohibited fishing. The community members of Tsitsikamma historically were also reliant on resources that were found in the coastal forests. They utilised wood found in the forest as a source of fuel and building material. Plants that grew in the forests were used for medicinal purposes. When the local communities ended up being prohibited from accessing these resources, they were left in a perilous position with very few livelihood alternatives (Charles, 2021). This reveals how important it is for people to have diversified livelihoods because when one livelihood fails, there is an alternative one to fall on (Chambers & Conway 1992; Dai et al., 2020).

Another study conducted in Okhahlamba Drakensberg by Moyo and Cele (2020) revealed that the local communities needed the resources found within the PA for their livelihoods but they faced the challenge of accessing these resources because of the restrictions that were implemented by the park. The findings of the study revealed that the local community members could not access clean water from a river found inside the park, instead, they could only access dirty water found elsewhere to the detriment of their health. The local community members were also in need of the grasslands within the park as some used it for thatching their homes and for making baskets which they would sell to tourists. Traditional healers required specific types of plants and even animals found within the PA for medicinal purposes. The same study also revealed that the local communities needed claystone found within the park to make artefacts to sell to tourists. The act of the PA imposing restrictions on resources had negative repercussions on the local communities as they did not have access to the resources which enabled them to sustain themselves, subsequently poverty has been exacerbated (Moyo & Cele, 2020).

The study area, Hluhluwe Imfolozi Park (HIP), was established in 1895 (Brooks, 2000). It is located in South Africa, KwaZulu Natal covering an area of 94 894 ha. It is noted for the role it played in saving the white rhino population (Nsukwini, 2015). HIP utilises Community Based Conservation (CBC), which is a way of trying to uplift local communities through socio-economic development. The programmes that were

implemented also assisted the local communities by diversifying their livelihoods thereby not making them solely reliant on natural resources for sustaining themselves.

Over R7,5 million is released annually by the park to pay the community members that are employed by the park. Tourism plays a significant role in PAs as it generates revenue for them, this revenue enables PAs to develop local communities (Mdiniso, 2017). The community members who are not employed by the park have other various streams of income which come from selling their handmade crafts to tourists. There is the Zamimpilo craft centre which allows HIP local community members to sell handmade crafts and local cuisine to tourists. However, this type of livelihood is not consistent and does not generate much income (Adeleke & Nzama, 2013). Some people operate businesses within the park, for instance, some traditional authorities own Ensweleni camp which is located within the PA. This camp accommodates tourists when they come to visit the park. The local community members also collect fruits found within the park while some practiced agriculture. Some use plants for traditional healing purposes as well (Mdiniso, 2017).

The studies that have been done provide a convincing account of the importance of PAs to the local communities residing next to them. This shows that PAs can perform a dual function. They are not only utilised as tools to protect natural habitats, but they also serve to assist local communities to sustain themselves by providing resources. This aligns with what Baldwin and Fouch (2018) stated regarding PAs and how they have the potential of performing beyond their role of being conservation tools. This links to the study as it gives context for addressing the first objective of the study which seeks to find out the livelihoods of communities that are adjacent to PAs.

3.4. PAs, pandemics and impacts on local communities

The Covid-19 virus has resulted in massive global destruction. The novel virus began as an epidemic in Wuhan China in the Hubei province. The people who had contracted the virus showed symptoms of a dry cough, a fever, difficulty in breathing and headaches. Covid-19 is believed to have a zoonotic origin (Zhou et al., 2020). A zoonotic disease originates in animals, then an animal pathogen is passed on to humans making them the host reservoir. Zoonotic diseases easily become pandemics due to how connected the human race has become. Plowright et al., (2017) state that a spillover which is the transfer of a pathogen from an animal to a human being is not

something likely to happen as there are barriers that a pathogen has to go through before making it to the host reservoir.

Covid-19 is said to have emanated from bats that were sold in a market in Wuhan China. The pathogens are released from the animal when it is being slaughtered or when the bat secretes fluids. The pathogen can survive outside the bat for approximately a week, the environmental conditions need to be favorable as they have a role to play in how long the pathogen can survive outside a host before it finds one (Plowright et al., 2017). Notwithstanding, there are many contestations around the origins of coronavirus. Whereas some authors assert that the coronavirus is of zoonotic origin (Holmes et al., 2021; Liu et al., 2020; Shereen et al., 2020), there are speculative theories which suggest that the coronavirus either occurred naturally or that it was engineered as a biological weapon which would result in massive destruction and the death of a large number of the human race (Yee et al., 2020). It is not the focus of this study to evaluate the causes of the coronavirus but to assess how it is implicated in communities adjacent to PAs.

3.4.1. The effects of the Pandemic on PAs

PAs are territories that perform the important role of guarding the flora and fauna while concurrently providing ecosystem services. The coronavirus pandemic affected PAs, altering the way that they would normally function (Miller-Rushing et al., 2021; Stone et al., 2021; John, 2021). With PAs affected, this resulted in a domino effect on local communities since PAs are not just single entities, but they have people whose livelihoods are linked to them. Therefore, what happens in PAs will in one way or the other affect those connected to them.

The World Health Organization (WHO) declared the coronavirus as a pandemic in March 2020. With the outbreak of the pandemic, the PAs had to operate under precautionary conditions to aid in halting the spread of the virus. PAs around the world closed, while some were opened partially. For example, Spenceley et al., (2021) referred to PAs in Brazil, which had 334 of its PAs closing due to the pandemic. Even though the closing of some PAs may have been deemed as a negative thing to happen especially for the workers who ended up being retrenched, it has now been revealed that, from an environmental perspective, there was an improvement in the state of certain ecosystems (Akinsorotan et al., 2021).

The pandemic resulted in the implementation of restrictions which inhibited people to travel so that the rate of Covid-19 transmissions would be halted (Jones et al., 2021). Consequently, there was a sharp decline in the number of people who would visit PAs. This negatively affected them because most of their revenue is generated through tourist visitations. For example, five national parks in Utah (USA) would attract 15.3 million tourists under normal circumstances, generating US\$614 million. A portion of this money was distributed to 18 900 employees as remuneration. However, the outbreak of Covid-19 led to a massive decline in the number of tourists coming to visit these parks. The Arches National Park, which is in Utah, had 404 400 fewer visitors in March and May 2020 when the pandemic had just commenced, portraying the extent of the effects of the restrictions on PAs. Less visitation automatically meant that there would be less revenue generated (Spenceley et al., 2021).

Tourism is not the only way that PAs accumulate money, PAs also have investors who sow into them, however, it is unfortunate that with the global economic climate being in such a bad state during the pandemic, some investors had to withdraw their association with certain PAs. This had negative repercussions on PAs since there was a decrease in the monetary support that was available for the protection of wildlife. Stone et al., (2021) state that this was the implication of the pandemic in areas of conservation in Botswana.

Another major problem that the PAs faced was the increase in the illegal use of resources located within the PAs. For example, the conservation areas in Nepal, in South Asia experienced an increase in resource extraction. During the first month of the lockdown, there was a high rate of logging, and the illegal harvesting of forest resources took place with 514 cases recorded (Hockings et al., 2020). Approximately 34% of the amazon in Brazil was cleared during the pandemic (Akinsorotan et al., 2021). According to Stone et al., (2021), there was an increase in poaching in the conservation areas located in India, Kenya, Uganda, and South Africa.

3.4.2. The impact of the pandemic on local communities

The Covid-19 pandemic removed some people from a state of normalcy and placed them in a state of vulnerability. The effect of the pandemic was not only on health matters but was also evidently financial, as many people found themselves in the pit of poverty. The lives of the community members that live adjacent to PAs were also

considerably affected in various ways by the pandemic (Miller-Rushing et al., 2021; Stone et al., 2021).

As stated above, there are people whose lives are linked to PAs since their livelihoods are derived from them (John, 2021). What happens in PAs and the decisions that are made by the park authorities regarding PAs, will inevitably trickle down to those who are associated with them such as the employees. The pandemic may have affected the people residing adjacent to PAs, however, the intensity of the effects is determined by their level of dependence on PAs. Some local communities' livelihoods are derived directly from PAs while others are not dependent on PAs at all.

The pandemic caused certain changes to take place in PAs such as salary cuts or even worse retrenchments since PAs were not generating enough revenue to enable them to pay employees. This became a global crisis yielding nothing but negative implications. According to Spenceley et al., (2021) Covid-19 has caused 174 million people to lose their jobs specifically in the tourism sector. In Africa, the funding of 700 game guards and 300 employees who were employed in conservation parks was affected. In Kenya, the Mara Naboisho Conservancy provides the main source of income for more than 600 Maasai families. However, due to the outbreak of the coronavirus, this stream of income ceased because people stopped visiting the park due to the lockdown regulations that were put in place. The communities who live adjacent to the Virunga National Park in Rwanda were also negatively affected by the pandemic as they were used to receiving a share of the revenue generated by the park (Hockings et al., 2020).

Another negative implication of the pandemic on local communities was that some of the PAs closed, adhering to the lockdown regulations. This prohibited the local communities from accessing natural resources. These lockdown regulations which were implemented led to what (Rutz et al., 2020) referred to as an "anthropause" whereby human mobility ceased. The measure of banning people from moving may have been good in that it played a major role in flattening the curve of coronavirus infections however, it is unfortunate that the rate and the curve of poverty were being sharpened simultaneously. The World Bank (2020) postulates that the pandemic would result in the exacerbation of the poverty rates, resulting in 176 million people globally being in poverty.

In South Africa, there were cases of community members losing access to resources of great significance. For example, some community members that reside adjacent to the Kruger National Park harvested mopane worms as a source of protein. However, due to the Covid-19 pandemic, they were not able to harvest, resulting in issues of food insecurity and the loss of income for those who sold the mopane worms (Smith et al., 2021). On the contrary, PAs such as Snowdonia Natural Park have residents residing within it. During the pandemic, besides being a source of natural resources, this PA was particularly needed by the residents for recreational purposes such as taking walks and biking (Jones et al., 2021). This shows that while some people are dependent on PAs for resources, others simply use PAs areas for recreational purposes which reveals how PAs are significant to people for different reasons. Furthermore, it shows that not all communities that reside next to PAs are impoverished and dependant on PAs for natural resources as a lot of research often alludes, (Adeleke & Nzama, 2013; Barrow & Fabricius, 2002; Moyo & Cele, 2020; Chechina et al., 2018; Clements et al., 2014; Oldekop 2016; Roe et al., 2015; Stone et al., 2021). The aforementioned cases reveal how the pandemic increased the level of illegal resource extraction. With the coronavirus causing so many deaths, some community members lost bread winners in their households, therefore, the only way these people would be able to sustain themselves would be through using resources found within conservation areas. However, the pandemic did not make it easy for community members to access these resources due to some PAs having had to close (Hockings et al., 2020).

Some local community members got infected with the coronavirus, leaving them in very critical health conditions. Unfortunately, some people succumbed to death because of Covid-19. With the coronavirus having such negative implications on people's health and resulting in a large number of deaths globally, a quest for a cure rose rapidly. As a result, there was an increase in Rhino poaching in conservation areas such as Botswana since some Chinese believed that Rhino horns could be used for medicinal purposes to treat Covid-19 (Akinsorotan et al., 2021).

The impact of the pandemic on PAs has been vast as the literature above portrays. Since PAs have local communities linked to them for instance through employment

and through utilising resources located within their premises, when PAs were affected by the pandemic this had a ripple effect on the local communities (Miller-Rushing et al., 2021; Stone et al., 2021). In light of the literature above which states cases of how the pandemic has affected local communities in various parts of the world, it is evident that the issues that the local communities had before the pandemic such as unemployment, poverty, lack of access to resources located within PAs and food insecurity were exacerbated by the pandemic. It is in the interest of this study to uncover how the pandemic affected the Machibini community specifically looking at whether this community had access to the resources located within HIP during the pandemic in comparison to before the pandemic. No research had been conducted regarding this, thus addressing the third objective which seeks to evaluate the Machibini community's access to resources found inside the park during the pandemic.

3.5. Coping strategies utilised by communities

Covid-19 and the lockdown regulations had unfortunate consequences on the livelihoods of people around the world. Rural communities were the hardest hit as the pandemic revealed how precarious their livelihoods were (Krauss et al., 2022). While some people's livelihoods were not gravely affected by the pandemic, a large number of people found themselves deeper into the pit of poverty than they had been before (Sumner et al., 2020). Nonetheless, some of the communities that were affected devised ways of coping with the pressures brought about by the pandemic.

3.5.1. Food sharing

One of the methods that people adopted to ensure food security in their communities was food sharing (Bennett et al., 2021). Nepal has approximately 3.7 million farm holders who were fortunate to have livelihoods that continued to thrive during the trying time of the pandemic (FAO, 2013). This was because everything they needed for their farms to work was available locally, such as seeds and compost. Family members worked these farms and everything that was produced was consumed by the family and sold to some community members. Only Nepal's large-scale farms producing milk, eggs, fruits and vegetables were gravely affected since they ceased to operate as a result of the lockdown (Adhikari et al., 2021). To counteract this, some suppliers of food stopped making deliveries to distant areas and changed to delivering to the local community members.

3.5.2. Finding alternative livelihoods

Some of the local communities found themselves in a vulnerable position as their livelihoods were stripped. As a result, they were forced to find alternative ways of surviving during the trying times of the pandemic. In Madagascar, the local communities turned to natural resource extractive activities such as logging, forests were cleared to provide land for agriculture, and they also engaged in charcoal production (Razanatsoa et al., 2021). Even though these were short-term activities and very helpful in sustaining people they were, unfortunately, detrimental to the environment. There are alternative livelihood activities that were suggested for communities to engage in which include sheep husbandry and keeping poultry (Kimengsi et al., 2019).

3.5.3. Local communities making masks and selling them

Mask-wearing became a necessity during the pandemic, forming part of the Non-Pharmaceutical Interventions NPIs utilised to curb the spread of the virus (Krauss et al., 2022). In some communities, those who had sewing skills seized this opportunity by making masks and selling them to people in their communities (Charles, 2021). Through this act, people were able to sustain themselves using the money they generated.

The Ku-Humelala Craft Group in South Africa is a group of people who make crafts and sell them to tourists. These people diverted from making handcrafts for tourists to making masks which would be sold to the local people. The Thonga Beach Lodge located near iSimangaliso Wetland Park and Rhino Ridge Safari Lodge near HIP are privately owned accommodation areas that donated the material used for making masks which were sold to the local communities. This adaptation strategy did not only assist the local communities by providing them with an alternative income stream, but it also ensured the community was protected from Covid-19 by decreasing their chances of contracting the virus (Spenceley et al., 2021). In light of how communities have been affected by the pandemic and the coping strategies they have adopted in the examples given above, this study will evaluate how the Machibini community coped with the pandemic addressing, the fourth objective of this study which seeks to explore the coping strategies utilised by the community members to deal with the impacts of Covid-19.

3.6. Adaptation measures utilised by PAs to deal with the pandemic

PAs had to devise approaches that would help them overcome the challenges that they encountered because of the pandemic. This was of paramount importance as it would ensure the continuation of the effectiveness of PAs concerning the protection of biodiversity and being sites that provide not only resources for the livelihoods of the people who reside adjacent to them but employment as well. The actions taken by those who manage PAs will not only benefit the environment but local communities as well since what takes place in PAs has a bearing on local communities as well (Spenceley et al., 2021).

3.6.1. Dealing with the Covid-19 transmissions

The greatest challenge with Covid-19 is how easily transmissible it is, hence, the sky rocketing Covid-19 confirmed cases during the first wave which commenced in March 2020 and ended at the end of May 2020 (Sutherland et al., 2021). Certain measures had to be adopted to halt the high transmission rates such as lockdowns, mask-wearing, hand washing and sanitizing. PAs also acted upon the issue of Covid-19, as some PAs did not allow any visitors on their premises in adherence to the lockdown regulations, this was also done as a protective measure (Spenceley et al., 2021). For example, in Brazil, 334 PAs were not open for any visitation in March 2020 and only allowed visitors once the lockdown regulations were eased.

Communities that are adjacent to PAs are in most cases rural and their health care services are either poor or inaccessible. These communities also faced the challenge of not having enough money to afford the available health care services (Chapman et al., 2015). In attempting to assist local communities, some PAs provided incentives for local communities that would assist with decreasing the transmission rate of Covid-19 and helping those whose health was challenged because of Covid-19. For example, Borana, in Kenya, was able to assist local communities by providing them with a mobile clinic (Spenceley et al., 2021). This had a positive impact on the local community members since health care services were now within their reach.

3.6.2. Addressing food insecurity

Food insecurity became a major challenge amongst communities that are adjacent to PAs who, in most cases were poverty-stricken. Some families had their breadwinners retrenched from work, or they were faced with the worst-case scenario of losing them.

This contributed to the challenge of food insecurity in the local communities. There are PAs who took action against the issue of food insecurity amongst the communities adjacent to them, for instance, Tutka Bay Lodge which is located not too far from the Kachemak Bay State Park in Alaska embarked on a project providing freshly produced food for the local community members. The food was produced locally in greenhouses and on available plots of land that could be utilised as gardens (O'Brien, 2020). In South Africa, the Grootbos Private Nature Reserve was able to provide food for those who needed it. This initiative was set up through the football foundation of this PA. This food relief programme was able to cater for over 2000 people (Spenceley et al., 2021).

3.6.3. Adapting to financial deficit

PAs encountered various challenges due to the pandemic. The sharp decline in revenue generation was a major problem for most PAs. This coerced them to decrease their budget. For example, PAs had to cut down the salaries of some of their employees or retrench them (Razanatsoa et al., 2021). The decline in revenue production was a consequence of the travel restrictions which were implemented in countries across the globe to decrease the transmission rate of Covid-19. This hit hard on PAs, such as in Africa which experienced a 60-100% revenue decline (Akinsorotan et al., 2021).

The pandemic immensely affected how PAs operated. The financial situation they found themselves in caused them to be selective with the activities that would continue within the parks, some activities were prioritized above others. For instance, the National Parks in Madagascar turned their attention to their forests, ensuring that surveillance over them was strengthened because there was an increase in natural resource extraction done by local communities (Razanatsoa et al., 2021). According to Bega (2021), there was a rise in the harvesting of bushmeat by the impoverished communities living adjacent to PAs, compelling these conservation areas to strengthen their surveillance. The operations that were affected and compromised were the local community development projects. For instance, De Hoop Nature Reserve in South Africa would donate R500 million annually to assist with the economies of local communities adjacent to it. Unfortunately, the PA could only afford to offer one-third of the initial amount towards the local economy because of the financial strain they experienced during the pandemic Bega (2021). This adaptation

measure of selecting certain activities to prioritize during the pandemic may have been helpful for biodiversity, but, unfortunately, this measure may have not worked in favour of the local communities.

3.6.4. Adapting to the lockdown restrictions

Research on biodiversity, as well as social research that requires interaction between local community members and researchers, could not be conducted because of the lockdown. Akinsorotan et al., (2021) state that the information gathered through research that is conducted in PAs is crucial as it assists those who manage PAs to tailor solutions that ensure the protection of biodiversity and the sustainable utilisation of resources by local communities. The pandemic and the resulting restrictions have hindered such research to be conducted which may affect not only the species in PAs but also the local communities that use the resources found within PAs for their livelihoods. Onsight research could not proceed during the lockdown; however, since the researchers could not continue to have person-to-person interactions, any form of interactions with their sample population became online (Razanatsoa et al., 2021). For instance, researchers in Zimbabwe conducted their qualitative research in the Mahenye community which practices community-based ecotourism virtually. The researchers wanted to explore how the pandemic affected this community. The researchers collected their information virtually from their key informants via email, and interviews were conducted over phone calls and social media platforms (Mudzengi et al., 2022). This positively affects local communities since the researchers work hand in hand with the PAs to tailor solutions for the local communities which can help them during these unprecedented times of the pandemic.

3.6.5. Adopting domestic tourism

The travel restrictions that were implemented at a global scale to halt the Covid-19 transmissions which were rising exponentially harmed PAs since there were no international and national tourists visiting them (Mudzengi et al., 2022). It became evident that there needed to be a shift in these PAs. Communities adjacent to some PAs especially those that are in Eastern and Southern Africa rely heavily on the tourism economy which is mostly supported by both national and international tourists World Tourism Organisation (WTO), (2013). Mudzengi et al., (2022) assert that being less reliant on international tourists is beneficial for PAs because when there are global shocks such as the Covid-19 pandemic, PAs can recover at a faster rate. In response

to the pandemic, the Nairobi National Park, in Kenya adopted domestic ecotourism, whereby the tourism packages offered by the park were tailored for local community members (Lindsey et al., 2020). Before the pandemic, the money required to enjoy the amenities offered by this PA was beyond what the local community members could afford. The adoption of domestic tourism was important and beneficial for local community members (Mudzengi et al., 2022). This is because PAs that adopted domestic tourism were able to operate amid the pandemic, especially during the period when containment was eased whereby only the interprovincial restrictions were lifted and not the national and international travel restrictions. This meant that local community members employed by PAs were working and earning money to sustain themselves during the pandemic.

The adaptation measures that were implemented by PA authorities during the pandemic to overcome the various shocks have proven to have an impact on the local community members. For instance, provisions such as mobile clinics were made to assist local communities that had poor health services during the pandemic (Spenceley et al., 2021). PAs provided food parcels for local communities. The PAs who were in the domestic tourism sector were able to continue operating during the pandemic, which secured the salaries for their local community employees. Concerning this particular study, the strategies and measures that were implemented by the various PAs in their local communities provide insight into the various coping strategies that can be provided by PAs to assist local communities to deal with the shocks brought about by the pandemic. It is in the interest of this study to explore how local communities could be assisted during the pandemic, thus addressing the fifth objective of the study which seeks to find strategies which can be implemented to assist rural communities to respond to disasters.

3.7. Bhammar's framework of tourism recovery in PAs

The inability of people to travel to PAs as a result of the travel restrictions that were implemented during the pandemic had negative repercussions on PAs as their revenue generation decreased (Spenceley et al., 2021). Bhammar's framework is for the recovery of tourism in PAs. Three important aspects form the basis of this framework. These are: protecting the natural environment as it is what attracts people to these sites, diversifying the tourism business to yield more revenue, and finally, equal benefit sharing with communities adjacent to PAs. Bhammar et al., (2021) note

that attaining the desired outcome of tourism recovery requires PAs to work together with the private sector, government, and local communities for a cash infusion. This brings to light that PAs do not function on their own, there are other vital stakeholders involved in the process of operating them.

3.7.1. The protection of the natural environment

PAs ought to be acknowledged for the significant role they play in protecting the environment and its resources. It is the pristine locations that attract people. When more visitors are coming to PAs, there is more income generation. Unfortunately, this form of income alone is not sufficient to cater for the expenses of PAs. According to John et al., (2021) the pandemic made revenue generation even more difficult for PAs. This meant that the money for operating PAs decreased drastically, leaving them unable to fulfil certain tasks such as paying park rangers who play an important role in the protection of the environment, especially from poachers (Bhammar et al., 2021).

3.7.2. The growth of the tourism industry

There are other important aspects apart from the pristine nature of PAs that are vital for the smooth operation of PAs, infrastructure is also critical as it can be counted among the factors that make PAs easily accessible and enables them to function properly (Bhammar et al., 2021). Raina (2005) divided the facilities and services that are vital for making the tourism business thrive into three different categories. The first category is the physical infrastructure which is inclusive of the accommodation facilities such as hotels, roads, restaurants, electricity and water. The second category is the cultural infrastructure which is the heritage of a certain area, the local cuisine, art and music that is distinct to that location. The third category is the service infrastructure which includes the tourist guides who work in PAs and banking facilities. All these developments play a role in increasing the standard of the PAs putting them in a greater position to attract more visitors, which in return increases revenue generation.

3.7.3. Benefit Sharing

Kegamba et al., (2022) define benefit sharing as directing monetary or non-monetary incentives to a certain group of people. In the 5th IUCN World Parks Congress, it was stated that PAs ought to practice benefit sharing with the communities that reside at their borders as this can contribute to poverty alleviation. Snyman and Bricker (2019)

assert that benefit sharing plays a role in empowering communities that are adjacent to PAs. The sustainability of PAs is also influenced by the type of relationship existing between the PAs and their adjacent communities. The inclusion of local communities in the conservation process through measures such as benefit sharing causes them to support the conservation of biodiversity (Spenceley et al., 2021). The communities that are adjacent to PAs are in most cases poverty-stricken, which gives more reason for them to be recipients of a portion of the revenue generated by PAs (Abukari, 2020).

Various benefit-sharing approaches are utilised by PAs, seeking to engage local communities in the conservation process whilst concurrently yielding benefits for them. For instance, in Nepal, the local community members get 30-50% of the revenue that is accumulated by the park. This money is used for the development of the areas along nature reserves, and for the conservation projects that are in these areas (Kegamba et al., 2022). In Africa, there are also various forms of benefit-sharing initiatives that PAs use in local communities, for instance, there is the Protected Area Outreach Programme (PAOP) which gives a portion of the money that is generated from the visitors' entrance fees to the local communities. PAs also work together with local community members to manage natural resources where both parties have their own established roles to play that are guided by an agreed-upon framework.

Community-Based Conservation (CBC) is also another form of benefit sharing and it is also known as Community Based Natural Resource Management (CBNRM). Communities that are adjacent to PAs are allotted natural resources to take care of, the local communities also use these natural resources for their livelihoods. An example is the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) which is an initiative that was established in Zimbabwe in 1989 (Kegamba et al., 2022). HIP also initiated CBC in communities adjacent to it to try to diversify the livelihoods of local communities, however, no extensive research has been done to show the various programmes that were implemented in the Machibini community.

A framework is crucial as it outlines the approach that is most likely to be suitable to be implemented in a certain situation. In view of the impact that Covid-19 had on PAs and local communities it is imperative to find ways of bouncing back from disasters. Bhammar 's framework for tourism recovery in PAs has been explained here so that it

can provide insight into how PAs should respond to the shocks that were presented by the pandemic. The recovery of PAs, especially financially, is important for local communities too, since some of the challenges they encountered because of the pandemic will be within PA's capacity to address. It is in the interest of this study to see which strategies can be proposed to assist local communities to respond to disasters during unprecedented times, thus addressing the fifth objective of the study.

3.8. Chapter Summary

This chapter has reviewed literature that is linked to the objectives of the study. The chapter elaborated upon the following: the evolution of PAs, PAs and livelihoods, the livelihoods of communities adjacent to PAs, and the impact of the pandemic on PAs and livelihoods of communities adjacent to them. The chapter went on to discuss the coping strategies utilised by communities for Covid-19 and the adaptation measures that were implemented by PAs during the pandemic and how they had an impact on the local community members. Finally, this chapter discussed Bhammar's framework of tourism recovery in PAs. The following chapter will detail the physical setting of the study and the methodology utilised for this research project.

CHAPTER 4: PHYSICAL SETTING AND METHODOLOGY OF STUDY

4.1. Introduction

This chapter describes the physical setting of the study area which is the Machibini community. The following characteristics are explained; climate, topography, geology, agricultural potential, vegetation and socio-economic conditions. All these aspects assist with describing the study area. The methodology which was followed in this study is also discussed. In this regard, the chapter explains the research paradigm, the research design, population and sampling, instrumentation and data collection, the data analysis and finally the ethical considerations of the study.

4.2. Description of the study area

This study explores the implications of the pandemic on the livelihoods of communities that are adjacent to PAs. However, in this study, the Machibini community was chosen as the study area based on its proximity to the HIP (Figure 4.1). This community is located in uMtubatuba Local Municipality, uMkhanyakude District Municipality, in KwaZulu Natal Province (Mtubatuba Municipality Integrated Development Planning-IDP, 2018). The geographical position of Machibini is 27°43'23"South and 31°55'17"East (Mapcarta, 2022). From the R618 road, the Machibini community is located about 6,4 kilometres from the entrance of HIP (Map data, 2022).

HIP was established in 1895, making it to be one of the first PAs to be established in KwaZulu Natal (Mdiniso & Nzama, 2018). PAs are areas of great significance because they play the crucial role of safeguarding the environment and resources as well as halting the destruction of biodiversity (John, 2021).

4.2.1. Climate

Mtubatuba has a subtropical climate, resulting in warm to hot summers and mild winters. The annual mean temperature of Mtubatuba is 21.5 (Mtubatuba Municipality IDP, 2018). The annual rainfall differs depending on whether a place is located on the western part of Mtubatuba or on the eastern side which is nearer to the coast. The former experiences 600-700mm of rainfall and the latter 1201-1250mm annually (Kiala et al., 2021; Mtubatuba Municipality IDP, 2018).

4.2.2. Topography and geology

The geological formations that underly the Mtubatuba area are mudstone, basalt and sand (Kiala et al., 2021). There are various types of landforms found in this area, especially in the western part of Mtubatuba such as incised valleys and plateaus (Mtubatuba Municipality IDP, 2018). Mose sandy rock formations are dominant in the eastern part which is where Machibini is located. This area is mostly flat in comparison to the western part of the municipality which has undulating landforms with mudstone and shale rock formations (Mtubatuba Municipality IDP, 2014).

Study Area: maChibini, KwaZulu-Natal, South Africa

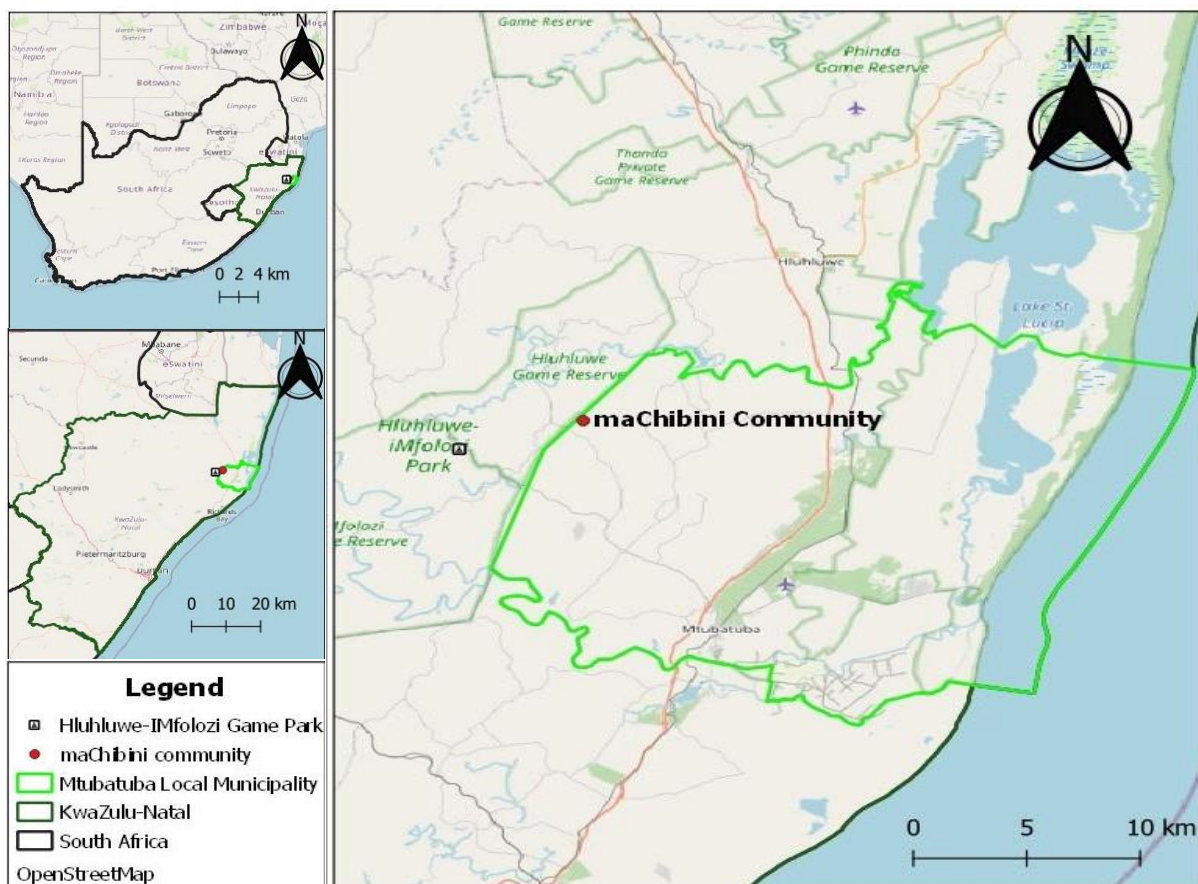


Figure 4.1: Study area

4.2.3. Vegetation of the area

The Machibini community is in proximity to the HIP which is classified as a savannah biome, and it exhibits similar vegetation. The type of vegetation that is found in the HIP is grasslands, open and closed woodlands and thickets (Hluhluwe-Imfolozi Park Management Plan, 2011; Mkhwanazi 2018).

4.2.4. Agricultural potential

Theoretically, only 20% of the land in Mtubatuba Municipality has the potential of producing crops. The other 80% of the land has major limitations that hinder the land from being used for agricultural production, for example, the land being inarable or having been developed (Mtubatuba Municipality IDP, 2021). Agriculture plays an important role in sustaining certain families, Machibini community has been identified as being historically reliant on subsistence farming, however, the issue of water scarcity has affected the farming practices of people (Bakre, 2017).

4.2.5. Socio-economic conditions

The Machibini community is a fairly small community covering an area of 35.18km². This community has a population of 3771 consisting of 599 households (Stats SA, 2011). The young people who are aged 0-14 make up 41,2% of the population in Machibini, while the working age group (15-64 years) make up the largest portion of the population which is 52,9%. Elderly people who are aged 65 years and above constitute 5,9% of the population. The Mtubatuba municipality under which the Machibini community falls was greatly challenged by the issue of unemployment. In 2001, the unemployment rate was estimated at 59,7%. In 2011, there was a decrease in the percentage of unemployment to 39%. Even though the unemployment rate was decreasing certain phenomena affected this. For instance, the occurrence of the drought in the year 2016 and the pandemic that started in the year 2020 resulted in an increase in the unemployment rate from 31,6 % in 2016 to 37,2% in 2020 (Mtubatuba Municipality IDP, 2021).

A contributing factor to the economic development of an area is the type of education that people acquire. In Mtubatuba Municipality, only 38% of the population managed to get as far as matric and only 2,5% of the people managed to further their studies in institutions of higher learning (Mtubatuba Municipality IDP, 2021). The Machibini community, however, has a higher percentage (4%) of people who are 20 years and

above and have managed to go to tertiary institutions. This is important to note as it determines the livelihood activities people end up having. Those who have been hindered from getting employment because they fell short of the required knowledge and skills utilise the resources at their disposal and the skills they have to earn a living such as making artefacts to sell to tourists (Mkhwanazi, 2018).

4.3. Research Methodology

Corbin and Strauss (2008) define methodology as a manner of studying phenomena that takes place in society. Research methodology determines the trajectory that a certain study will take. According to Pierce (1995), the questions that a researcher has are influenced by the existing theories and literature. The questions about social phenomena that arise will determine how the data is collected and how it will be analysed. This will inevitably affect the findings of the study (Pierce, 1995).

4.3.1. Research paradigm

A research paradigm refers to the beliefs and understanding that a community of researchers have about a certain phenomenon (Guba & Lincoln, 1994). Research paradigms guide the researcher into knowing what falls within the particular research that is being undertaken. The different paradigms that exist in research include positivism, post-positivism, critical theory and constructivism (Krauss, 2005). This particular study utilised constructivism as the research paradigm. Constructivism can be described as the knowledge and understanding that people have about reality, this knowledge is accumulated through personal experiences (Adom et al., 2016). Creswell (2013) states that the knowledge that people generate about certain objects and occurrences is subjective. It is the researcher's role to find out the meanings that people have attached to these objects and occurrences (Creswell, 2013). Even though the occurrence of certain phenomena such as Covid-19 may reach every part of the world, the impacts vary, which is why people's explanation of how the pandemic affected them is not the same. To understand the various meanings that the community members of Machibini have linked to the occurrence of the pandemic and how it has affected their livelihoods, it is of paramount importance to consult with the local community members as it is through personal interaction that these meanings can be expressed to the inquirer (Creswell & Creswell, 2018).

According to Guba and Lincoln (1994), there are three essential questions that a researcher needs to ask themselves before conducting any study that will determine what exactly will form part of that study. The questions are the ontological question, the epistemological question and the methodological question. The ontological question is about the nature of reality. The second question is the epistemological question which asks about the relationship that exists between the researcher and the information that is not yet revealed. The final question is the methodological question which is about the method that will be utilised to reveal what the researcher thinks needs to be brought to light by the study (Guba & Lincoln, 1994). What is assumed about reality will lead the inquirer into researching and finding information about the state of reality. This will influence the method of collecting and analysing the data and inevitably affect the results of the study (Tight, 2017).

4.3.1.1 Ontology

Ontology refers to the state of reality. Flick (2018) adds that it is the relationship between reality and the research that is being conducted. It reveals the state of things in reality and the different things that can be known about reality (Guba & Lincoln, 1994). In constructivism research, there is the relativist stance which states that people have different interpretations of reality and this stems from their experiences. The role of the researcher is to reveal the different interpretations that people have about their reality. Concerning this study, the literature claims that communities that are adjacent to PAs are in most cases unemployed and they are therefore dependent on resources that are found within PAs for their livelihoods (Moyo & Cele, 2020; Mkhwanazi, 2018; Mdiniso & Nzama, 2018). However, park policies restrict resource extraction and use hence the livelihoods of those that are dependent on the resources are negatively affected. This shows the reality of some of the people who reside next to PAs. This study seeks to get to the crux of how the livelihoods of the Machibini community members have been altered by the pandemic and whether they had access to resources that were vital for their livelihoods during the pandemic or not, this being the third objective of the study.

When revealing the varied meanings that people have about their realities, the researcher may provide the actual words of a participant to act as evidence (Creswell, 2013). To find out how the pandemic has affected the local communities access to

resources, the researcher needs to learn from the local communities to understand the state of their reality and to hear the different interpretations the participants have about their reality.

4.3.1.2 Epistemology

The creation of authentic knowledge is referred to as epistemology. Guba and Lincoln (1994) explain that the epistemological question in research seeks to find out the relationship that exists between the researcher and what can be known. Constructivism uses a transactional approach where interaction between the inquirer and the participant is required so that the different perspectives about the reality that people have can be revealed, this being a way of generating new knowledge. Guba and Lincoln (1994) continue to state that social constructivism is dialectical in its methodology which shows how important it is for the inquirer to communicate with participants.

4.3.2. Research design

Creswell and Creswell (2018) posit that the research design of a study is the whole process of the study commencing from the conceptualisation of the issue that the researcher wants to find answers to, moving on to the researcher writing the research questions, the collection of the data, the analysis of the data and finally the interpretation of the data. This study followed a case study design. A case study is a form of research where empirical data is acquired by the researcher in a certain area (Yin, 2018). The researcher chooses a specific area to do an in-depth analysis of a certain phenomenon that has taken place in that area. The data collected is interpreted in a way that reveals the subjective views of the people who form part of the study area about how a certain occurrence has affected them (Akhtar, 2016). A case study design was appropriate for this study because it enabled the researcher to do an in-depth exploration of how the pandemic affected the livelihoods of the Machibini community.

4.3.3. Research approach

The study will employ a qualitative approach. According to Flick (2018), it is more appropriate to study social phenomena using a qualitative approach. Studying societies in this manner makes it possible for the researcher to understand the meanings that people attach to their reality and their past experiences. In qualitative

research the participants are the focal point, the researcher is more concerned about their ideas and the meanings they have attached to a certain phenomenon or problem. For the researcher to understand how the pandemic affected the livelihoods of the Machibini community and their access to resources found within the HIP, the use of a qualitative approach was deemed appropriate to the extent of gathering insights from the community members. The insights included how the pandemic affected their livelihoods and whether the pandemic played a role in their being hindered from accessing vital resources from the HIP. Furthermore, the researcher gained insight into how the community members coped with the implications of the pandemic.

4.3.4. Population and Sampling

In the research process, sampling is concerned with finding the most appropriate way of selecting participants from a greater population. The sample is chosen from a population that shares the same social circumstances (Flick, 2018). In the case of this study, the pandemic is a social circumstance which has had varied implications for people.

4.3.5. Sampling technique

The sampling technique can be defined as the operating procedure that the researcher applies when selecting the sample for the study (Troost, 1986). The proposed study used a purposive sampling technique. This type of technique is used in qualitative research where participants are chosen based on predetermined criteria, which was the case with respondents from the Machibini community. The most important thing about these selected participants is the information that they will provide to the researcher concerning the problem under study (Flick, 2018). The selected participants use the knowledge gained from their experiences to answer the research questions (Creswell, 2003). In this particular study, the people who have the answers to how the pandemic has affected communities adjacent to PAs concerning accessing resources found within these PAs are the Machibini community. This community was chosen for its location adjacent to the HIP. Based on their past experiences, the participants can provide relevant information concerning how the pandemic has affected their livelihoods, it is because of this reason that the purposive sampling technique was selected for this particular study.

4.3.6. Sample size

The sample size can be defined as the number of participants in a study. Sandelowski (1995) cited in Kindsiko and Poltimae (2019) states that the sample of a study should not be too large as this will not permit the researcher to do an in-depth analysis of the research problem which is important in qualitative studies. Brink et al., (2012) add that a large sample may make it difficult to analyse the data and reach a conclusion. Therefore, there are no rules for selecting a sample size in qualitative studies.

Using the above-mentioned literature, a sample of 44 people was selected from the Machibini community. According to Stats SA (2011), the Machibini community has 599 households. One member from each of the households closest to the border of the HIP was interviewed. The community members closest to the park had relevant answers to the research questions since they had more experience and knowledge about the park, unlike the households that were further away from the park. The selected community members would also provide the relevant information regarding their access to resources within HIP during the pandemic. In addition to this number, the traditional leader of the Machibini community and HIP official were interviewed. The Machibini community is a rural community and the researcher thought it would be fitting to ask for permission to conduct research in this area from the traditional leader as opposed to asking the ward councillor. This means that the total sample for the study is 46.

Table 4.1: Summary of qualitative sample

Respondents	Number	Reason for selection
HIP official	1	The park official had information on whether the park permitted community members to access resources in the park during the pandemic.
Machibini Traditional leader	1	The traditional leader had to be consulted as the research was being conducted in the community that is under his leadership.
Machibini Community members	44	44 community members were selected from Machibini, Ward 15 in Mtubatuba Local Municipality, to find out how the pandemic affected their access to resources found within the HIP.

4.3.7. Instrumentation and data collection

Researchers must choose the appropriate instrumentation and technique for collecting data (Flick, 2018). This study uses a constructivist paradigm, and this paradigm applies a dialectical method when collecting data from the sample (Guba & Lincoln (1994). Structured and in-depth interviews were employed as the data collection instruments. Structured interviews are defined as a data collection instrument whereby participants are given predetermined standardized questions with closed-ended questions where the researcher asks straightforward questions that require a yes or no answer (George, 2022). The structured interviews were considered appropriate for this study as they provide less room for ambiguity in the responses of the participants. In this study, the participants were asked the same questions, which filtered important information in line with the research questions (Creswell, 2003). In addition to structured interviews, in-depth interviews were utilised to gather information from the Traditional leader and the park authority. In-depth interviews are defined as a data collection instrument that is used to carry out lengthy and detailed interviews within a small sample (Rutledge et al., 2020). They were considered the most appropriate data collection instrument for the Traditional leader of the Machibini community and the HIP official because the questions are asked in a manner that requires a detailed exploratory answer about a certain issue, unlike structured interviews.

4.3.8. Data Analysis

Flick (2018) defines data analysis as the interpretation of the collected data. This involves making meaning out of the information gathered from the respondents' answers. Creswell and Creswell (2018) further explain data analysis by breaking down what the process of data analysis entails. The process of data analysis includes collecting raw data from the field in the form of transcripts and organising it, the data is then broken down into themes and interpreted by the researcher. Data analysis aims to combine all the gathered data and to make a generalisation based on the answers to the research questions. To analyse the data collected through both structured and in-depth interviews a thematic approach was followed. This approach is constituted of six steps.

The first step in analysing qualitative data is organizing the data (Creswell & Creswell, 2018). This involved the researcher sorting the transcripts from all the 46 participants

before delving into meanings the participants had attached to the occurrence of the pandemic and the implications it had on them.

The second step of the analysis process involves reading the transcribed data (Creswell & Creswell, 2018). This entailed the researcher reading through all the transcripts and making notes on some of the participants' responses that stood out and where the respondents raised interesting points which were contrary to what the literature had suggested. This assisted the researcher to gain insight into how the pandemic affected the livelihoods of the Machibini community.

The third step of analysing data involves coding the data (Creswell & Creswell, 2018). The researcher transcribed the subjective views of the participants about the pandemic and its implications. Thereafter, the researcher grouped the common responses by codes. The researcher ensured that each objective did not have more than five codes.

The fourth step of the data analysis process is the generation of descriptions and themes. This involved the researcher identifying the repeated patterns in the responses of the participants and categorised them together into themes. According to Creswell and Creswell (2018), a study must have about five to seven themes which represent the major findings of that study. The major findings of this study are discussed in the following chapter.

The fifth step in the data analysis process is interpreting the data (Creswell & Creswell, 2018). Here, the researcher looked deeper into the meanings of the themes that were identified in the previous step and made generalizations based on the major findings of the study which were linked to the experiences and the thoughts of the participants. The researcher made meaning of the participants' responses regarding the implications the pandemic had on them.

The sixth and final step of the data analysis process involved the researcher creating visual representations of the findings. The researcher organised the findings and presented them in the form of tables and figures to paint a clearer picture of the outcome of the study.

4.3.9. Ethical considerations

Researchers must be mindful of certain issues that relate to ethics before the data collection process commences (Tight, 2017). Researchers should respect the research sites as well as the participants. The researcher can encounter vulnerable people within the sample, such as people who are in wheelchairs, pregnant women and those who are neurologically impaired. The researcher needs to consider their needs (Creswell, 2003). In line with ethical considerations, this study adhered to the following; before the commencement of the research, the researcher sought the approval of the institution to conduct research in the Machibini community and HIP. In this regard, the research proposal was presented to the University of Zululand Research Ethics Committee (UZREC) so that it could evaluate whether or not the study was ethical. Hence the UZREC issued an Ethical Certificate (Certificate Number: UZREC 171110-030 PGM 2021/192) for this research to be undertaken. The researcher must also get permission from a gatekeeper before conducting research (Creswell & Creswell, 2018). In adherence to this, the researcher went to the study area to get permission from the traditional authority of the Machibini community. This permission was granted.

At the beginning of the study, the researcher disclosed the purpose of the study to each participant and did not force any of the community members to participate in the study. The researcher ensured that the daily proceedings of the participants were not immensely affected. During the analysis stage, the researcher revealed all the perspectives and did not just present the negative outcomes of the pandemic on the Machibini community. The researcher also concealed the identity of the participants during the reporting stage. Furthermore, information that would cause harm to the participants was not revealed. Finally, the researcher would provide the participants with copies of the thesis as a way of disclosing the findings of the study to them (Creswell & Creswell, 2018).

4.4. Chapter Summary

This chapter has described the physical setting of the Machibini community. It focused on aspects such as the climate of Machibini, the topography, agricultural potential, vegetation, and the socio-economic conditions of the community. This chapter also discussed the path taken by the researcher in answering the research questions of this study which pertained to the implications of the pandemic on the Machibini

community. The chapter explained the research paradigm, the research design, population and sampling, instrumentation and data collection, the data analysis and finally the ethical considerations of the study. The following chapter will present the in-depth findings of the study.

CHAPTER 5: ANALYSIS OF THE FINDINGS

5.1. Introduction

This chapter analyses the data that was collected from the Machibini community which is adjacent to Hluhluwe Imfolozi Park (HIP). The first section outlines the demographic characteristics of the respondents. This is followed by an analysis of the livelihood activities of the respondents. The third section evaluates the impact of Coronavirus disease 2019 (Covid-19) on the livelihood activities of the respondents. Subsequently, the fourth section explores whether the community members had access to the resources within HIP during the pandemic. This is followed by the fifth section which explores the coping strategies utilised by the community members to deal with the impacts of Covid-19.

5.2.1. Age of the respondents

This section describes the demographic characteristics of the respondents in terms of age, gender, marital status, ethnicity, period of residence, educational level, employment status, combined household income, grant recipients, and access to water and electricity. The description of these factors is crucial as they paint a clear picture that explicitly describes the sample, providing the reader with a better understanding of the participants.

The total number of respondents in this study was 44. The majority (32%) of the participants were between the age group of 18-30. The second highest number of participants was in the 31-40 age group, which had a total of 27%. The 51 and above age group had 16%, followed by the age strata of 18 and below which had 14% of the respondents in it. The age group with the least number of respondents falling within it was 41-50, with only 11% of respondents (Table 5.1). These results indicate that most respondents were within the age strata of 18-30. This may be attributed to two factors, the first being the time at which the study was conducted which was in the morning. During this period all the people who were employed may have gone to work. Secondly, the researcher believes that since a large proportion of the respondents had no tertiary education, getting employment had been challenging for them, which is why most of the young respondents were unemployed and were hoping to get employment locally either at HIP or at the local mine (Somkhele Coal Mine).

Table 5.1: Age of respondents

Age group	Respondents	Percentage
18 and below	6	14
18-30	14	32
31-40	12	27
41-50	5	11
51 and above	7	16
Total	44	100

5.2.2. Gender and marital status

The results depict that most of the respondents (75%) were not married, this includes both genders. With only 23% of the sample indicating that they were married, the remaining sample (2%) did not fall within any of the aforementioned categories. Since there is a high number of respondents (75%) who were not married in a rural community such as the Machibini, it shows a change in the traditional pattern in rural areas. Most of the participants may not be married as a result of personal preference or as a result of their financial incapability which hindered them from getting married and having a family of their own. The results depicted that more than half of the sample (71%) had a combined household income of less than R5000, which is evidence that most of the respondents were struggling financially.

There are proportionally more males than females that participated in this study, as illustrated in the pie chart below (Figure 5.1). Males made up 64% of the sample and 36% of the respondents were female. The results reveal that most males utilise the skills they have and the resources at their disposal as income-generating schemes. Some males in this study have their own businesses and are located in the Machibini area. It also emerged that the men in the area get employment either in the HIP or in the Somkhele coal mine which is close to the Machibini community.

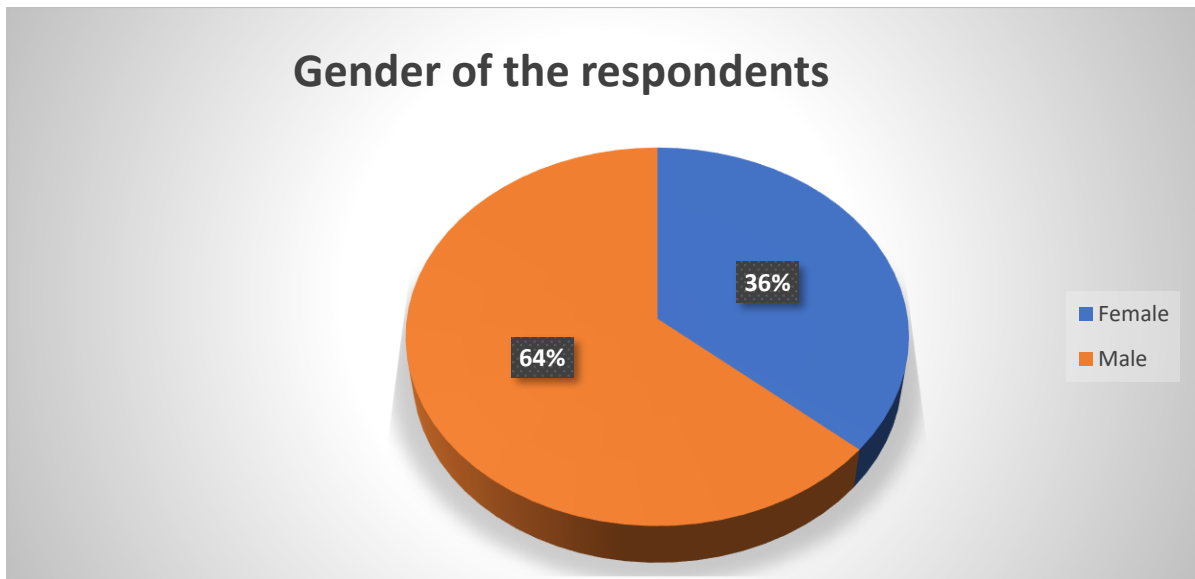


Figure 5.1: Gender of the respondents

More than half (52%) of the males indicated that they were single and 23% of the females indicated that they were single (Table 5.2).

Table 5.2: Marital status of respondents

Marital status	Gender	Respondents	Percentage
Single	Males	23	52
	Females	10	23
Total		33	75
Married	Males	4	9
	Females	6	14
Total		10	23
Other	Males	1	2
	Female	-	-
Total		1	2
Grand Total		44	100

Only 9% of the males in the sample indicated that they were married. Not a large number of female respondents were married, with only 14% stating that they were married.

5.2.3. Period of residence

Not all of the 44 respondents were born in the Machibini community. Table 5.3 shows that 72% of the respondents indicated that they had lived in this particular community since birth. Only 7% of the participants stated that they had inhabited the area for approximately 20 years, and 2% of the respondents revealed that they had only stayed in the community for not more than 15 years. A total of 7% of the sample stated that they resided in the Machibini area for approximately 10 years, another 7% of the sample stated that they started living in the area not more than 5 years ago while 5% of the remaining sample indicated that they had only stayed in this community for just over a year.

Table 5.3: Table showing the respondent's period of residence in Machibini

Period of residence	Respondents	Percentage(%)
Since birth	32	72
20 years	3	7
15 years	1	2
10 years	3	7
5 years	3	7
1 year	2	5
Total	44	100

5.2.4. Educational level

The results as illustrated in Figure 5.2 show various education levels which are, grades 1-3, 4-7, 8-12 and tertiary.

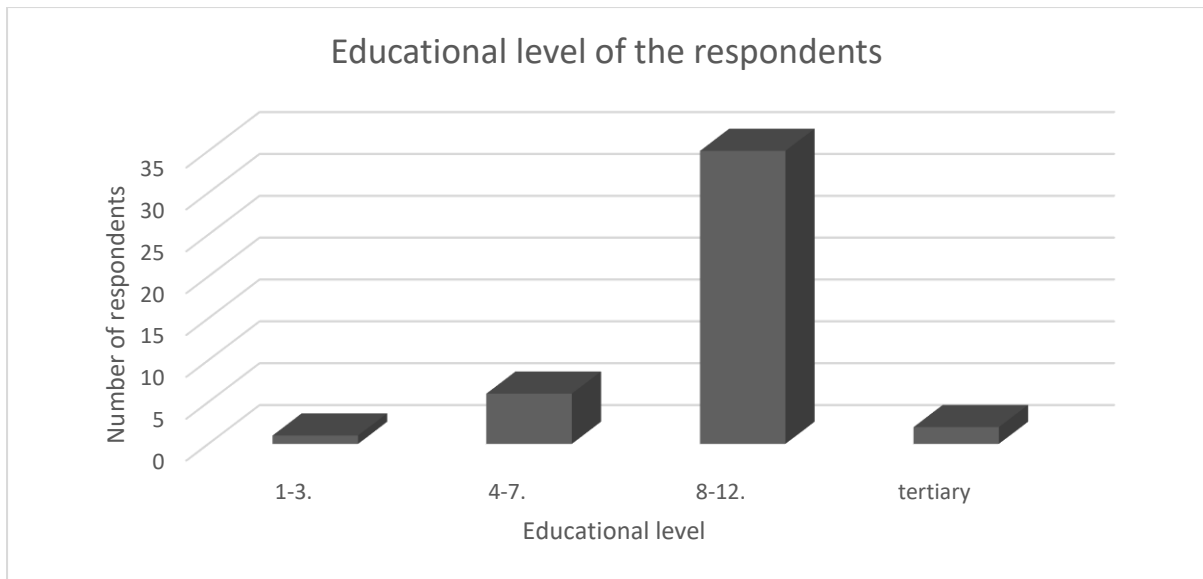


Figure 5.2: Education level of the respondents.

The results reveal that most of the respondents (80%) had reached high school level which is the 8-12 educational strata, followed by 14% whose educational career did not go beyond grade 7. Only 4% of the sample furthered their studies and went to tertiary. The educational strata that had the least number of participants were grades 1-3 which had 2% of the sample. The results depict that the majority of the respondents did not get into tertiary, this may have acted against these participants with regards to the type of employment they would qualify for. Education is deemed important especially tertiary as it is instrumental in giving people essential knowledge and training for a particular field. Most of the people in the sample had not furthered their studies and this may have been a contributing factor to the high unemployment rate in this community.

5.2.5. Employment status of the respondents

The results as illustrated in Figure 5.3 below show that most of the respondents (43%) in this study were unemployed. This is closely followed by the respondents who were employed who constituted 36% of the sample. Lastly, 21% of the participants indicated that they were self-employed, which made up the smallest proportion of the sample. Most of the respondents (95%) in this sample revealed that they did not further their studies into tertiary, which may have minimised their chances of getting jobs since they had no proper knowledge, training and expertise in any particular field. In addition to this, the pandemic resulted in people losing their jobs, 2% of the sample alluded to

this. As a result of being unable to find jobs, people resorted to starting their own businesses to sustain themselves and their loved ones.

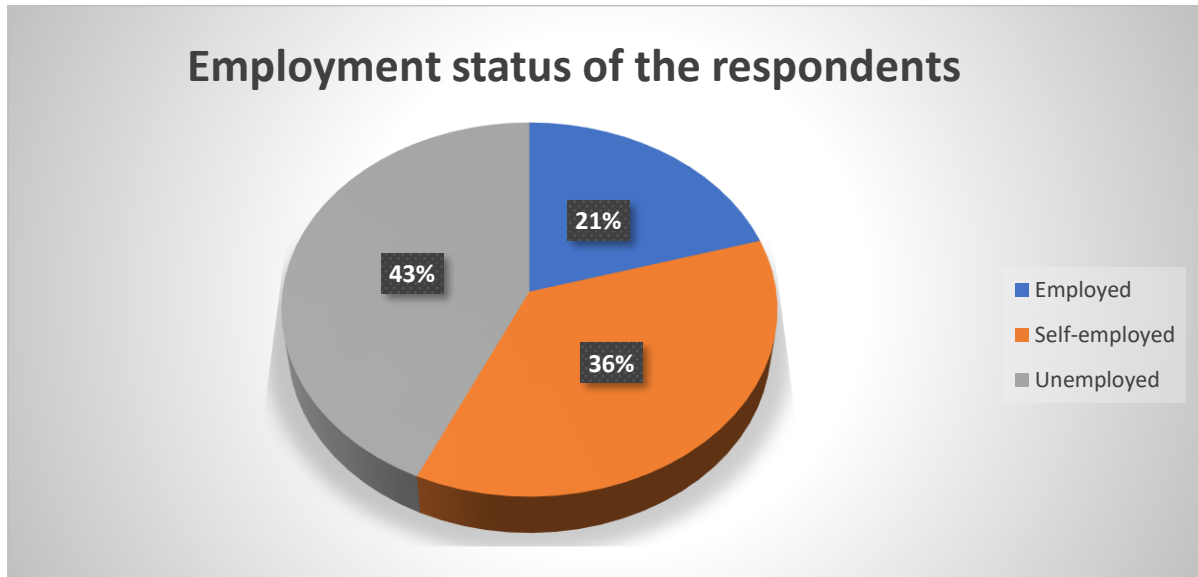


Figure 5.3: Employment status of the respondents.

5.2.6. Combined household income of respondents

As illustrated in Table 5.4 below, most of the respondents (71%) indicated that they had a combined household income of less than R5000. Within this category are respondents who were unemployed and were solely dependent on grant money they received from the government, which they claimed to be insufficient when considering how high the cost of living was. This was followed by 16% of the respondents who indicated that their combined household income was between R5000-R10000, closely followed by 11% of the respondents who indicated that their combined household income was between R15000-R20000, these were respondents who were fortunate not to lose their jobs during the pandemic. Only 2% of the sample indicated that they had a combined household income of over R30000. It can be deduced from the results that the respondents from this sample are struggling financially since more than half the sample (71%) indicated that their combined household income is below R5000. This is in line with what Abukari (2020) found, who stated that communities adjacent to PAs commonly live in poverty, hence their dependence on natural resources which in most cases, are located within the confines of PAs.

Table 5.4: Household income of respondents

Household income	Respondents	Percentage(%)
less than 5k	31	71
5k-10k	7	16
15k-20k	5	11
more than 30k	1	2
Total	44	100

The results depict that less than half of the respondents (39%) were recipients of a social grant, and the other 61% stated that they were not recipients. Only 2% of the sample stated they received a disability grant which turned out to be their only source of income during the pandemic since their business ceased to operate. A total of 4% of the sample indicated that they received a pension. One of the respondents stated that they were grateful that the government assisted them with social relief grant during the trying times of the pandemic as the money assisted them immensely.

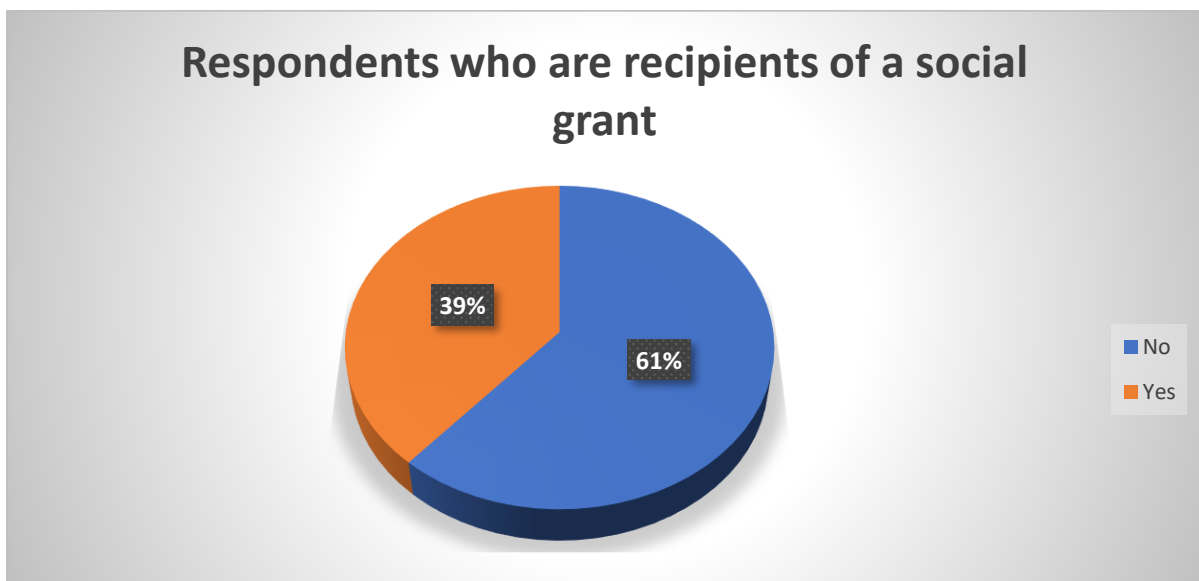


Figure 5.4: Respondents who are recipients of a social grant.

5.2.7. Respondents with electricity and water

Electricity did not seem to be a problem for the individuals who were a part of the sample as all of the 44 respondents (100%) from the Machibini community indicated that they had electricity in their households. Only water seemed to be a problem in this community. Some respondents revealed they had to dig up water from the ground,

which was dirty and detrimental to their health. Another alternative was a communal pool of water (Figure 5.5) which was also used by the livestock.



Figure 5.5: Communal pool of water.

The respondents revealed that they were experiencing a season of drought and that they did not have water for a prolonged time. Some respondents revealed that they paid R700 to have water delivered to their households by a 'water kan'. Unfortunately, not all respondents could afford this, especially those who were unemployed. During the pandemic, people had to wash their hands frequently, especially after being in public areas, which made clean water essential during the period of the pandemic. (WHO, 2020) emphasized that hand hygiene was of paramount importance as it decreased the chances of the virus spreading. The park intervened in the water crises and provided this community with a water tank. This tank was filled with water pumped from the park, which means that the people utilise water from the HIP and the tank was placed right outside the HIP as illustrated below in Figure 5.6.



Figure 5.6: Communal water tank.

The unavailability of water in the homes of the respondents can be said to impede their lives. This is because the time and labour spent in the procurement of water could be utilised for other productive activities that could even result in the generation of income. Considering the insights from the SLA (see e.g., De Sagte, 2002, chapter two) regarding the vulnerability context, it can be said that the unavailability of water in the homes of the respondents from the Machibini community is an external factor that stands against the prosperity of other livelihoods that they are involved in, as going to get water from the water tank can consume a lot of time.

5.3. Livelihood activities of the Machibini community members

This section focuses on the first objective of the study. This objective sought to analyse the livelihood activities that the Machibini community engaged in before the pandemic.

5.3.1. The livelihoods of the respondents before the pandemic

The respondents were engaged both in income-generating and non-income-generating livelihoods. These livelihoods were of equal significance because they played a vital role in sustaining the respondents even during the pandemic. Although

some participants had alluded to agricultural activities as being one of the imperatives for their sustenance, only 9% of the respondents reported having vegetable gardens at home. A total of 21% of the respondents stated that they had livestock which was their essential source of protein. Only 11% of the sample indicated that they had both vegetable gardens and livestock at home while 2% had poultry. It was brought to light by one respondent that the study area was experiencing a drought event, the respondent stated: “Our agricultural practices are greatly affected by the current drought, we cannot plant the crops we need since it is not every type of crop that survives under such climatic conditions” (Interview with respondent 5, Machibini. August 2022). This explains why only a minority of the respondents (9%) had vegetable gardens.

More than half of the sample (57%) engaged in livelihood activities that generated an income for them. The Machibini community is in proximity to HIP, where 5% of the respondents were employed there as general workers. There is a local clinic in this community where 5% of the respondents were employed as security guards, and 2% of the respondents indicated that they also worked as security guards at the local community hall. A total of 5% of the respondents were roadwork assistants and 2% worked at a research centre not far from the Machibini community. Finally, 2% of the sample worked at a local shop. In addition to this, there were respondents in this sample who sustained themselves and their families through self-employment, as a result of being unable to find employment. This included 12% of the sample that sold handcrafts to tourists (Figure 5.7).



Figure 5.7: Handcrafts activities

A respondent who makes handicrafts from wood stated: “I have been making handicrafts for over 20 years, I did not finish school which has made it difficult for me to find a job, and as a result, this has become my main way of making money” (Interview with respondent 12, Machibini, August 2022). The other 16% of the respondents were involved in a myriad of activities such as selling firewood to both local communities and tourists as illustrated in Figure 5.8. This is in line with the findings of a study conducted by Mdiniso and Nzama (2018) which was conducted in the Mpembeni, Hlabisa and KwaXimba communities which are also adjacent to the HIP. This study brought to light how the community members from these communities had their own way of generating money which was through accommodating tourists. This reveals how local community members benefit from the presence of PAs as they attract tourists that take part in the local economy.



Figure 5.8: The firewood sold to tourists and local communities.

Other respondents were involved in building houses, cutting grass in the local community, family-owned taxi businesses, repairing cars, making and selling bricks to builders, selling chickens, and operating a *spaza*¹ shop. This shows that these respondents (16%) were innovative since they established ways that could generate income and help them to survive. This also brings to light that not all respondents who reside adjacent to PAs such as HIP have livelihoods that are derived from the resources that are found within the confines of the PAs as most research suggests (see e.g., Adeleke & Nzama, 2013; Barrow & Fabricius, 2002; Clements et al., 2014; Oldekop 2016; Roe et al., 2015; Stone et al., 2021). This also confirms the findings of Chichina et al., (2018) who found that the local communities adjacent to the North Negros Park in the Philippines engaged in livelihoods that were not derived from the resources that were found within the confines of the park. These livelihoods included livestock farming and running local shops which sold essentials to the community members. However, even if this was the case, developments in PAs (such as the impact of Covid-19) do affect even those livelihood activities which do not use

¹ A shop falling within the informal economy that provides local people with their daily necessities, imitating the supermarkets that are found in the urban areas (Kgaphola et al., 2019).

resources in the PA. This will be discussed in the section on the impacts of Covid-19 on the livelihood activities of the Machibini Community.

Only a total of 9% of the respondents indicated that their livelihoods were derived from resources that were located within the park. These were women who cut grass inside the park seasonally (June and July) and they would either sell it, use it for thatching their homes or make baskets and mats which they would sell to tourists in the Vulamehlo market located within the HIP. There was 5% of the respondents who stated that they collected wood outside the park because they were not allowed to collect firewood inside the park. Even though this was what these respondents claimed, it is highly unlikely that this is true as the researcher did not see any trees in the vicinity that is closest to the park, which is where these respondents sell their wood. It is most likely that they got this wood inside the park because there appeared to be more trees inside the park in comparison to outside of the park. When the park official was asked about local communities being granted access to utilise resources found within the confines of the park, he stated that local community members were not allowed to enter the park as they pleased because the animals in the park were very dangerous and had the potential of inflicting serious damage on them (Interview with Park Official, July 2022). Even though community members were prohibited to enter the park as they pleased, the park allowed some community members to collect resources (such as grass) at a certain period, providing them with a security guard to accompany them. This raises the question of why it is only the women who cut grass who were given the chance to enter the park to collect grass while people who wanted to collect firewood were not allowed to do so. Surely a harvesting period can also be given to those whose livelihood strategies involve selling firewood as this would show fairness and impartiality by the park.

The respondents disclosed that when they entered the park, they needed to sign an indemnity form at the gate. Their signatures indicated that they were aware that when they entered the park to harvest grass at their own risk, should anything befall them, the park was not responsible. The respondents were not happy about this as they stated: "This does not sit well with us, even when the security guard accompanies us, they are not armed which shows how the park cares more about the animals than they care about us" (Interview with respondents 30 and 31, Machibini, August 2022).

Within this sample was an old lady who also used to harvest the grass, she also reiterated that indeed when she entered the park, it was mandatory to sign at the entrance. This respondent stated that she last entered the park in 2019, this was before she was almost attacked by an elephant in the park as they were harvesting. Unfortunately, at the time, no security guards were dispatched to accompany the women as they went into the park to harvest. It was this traumatic experience that caused her to cease going into the park to harvest (Interview with respondent 43, Machibini, August 2022). This shows that the park is not doing enough to assist community members who come to harvest resources from the park.

Furthermore, it points to community members entering the park illegally, which would explain why no security guards would accompany them when they went to harvest. This confirms the findings of Gordan (2017) who arrived at similar findings concerning local communities being granted limited access to PAs. These were communities in proximity to Majete Wildlife Reserve. Similarly, Moyo and Cele (2020) also found that the local communities adjacent to OKhahlambha Drakensberg Protected Area were only granted limited access to the park to harvest grass within specified time frames.

In answering the first research question of this study, it can be deduced from the results that participants were not just dependant on one form of livelihood, rather the community members had diversified livelihoods. Based on the insights of the Sustainable Livelihoods Framework (SLF), (see e.g., Chambers & Conway, 1991; De Sagte, 2002; Serrat, 2017, chapter two) it is of paramount importance for people to have livelihoods that are diversified as this decreases pressure on the natural resources. It increases household income and decreases vulnerability in the face of external shocks. When looking at the community of the study area, through the lens of the SLF, this framework enabled the researcher to see the capital assets of this community which are the factors that enabled the people to engage in their livelihoods before the pandemic struck.

The first capital asset is human capital, it can be said that the respondents were in a good state in terms of their health as they were capable of engaging in various livelihoods that sustained themselves and their loved ones. Furthermore, the community had a local clinic facility. In addition to good health, the skills that the local communities possessed proved to be important since they enabled the community

members to engage in activities such as building houses, cutting grass in the local households, and making handicrafts. Consequently, out of these skills, income was generated. The level of education also showed to be a valuable human capital asset since it secured people's livelihoods. For instance, it was mandatory for people who got employed at the park to have passed their Grade 12 and had their matric certificate (Interview with park official and traditional authority, July 2022). The results show that even if the respondents did not have a certain kind of human capital asset such as education, they would use a different one such as their skills. In this study, the respondents who did not have a matric certificate were able to use their skills to engage in other livelihood activities such as making handicrafts.

The second capital asset was natural capital. The results of this study showed that there were respondents whose livelihoods were derived from natural resources. For instance, some harvested grass inside the HIP, others made handicrafts from wood, as well as some had vegetable gardens, livestock and poultry they sold to sustain themselves. Thirdly, physical capital, in the form of roads, water and modes of transport, were also crucial factors that enabled livelihoods to take place. For instance, respondents used roads for travelling to work and some respondents (34%) utilised the water from the communal tank for the irrigation of their plants.

Fourthly, there were consistent cash inflows that the respondents were recipients of, which the SLF regards as financial capital. A total of 45% of the respondents indicated that they had financial capital which was in the form of pensions, social grants and disability grants. Another 20% of the respondents received salaries which was also a consistent source of cash inflow so long as they were working. Financial capital proved to be important in this sample, as businesses emerged from the little money people were receiving every month. One respondent indicated that they started their business of selling chickens through the social grant they received (interview with respondent 35, Machibini, August 2022).

HIP utilises Community Based Conservation (CBC) which is a management strategy that tries to uplift the communities adjacent to them through socio-economic development. The park official stated that “the traditional authorities of the local communities are our main line of communication, they then have to pass on information from the park to the community members, be it about employment or any

other initiative the park wants to implement in the community” (Interview with park official, July 2022). The park official mentioned a programme called the Community Levy whereby a certain percentage of the revenue generated by the park is used for some community projects in the Local communities, for example, the money could be used for building classrooms in schools (Interview with park official, July 2022). The traditional authority of Machibini confirmed this and even stated that “I would say that the park has a good relationship with the Machibini community as the park assists this community, for instance by providing jobs for some community members” (Interview with traditional leader, Machibini, August 2022). The results suggest that there is more that needs to be done by the park concerning enhancing the livelihoods and uplifting this community. None of the respondents revealed how much financial capital investments were made into the community to establish or support local livelihoods, as there is a great need considering the high unemployment rate in this community.

5.4. Impact of Covid-19 on the livelihoods of the respondents

This section of the study focused on the second objective. This objective sought to evaluate the impact of the pandemic on the livelihood activities of the respondent from the Machibini Community.

5.4.1. Covid-19 transmissions in the sample

The impact of the pandemic was far-reaching, touching and altering the lives of people on a global scale. The results revealed that 84% of the respondents had not contracted Covid-19, and only 16% of the sample disclosed that they had been infected with Covid-19. When the respondents were asked about how they managed to protect themselves, they stated that they stayed at home and adhered to the lockdown regulations. They also revealed that they utilised traditional medicine such as the leaves of gumtree and *umsuzwane*², for steaming.

5.4.2. The livelihood activities of the respondents during the pandemic

The results revealed that the pandemic affected the respondents in different ways. Some continued to work during the pandemic while adhering to the covid-19 regulations such as wearing a mask, constant sanitizing, and social distancing. For instance, 5% of the respondents who were security guards at the local clinic continued

² A plant that grows naturally and is utilised for medicinal purposes, treating colds, fever and chest pains through steaming (Maroyi,2017).

working, and 2% of the respondents were operating a spaza shop during the pandemic. From a livelihood perspective, this shows that these respondents were affected by Covid-19, but still managed to engage in their livelihoods amidst the pandemic.

During the pandemic, the respondents who worked as roadwork assistants and who worked at research centres stopped going to work. The respondent who worked at the research centre stated that they continued working from home. These respondents (7%) were fortunate enough to continue receiving their salaries. Unfortunately, there were some respondents (7%) who stopped working and received no money as they were at home, these respondents worked in the HIP and at a local shop. However, these respondents (7%) were fortunate enough to get their jobs back after the pandemic. There was only one respondent who lost his job permanently because of the pandemic, this was a respondent who worked at the Somkhele Coal Mine, bringing to light the negative repercussions of the pandemic upon the respondents of this sample. The respondent stated that:

“The pandemic has really affected me, it took away my only way of making money, leaving only one person at home with the responsibility of taking care of the whole family. Getting employed before the pandemic was not easy and I’m pretty sure that getting a new job after the pandemic will be even more difficult, but I am still hopeful that I will find a job eventually” (Interview with respondent 10, Machibini, August 2022).

According to the results, the self-employed respondents were the ones who were the hardest hit by the pandemic. This was 12% of the respondents who sold handcrafts to tourists. These respondents (12%) found themselves in a serious predicament as they lost their main income-generating scheme, making it difficult for them to attain their basic needs. The respondents who sold handcrafts to tourists, both within the premises of the park at the Vulamehlo Market and outside the HIP at the entrance were forced to stop selling their crafts. This was a result of the lockdown that was implemented worldwide which banned travelling and called for people to stay in their homes. This is the context within which one respondent stated that “we stopped selling in the market in March 2020 and only started selling in May 2022, which means that for almost one and a half years we have not been making any money from our handcrafts because the park was closed, this has affected us terribly as selling to

tourists was our main way of making money” (Interview with Respondent 30, Machibini, August 2022). In addition to this, one respondent stated that “we had a shop at home before the pandemic, but we had to close it for good because we were no longer making money from it. We then had to start a new business so that we could generate some money to sustain us” (Interview with respondent 29, Machibini, August 2022). There is another respondent who also had their business collapse, they stated that “the pandemic hit me hard because my business of selling chickens was affected, this was my only way of making money, things would have been a bit better for me if I was receiving the social relief grant, but unfortunately, I wasn’t receiving it” (Interview with respondent 37, Machibini, August 2022).

The results of this study corroborate the findings of Spenceley (2021) about the pandemic having negative repercussions on the livelihoods of the local communities in Kenya. For instance, the employment of 700 game guards and 300 employees who were employed in conservation parks were affected. While there were people who experienced salary cuts, some were retrenched. In the study area, 5% of the respondents employed by the HIP as game guards were retrenched during the pandemic.

In answering the second research question which sought to find out how the pandemic affected the livelihood activities of the respondents, it can be deduced that the pandemic affected the livelihood activities of the respondents, in varying ways. This is because, while 5% of the sample continued working during the pandemic, 48% of the respondents who had been working at that time stopped working. The remaining 47% of the respondents were not working before the pandemic. Drawing insights from the SLA (see e.g., Chambers & Conway, 1991; De Sagte, 2002; Serrat, 2017, chapter two) which emphasizes the importance of people having sustainable livelihoods, it can be said that from the aforementioned livelihoods, the only livelihoods that were resilient and could withstand the external shocks of the pandemic were those which involved working as a security guard at the local clinic and operating a spaza shop. Research results show evidence that there is a great need for such livelihoods in this community.

The pandemic also had an impact on the livelihood activities of the respondents that were not dependent on the resources found within the HIP. For instance, 14 % of the respondents who were involved in livelihoods such as building houses, cutting grass

in the local community, repairing cars, making bricks and selling them to builders and selling chickens stated that their operations came to a standstill and that their businesses only started getting back on track at the beginning of 2022. The local shop that was used by both tourists and local community members was no longer attracting tourists who bought from the shop due to the lockdown that restricted travelling. The number of local community members who were buying from the shop also decreased. This meant that the amount of money generated by the owner decreased (Interview with respondent 41, Machibini, August 2022). A respondent who had a taxi business stated that “the pandemic affected us immensely, especially within the first six months because the number of people passengers per trip had to decrease, and the number of people using public transport also decreased because of lockdown. We also used to transport the staff who worked inside the park but when the pandemic struck, the employees stopped working which meant that the money we made decreased” (Interview with respondent 7, Machibini, August 2022). The respondents who sold firewood to tourists and local community members stated that “the pandemic harmed us since we were forced to stop selling because no one was buying our firewood during the pandemic” (Interview with respondent 13 and 18, Machibini, August 2022). These respondents were solely reliant on these livelihoods for the generation of income. Seeing the negative repercussions that the pandemic had on the livelihoods of the respondents proves how imperative it is for respondents to have diverse livelihoods that generate an income in their households. This is because when one livelihood fails, people will have an alternative source of sustenance during unprecedented times, making them secure and less vulnerable.

5.5. Access to resources that are within the premises of HIP during the pandemic.

The following section discusses the third objective of the study, which sought to examine whether the respondents had access to the resources that are found inside HIP during the pandemic. Out of all the respondents in this sampled population, a total of 43% of the respondents stated that they utilised resources from the park during the pandemic. This was, 9% of the respondents who cut grass from inside the park which they used for thatching their homes or making baskets that they would sell to tourists at Vulamehlo Market inside HIP. Also, 34% of the respondents utilised water that was pumped from the HIP as it was the only source of clean water they had access to in

the area. The respondents however raised complaints about the availability of this water as the park would close the water pump for even up to a month, leaving the people with no clean water. The respondents complained that “sometimes there was no water coming out of the park for up to a month, this meant that we had to use the dirty water from the communal pool or pay R700 for a ‘water kan’, I personally could not afford” (Interview with respondent 15, Machibini, August 2022). Only 32% of the respondents could afford it. This resonates with the findings of the study conducted by Smith et al., (2021) in Kruger National Park, whereby the local communities that used to harvest mopane worms as a source of protein were forced to stop as a result of the pandemic. This did not only affect them from a nutritional perspective since this was their source of protein but also from a financial perspective since the people who sold mopane worms could not continue selling them.

The respondents revealed that in 2020 when the pandemic started, they were granted access to collect grass from inside the park, however, the period that they could collect the grass was shortened from two months to just two weeks. They stated that this continued in 2021 and that the harvesting period only increased in the year 2022. They stated that their harvesting period began on the 15th of June 2022 and ended on the 15th of August 2022. The respondents also stated that during the pandemic, they were mandated to wear masks when going to harvest, and they had to buy their own sanitisers, otherwise they would not be granted access to the park. In addition, the respondents stated that they had to pay R500 for a hired car that would help them with moving around inside the park. This vehicle also assisted them with carrying the grass, enabling them to get a greater quantity of the grass every time they went to the park for harvesting. The restrictions concerning harvesting which led to a shortened harvesting period led to financial issues since the quantity of the harvest decreased significantly.

In answering the third research question which sought to find out whether the respondents had access to the resources found within the premises of the park during the pandemic, it can be concluded that the respondents did have access to resources however, there were restrictions put in place such as having a shortened harvesting period and sometimes the unavailability of water. Drawing insights from political ecology (see e.g. Robbins, 2012; Tizley, 2020, chapter two) which speaks about how power plays an important role when it comes to accessing resources. PA authorities

utilised their power to control how and when communities adjacent to them can access and utilise resources located within the premises of these PAs. The Machibini community were constrained from utilising resources as they pleased, due to the restrictions imposed by those who have control over them, which, in the case of this study was the HIP authorities. This had negative repercussions on these respondents since their harvests decreased. In addition to this, the respondents who utilised water from the park did not always have access to water since no water from the park would be pumped into the tank for up to a month sometimes. This shows how the decisions made by park authorities can either positively or negatively affect those linked to the park such as the local communities.

5.6. Coping strategies utilised by respondents to deal with the impacts of the pandemic

The following section discusses the fourth objective, which explored the coping strategies that were adopted by the respondents from the Machibini community so that they would be able to survive during the unprecedented times of the pandemic.

5.6.1. Rating the impact of the pandemic

The respondents were asked to rate the impact of the pandemic on their lives. The results as illustrated in Figure 5.9 below indicate that more than half of the sample (59%) rated the impacts of the pandemic as extreme. When the respondents were asked to elaborate, they stated that they felt financial strain during the pandemic, especially those who lost their main income-generating schemes. This was followed by 25% of the sample who indicated that the impact of the pandemic was moderate upon their lives. These were the respondents who were not severely affected by the pandemic, as they were not infected with the Covid-19 and were not strained financially as the household income was enough to sustain them. Only 16% of the respondents indicated that the impacts of the pandemic were minimal, this was inclusive of those who did not stop working and those who were able to work from home and still received their monthly income during the pandemic.

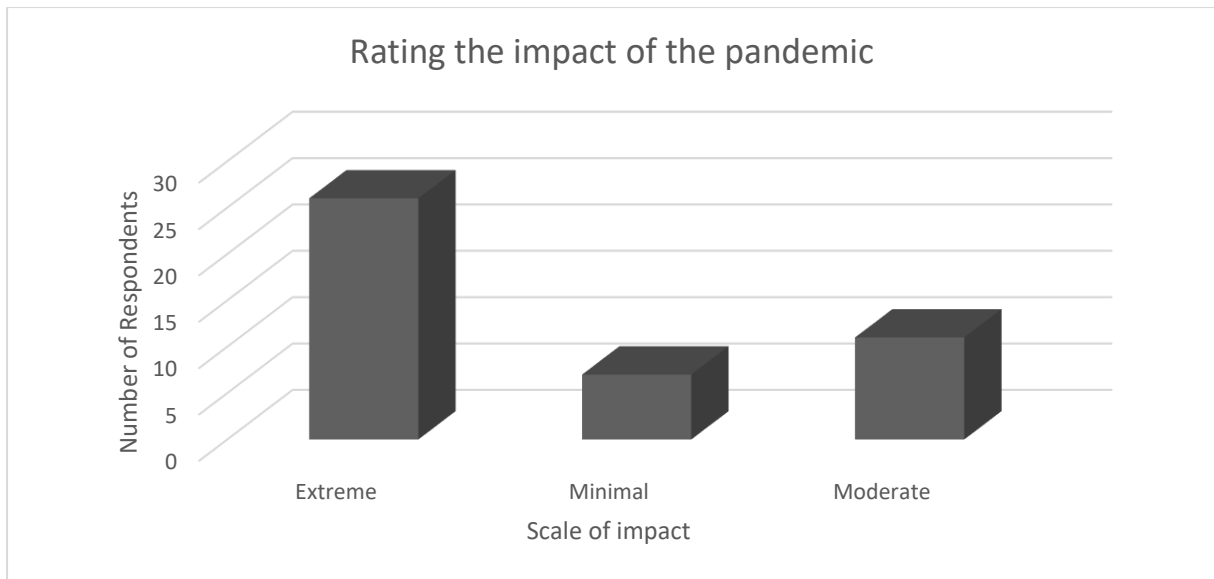


Figure 5.9: How the respondents rated the impact of the pandemic.

The respondents established ways of coping with the negative impacts of the pandemic based on the level at which they were affected by the pandemic. This was of paramount importance as it would assist the respondents to be able to endure the unprecedented and trying times of the pandemic that placed them in a vulnerable state.

5.6.2. The coping strategies adopted by the local community members

Respondents were forced to find alternative livelihoods that would help sustain themselves and their loved ones. A total of 7% of the respondents whose businesses collapsed as a result of the pandemic, stated that they ventured into new ways of generating an income during the pandemic. This included selling alcohol, which was a quick way of accumulating money. The respondent who sold alcohol stated that “I have never had a formal job, before the pandemic I was selling chickens however, due to the pandemic my business collapsed, I then started selling alcohol because I knew that it would generate money quickly” (Interview with respondent 13, Machibini, August 2022). Other income-generating strategies included selling chickens, crops and fast foods. The respondents indicated that these alternative livelihoods helped them to stay afloat. Other respondents (13%) stated that their vegetable gardens and livestock were helpful during the pandemic as this meant that they would not have to buy everything since they had some vegetables and a source of protein, which saved them money. Local community members finding alternative livelihoods during the pandemic

corroborates with the findings of (Charles,2020) which found that the Ku-Humelala Craft Group in South Africa who sold crafts to tourists diverted to making masks and selling them to the local community members as there were no tourists to sell the crafts to during the pandemic. This emphasizes the importance local communities being quick to adapt to any shocks that are brought by disasters so that they can survive the unprecedented times.

There were respondents (9%) who had to adopt certain measures to continue engaging in their livelihoods amid the external shocks that came with the pandemic. The women who collected grass had to wear masks and have their sanitisers so that they could be granted access to the park to harvest. Even though the respondents could not sell the grass and handicrafts during the pandemic, the grass they harvested had other uses such as thatching their houses. This demonstrates an element of resilience in their livelihood strategy as they were able to adopt certain measures that enabled them to continue with this livelihood strategy (see e.g., Chambers & Conway 1991; De Sagte 2017, chapter two).

Some respondents were solely dependent on grant money and remittances during the pandemic. There is one respondent in particular who stated that “during the pandemic I could no longer continue with my livelihood which was selling firewood to tourists and community members, it was the grant that I received for my health condition (epilepsy) that sustained me” (Interview with respondent 12, Machibini, August 2022). A total of 78% of the respondents indicated that they had no major way of coping with the shocks of the pandemic apart from household income, made up of grant money and remittances. This was their only source of income during the pandemic, and it was a lot less than what they were used to. This is the context within which one respondent stated that “during the pandemic, we were depending on my grandmother’s pension to take care of us. This money was unfortunately not enough as my grandmother was at some point forced to go borrow money so that we could buy food” (Interview with respondent 4, Machibini, August 2022). This shows how greatly challenged the respondents were in terms of their finances and points to the importance of individuals having resilient livelihoods as they will be able to sustain them through anomalous times.

The respondents stated that it was only at the beginning of the year 2022 that things started going back to normal for them, especially those who owned businesses. The continuation of their operations helped them to get back on their feet again, these were the respondents who worked at a local shop, sold handcrafts to tourists, sold firewood to both local communities and tourists, built houses, cut grass in the local community, had a family-owned taxi business, mechanics, made bricks and sold them to builders, finally, the respondents who sold chickens. Concerning some respondents engaging in new livelihoods, and attempting to survive the pandemic, the study found that this correlates with what Razanatsoa et al., (2021) discovered about the local communities in Madagascar whereby the people resorted to doing extractive activities such as logging and charcoal production during the pandemic.

To address the fourth research question, which sought to find out the coping strategies that were adopted by the respondents to the shocks that were brought about by the pandemic, it can be concluded that there is not a lot that the respondents did to respond to the challenges they encountered during the pandemic. Drawing insights from the SLF (see e.g., Chambers & Conway 1991, chapter two), specifically looking at the vulnerability context which speaks of the external shocks such as Covid-19 that affect people and puts them in a precarious position. The SLF looks at how vulnerable people cope with such stressors. The biggest challenge was that the respondents ceased to engage in livelihoods that they sustained themselves by. Only 9% of the respondents acted upon the predicaments they were faced with, establishing new livelihoods, while the rest of the sample population settled for the household income which was made up of social relief grants, pensions, disability grants and salaries of those who were working at home. Another 13% of the respondents stated that they had livestock and vegetable gardens that helped sustain them during the pandemic, this decreased the respondent's vulnerability towards the pandemic. It can be said that the remaining 78% of the respondents were incapable of being innovative and establishing solutions that would result in them being less vulnerable during the pandemic. The researcher believes that these respondents (78%) were hoping to get external assistance either from government institutions, the HIP or the traditional authority of Machibini.

5.6.3. Initiatives implemented by the HIP to assist respondents during the pandemic.

The park tried to assist the community of Machibini by providing food parcels and short-term jobs, however, the results show that many of the respondents (84%) stated that they did not receive the assistance. Only 16% of the respondents indicated that they received assistance, this was 11% of the respondents who got food parcels and 5% of the respondents who got short-term jobs to work in the park for a period of one to three months. When the park official was asked about this matter, they stated that food parcels were given to the people who used to work at the park. A total of 11% of the respondents stated that they received food parcels from the park during the pandemic. These were the two respondents who worked as game guards in the park and the three respondents who sold handcrafts at the Vulamehlo market. One of the game guards had this to say regarding the food parcels “I was not working for more than six months so I was very happy when I received a food parcel, I thought I would receive them until I went back to work but, unfortunately, that was not the case. Not that I don’t appreciate this initiative, I just wish it was continuous and not just a once-off thing” (Interview with respondent 27, Machibini, August 2022). Spenceley et al., (2021) arrived at similar findings whereby the Grootbos Private Nature Reserve was able to provide food for those who needed it during the pandemic. The food relief programme was able to cater for over 2000 people who were in need.

The park also employed local community members during the pandemic to do general work in the park. This included fixing the fence, removing alien invasive species and even feeding some of the animals in the park. Only 5% of the respondents indicated that they got employed by the park during the pandemic. However, the respondents raised complaints about the period of these contracts, stating that three months was too short. Some respondents also complained about the procedure that was used in selecting candidates for employment. A maximum of only five people would get employed per period, in addition to this, these candidates were obliged to have completed their matric. This put some respondents who did not finish high school at a disadvantage, meaning that they were automatically disqualified.

Drawing insights from the SLF, (Serrat 2017, chapter two) transforming structures and processes is crucial as they can have a positive or negative influence on people during unprecedented times such as pandemics. They provide people with the assistance

they need to endure the trying times. The results show that there were programmes implemented by the park during the pandemic to assist the community members who were at risk such as food parcels, which 11% of the sample indicated to be recipients of and short-term contract vacancies that only 5% of the sample received. Even though there were programmes to assist this community, it is evident that they were not enough. This has resulted in the community members having negative perceptions towards the HIP. This is because they did not receive much assistance from the park during the pandemic as the park decided to offer assistance selectively. It became apparent, through the respondents that there was a family in this community that received food parcels while the families next to them did not. The respondents stated that the park took care of this particular family, in honour of their late grandfather who gave a portion of his land to the park, enabling the park to enlarge their territory (Interview with respondent 9, Machibini, August 2022). One respondent stated that,

“I actually prefer the Somkhele coal mine than the HIP, the park made many promises to us and has not delivered. The mine has employed a lot more people in this community than the park has, the park employs people from other communities. Another thing is that we never hear about available vacancies in the park from the Induna (traditional authority) because he does not share with us. This information is only known by those closest to him, we are only told about vacancies in the park by those who work inside the park who are from this community. Interestingly, the park did not want the Coal mine to be established in the area, one of the claims it made was that socioeconomic development was already taking place in the area through its various programmes in this community and that it (HIP) was taking care of this community, which was not the case. Even during the pandemic, we received no incentives from the park” (Interview with respondent 43, Machibini, August 2022).

This shows how negative the feelings and perceptions of the respondents are towards the park, stemming from being neglected by the park. However, it can also be said that the park may have been selective concerning whom it helped because of the decreased revenue it had generated during the pandemic as the park was not having any tourists coming in to visit.

5.7. Chapter Summary

The first section of this chapter focused on the demographic characteristics of the respondents as it was essential to comprehend who the participants were. The second section discussed the livelihood activities of the respondents. The results showed that the respondents from the Machibini community had a variety of livelihoods that they sustained themselves by. Some respondents had livelihoods that required resources that were found within the confines of the HIP, as discussed in the third section. The fourth section discussed how the pandemic affected the livelihoods of the respondents in different measures, with some respondents losing their only income-generating scheme, while others maintained their livelihoods. The results also showed that the respondents were granted access to the park to extract the resources they needed. However, the period that was available for harvesting was cut short during the pandemic. The final section looked into the coping strategies that were adopted by the respondents. The results showed that there were respondents who engaged in new livelihoods such as selling chickens and fast foods. On the contrary, other respondents were sustained by their household income during the pandemic. The following chapter will provide recommendations, regarding the programmes that can be implemented in communities such as the Machibini community, assisting the people to deal with disasters.

CHAPTER 6: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1. Introduction

This study consisted of six chapters. Chapter one provided the background to the study. Chapter two explored the contextual and theoretical frameworks that underpinned this study. The third chapter reviewed literature that was linked to each objective of this particular study. The fourth chapter presented the physical setting of the Machibini community and also described the research design and the methodology followed in the data collection process for this study. Chapter five provided the analysis and interpretation of the data in response to the objectives of the study. This chapter, therefore, concludes the entire thesis. It does so by firstly restating the research aim and objectives, the second section summarises the study's results by responding to the objectives in sequential order, the third section proposes recommendations, and the final part of this chapter suggests areas of possible future research.

6.2. Restatement of the research aim and objectives

This study aimed to analyse how the Coronavirus disease 2019 (Covid-19) pandemic affected the livelihoods of the Machibini community that is adjacent to Hluhluwe Imfolozi Park (HIP).

The specific objectives are as follows;

- a. Analyse the livelihood activities of the Machibini community before the Covid-19 pandemic.
- b. Evaluate the impact of Covid-19 on the livelihood activities of the Machibini community.
- c. Evaluate the local community's access to resources found within HIP during the pandemic.
- d. Explore the coping strategies utilised by the community members to deal with the impacts of Covid-19.
- e. Propose strategies which can be implemented to assist rural communities to respond to disasters.

The following section summarises the study's results by responding to the objectives in sequential order.

6.2.1. The livelihood activities of the Machibini community members before the pandemic

The first objective of this study sought to analyse the livelihood activities of the Machibini community before the Covid-19 pandemic. In response to this objective, it can be deduced from the results that the members of the Machibini community who were a part of this sample were not dependent on a single form of livelihood, but they had a variety of livelihoods. For example, more than half of the sample (57%) engaged in livelihood activities that generated an income for them. These respondents (57%) were involved in activities such as being game guards in the HIP, security guards, working at a research centre, working at a local shop, selling handcrafts and firewood to tourists and local community members, building houses, cutting grass in the local community, family-owned taxi business, repairing cars, making bricks and selling them to builders, selling chickens, lastly operating a *spaza* shop.

6.2.2. The livelihood activities of the respondents during the pandemic

The second objective sought to find out how the pandemic affected the livelihood activities of the Machibini community. The study found that the pandemic affected the livelihood activities of the respondents, in varying ways. This is because, while 5% of the sample continued working during the pandemic, 48% of the respondents who had been working at that time stopped working. However, out of the 48% that stopped working, 9% of the respondents continued getting paid even though they were not working. The remaining 47% of the respondents were not working before the pandemic.

6.2.3. Access to resources that are within the premises of the HIP during the pandemic

In response to the third objective of the study which sought to find out whether the respondents had access to the resources found within the premises of the park during the pandemic, the study found that the respondents did have access to resources. The respondents (9%) cut thatching grass from inside the park for their homes. There was also 34% of the respondents who utilised water that was pumped from the HIP as it was the only source of clean water, they had access to in the area. Even though the respondents had access to the resources during the pandemic, there were restrictions put in place such as having a shortened harvesting period which was reduced from a

period of two months to two weeks. The water is sometimes unavailable for up to a month in some cases.

6.2.4. Coping strategies utilised by the respondents to deal with the impacts of the pandemic

The fourth objective of the study sought to find out the coping strategies that were adopted by the respondents to the shocks brought about by the pandemic. In response to the above objective, it can be concluded that there is not a lot that the respondents did to act upon the challenges they encountered during the pandemic. For example, a total of 78% of the respondents stated that they were sustained by household income, made up of grant money and remittances. This was their only source of income during the pandemic, and it was a lot less than what they were used to. Only 9% of the respondents acted upon the predicament they were faced with by establishing new livelihoods. Also, 13% of the respondents stated that they had livestock and vegetable gardens that helped sustain them during the pandemic, this decreased the respondent's vulnerability towards the pandemic. The remaining 5% of the sample continued with their usual livelihoods that they were engaging in before the pandemic struck.

6.3. Recommendations

6.3.1. Recommendations for the HIP authority and Machibini traditional authority

The study established that there are many problems around the employment strategy utilised by the HIP in the Machibini community as well as the contract duration for part-time employees in the park. Therefore, the following is recommended.

- a) The park needs to work with the traditional authority of this community to establish a system that will ensure that information about the availability of employment opportunities is disseminated to every part of this community, in this way everyone has a fair chance of getting employment. It is also imperative for the park to make their employees' contracts permanent.
- b) The park needs to work hand in hand with the traditional authority to provide people in this community with life skills programmes and the necessary facilities that will support their livelihoods.

- c) The park can adopt Bhammar's framework for tourism recovery in PAs (see chapter 3) to assist them with getting their revenue generation back on track as the park can only offer meaningful assistance to this community once their revenue generation has recovered from the effects of the pandemic.

6.3.2. Recommendations to the local community members of Machibini

This study established that the local community members who sold handcrafts to tourists inside the park at the Vulamehlo market and outside the park were not able to do so during the pandemic as there were no tourists to buy their handcrafts.

- a) These community members, through the assistance of the park, can open an online store that is accessible on the HIP's website since there is a larger audience there to sell their handcrafts. This way, even if the people's crafts are not sold during physical visits due to disruptions such as the Covid-19 pandemic, they will be available and sold online through this platform.

6.3.3. Recommendations to the Department of Geography and Environmental Studies, University of Zululand

People must have livelihoods that are capable of withstanding any form of shock as this would ensure that they have means of survival even during the greatest forms of disasters such as the Covid-19 pandemic. It is therefore recommended that;

- a) More studies are to be done by students in this department that look into the diversification of livelihoods in communities and the establishment of sustainable livelihoods in vulnerable communities.

6.4. Suggestions for further research

- a) This study revealed that the park provides employment opportunities for local communities, however, there are community members from Machibini who stated that they didn't receive information about the availability of vacancies in the park. Further studies can be conducted on the various communication strategies between park officials, traditional authorities and local communities that can be adopted by the three parties for the proper dissemination of vital information to all local community members.
- b) This study found that HIP assists the Machibini community in various ways such as through the provision of a water tank that stores pumped water from the park. Further studies can be conducted that look into how equal access to such

resources is ensured and the possible challenges local communities may face with accessing assistance provided by PAs.

- c) This study looked at how the pandemic affected the livelihoods of the Machibini community; however, it emerged that this community was in the middle of a drought. Further studies can investigate how droughts affect the livelihoods of rural communities.

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APPENDIX A- QUESTIONNAIRE (ENGLISH)



THE UNIVERSITY OF ZULULAND

FACULTY OF SCIENCE AND AGRICULTURE

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

QUESTIONNAIRE FOR COMMUNITY MEMBERS

Research question: How has Covid-19 affected the livelihoods of the Machibini community?

Researcher: Mawande Mkhize

I am a student at the University of Zululand, in the department of Geography and Environmental Studies. I am conducting research which aims at analysing the impact of Covid-19 on the livelihood activities of the Machibini community. I would appreciate it if you would be part of this study by answering the following questions. The information you will provide will remain strictly confidential and will be used for academic purposes only.

Consent form for participation

I, the respondent voluntarily agree to take part in this study. I am well aware of the aim of this study and give my consent to participate in it. I also understand that my participation is voluntary and that I can withdraw whenever I feel the need to do so. I have also been made well aware that the information I give will remain strictly confidential and that it will be utilised for academic purposes only.

Participant's Signature:

Date:

SECTION A:

DEMOGRAPHIC CHARACTERISTICS

Please provide the most accurate answer by putting a cross [X] next to your response.

You may only mark one box.

1. Age:

Age in years	
18 and Below	
18 – 30 years	
31 – 40 years	
41 – 50 years	
51 and above	

2. Marital status:

Single	
Married	
Divorced	
Separated	
Other	

3. Educational level: Please indicate with an [X]

Education level	
Grade 1-3	
Grade 4-7	
Grade 8-12	
Tertiary	

4. Employment Status:

Employed	
Self - employed	
Retired	
Unemployed	

5. If you are unemployed, is there any social grant you are getting?

Yes	
No	

6. What is your household size?

7. How many people in your household are employed?

8. Please indicate the approximate combined income for your household:

Less than R5 000	
------------------	--

Between R5 000 – R10 000	
Between R15 000 – R20 000	
Between R 20 000 – R 30 000	
More than R30 000	

9. Do you have tap water at home? If not, please explain where you get water from.

10. Do you have electricity at home?

SECTION B:

WHAT WERE THE LIVELIHOOD ACTIVITIES OF THE MACHIBINI COMMUNITY BEFORE THE COVID-19 PANDEMIC?

1) Is there any activity that you engage in so that you can support yourself and your family?

Yes	
No	

2) If you answered yes to the above question, please give a brief explanation of the nature of that activity.

3) For how long have you been involved in this activity?

4) Does your livelihood activity require resources from Hluhluwe Imfolozi Park?

Yes	
No	

5) If you answered yes to the above question, please list those resources.

6) Do you need a permit to access those resources?

Yes	
No	

7) Can you easily access these resources?

Yes	
No	

8) If not, please explain the challenges you face with accessing the resources.

9) Are you the only person in your household who engages in livelihood activities that are important for sustaining your family?

Yes	
No	

10) Are there any programmes that Hluhluwe Imfolozi Park had implemented in this community to assist with employment before the outbreak of the pandemic?

Yes	
No	

11) If you answered yes to the above question, please give a brief explanation of those programmes or initiatives.

12) Do you have a vegetable garden at home?

13) Do you sell any products from your garden?

14) Do you have livestock?

15) Do you sell any of your livestock?

SECTION C:

WHAT IS THE IMPACT OF COVID-19 ON THE LIVELIHOOD ACTIVITIES OF THE MACHIBINI COMMUNITY?

1) Have you ever been infected with Covid-19?

Yes	
No	

2) If you answered yes to the above question, did this hinder you from engaging in your livelihood activities?

Yes	
No	

3) If your answer to the previous answer is yes, please provide a brief explanation of how the pandemic hindered you from engaging in your livelihood activities.

4) Has the pandemic affected your livelihood activities in any way?

Yes	
No	

5) If you answered yes to the above question, please give a brief explanation of how it has affected you.

6) Were you able to overcome these challenges?

Yes	
No	

7) If you answered yes to the above question, how have you been able to overcome these challenges?

SECTION D:

DID THE LOCAL COMMUNITY HAVE ACCESS TO RESOURCES FOUND WITHIN HLUHLUWE IMFOLOZI PARK DURING THE PANDEMIC?

1) Do you have any knowledge about Hluhluwe Imfolozi Park?

Yes	
No	

2) If you answered yes to the above question, please provide a brief explanation of what HIP means to you and why it is important.

3) Have you ever been inside the HIP?

Yes	
No	

4) Do you have livelihood activities that require resources from the park?

Yes	
No	

5) If you answered yes to the above question, please state what those resources are.

6) Was it easy for you to access the resources before the pandemic?

Yes	
No	

7) If you answered no to the above question, please give a brief explanation of the challenges you faced with trying to get access to resources.

8) How often do you enter the park to gather resources?

9) During the pandemic were you able to access resources found within the park?

Yes	
No	

10) If you answered no to the above question, please give a reason for your answer.

11) Is there an alternative livelihood activity that you engaged in during the pandemic?

Yes	
No	

12) If you answered yes to the above question, please give a brief explanation of that activity.

SECTION E:

WHAT ARE THE COPING STRATEGIES UTILISED BY THE COMMUNITY TO DEAL WITH THE IMPACTS OF COVID-19?

1) Please rate the impact that the pandemic has had on your livelihoods

Minimal	
Moderate	
Extreme	

2) Please give a brief explanation of how the pandemic affected you.

3) Have you been able to cope with these challenges?

Yes	
No	

4) How have you been able to deal with the challenges you have faced caused by the pandemic?

5) Is there any assistance you have received during the time of the pandemic? (From the municipality or Hluhluwe Imfolozi Park)

Yes	
No	

6) If you answered yes to the above question, please explain how you have been assisted.

7) What assistance would you say you needed during these trying times?

8) Is there anything positive you would say you gained as a result of the pandemic?

Yes	
No	

9) If you answered yes to the above question, please provide a brief explanation for your answer.

10) Is there anything else you would like to add regarding my research?

APPENDIX B- QUESTIONNAIRE (ISIZULU)



INYUVESI YASEZULULAND

IFACULTY YE SCIENCE NE AGRICULTURE

UMNYANGO WEGEOGRAPHY NE ENVIRONMENTAL STUDIES

IMIBUZO YOMPHAKATHI WAMACHIBINI

Umbuzo wocwaningo: I Covid-19 ithinte kanjani indlela izakhamuzi zaseMachibini eziyphilisa ngayo?

Umcwaningi: Mawande Mkhize

Ngiwumfundi wase Nyuvesi yase Zululand, kwi-department ye Geography ne Environmental Studies. Ngenza ucwaningo oluhlaziya ukuthi i-Covid-19 ithinte kanjani indlela izakhamuzi zaseMachibini eziyphilisa ngayo. Begingakuthokozela ukuthi ube yingxenye yalolucwaningo engilwenzayo ngokuphendula lemibuzo elandelayo. Izimpendulo onginikeza zona zizohlala phakathi kwami nawe futhi lolulwazi oluphumayo luzosetshenziselwa umsebenzi weskole hhayi okunye.

Ifomu lemvumo yokubamba iqhaza

Mina, mhlanganyeli ngiyavuma ukuba yingxenye yalolucwaningo ngokuphendula lembuzo. Ngiyayazi inhloso yokwenziwa kwalolucwaningo. Ngiyaqonda ukuthi angiphoqiwe ukuba yingxenye yalolucwaningo, futhi ngiyazi ukuthi ngingahoxa noma ingasipha isikhathi uma ngizwa isidingo sokuthi ngenze njalo. Ngazisiwe futhi ukuthi izimpendulo zami zizohlala phakathi kwami nowenza lolucwaningo nokuthi umsebenzi weskole lona.

Isignesha yomhlanganyeli:

Usuku:

INGXENYE A:

IZICI ZOKUBALWA KWABANTU

Ngicela unginikeza impendulo enembayo ngokubeka u[X] kuyo. Uvumeleke ukukhetha ibhokisi elilodwa.

11. Ubulili

Owesilisa	
Owesifazane	

12. Ubudhala:

Ubudhala ngeminyaka	
18 nangezansi	
18 – 30 iminyaka	
31 – 40 iminyaka	
41 – 50 iminyaka	
51 nangenhla	

13. Isimo somshadho:

Awushadhile	
Ushadhile	
Uhlukanisile	
Okunye	

14. Isimo somsebenzi:

Uqashiwe	
Uyazisebenza	
Uthathe umhlalaphansi	
Awusebenzi	

Umbuzo wezemfundo

15. Ngicela ungikhombhise ngokumaka uX lapha ogcine khona kwezemfundo

<u>Ibanga 1-3</u>	
<u>Ibanga 4-7</u>	
<u>Ibanga 8-12</u>	
<u>enyuvesi</u>	

16. Usuhlale iminyaka emingaki kulendawo?

17. Nibangaki ekhaya?

18. Bangaki abasebenzayo ekhaya?

19. Ngicela ukhombise okucise kube yisamba somholo wabantu abasebenzayo ekhaya uma usuhlanganisiwe.

Ngaphansi kuka R5 000	
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Phakathi kuka R5 000 – R10 000	
Phakathi kuka R15 000 – R20 000	
Phakathi Kuka R20 000 – R 30 000	
Ngaphezu kuka R30 000	

20. Ninawo ughesi ekhaya?

Yebo	
Chabo	

21. Ninawo amanzi aphuma empompini ekhaya?

Yebo	
Chabo	

22. Uma impendulo kuwuChabo, ngicela ukwazi ukuthi niwatholaphi

INGENYE B:

UMPHAKATHI WASEMACHIBINI UBZIPHILISA KANJANI NGAPHAMBI KOKUBA KUBE NOBHUBHANE?

1. Ukhona umsebenzi othile owenzayo ukuze ukwazi ukunakekela wena nomndeni wakho?

Yebo	
Chabo	

16)Uma impendulo yangaphezulu kuwuyebo, ngicela ungichazela kafushane ngendlela yakho yokuziphilisa.

17)Sekube isikhathi esingakani uzibandakanya nalendlela yokuziphilisa?

18)Indela yakho yokuziphilisa iyazidinga izinsiza ezitholakala ngaphakathi kwesiqiwi?

Yebo	
Chabo	

19)Uma impendulo yangaphezulu kuwuyebo, ngicela ungibhalela zona lezo zinsiza.

20)Uyakwazi ukufinyelela kalula kwizinsiza?

Yebo	
Chabo	

21)Uma impendulo yangaphezulu kuwuchabo, ngicela ungichazela izinkinga obhekana nazo ngokufinyelela kulezizinsiza.

22)Niyatshala ekhaya?

Yebo	
Chabo	

23)Ninayo imfuyo?

Yebo	
Chabo	

24)Niyakudhayisa enikutshalile noma enikufuyile?

Yebo	
Chabo	

25)Izilwane zase sqiwini akwenzeki zeqe zidle okutshalile noma imfuyo yakho?

INGXENYE C:

UBHUBHANE LUBE NAMTHELELA MUNI KWINDLELA ENIZIPHILISA NGAYO KULOMPHAKATHI?

1. Uke waba neCovid?

Yebo	
Chabo	

2. Uma impendulo yangaphezulu kuwuyebo, ngicela ungichazela ukuthi iku(affecte) kanjani?

3. Iuyithintile imisibenzi eniziphilisa ngayo?

Yebo	
Chabo	

4. Uma impendulo yangaphezulu kuwuyebo, ukwaze kanjani ukukunqoba lokhu? (beniziphilisa kanjani ngesikhathi sobhubhane).

INGXENYE D:

UMPHAKTHI UBUKWAZI UKUFINYELELA KWIZINSIZA EZITHOLAKALA NGAPHAKATHI KWEHLUHLUWE IMFOLOZI PARK KULESISIKHATHI SOBHUBHANE?

13) Unalo ulwazi ngokuthi siyins isiqiwi (Hluhluwe Imfolozi Park)

Yes	
No	

14) Uma impendulo lakho kuwuyebo ngicela ungichazela kabanzi.

15) Useke wangena esiqiwini?

Yes	
No	

16) Indlela yakho yokuziphilisa iyadHINGA izinsiza zasesiqiwini?

Yes	
No	

17) Ungena kangaki esiqiwini ukuyothola lezinsiza?

Bekulula yini ukuthi ufinyelele kuzo izinsika ngaphambi kokuthi kuqale ubhubhane?

Yebo	
Chabo	

1) Uma impendulo yangaphezulu kuwuchabo, ngicela ungichazela kafushane ngezinkinga enibhekena nazo ngokuzama ukufinyelela kwizinsiza.

2) Niyakhona ukufinyelela kwizinsiza ezitholakala epaki ngesikhathi sobhubhane?

Yebo	
Chabo	

3) Uma impendulo yangaphezulu kuwuchabo, ngicela unginikeza isizathu sempendulo yakho.

4) Ikhona enye indlela yokuziphilisa ozibandakanye nayo ngesikhathi sobhubhane, ngphandle kwalena ubuyijwayele?

Yebo	
Chabo	

5) Uma impendulo yangaphezulu kuwuyebo, ngicela ungichazela Kafushane ngalowo msebenzi.

INGXENYE E:

IMAPHI AMASU ASETSHENZISWE UMPHAKATHI UKUZE UKWAZI UKUMELANA NOMTHELELA WECOVID-19?

11) Ngicela ukalekise ukuthi icovid ibe nomthelela omungakanani, Khombisa ngo X

Ube muncane	
Ube phakathi nendawo	
Ube mkhulu	

12) Ngicela unginikeza isizathu sempendulo yakho.

13) Lukhona usizo enilutholile njengoba kuyisikhathi sobhubhane obeluvela kumasipala noma eHluhluwe Imfolozi Park?

Yebo	
Chabo	

14) Uma impendulo yangaphezulu kuwuyebo, ngicela ungichazele kabanzi ukuthi nisizakale kanjani.

15) Iluphi usizo eningathi niyaludhinga kulesikhathi esinzima kangaka?

16) Kukhona okunye ofisa ukungazisa ngakho mayelana nocwaningo lwami?

APPENDIX C- INTERVIEW GUIDE FOR TRADITIONAL AUTHORITY



THE UNIVERSITY OF ZULULAND

FACULTY OF SCIENCE AND AGRICULTURE

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

QUESTIONNAIRE FOR TRADITIONAL LEADER

Research question: How has the Covid-19 pandemic affected the livelihoods of the Machibini community?

Researcher: Mawande Mkhize

I am a student at the University of Zululand, in the department of Geography and Environmental Studies. I am conducting research which aims at analysing the impact of Covid-19 on the livelihood activities of the Machibini community. I would appreciate it if you would be part of this study by answering the following questions. The information you will provide will remain strictly confidential and will be used for academic purposes only.

Consent form for participation

I, the respondent voluntarily agree to take part in this study. I am well aware of the aim of this study and give my consent to participate in it. I also understand that I am not obliged to participate and that I can withdraw whenever I feel the need to do so. I have also been made well aware that the information I give will remain strictly confidential and that it will be utilised for academic purposes only.

Participant's Signature:

Date:

TRADITIONAL LEADER

1. Is the presence of the park beneficial for the community? Please give a reason for your answer.

2. What is the nature of the relationship between Hluhluwe Imfolozi Park and the Machibini community?

3. Were there any programmes implemented by the park for this particular community to help people with their livelihoods? How have they been helpful?

4. What measures are there to ensure that the benefits of the park are equally distributed to the community?

5. How have the operation of these programmes been affected by the pandemic? Please explain.

6. What has been done to assist communities during the time of the pandemic?

7. Is there a body/ platform where the community members can voice out their opinions about the park?

8. Is there anything that you would like to share with me concerning this research project?

APPENDIX D- INTERVIEW GUIDE FOR THE PARK OFFICIAL



THE UNIVERSITY OF ZULULAND

FACULTY OF SCIENCE AND AGRICULTURE

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

INTERVIEW GUIDE FOR THE PARK OFFICIAL

Research question: How has Covid-19 affected the livelihoods of the Machibini community?

Researcher: Mawande Mkhize

I am a student at the University of Zululand, in the department of Geography and Environmental Studies. I am conducting research which aims at analysing the impact of Covid-19 on the livelihood activities of the Machibini community. I would appreciate it if you would be part of this study by answering the following questions. The information you will provide will remain strictly confidential and will only be utilised for academic purposes.

Consent form for participation

I, the respondent voluntarily agree to take part in this study. I am well aware of the aim of this study and give my consent to participate in it. I also understand that I am not obliged to participate and that I can withdraw whenever I feel the need to do so. I have also been made well aware that the information I give will remain strictly confidential and that it will be utilised for academic purposes only.

Participant's Signature:

Date:

PARK OFFICIAL

1) Please explain the nature of the relationship between the park and the local communities.

2) Are local community members allowed to use resources found within the park for their livelihoods?

Yes	
No	

3) Has the pandemic affected any of your operations?

Yes	
No	

4) If the answer to the above question is yes, please briefly explain how it has affected your operations.

5) Were there any programmes for local communities to help diversify their livelihoods before the pandemic?

Yes	
No	

6) If the answer to the above question is yes, please describe the programmes.

7) How has the pandemic affected the operation of your programmes?

8) What assistance has been provided by the park for the local community during the pandemic?

9) How have these programmes assisted the local community?

10) Is there anything that you would like to share with me concerning this research project?
