

# A Qualitative Study on Perceived Impacts of a Nature Reserve on Community Livelihoods

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**ABSTRACT:** Nestled in the heart of Nelson Mandela Bay Municipality lies a nature reserve that has been a source of livelihood for the local communities. This nature reserve is an ecological gem and a prominent contributor to sustainable development and community empowerment. This study focused on the perceived impacts of Swartkop Nature Reserve on community livelihoods in Motherwell, Gqeberha, Eastern Cape Province, South Africa. The qualitative research method was followed, and data were obtained from 32 participants residing adjacent to the nature reserve. The study's findings discovered several activities such as small-scale farming, harvesting of medicinal plants, recreational activities, recycling, and fishing as some of the sources of community livelihood. Based on the findings, valuable recommendations have been offered in the study to guide policymakers and governments.

**KEYWORDS:** Nature reserve, community livelihood, sustainable development, Nelson Mandela Bay Municipality, South Africa

## Introduction

Nature reserves are designated areas that are protected to preserve natural habitats and maintain biodiversity (Republic of South Africa Department of Forestry, Fisheries, and Environment 2003). These areas can significantly impact the surrounding communities, particularly those whose livelihoods depend on the environment (Wessels et al.2021).

Access management control is one of the critical aspects of reserve management, ensuring the safety of workers and visitors, the safety of assets, and preventing illegal activities such as poaching. Visagie and Saul (2014) assert that members of the public should be provided with sustainable and controlled access to all protected areas and these accesses should be managed by well-trained staff. The latter suggests that access control is key to managing the capacity of the nature reserve so that the number of people admitted at a given time does not exceed the capacity of the nature reserve to minimize the risk of environmental damage (Vujko et al.2017). The above discussion suggests that access management and control are important for the general upkeep of the nature reserve for sustainability and community development.

The reserve management plan forms the basis for establishing governance and management of a nature reserve (Republic of South Africa Department of Forestry, Fisheries, and Environment 2003). The establishment and capacitation of community forums for engagement is a prerequisite to ensure that local communities and stakeholders are involved in the governance and management of nature reserves (Spies, Long, Stine, et al. 2018). Transparent planning and development of effective policies in consultation with the community and stakeholders of the nature reserve are important not only for effective management but also for ensuring the sustainability of the nature reserve (Green 2019).

According to Fredeheim and Blanco (2017), co-management is a model to alleviate conservation conflicts in nature reserves and enhance good governance and management. Co-management is a partnership model seeking to strengthen relationships between a nature reserve and the community in co-management of the nature reserve (Republic of South Africa Department of Forestry, Fisheries, and Environment 2003).

The International Union for Conservation of Nature (IUCN 2015) points out that nature reserves contribute to human health and well-being through fresh air, clean water, and plants.

The World Health Organisation (WHO 2015) established that up to a quarter of all deaths could be avoided if there is improved management of environmental issues such as air pollution, water contamination, and dust from degraded drylands which are major contributing factors to deaths. Stolton and Dudley (2012) point out that the socioeconomic and cultural values of nature reserves were underestimated and unnoticed; however, due to pressures on nature reserves to create employment, transfer skills and contribute to the well-being of adjacent communities, socioeconomic and cultural values have been elevated.

### **Problem statement**

This study focused on the Swartkop nature reserve located in the township of Motherwell, Gqeberha (formerly known as Port Elizabeth), in the province of the Eastern Cape in the Republic of South Africa. The nature reserve is in Motherwell and bordered by communities zoned as municipal wards and Swartkop River. The river is an important feature and inseparable from the nature reserve. Prideaux and Cooper (2009) assert that rivers are a major tourism resource providing spectacular settings, conservation of the ecosystem, recreational opportunities, waterfront landscapes in many centres of tourism interest, a means of transport, and an essential source of water for human consumption.

Most communities in South Africa situated adjacent to nature reserves have protested over the past two decades about the effect of the nature reserves on their livelihoods and community development. For example, the community of Sicambeni in Port Saint Johns (Eastern Cape) took to the streets, claiming that Silaka Nature Reserve management, of which they are beneficiaries, is failing to recruit employees from their community (Dispatch Live 2017). The same grievance was a bone of contention, resulting in a weeklong protest and closure of Silaka Nature Reserve (Loewe 2013). The Nkambeni community protested, claiming that Kruger National Park (Mpumalanga Province) is not hiring people from the local community (Pijoos 2019). These protests led to the closure of Numbi Gate (one of the entry points to the park). The community of Matiyani (Limpopo Province) also took to the streets on a week-long protest barricading the Phalaborwa Gate of Kruger National Park (Ntlemo 2020) demanding that 70% of employment must come from their community.

These protests have put pressure on nature reserves and other protected areas in South Africa to create jobs for the local communities. According to the Eastern Cape Socio-Economic Consultative Council (ECSECC 2017), the unemployment rate in Nelson Mandela Bay is 28% and the national unemployment figure of 52% was reported in the year 2020 (The Republic of South Africa National Treasury 2020). These figures portray a country that is facing a crisis of unemployment. Although it appears that the immediate impact of focus from the protests was jobs, Jones et al. (2020) caution that jobs are not the only benefits of a nature reserve to communities as other social impacts could be accrued from a nature reserve. Some of the social impacts include access to natural resources such as firewood, and medicinal plants, and the performance of cultural activities.

Several nature reserves in the Eastern Cape Province, such as Dwesa and Cwebe, had a successful land claim settlement as early as 2001 under the land restitution programme (Ntshona et al. 2009). However, in 2003, the communities were neither benefiting nor participating in the affairs of their nature reserves. This prompted the Department of Environmental Affairs and Tourism (DEAT) to establish a People and Park Programme (PPP) after realizing that adjacent communities were not benefiting from the socio-economic opportunities created by these nature reserves. The PPP aims to ensure that communities adjacent to nature reserves participate in its affairs and facilitate and enhance community participation, particularly in nature reserves where land claims are prevalent (Coetzee and Nell 2019). Despite government interventions, several community nature reserves in South Africa remain underdeveloped, depriving communities of potential opportunities. The prevalence of protests is a testimony to this fact. Inequality, unemployment, and poverty are some of the

challenges facing communities located adjacent to the Swartkop Nature Reserve in Motherwell. Freedom House (2017), a non-profit organisation, established that the exposure and participation of young people in drugs, alcohol and violent crime is a major challenge in Motherwell. This has been linked to a lack of recreational activities in the area for the youth and socio-economic conditions such as high unemployment. This lack of recreational activities in the area for young people and socio-economic conditions such as high unemployment have been linked to this problem. Although the Swartkop Nature Reserve (SNR) cannot be the only solution for community livelihoods in Motherwell, it should be recognized as a critical natural resource located in an impoverished community that should contribute to the livelihoods and development of the community. This study aims to explore the perceived impacts of the Swartkop Nature Reserve on community livelihood and development. The question which arises is, "What are the perceived impacts of the nature reserve on community livelihoods?"

## Literature Review

This study is rooted in the National Development Plan (NDP) framework which is a blueprint embedded in the Constitution of South Africa (1996). The NDP aims to “eliminate unemployment and reduce inequality by 2030 (National Planning Commission 2012). The NDP gave rise to this study in the context of natural resources, specifically focusing on the Swartkop Nature Reserve. Nature reserves, hypothetically, as natural resources with abundant opportunities, should contribute to achieving the aim of the NDP.

According to Nelson Mandela Bay Municipality (NMBM 2012), approximately one-third of the natural resources are lost because of urban expansion, cultivation, overgrazing, mining, and alien plant infestation (NMBM 2012). The preservation of nature reserves and alternative protected areas is primary to understanding environmental impacts that underpin other sorts of impacts like social, economic, and cultural (Manzini 2017). This means that if the nature reserves are not preserved sustainably, environmental impacts will not be realized. Protected areas play a crucial role in maintaining human and environmental well-being (IUCN WCPA 2015; MacKinnon et al., 2019). Socially, the impacts of a nature reserve embrace varied components that include mental and physical health (Jones et al. 2020), and access to natural resources (Rees et al. 2015). Nature reserves give opportunities for physical exercise and foster social connections for community cohesion and social well-being (IUCN WCPA 2015). The adjacent community of the Great Fish Nature Reserve have the benefit of discounted games emanating from the culling of animals as a way of managing carrying capacity (Tozer et al. 2020). The adjacent community of Dwesa Nature Reserve has loose and unlimited access to beaches and recreational activities (Mbashe Local Municipality 2022). Access to an exceeding nature reserve to reap medicinal plants (IUCN WCPA 2015) remains a primary interest for many communities. However, within the same vicinity, IUCN WCPA (2015) advises that nature reserve management needs to enter into agreements with local communities to collect medicinal plants in a sustainable way to provide essential social, cultural, and livelihood advantages. Franks, Booker, and Roe (2018) imply that the social impacts of nature reserves on the African Continent can comprehend the benefits of environmental services.

However, other studies highlight that the creation of a nature reserve can also result in restrictions on traditional land use practices such as grazing, hunting, or gathering by local communities (Hoffman 2021). This situation may limit their access to natural resources, thereby negatively impacting their livelihoods. In addition to these economic considerations, social factors such as changes to cultural traditions and identity may also arise due to the introduction of new conservation policies. The literature review identifies these various viewpoints and aims to provide context for understanding how they may play out in the specific case study under discussion. By drawing upon previous research findings and insights from experts in this field including ecologists, anthropologists, and economists this study can provide valuable

knowledge about potential benefits or challenges associated with establishing protected areas like nature reserves.

## Methods

To conduct a qualitative study on the perceived impacts of a nature reserve on community livelihoods in Nelson Mandela Bay Municipality, South Africa, the researchers employed various methods. Firstly, the research team conducted interviews with key stakeholders such as residents, government officials, and conservationists to gather their opinions and experiences regarding the nature reserve's impact on community livelihoods. Additionally, focus group discussions were held with members of different communities to gain insights into how they perceive the effects of the nature reserve on their lives. To further supplement these findings, an extensive literature review was carried out to analyze previous studies done in this field. Furthermore, observations were made within the nature reserve itself to assess its ecological status and management practices that could have an impact on nearby communities' economic activities. All collected data were analyzed qualitatively using content analysis methods. The use of multiple methods in this study allowed for comprehensive data collection from diverse perspectives while also ensuring that no single method dominated or skewed results.

## Results

The qualitative study conducted on the perceived impacts of a nature reserve on community livelihoods in Nelson Mandela Bay Municipality, South Africa revealed interesting results. For example, one of the objectives which is to better understand the causes of the nature reserve's neglect, gave way to an overwhelming 27 participants, accounting for an aggregate proportion of 84.4%, who said that Swartkop Nature Reserve is significant for a variety of reasons. Participants judged importance based on the benefits they derive from the nature reserve.

The first comment comes from a tour guide aged 20-30 years. "We started a tour guide business where we take hikers and cyclists to the nature reserve. They appreciate the experience of the nature reserve, and the demand is growing. We want to grow our business and ensure that Swartkop is a popular adventure destination."

The second response came from a mother of five children. "The medication we collect here is quite beneficial; we go a long period without contacting doctors or visiting clinics. We get herbs to cure several illnesses, including high blood pressure, stomach aches, flu, pains, swelling, and other ailments."

Another participant who was a farmer (crop producer) said... "The cabbages, tomatoes, onions, and spinach produced in this small garden supply small informal markets at a low cost. This product saves residents as they don't have to travel far. This is the only piece of land which is part of Swartkop Nature Reserve. If the municipality evicts me, I have no alternative land to continue with this garden. I am not going to only suffer, but my customers too will suffer."

From the focus group interview, several participants also felt that "the preservation and conservation efforts within the nature reserve contributed to increased biodiversity and improved soil quality." These factors were critical for ensuring long-term sustainability within their communities.

Another notable result was related to tourism. Participants saw an increase in tourist activity since the creation of the nature reserve which has led to both economic benefits and social interaction between tourists and locals. These results highlight how conservation efforts can have positive effects not only on environmental factors but also on socio-economic aspects such as job creation, increased biodiversity, improved soil quality, and tourism development.

On the contrary, five (15.6%) individuals voiced negative views of the nature reserve, citing different reasons. Two of these participants stated the following on their perception of the nature reserve as unimportant:

The first response came from a mother of three children. “The rubble and litter that are disposed of on the nature reserve attract criminal activities. People hide from the rubble to check if a house is occupied or not. If not, that house will be a victim of housebreaking. I experienced housebreaking and theft more than three times. My neighbors were also victims of housebreaking and theft. Some young boys spend every afternoon in the dumpsite smoking dagga. They make the place unsafe.”

A second response is from a participant who is unemployed and aged 24 years... “I cannot say the nature reserve is important because I am not working. I passed matric a few years ago and my parents could not afford university. If the reserve is important, it must provide jobs for the youth.”

## **Discussion**

The study presents a range of insights gathered from the participants' perspectives on the perceived impacts of the nature reserve on community livelihoods in Nelson Mandela Bay Municipality, South Africa. One key finding is that the nature reserve has positively impacted community livelihoods by providing employment opportunities, particularly for women and youth. Participants noted that jobs within the reserve were desirable due to their stability and natural setting. This is particularly important given the high levels of unemployment in South Africa. The findings align with the National Development Plan (2012) which aims to mitigate unemployment and inequality by 2030. It also came to light that nature reserve serves as a haven for medicinal plants that communities rely on to treat ailments that do not require visiting a medical doctor. Access to these indigenous plants opens an opportunity for individuals and families to save on hospital costs. The findings support previous findings by IUCN (2015) which noted that nature reserves provide access for communities to acquire medicinal plants.

Besides the positive impacts, there were also concerns expressed about potential negative impacts such as displacement from ancestral land or exclusionary practices towards traditional resource users and uncontrolled disposal of waste materials, these findings highlight some important considerations for sustainable development in conservation areas where local communities are involved.

## **Conclusion**

As stated earlier, this study aimed to explore the perceived impacts of a nature reserve on community livelihoods in Nelson Mandela Bay Municipality, South Africa. The findings showed that there are both positive and negative effects. The literature review highlighted how nature reserves can contribute to sustainable development by providing economic benefits through ecotourism and promoting environmental conservation. From the interviews, we found that the nature reserve contributes to job creation. Tour guards benefit substantially from the tourists who visit the area. The nature reserve also provides access to medicinal plants which the community can use to cure certain diseases. Some residents, however, felt that the nature reserve is used as a dumping site and many criminal activities take place from the nature reserve. These results suggest that while nature reserves can provide tangible benefits to nearby communities, careful management is needed to mitigate potential negative effects and ensure inclusive participation in decision-making processes. Therefore, policymakers need to consider these different experiences while planning and managing nature reserves. By addressing issues and promoting sustainable development practices, we can ensure that everyone in the community benefits from having a nearby natural area like a nature reserve.

## **Recommendations**

Based on the findings of this study, it is evident that nature reserves have a significant impact on community livelihoods. It is therefore recommended that the Nelson Mandela Bay Municipality

prioritise sustainable development in these natural areas to enhance their benefits to local communities.

Firstly, there should be increased efforts towards environmental education and awareness campaigns for residents living near nature reserves. This will help them understand the importance of conservation and how they can benefit from preserving these resources.

Secondly, there should be more collaboration between relevant stakeholders such as government agencies, NGOs, and local communities in managing these areas. This would ensure inclusive decision-making processes which consider both ecological and social needs.

Thirdly, there should be continuous research on the impacts of nature reserves on community livelihoods to identify any gaps or challenges faced by locals. This can pave the way for targeted interventions aimed at improving sustainability within these ecosystems.

Authorities must increase investment in infrastructure, such as access to roads and tourism facilities like lodges and campsites, to improve accessibility while also creating job opportunities for locals.

By prioritizing sustainable development practices around nature reserves, a harmonious relationship between humans and nature can be created while still reaping economic rewards through eco-tourism initiatives.

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