DYNAMICS OF NAMIBIAN DEFENCE FORCE INTERVENTION IN ANTI-POACHING OPERATIONS OF ETOSHA NATIONAL PARK (2016 -2022)

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN SECURITY AND STRATEGIC STUDIES AT THE UNIVERSITY OF NAMIBIA

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ABSTRACT

The study sought to re-count the dynamics of the Namibian Defence Force's (NDF) intervention in anti-poaching operations in Etosha National Park. Specifically, the study describes the notion of anti-poaching, and strategies that can be adopted to prevent poaching in Etosha. To determine whether the NDF's participation in anti-poaching operations has the potential to combat poaching in Etosha, a sample of 20 members of the NDF, Namibian Police Force (NAMPOL), and the Ministry of Environment, Forestry and Tourism (METF) Anti-Poaching Unit who served in anti-poaching operations was selected. The study involves three interview sessions with 20 participants, comprises 5 females and 15 males. The gender dynamics revealed that there is a higher level of male participation in anti-poaching operations compared to female participation due to the nature of operations. A non-probability purposive sampling technique was employed to select participants for the study. The main research instrument for this study was an interview guide, with a semi-structured interview schedule comprised of open-ended questions. The researcher also utilised official records and statistics for additional information and support. The study established that the Namibian Defence Force's intervention in Etosha National Park led to a decrease in rhino poaching. Before the NDF intervention, 82 rhinos were poached in 2015. However, by 2016, the number decreased to 58 rhinos, and further to 34 in 2017. Between 2019 and 2022, the number of poached rhinos fluctuated between 24 and 52. The study recommends that the Namibian government allocates resources towards establishing a fully-fledged Anti-Poaching Unit, address the park's vulnerabilities by repairing and electrifying fence perimeters. Creating permanent monitoring bases along the perimeter will also likely improve surveillance capabilities and allow for the timely detection of suspicious movements. It is essential to employ stringent access control measures and sniffing dogs to regulate entry into the park. Additionally, modern technologies, such as surveillance cameras and long-range drone cameras are essential for combating poaching. The NDF and NAMPOL should extend their operations and increase personnel deployment. By adopting these comprehensive recommendations, Etosha National Park can potentially strengthen its defence against poaching and safeguard its wildlife for future generations.

Key words: Intervention; Poaching; Anti-Poaching

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LIST OF ACRONYMS AND ABBREVIATIONS

AK-47	Automatic Kalashnikov 1947 *Avtomat Kalashnikova 1947*
BDF	Botswana Defence Force
CITES	Convention on International Trade in Endangered Species
COVID-19	Coronavirus Disease of 2019
ENP	Etosha National Park
IUCN	International Union for the Conservation of Nature
MEFT	Ministry of Environment, Forestry and Tourism
NAMPOL	Namibia Police Force
NCAA	Namibia Civil Aviation Authority
NDF	Namibian Defence Force
NEMBA	National Environmental Management Biodiversity Act
NGOs	Non-Governmental Organisations
POCA	Prevention of Organised Crime Act
SADC	Southern African Development Community
SANDF	South Africa National Defence Force
UNDP	United Nations Development Programme
USA	United States of America

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This Project is dedicated to the following people:

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DECLARATIONS

I, Petrus George Kornelius, hereby declare that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution. No part of this thesis/dissertation may be reproduced, stored in any retrieval system, or transmitted in any form, or by means (e.g. electronic, mechanical, photocopying, recording or otherwise) without the prior permission of the author, or The University of Namibia in that behalf.

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Signature: _____ Date: April 2024

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

The purpose of this study was to outline the dynamics that the participation of the Namibian Defence Force (NDF) has had, in combating rhino poaching in the Etosha National Park (ENP), Namibia. The increase in poaching country-wide has been alarming, specifically, in the ENP. According to the United Nations Development Programme (UNDP) (2015), poaching is a complex global concern that erodes biodiversity and ecosystems and produces insecurity that drives war and corruption. Therefore, the UNDP continues to promote an integrated strategy for combating the illegal hunting and trade of animal products and their derivatives. These circumstances imply that individuals, private companies, public institutions, regional, continental and international organisations are concerned about poaching. Poaching typically refers to the illegal hunting of wildlife or the removal of wild animals from their habitats without the relevant authority's consent (Random House, 2002). Poaching has been defined differently from several schools of philosophy. However, all descriptions describe it as the illegal hunting of wildlife.

Caluza (2020, p. 11) defines poaching as the “unlawful trapping, shooting, or taking of wild animals, fish, or plants from private property or a place where such actions are reserved or prohibited”. On the other hand, the meaning of "anti-poaching" refers to the avoidance of the killing of wild animals and their removal from their natural habitats. Therefore, it is related to wildlife conservation and environmental preservation. The poaching of wild species has been identified as one of the leading

causes of biodiversity loss on a world scale; hence anti-poaching efforts aid in maintaining environmental equilibrium.

Despite extensive efforts by various stakeholders to prevent poaching worldwide, wildlife crime is on the rise, and the alarming reduction of wild animal populations is evidence of this (World Wildlife Funds, 2020). As observed by the Legal Assistance Centre (2017), it was noted that the poaching phenomenon was driven by the enormous demand for wild animal goods on the Asian black market, where such things are highly prized and utilised for status and medicine. Wildlife conservation is a global problem. Wildlife protection treaties and conventions, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora, have been adopted at an international level. According to Forbar (2019), the Convention on International Trade in Endangered Species of Wild Fauna and Flora is a worldwide agreement regulating the international trade of wildlife and wildlife products. In 1975, the Convention entered into force to ensure that international trade did not endanger the existence of wild flora and animals.

In addition, the African Convention on the Conservation of Nature and Natural Resources of 1968 was approved and enacted on 11 July 2003 at the continental level to protect Africa's environment. Individual nations have also formed regulations, established many organisations, and implemented tactics to ensure the survival of their animal populations. The engagement of the NDF in anti-poaching operations is one of Namibia's most recent government policies for preventing poaching and countering wildlife crime. However, the deployment of NDF in anti-poaching operations prompted questions of whether such a government effort is helpful in arresting the situation. This section provides the study's introduction on the dynamics of the NDF

intervention in the anti-poaching operations. The following section discusses the study's background.

1.2 Background of the study

Diverse entities on the international stage are gravely concerned with the survival of animals. It is generally known that illegal hunting (poaching) has drastically decreased the populations of several animal species. The Global Living Planet Index reveals a 68 per cent average decline in mammal, bird, amphibian, reptile, and fish populations between 1970 and 2016 (World Wildlife Funds, 2020). Illegal hunting has been cited as a factor leading to animal population reduction. According to *The Namibian* newspaper (2017, p. 15), "poaching deprives communities of their natural capital and cultural legacy and hampers sustainable economic growth and poverty alleviation." Currently, this situation is worsening in Namibia. In Africa, populations of big animals such as rhinoceroses and elephants witnessed drastic declines throughout the 1970s and 1980s owing to poaching. The populations of wild mammals in Namibia were not an exception to this catastrophe.

Despite these decreases, Namibia has witnessed a remarkable resurgence in the population size of all big animals, notably rhinoceroses and elephants, during the past 25 years. This recovery was made possible by the innovative and remarkable efforts of the Namibian government. The establishment of communal conservancies is one of the frequent initiatives utilised by Namibia. In communal conservancies, the authorities empower communities residing in such regions to manage the natural resources at their disposal through communal conservancies that have been formed (World Wildlife Fund, 2021). According to the Revised National Strategy on Wildlife Protection and Law Enforcement (2020, p. 12), about 43 per cent of Namibia's land area is managed for conservation. This area includes national parks and reserves,

communal and commercial conservation areas, community forests, and private nature reserves (The Republic of Namibia, 2020).

Moreover, the state is responsible for the conservation of wildlife in Namibia. Between 2012 and 2016, poachers used new manoeuvres and techniques of operation, increasing poaching in national parks. As poachers began massacring wild species, conditions in the national parks deteriorated. Consequently, gunfights between game wardens and poachers are a daily occurrence in national parks. Poaching has caused a continuous decline in the populations of wild animals, including elephants, rhinoceroses, lions, and zebras. Poaching has become a problem in Namibia and is a huge threat to the national natural heritage, and harms the ecosystem. The Legal Assistance Centre's records reveal that between 2014 and 2017, 241 rhinoceroses and 245 elephants were killed by poachers (Legal Assistance Centre, 2017). As the situation in the national parks and conservation areas continued to deteriorate, the Ministry of Environment, Forestry, and Tourism (MEFT) could no longer address the crisis alone.

By 2016, the government of Namibia implemented a strategy to increase wildlife protection. The adopted strategy led to the intervention of the NDF or military intervention in wildlife protection throughout the Republic (The Republic of Namibia, 2020). Military intervention, as defined by the Dictionary of Military and Associated Terms (2005), is "the deliberate act of a nation or group of states to bring its military forces into the course of an existing issue". In this research, the introduction of the NDF into anti-poaching operations to suppress poaching and dissuade other criminal activities that may endanger the existence of animals or lead to environmental instability is viewed as military intervention. During the early years of NDF involvement in anti-poaching, there were some exchanges of fire between NDF

personnel and poachers. A member of the Namibian Defence Force was shot and killed by poachers in Bwabwata National Park in 2019.

In 2019, the NDF helicopter was fired upon by poachers in Etosha National Park. Generally speaking, shooting bullets at military people and equipment equates to rebellion or a declaration of war against the state, which might compromise national security. Since 2016, the NDF has conducted aerial and ground patrols in protected zones to detect suspicious activity. Moreover, the NDF has established satellite bases to intercept poachers. The NDF has been aiding with the following: monitoring the footsteps of suspected poachers, pursuing suspected poachers in dense woods, and interacting with populations around national parks, conservancy areas, and protected areas to gather information on wildlife crime. In addition, they have been supporting the Namibian Police Force in effecting arrests. The NDF's intervention strategy was not straightforward since military personnel are not trained for wildlife conservation but rather for combat. Consequently, it is of the utmost importance to evaluate if the NDF intervention strategy has contributed to eliminating poaching as part of the government objectives and agenda. This study intends to outline the dynamics of NDF intervention in anti-poaching operations in ENP from 2016 to 2022.

1.3 Statement of Problem

According to Bwisa (2018), a researcher employs a statement of the problem to shape the problem addressed by an investigation. A research problem is a knowledge gap that necessitates further research. Article 95 (l) of Namibia's Constitution mandates the "maintenance of ecosystems, essential ecological processes, and biological diversity of Namibia and consumption of living natural resources on a sustainable basis for the current and prospective benefit of all Namibians" (The Republic of Namibia, 1990, p. 41). Despite the establishment of wildlife protection agencies in Namibia, an

upsurge in wildlife crimes has been documented. The growth of poaching and illicit possession of animal products has threatened the protection of wildlife in the country. Accordingly, the poaching of big animals has been on the increase. The populations of large animals such as rhinoceroses and elephants have declined drastically. Poachers' behaviour against wildlife became uncontrollable after they began decimating all kinds of animals. Local population members in the vicinity of national parks, communal and private conservation areas, and other protected places joined poaching syndicates (Fynn & Kolawole , 2020). The same author goes on to state that some have acquired a propensity to harbour poachers supplying them with food, transportation, shelter, and hiding places for poachers when law enforcement officers are pursuing them. This situation pushed the government to tighten its environmental protection policy. Namibia ultimately resorted to military intervention to halt the nationwide increase in poaching. The NDF intervention strategy is to end poaching, stop the illegal trade in wildlife goods, and prevent Namibia from becoming a haven for illegal wildlife products. Furthermore, since the NDF intervention commenced in 2016, to the knowledge of the current research, no research has been undertaken to determine whether this strategy has had an impact in combating poaching across the country. This research thus sought to examine and describe the dynamics of the NDF's participation in anti-poaching operations in ENP from 2016 to 2022.

1.4 Main Research Question

In this study the main question is: What are the dynamics of the NDF's intervention in anti-poaching operations within Etosha National Park?

A research question is a question that guides a researcher's investigation. Schekman (2019) states that a research question should be well-defined and narrowly targeted to direct the researcher to a logical conclusion. Furthermore, emphasis should be placed

on the importance of formulating a research question that succinctly captures an unresolved matter or dilemma, which the researcher aims to explore through literature analysis, experimental investigation, or theoretical examination (Schekman, 2019).

1.4.1 Specific Research Questions

In addition to the primary research question, this study also sought to respond to more specific research questions. In that regard, the study addresses the following three specific research questions:

1.4.1.1 What does the notion of anti-poaching entail?

1.4.1.2 What are the dynamics of the NDF intervention in Etosha?

1.4.1.3 What strategies can be employed to curb poaching in the Etosha?

According to Kowalczyk (2021), a specific research question is an answered inquiry into a particular topic. It is the first stage in conducting research. In other words, the research question is the first active step in a research project when a researcher gets a notion of what he wants to explore (Kowalczyk, 2021). Specific research questions assist the researcher in concentrating their study by guiding him through the research and writing processes.

1.5 Significance of the Study

Because it spells out the importance of a study, the significance of study is one of the most crucial portions of research (Cobar, 2017). The significance of the current research lies in the fact that it provides policymakers with tangible data on the poaching trajectory in Namibia. In particular, this study indicates the standing and well-being of Namibia's wildlife compared to the rest of the world. In addition, it is envisaged that the study will increase social awareness on the importance of wildlife in the ecosystem and allow the government to establish channels of communication

between the populations in the vicinity of protected areas and members of law enforcement agencies, thereby empowering individuals to protect the environment. The study also contributes to the body of knowledge in strategic management, especially as it relates to conservation. The findings of the study also possess the potential to aid educators, policymakers, military officers, and the MEFT staff in developing plans and policies.

1.6 Limitations of the Study

The limitations of a research, as explained by James and Murnan (2004), pertain to methodological aspects that influence the interpretation of the research findings, thereby constraining the ability to simplify the results. This research specifically focuses on assessing the dynamics of the NDF's intervention in combating poaching within the ENP. However, it is important to note that the study only considered ENP as significant and was confined to personnel actively involved in anti-poaching activities within the park during the specified timeframe.

One key factor that affects the study's outcomes is the rotation of NDF and NAMPOL members in Etosha on a six-month cycle. The exclusion of those members who were involved in similar operations in previous years from the research may have implications on the results. Additionally, the researcher encountered difficulties in adhering to the initial plan of having 25 participants, as some members were committed to field operations and unavailable for interviews. This reduction in the number of participants could directly influence the research outcome, as certain important perspectives might have been missed. Furthermore, the COVID-19 lockdown, with its attendant restrictions on movement an physical contact, implemented between 2021 and 2022, had an impact on the number of poaching incidents, as it restricted the movement of foreign nationals into Namibia, including

within ENP. The study established evidence of foreign nationals' involvement in poaching, and the altered movement patterns during the lockdown may have affected the research results. The researcher's personal financial constraints led to a shorter stay in Etosha, which presented a significant challenge to the study's collection of data. Another factor contributing to the study's limitations was the reluctance of some participants to disclose information.

1.7 Delimitations of the Study

According to De Vos, Strydom, Fouché, and Delport (2022), a study's delimitations outline the specific restrictions, limitations, and boundaries that guide the study's scope. The delimitations outline what will not be considered or included and define the parameters within which the study will be conducted. This study acknowledged and addressed its delimitations to ensure that they did not alter or affect the overall findings in an unreasonable manner. Due to Etosha National Park's significance in addressing the research question, the study acknowledged that its scope was delimited to that area. To mitigate the impact of delimiting the study to a specific time period, the researcher took into account personnel who were actively involved during that period and emphasised on the significance and relevance of the specific time period. The study also considered the potential impact of excluding participants from previous years and rotational cycles. Despite this difficulty, the researcher investigated the dynamics comprehensively, taking into account the potential impact of the rotational changes.

The study took into account the potential difficulty of participants' availability, recognising that the members' commitments in the field affected the sample size. Despite the small number of participants, the study collected and analysed data thoroughly, taking into account as many perspectives as possible. The study

acknowledged the effects of the COVID-19 restrictions on the movement of foreign nationals and the incidence of poaching. The study examined data within the context of the lockdown period, emphasising its potential implications on the results.

Due to financial constraints, the researcher was only able to stay in Etosha for a shorter duration than desired. The researcher took care to maximise this period, making the most of the available resources and time while still gathering valuable information. The study also acknowledged the reluctance of some participants to disclose information, and the researcher presented the findings based on the provided data while applying careful analysis to mitigate the impact of incomplete disclosure.

1.8 Definition of terms

1.8.1 Anti-Poaching: the organised effort to combat wildlife poaching. Anti-poaching is a broad term for a campaign against the illegal wildlife trade. These campaigns are usually run by national parks and private security groups on personal property (Fynn & Kolawole , 2020).

1.8.2 Biodiversity: the variety of biological forms found in a region. The natural world consists of various animals, plants, fungi, and even microbes such as bacteria. In ecosystems, these species and creatures work together to keep the balance and life going (Wahlin, Host, Runeson, & Wesslen, 2003).

1.8.3 Communal Conservancy: a community-based organisation with conditional rights to manage wildlife in a self-defined area. They are democratic, self-governing entities ruled by committees elected by their members (Community Conservation Namibia, 2021).

1.8.4 Conservation: it entails maintaining and safeguarding these resources to ensure that they endure for future generations. It involves preserving species variation, genetic

makeup, ecosystems, and environmental processes, including nutrient cycling (Community Conservation Namibia, 2021).

1.8.5 Ecosystem: a geographic area in which plants, animals, other species, weather, and topography interact to develop a variety of life. Ecosystems consist of biotic or living components and abiotic or non-living components (World Wildlife Funds, 2020).

1.8.6 Effect: a change brought about by action or occurrence; an event, situation, or state of affairs caused by a cause.

1.8.7 Impact: the significant influence anything, especially something unusual, has on someone or something (Belle & Cantarelli, 2017).

1.8.8 Intervention: actively becoming engaged in a challenging situation to improve or avoid its deterioration (Dictionary of Military and Associated Terms, 2005).

1.8.9 Poaching: the unauthorised trapping, shooting, or taking of wild animals or plants from an area where such actions are strictly prohibited. Poaching is a significant threat to the survival of many wild animals worldwide and contributes to the loss of biodiversity (Community Conservation Namibia, 2021).

1.8.10 Population: a group of people of the same species who live in the same area (De Vos, Strydom, Fouché & Delport, 2022).

1.8.11 Wildlife: Animals that have not been domesticated or tamed, including game and nongame animals, typically inhabiting in natural settings (Bhatia, 2020).

1.9 Organisation of the Study

This section briefly outlines the layout of each chapter. Chapter Two is the theoretical framework and literature review, in which the researcher specifies the theories adopted for the analysis and interpretation of data. It thus explains the major explications of the theories. Chapter Two further reviews literature on military interventions in anti-

poaching operations in Namibia, Botswana, and South Africa, focusing on the impact of military involvement on the trends in poaching, the contribution of military intervention to the survival of wildlife, and the social factors linked to military interventions in anti-poaching operations in Namibia, Botswana and South Africa. Chapter Three presents the study's methodology. In addition, the chapter addresses the research design and study population, the sampling technique, research instruments, data collection procedures, data analysis, and research ethics. Data presentation and analysis is made in the Chapter Four, and Chapter Five presents the conclusions, summary and recommendations of the study.

1.10 Summary

In summary, poaching contributes to the decline in the population size of wild animals globally. Namibia has institutions and policies in place supporting the protection of wildlife. Despite such institutions and policies being in place, poaching activities and the illegal possession of wild animal products are crimes that are still prevailing in the country. Namibia's government has opted for the NDF's intervention in anti-poaching operations in a bid to suppress poaching activities countrywide. It is in line with this observation that the current study's main objective is to examine and establish the impact of the NDF's intervention in combating poaching in the Etosha National Park.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

This chapter discusses the theoretical framework underpinning the study. The literature review within this chapter delves into various aspects that are critical to contextualising the current enquiry, including the concept of anti-poaching, the catalysts that led to military intervention in anti-poaching efforts, the transformative impact of anti-poaching operations, and the strategies considered for effectively addressing poaching in the context of Etosha National Park.

2.2 Theoretical framework

According to Gabriel (2008), a theoretical framework is a structure that holds or supports a study. The theoretical framework introduces and describes a theory that explains why the research problem under study exists. It is also a framework that helps explain the data collected in a systematic and grounded manner.

Since the objective of the military, as one of the elements of national power, is to defend and protect the national interests in both domestic and international arenas, the fundamental concern of the current study can best be understood through the explications of the 'Civil-Military Relation Theory. Civil-military relations negotiates between the citizens, civilian government authorities, and the military (Williams, 2019). According to Schiff (1995, p. 1), the Civil-Military Relations Theory assumes that the military should remain separate from civilian political institutions to prevent domestic military intervention. Donnithorne (2013, p. 9) avers that the army should remain free from politics, and military power must be autonomous. According to Williams (2019, p. 54), bad civil-military relations are reflected by the dominance of

military institutions in society or the politicisation of the military. Therefore, the military should be ready to render service to civilian authority as the situation may dictate. In a democracy, civilian control should allow the military serves a circumscribed power and delegated role to provide security for the nation (Donnithorne, 2013, p. 9). Thus, the military should protect other elements of national power such as the economy, population, environment, and many others.

This study is associated with the theory of civil-military relations, and according to Dempsey (2010) civil authority determines the degree of military authority and responsibility and what to delegate, and even whether to consult or listen. Thus, civil control means that the leadership that is elected, and those whom they appoint, have both the authority and rights in terms of determination in these respective appointments. This theory underpins this study because of the observed fact that it is civil authority that has predetermined the need for the protection of Namibia's heritage resources, including elephants, rhinos, and the environment in which these resources are living. Since the civilian authority has no power to fulfil such function, the military, and in this case, the NDF is mandated with such role to protect the Namibian wildlife. In other words, civilian professionals seek to ensure that poaching activities and other wildlife crimes suppressed through the intervention of the military. Thus, the outcome of this study has the potential to tell whether the NDF intervention in anti-poaching operations is yielding tangible results and thus, worth maintaining or that it should be withdrawn.

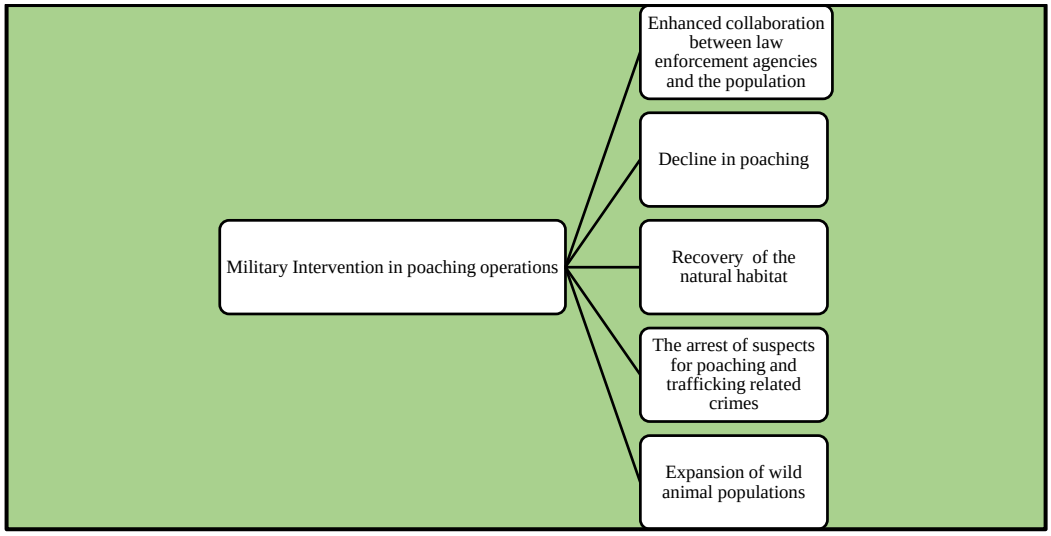
2.3 Framework on the dynamics of military intervention in anti-poaching operations

According to studies on the dynamics of military interventions in anti-poaching operations, such as “Military Antipoaching in Botswana” by Hank (2007) and “The

Military Response to Poaching" by MacDonal (2019), military intervention has resulted in a decrease in poaching, an expansion of wild animal populations, improved collaboration between law enforcement agencies and the population, the arrest of suspects in poaching and trafficking-related crimes, and the recovery of the natural habitat. Observing the paucity of studies on the Namibian context, resulting in inadequate results, this study sought to fill these gaps. As such, the current study contributes to existing scholarship by examining the dynamics of the NDF intervention in anti-poaching operations and by proposing strategies to improve anti-poaching operations in Namibia and beyond.

Figure 2.1

Framework on the dynamics of military intervention in anti-poaching operations



Source: Author's initiative (2023)

2.4 Literature review

A literature review engages critically with the earlier published works on a specific academic topic. A literature review assists the researcher in understanding what other writers have already done, and in the process establish what is currently unknown or understudied within the subject area of interest. In this regard, the study reviews the

literature on the factors that prompted the military intervention in anti-poaching operations, and the changes brought about by the involvement of the military in combating poaching in the three SADC nations which are; South Africa, Botswana and Namibia. The researcher purposively selected these three countries because they share common borders through which wild animals wander freely from one country to another. In addition, the three SADC nations have all also experienced similar scourges in poaching activities within the Southern African region.

2.5 Primer on anti-poaching

The world is suffering from alarming species extinction rates, primarily due to wired poaching (World Wildlife Funds, 2020). According to Matungwa and Wawa (2021, p. 1), wildlife poaching is a global problem that has led to the loss of animal populations. Felbab-Brown (2017, p. 1), opines that illegal wildlife killing, including wild species trafficking and its associated activities, negatively impacts national and international security in various ways. Ultimately, this has the potential to degenerate into world political instability, if not addressed aggressively. Wildlife trafficking has the capability to provide funding for criminal organisations, raise the danger of disease outbreaks, and further damage the natural system on which people depend (Felbab-Brown, 2017, p. 1). The fight against poaching and associated activities is not new. It has existed for many centuries. Consequently, in the nineteenth century, countries such as the United Kingdom adopted legislations such as the Game Act of 1831 and the Night Poaching Act of 1828 to regulate wildlife shooting.

These Acts are among the processes that spawned the present anti-poaching measures. In and of itself, "anti-poaching" is the antithesis of "poaching." The essence of the notion of “anti-poaching” is the organised effort to counter wildlife poaching; the term is commonly used to describe a comprehensive operation against the illegal killing of,

and trade in wildlife. In addition, anti-poaching operations are often conducted by national parks on public territory and by private security firms on private land.

2.5.1 Anti-poaching role players

In various regions of the world, anti-poaching operations may also include the military. The military can use both offensive and defensive modes when combating poaching. When anti-poaching units launch attacks against poachers, the anti-poaching operation is taking an offensive stance. In contrast, when anti-poaching teams retaliate against poachers, the operation can be described as defensive. Particularly in the Southern African Development Community, military deployment in anti-poaching operations has become widespread. Nevertheless, this technique has met with several objections. According to Masse, Gardiner, Lubilo, and Themba (2017), there are growing concerns that the deployment of paramilitary and military or military-like actors, techniques, technologies, and partnerships in pursuit of environmental protection results in violations of human rights, the perpetuation of exclusionary conservation practises, and the further marginalisation of already vulnerable people.

The Community Based Anti-Poaching Operation came in as a supplementary anti-poaching instrument following the development of anti-poaching measures in response to the rapid increase in community poaching operations. In 2002, the world witnessed the implementation of a Community-Based Anti-Poaching Operation in Nepal in response to the proliferation of illicit wildlife trade in international markets. This strategy aimed to engage locals in patrolling and awareness-raising to prevent illegal activity in wildlife reserves and national parks. Community-based anti-poaching patrols are frequently comprised of a team of people that consistently monitor a predetermined area of the community to prevent or minimise the unauthorised killing of wild animals. In the contemporary world, governments have opted for

comprehensive anti-poaching methods. This strategy incorporates many anti-poaching measures. Including local communities, military forces, and game wardens in anti-poaching actions is authorised under inclusive anti-poaching (Masse, Gardiner, Lubilo, & Themba, 2017).

2.5.2 Anti-poaching techniques

Some anti-poaching measures involve deploying armed, trained workers (game guards). The personnel are deployed to safeguard wild animals against poachers within specified localities. Their techniques include scanning the land for the potential discovery of suspected intruders through the deployment of satellite bases and monitoring equipment. Game guards also implement the tracking method. This is one of the most critical anti-poaching techniques, and through which trackers are employed to trace the footprints of poachers in protected areas. Similarly, the tracking method may follow the tracks of wild animals that game wardens suspect were wounded by poachers. Additionally, park rangers may use a technique known as "moving patrol."

The essence of an anti-poaching moving patrol is the movement of a team of guards from one location to another to collect intelligence about targeted animals, gain poaching information, discover poachers, obtain poachers' techniques and *modus operandi*, and then disrupt the poachers' plans. Anti-poaching teams may also employ standing patrols, in which team members are stationed at a particular place for a set amount of time, as the circumstances dictate. The crew may be able to notice the suspicious movements of poachers as well as the movements of the most frequently poached species. The "ambush patrol" is another strategy employed in anti-poaching operations. When the activities of poachers have been detected, and Game Rangers can anticipate their intended direction and route, ambush patrols are utilised.

In this strategy, a group of anti-poaching agents conceal themselves and ambush and trap /capture the poachers unawares. According to Aiken (2001, p. 1), an ambush is a surprise attack from a disguised position on a moving or momentarily halted target. Ambush may include a close-quarters assault designed to destroy the target or an attack using gunfire (Aiken, 2001, p. 1). An ambush need not capture or maintain territory. Ambushes are intended to eliminate or annoy opposing forces (Barrett, 1990). During patrols, teams may collect geographical information on hunting or poaching activities and cardinal occurrences. Some groups may capture and arrest illegal hunters on the spot, confiscate bushmeat, and demolish hunting sites.

2.6 Military intervention in anti-poaching

Historically, armed forces in any country have been organised and armed to chiefly repel external invasions. This tendency is no longer the case. The military has become an element of national power in the modern world. The army is now deemed the most powerful instrument of national power and was charged with safeguarding other elements, including the population, land, economics, politics, natural resources, borders, and the environment. Since soldiers are servants of their respective states, the military does not engage in politics and must take orders from civilian authorities operating under the Constitution. The civilian governing authority's role is to assign to the military, responsibilities that promote national security. The military is responsible for protecting wildlife as one of the national security interests.

The domestic deployment of military forces in anti-poaching operations cannot occur in a vacuum. Instead, there must be a causal factor. The inadequate enforcement of regulatory instruments to control or curb the killing of wild animals; the absence of legitimate bodies to regulate the killing of animal species; the vastness of the region, as game wardens cannot reach all parts of the area on time; and the population size of

the most highly prized species in the region are typically cited as the primary reasons for authorities to deploy military forces domestically in order to combat the illegal killing of wildlife.

In any situation, the significance of wild animals in the ecosystem and their repercussions on human existence are the driving forces behind military participation in anti-poaching operations. Sundell and Olsson (2017) stress that interventions are intentionally implemented change strategies that aim to impede or eradicate risk factors, activate or mobilise protective factors, reduce or eradicate harm, or introduce betterment beyond harm eradication. Interventions are applied in order to bring changes in various aspects of life. Thus, social work intervention encompasses a range of psychotherapies, treatments, and programs. Interventions may be simple or complex. Nevertheless, simple interventions may have multiple elements contributing to their effectiveness (Sundell & Olsson, 2017).

According to Soken-Heberty (2016), the term "wildlife" may conjure images of animals, but several criteria for protection or comparable areas also include flora. Soken-Heberty's statement illustrates that wildlife encompasses both animals and plants. These are the most critical aspects of human life. Wildlife contributes to sustaining the ecological equilibrium of nature. According to Bhatia (2020), the killing of predators causes an increase in the number of herbivores, which in turn affects the forest flora. As a result, these herbivores leave the forest searching for food on agricultural land, destroying our crops. Even though they are predators of one another, wildlife helps preserve ecological equilibrium by doing so (Bhatia, 2020). Large predatory animals are the primary cause of environmental growth. As a result, several issues emerge if balance and stability are disrupted (Bhatia, 2020).

Wildlife has also contributed tremendously to the economy. According to Booth (2010, p. 11), ten Southern African Development Community (SADC) nations produced almost US $3.2 billion from nature-based tourism in 2000/01. In contrast, hunting tourism made around US $190 million in seven SADC nations in 2008 (Booth, 2010). Such a substantial contribution to an economy is worthy of national protection. In some areas of the world, wildlife utilisation exceeds its economic significance. In Brazil, wild animals are used as food and for medicine. According to Alves, Oliveira, and Rosa (2013, p. 1), at least 354 wild animals are used in Brazilian traditional medicine, and 157 of these species are also consumed as food. Furthermore, some wild animals are utilised in scientific investigations, such as evaluating the efficacy of medicines. Monkeys, chimpanzees, etc., are typically used in scientific experiments (Bhatia, 2020). Preventing the extinction of species is significant.

Between 1970 and 2016, the Global Living Planet Index showed a 68 per cent drop in the average population size of animal species throughout the globe (World Wildlife Funds, 2020). Poaching, however, has been identified as a factor contributing to the decline of animal populations. In the SADC region, poaching of wild species such as rhinos and elephants has increased at alarming rates (Welz, 2013). SADC is one of the economic regions in Africa, where rhinoceros and elephant populations are densely concentrated.

The SADC member states such as Namibia, Botswana, and South Africa suffered an increase in the poaching of elephants and rhinos (World Wildlife Funds, 2020). The three sister nations opted for military intervention approaches to fight against the poaching of wildlife. This method was necessary due to the importance of wildlife, especially so because of the role that wild animals play within the ecosystem. The involvement of the military in anti-poaching operations was thus, in part, necessitated

by the role that wild animals play in the lived realities/existence of humanity. The primary goal of military intervention in anti-poaching operations is to put a stop to the illegal killing of wild animals, as well as curb any other wildlife related crimes.

2.6.1 SANDF experiences in anti-poaching

According to Nanima (2019), the Prevention of Organised Crime Act 121 of 1998 (POCA) was enacted to combat crimes, including rhino poaching, in South Africa. However, the public later argued that the instrument should be amended to provide for extraterritorial jurisdiction to prosecute those involved in rhino poaching at the highest levels. The Prevention of Organised Crime Act 121 of 1998 does not allow for the prosecution of criminals outside of South Africa (Nanima, 2019, p. 1). In addition to POCA, the National Environmental Management: Biodiversity Act of 2004 (NEMBA) provides the general framework for wildlife conservation in South Africa. However, each of the country's nine provinces has autonomy in implementing the national law. South Africa's anti-poaching and anti-wildlife crime legislation is robust.

Despite these regulations, a significant number of local and international organisations are partners in the conservation of wild animals in this country. Save Elephants, and the Mohololoholo Wildlife Rehabilitation Centre are two well-known groups in South Africa that work to curb the poaching of wildlife. Although South Africa has a series of laws and organisations to combat poaching, the country has the highest prevalence of illegal wildlife killings and related crimes. South Africa is home to 83 percent of Africa's and 73 per cent of the world's approximately 28,000 surviving rhinos, with the majority dwelling in Kruger National Park (Emslie et al., 2018). The reviewed literature indicates that Kruger National Park is home to the world's most significant rhino population and has become a hotspot for poachers. Poaching was influenced by the increasing population sizes of the most poached species in South Africa.

According to Welz (2013), South Africa engaged the military in anti-poaching operations because poachers from Mozambique retaliated by arriving in larger groups with an AK-47-wielding-"triggermen" and "guards." They fired without hesitancy at the rangers, which resulted in many battles in which some rangers were killed. In South Africa's national parks, poachers have unlawfully slaughtered large numbers of wildlife. According to Emslie et al. (2018, p. 7), between 2006 and 2010, the country lost 587 rhinos to poachers. The literature demonstrates that the persistent increase in poaching and the availability of weapons of war in the hands of poachers may threaten the country's national security. In 2011, the South African National Defence Forces intervened in the fight against poaching.

2.6.2 BDF experiences in anti-poaching

Botswana is among the SADC nations that have also been severely impacted by poaching over the past several decades (Legal Assistance Centre, 2017). Some of the acknowledged causes for such an increase are that Botswana is one of the African countries that houses a very huge population of African elephants. In addition, the increase in poaching in Botswana is the consequence of international criminal syndicate networks that drive the demand for illicit wildlife products, headed mainly for the black market in East Asia (Legal Assistance Centre, 2017). With the aims of protecting the environment, discouraging poaching, allowing wild animals to live freely and preventing the country from becoming the harbour of illicit products of highly valued animals, Botswana implemented the domestic deployment of the Botswana Defence Force (BDF) in operations that sought to combat the illegal killing of wild animals as well as fighting against wildlife crime within its borders.

The BDF has been involved in wildlife preservation for decades since the deployment of its first troops in 1987 (Hank, 2007). The basic principle of the BDF's intervention

in combating poaching is to reduce or, if possible, eliminate poaching activities in Botswana. According to Hank (2007), in 1987, after commercial poachers killed animals and terrorised communities in wildlife management areas, President Sir Ketumile Masire approved a plan to dispatch an elite strike-force. Again, the alarming poaching trend of the most targeted species in Botswana, in this case, rhinos and elephants, forced the government of Botswana to deploy the military for wildlife protection. Despite the lengthy BDF anti-poaching operation, illegal hunting has been a concern in the country, prompting the government of Botswana to implement a controversial "shoot-to-kill" policy against suspected poachers in 2013. Even if suspected poachers turn themselves in, the BDF will still execute them under this regime.

2.6.3 NDF experiences in anti-poaching

Namibia is one of the nations that has been terrorized by poachers and has suffered an increase in the destruction of wild species in SADC and Africa over the past several years (Community Conservation Namibia, 2021). In terms of rhino population, Namibia ranks fourth among African countries (World Wildlife Funds, 2020). The escalation has been linked to international criminal syndicate networks illegally trafficking wild animal products due to the demand for these products in the East Asia’s black markets (Legal Assistance Centre, 2017). In 2016, the Namibian Defence Force (NDF) embarked on an anti-poaching operation in response to concerns over the killing of wild animals that had plagued Namibia for quite some time. This involvement enables the NDF to join in nationwide anti-poaching operations. Recently, poaching in Namibia, particularly of high-value species, has proven problematic.

According to the 2016 Ministry of Environment, Forestry, and Tourism report, Namibia lost 97 rhinos to poaching in 2015. Meanwhile, according to *New Era* (2017, p. 1), thirteen poachers confronted the Wildlife Protection Unit members at Bwabwata National Park on 29 December 2016 and began firing at them. In retribution, and using the Criminal Procedures Act in self-defense, Anti-Poaching Unit personnel shot and killed three of the alleged poachers. According to the *New Era* newspaper, the remaining poachers equipped with AK47 assault weapons could escape (*New Era*, 2017, p. 1). Accordingly, Namibia has since implemented a military intervention to reduce the trends in the poaching of wildlife, and in the process, increase the population of wildlife, as well as awareness of the value of wildlife, and cooperation with the communities living adjacent to national parks and protected areas.

2.7 Dynamics of military intervention in anti-poaching

Given the observation that the military engagement in anti-poaching operations was prompted by an increase in the number of illegally killed wild animals and disruptive behaviour in the communities surrounding national parks and other protected areas, the primary goal/objective of this strategy was to put an end to poaching activities, advocate for the expansion of wild animal populations, improve environmental integrity, and promote good collaboration between law enforcement agencies and the population. A review of the pertinent literature demonstrates that, at least some states who chose a military strategy were able to achieve significant achievements in curbing the poaching of wildlife. In addition, the engagement of the military in anti-poaching operations led to a significant decline in poaching activities, an increase in the population sizes of the main targeted species, fostered cordial cooperation between law enforcement officials and the local people, and resulted in several arrests for poaching-related crimes.

2.7.1 Dynamics of SANDF intervention in the anti-poaching

In 2011 there was an observed rise of 115 with regards to the number of poached rhinos from 333 in 2010 to 448 in 2011 (Save the Rhino, 2020). The reviewed statistics illustrate that, the participation of the South African military in anti-poaching operations however, does not discourage poachers from committing instantaneous killings of animals instantly. In 2012, 668 rhinos were poached, accounting for an increase of 220 animals. The number of rhinos poached in 2013 was 1,004. This was the first time in recorded history that the country lost more than 1,000 rhinos in a single year. In South Africa, poachers killed 1,215 rhinos in 2014. That was the highest number of rhinos poached in the history of South Africa. In 2015, South Africa saw the first fall in rhino poaching when the number of poached animals dropped to 1175 (Fynn & Kolawole , 2020).

In 2016, the number of animals poached decreased to 1054, while in 2017, the number of animals poached decreased to 1028 (Fynn & Kolawole , 2020). In four years, South Africa experienced an increase in the number of poached animals, a three-year gradual decline in the number of rhinos poached, and a three-year rapid decrease in the number of rhinos killed, making military intervention in the fight against poaching in South Africa ineffective as an immediate preventative measure. Seven hundred and sixty-nine rhinos were poached in South Africa in 2018, while 594 were lost to poachers in 2019 (Fynn & Kolawole , 2020). The fact that 394 rhinos were poached in 2020 indicates that wildlife protection is improving. The number of poached rhinos is decreasing in South Africa, but it is unclear whether this is due to anti-poaching efforts by the military or because there are now lesser numbers of rhinos in the wild for poachers to kill (Save the Rhino, 2020).

In addition to rhino poaching, the literature review reveals that elephant poaching had been a substantial problem in South Africa for decades. According to Meijer (2018), an elephant is unlawfully slaughtered every fifteen minutes for its ivory. This number represents over 100 elephants daily and close to 40,000 elephants annually. Also, in 2011, the same year the SANDF was deployed, and in the two subsequent years, 2012 and 2013, following SANDF intervention in anti-poaching, no elephant poaching was observed. Late in 2014, the reviewed literature indicates that South Africa had lost two elephants to poachers. However, the number of elephants poached increased to 22 in 2015. The number of animals poached decreased to 15 2016, seven animals lesser compared to 2015 when poachers killed 22 animals. In 2017, 68 elephants were documented as having been poached, which is additional evidence of a rise in the poaching of elephants.

According to Save the Rhino (2020), in 2018, poachers killed 72 elephants in South Africa. From 2009 to 2021, the most significant number of elephants were slaughtered in South Africa. In 2019, a sharp drop by 41 elephants was recorded, as the number of animals poached decreased to 31. In 2020, sixteen elephants were killed by poachers, representing a further significant decline. In 2021, poachers killed only one elephant in South Africa. The reviewed literature demonstrates a significant drop in elephant poaching in South Africa, which supports the idea that the SNDF's efforts to stop poaching have yielded significant results in bringing the number of elephants killed each year down from 72 to 1.

According to Welz (2013), the frequency of anti-poaching patrols increased in 2011 when the SNDF was deployed. These patrols resulted in an unprecedented number of poachers being apprehended, and soldiers killing at least 23 poachers. The arrests of 165 suspects in 2010 is evidence of a small number of poaching-related arrests made

prior to the military intervention in South Africa (Welz, 2013). In 2011, the exact year when an anti-poaching military operation began in South Africa, the number of alleged poachers detained rose. South Africa arrested 232 poachers in 2011, a 67 per cent increase from the previous year. In 2012, the Anti-Poaching Units apprehended 258 poachers and in 2013, 343 suspects were apprehended, accounting for an increase of 85 over the previous year (Welz, 2013).

The number of arrests in 2014 was 386. By 2015, the country had arrested 317 poachers, a decrease of 26 compared to the previous year. In 2016, there were 680 more suspects detained for poaching-related crimes. The increasing number of arrests indicates that anti-poaching operations are improving. These arrests might result from the military forces increasing their patrols in the most impacted parks and other poaching-vulnerable locations. It might also be the outcome of law enforcement agencies and the local population working together to observe and report suspicious activities. In 2017, 518 poaching relate arrests were made, a decrease from the previous year. In 2018, there were just 401 while in 2019, a total of 253 suspected poachers were detained (Save the Rhino, 2020).

In 2020, South Africa announced that the number of arrests related to poaching had decreased significantly to 156. Since 2010, this was the country's lowest recorded number of poaching-related arrests. However, the reviewed literature also indicates that the number of suspected poachers apprehended rose by 33 to 189 in 2021. From 2011 to 2016, there was an increase in the number of arrests. However, the number of suspected poachers apprehended was observed to have decreased from 2017 to 2020. The drop may be attributed to the efficiency of the adopted strategy. In South Africa, the implementation of SANDF anti-poaching operations resulted in roughly 3,733 suspected poachers being arrested.

2.7.2 Dynamics of the BDF intervention in the anti-poaching

Since 1987, the Botswana Defence Force (BDF) has been involved in wildlife protection, and between 2006 and 2011, there were no rhino poaching incidences in Botswana (Hank, 2007). Nonetheless, two rhinos were poached in the country in 2012. Botswana lost two more rhinoceros to poachers the following year, 2013. The reviewed literature indicates that the country lost six rhinos to poaching between 2012 and 2016. In 2017, there was no rhino poaching incidents reported. Despite the BDF's prolonged fight against poaching, the number of rhinos killed has grown since 2018. In 2018, twelve more rhinos were killed by poachers in Botswana (Reuters, 2019). In addition, the number of rhinos poached in 2019 increased from 12 in 2018 to 29 in 2019 - an increase of over 100 percent.

In 2020, it was reported that the number of poached rhinos increased by 21 – from 29 in 2019 to 50 in 2020. Despite decades of anti-poaching operations by the BDF, the number of rhinos killed in Botswana has increased in recent years. Thus, one may infer that the adoption of military participation in Botswana's anti-poaching operations has not yielded the envisioned beneficial outcomes in recent years with regards to rhino poaching. In addition, the BDF's engagement in anti-poaching has led to the harassment of the local people around national parks and protected areas, as well as the killing of people along the borders between Botswana and its neighbouring countries, including Namibia, Zambia, Zimbabwe and Mozambique. Three Namibian fishermen and one of their cousins from Zambia were reportedly killed by the BDF while fishing in the Chobe River. This occurrence revealed that BDF wildlife protection units had used fatal force against suspected poachers.

Botswana's anti-poaching initiatives have resulted in the deaths of at least 22 Zimbabweans and at least 30 Namibians during the previous two decades (*The*

Namibian, 2016, p. 2). However, the frequency with which poachers and law enforcement agents exchange gunfire in Botswana has decreased. In addition, the participation of the military in anti-poaching measures has considerably contributed to the population growth of the most targeted species. According to the Legal Assistance Centre (2017), an assessment conducted in 1992 revealed that fewer than 19 white rhinos were in the wild, while the black rhino in Botswana was considered "locally extinct." In 2018, Botswana's rhino population amounted to around 502. However, by 2020, the rhino population had dropped to about 500 animals (Save the Rhino, 2020). Mackintosh also observes the growth of the elephant population in the country by explaining that, whilst there were 50,000 elephants in Botswana in 1990, this population increased to 207,500 in 2012 (Mackintosh, 2021).

Moreover, according to Dube (2021, p. 6), the most recent survey by the International Union for the Conservation of Nature (IUCN) suggests that Botswana's elephant population is rising, and that the country is currently home to around 130,000 elephants. Compared to the rhino population from 1992 to 2020 and the elephant population from 1990 to 2012, there is empirical evidence that the BDF has considerably impacted the survival of the rhino and elephant populations in the country.

2.7.3 Dynamics of the NDF intervention in anti-poaching

Before the participation of the Namibian Defence Force (NDF), in 2015, the number of rhinos poached stood at 97. In 2016, with the deployment of the Namibian Defence Force in anti-poaching operations, the rhino poaching trend decreased (MEFT-NAMPOL, 2021). According to a statement by the Ministry of Environment, Forestry and Tourism, the number of rhinos poached decreased by 31, from 97 in 2015 to 66 in 2016 (The Republic of Namibia, 2020). This statistic reflects a drop of 20.46% in rhino

poaching in 2016. In addition, the ministerial report indicates that poaching decreased by 6.05 percent in 2017 to 55 incidents. In Namibia, however, the number of poached rhinos increased by 21.06 per cent between 2018 and 2019. In 2019, 54 rhinos were poached, accounting for a decrease of 14.58 percent compared to 2018. In 2020, 32 rhinos were killed, a 7.04 percent decrease from the previous year (Community Conservation Namibia, 2021). According to Miller (2021), Namibia has impressively decreased the number of rhinos poached to 32 in 2020. As of July 2021, just nine rhinos had been poached, representing a decline of 2.07 percent in the trend of rhino poaching. According to the literature review, after the government initiated the NDF intervention in anti-poaching operations, the trend of rhino poaching in Namibia reduced instantly. However, rhino poaching increased by 21.06 percent in 2018.

From 2019 to 2021, there has been a progressive decline in rhino poaching. The highlighted improvement is a positive change attributed to the launch of the NDF anti-poaching operations. In 2015, a total of 49 elephants were reportedly poached in Namibia. Ministry statistics also indicate that elephant poaching rose in 2016, with around 101 recorded incidences of elephant poaching, compared to 49 elephants poached in 2015 (accounting for a 52.52 percent increase in the number of elephants poached in 2016). *The Namibian* (2020, p. 2) reported, in addition to the ministerial report, that 49 elephants were poached in 2015, compared to 101 in 2016. During that year, the NDF deployment was already in effect. One wonders if the poachers were ignorant of the military's participation in Namibia's anti-poaching activities or if the animals were killed in earlier years and their carcasses were only discovered in 2016.

In 2017, the number of poached elephants dropped dramatically to 50, representing a 51.51 percent decrease. In 2018, the literature indicates that 27 fewer animals were reported as having been poached, representing a reduction of 11.5 percent (MEFT-

NAMPOL, 2021, p. 15). In 2019, the number of poached elephants decreased to 13, representing a decline of 3.78 percent. The reviewed literature reveals that the number of poached elephants further decreased to 11 in 2020, a 0.26 percent decrease. Despite the military's participation in anti-poaching operations, the data show that elephant poaching did not decrease in 2016. However, the trend of elephant poaching began declining gradually between 2017 and 2020. In addition, due to the NDF's anti-approach intervention, the number of poached elephants was observed to have decreased by 89 percent, from 101 elephants in 2016 to a mere 11 in 2020 (MEFT-NAMPOL, 2021, p. 17). This drop demonstrates that the NDF's efforts to reduce the trend of poaching in Namibia have been successful. Community Conservation Namibia (2021) observes that the elephant population has increased from 7,000 to 22,000 since Namibia's government implemented the NDF intervention in anti-poaching operations in the country. Lions have also expanded their range and population. The number of black rhinos in Namibia has grown from about 65 to becoming the largest free-ranging population in the world (Community Conservation Namibia, 2021).

In addition, the participation of the NDF in anti-poaching efforts resulted in the establishment of communication channels through which the local communities and those living near national parks and protected regions may report suspicious poaching activity (*The Namibian,* 2021, p. 2). A considerable number of suspected poachers were apprehended due to this partnership. So far, the reviewed literature indicates that military engagement in anti-poaching operations increases the number of high-value species arrests. In 2015, there were 69 arrests involving high-value animals, such as elephants and rhinoceroses. In 2015, the Namibian government had not yet implemented the NDF anti-poaching operation intervention. However, immediately

following the NDF's intervention in 2016, arrests increased from 69 to 108, representing a 26.91 percent increase (The Namibian, 2021, p. 3). In 2017, there were 213 arrests, marking a 113.4% rise over 2016. In 2018, the number of arrests increased to 259, representing 8% of all arrests that occurred in 2018. Furthermore, an astounding 420 additional arrests were made in 2019, representing a 416.99 percent increase (The Namibian, 2021, p. 3).

The literature review revealed that the number of arrests involving high-value species in Namibia has of late been on the decrease. This is demonstrated by the reduction of arrests of high-value animals in 2020 to just 116, representing a decline of 48.72 percent. In 2020, there were 304 arrests of high-value animals (MEFT-NAMPOL, 2021).

2.8 Anti-poaching Strategies

The state, organisations that are involved in anti-poaching as well as the national security cluster can employ various strategies to curb poaching activities. Most proponents of anti-poaching indicate that the difficulty, however, lies in the readily available market for wildlife products. To this end, Save the Rhino (2020) believes that in order to arrest poaching activities, there is a need to tackle its root cause: consumer demand. Without consumer demand, there will be no incentive for poachers or traffickers. Hence, the government should engage with international stakeholders in order to curb the demand for wildlife products.

Johnson (2014) believes that the support of the local community is also important. Poachers operate from the communities that surround the parks and typically recruit local inhabitants to act as scouts and guides. As such, the sensitising of the local community is of utmost importance in educating them that nature and its preservation

is more important than receiving a payout from poachers. It is important to note however, that it takes more than high security and habitat protection to ensure that wildlife populations thrive. An important part of anti-poaching is the exchange of expertise and information between conservation specialists, state agencies and NGOs. This means that people working at the front line of conservation benefit from the best skills possible. The adequate deterrence effect of prosecution is also one of the most important strategies that can be employed to curb poaching. In light of this, it is critical that the judicial system mete out stringent penalties against individuals that are found to be in contravention of anti-poaching legislation. The National Strategy on Wildlife Protection and Law Enforcement 2021 – 2025 is reviewed. The reviewed strategy provides for strategic programme areas such as wildlife protection, anti-poaching and law enforcement; investigations and prosecutions; transboundary illicit trade; protection of rhinoceros within protected areas; protection of rhinoceros outside protected areas; protection of elephant; protection of pangolin; community safety and security; partner and stakeholder coordination; and awareness and communication.

2.9 Summary

This chapter provided an overview of currently existing knowledge regarding the impact of military interventions on anti-poaching, which in turn allowed the researcher to identify relevant theories within which to couch the current study. The chapter further provided a conceptual framework on the dynamics that military interventions are imagined to have on anti-poaching, as provided in current literature. This also allowed the researcher to identify the knowledge gaps that the current study will attempt to fill. The existing literature emphasised on various perspectives and strands of knowledge regarding the impact of anti-poaching activities. It also reviewed related knowledge regarding anti-poaching initiatives from various regional contexts. It is

however worth noting that none of the existing literature has sufficiently addressed these issues within the Namibian context, and as such the potential impact that the NDF's intervention in anti-poaching operation has had in the Etosha National Park, thus, necessitates this study. The next chapter discusses the methodology adopted in the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the study's methodology. The methodology is typically defined as the section of a research paper in which the researcher describes the steps taken to investigate and examine a problem, as well as the rationale for the specific processes and techniques used to identify, collect, and analyse information that helps to understand the problem (Kallet, 2004). According to Igwenagu (2016), a methodology is a comprehensive research plan that specifies how a research project is to be conducted and determines, among other things, the methods to be employed in a study. In addition, Kothari (2004) defines the research methodology as the research methods, the rationale behind the methods employed in the research study and an explanation of why the researcher chose a specific approach or technique above others. This chapter explains the research design, study population, sampling method, research instruments, data collection procedure, data analysis, research ethics, and ends with a chapter summary.

3.2 Research Approach/Paradigm

Several research approaches including qualitative, quantitative, and mixed methods exist. The type of the study under investigation has an influence on the research methods that may be adopted. For the current research, the researcher adopted a mixed research strategy. Mixed research assisted the researcher in gathering, analysing, and interpreting both qualitative and quantitative data to explicate variations in poaching trends after the implementation of the NDF intervention anti-poaching operations. According to Creswell (2012), mixed research entils collecting, analysing, and

“mixing” both quantitative and qualitative research (numerical and no-numerical) data in a single study to understand concepts, opinions or experiences fully. In mixed research, the focus is to capitalise on the strengths of both qualitative and quantitative methods. By combining these methods, researchers obtain more comprehensive understanding of the research topic or phenomenon under investigation in a natural setting (Given, 2012).

3.3 Research Design

The research design is the overall strategy chosen by the researcher to integrate the many components of the study coherently and logically, assuring that the researcher will effectively address the research problem (De Vaus, 2001). The research design outlines data collection, measurement, and analysis procedures. In this regard, in addition, the research adopted a descriptive design. Descriptive research studies describe the characteristics of an individual or a group (Kothari, 2004). Therefore, the descriptive research design approach enables the researcher to coherently describe variations in the poaching phenomena resulting from the NDF anti-poaching interventions. In addition, descriptive research is also conducted to identify and characterise the physical characteristics of the variables of interest under investigation (Sekaran, 2004). In this regard, a descriptive research design was employed since the researcher believed it to be the most suitable approach for determining and describing the impact of the NDF's involvement in the battle against poaching.

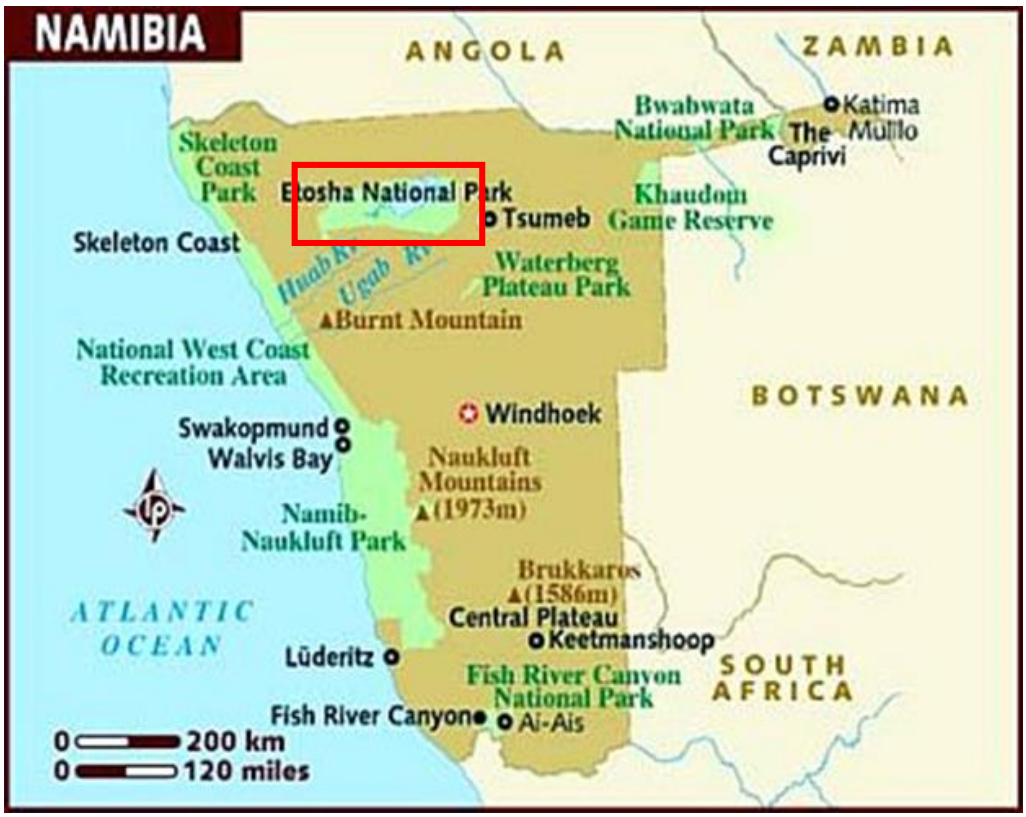
3.4 Study setting

According to Given (2012, p. 263), the research setting is the physical, social, and cultural site in which the researcher conducts the study. The study selected Etosha National Park (ENP) because, in 2016, following the increase in the number of poaching incidences, the Namibian government implemented interventions by the

NDF in order to combat poaching activities in ENP. ENP, located at 18° 56′ 43″ South and 15° 53′ 52″ East in the northwest of Namibia, is one of Africa's largest national parks, spanning approximately 8,598 square miles (22,269 square kilometres). ENP housed hundreds of species of mammals, birds, and reptiles, including several threatened and endangered species, such as the black rhinoceros. The presence of valuable species such as rhinoceros does indeed make Etosha National Park vulnerable to poachers. In most cases, poachers come from the community surrounding the ENP. Poachers target rhinos for their horns, which are highly prized in some cultures for their purported medicinal properties or as status symbols.

Figure 3.1

The location of Etosha National Park in the Namibian Map



Source**:** Dolphin Data Lab (2023)

3.5 Study population

According to Casteel and Bridier (2021), the ‘study population’ refers to all elements or objectives from which a sample is drawn. The study population for this research includes members of the NDF, NAMPOL and the staff of the MEFT Anti-Poaching Unit in Etosha. These law enforcement agents work to protect wildlife in ENP. Since they conduct field patrols daily, they are likely to possess valuable information for this study. Banerjee and Chaudhury (2010) add that a population is an entire group about which some information ought to be investigated. This study's population comprised 114 members of the NDF, 102 members of NAMPOL and 80 staff members from the MEFT Anti-Poaching Unit in ENP. In total, the study population was 296.

3.6 Sampling method

The sampling method refers to how some participants are selected from the study population. Tuner (2020, p. 8) defines ‘sampling’ as the selection of a subset of the population of interest in a research study. The researcher adopted a non-probability purposive sampling method to obtain in-depth data from information-rich and reliable participants. In non-probability sampling, the participants are selected at the researcher's discretion. According to Casteel and Bridier (2021), non-probability sampling methods afford access to the necessary groups of people. Purposive or judgmental sampling thus, is a strategy in which participants are selected deliberately to provide important information (Maxwell, 1996). In this study, the researcher selected Commanders, Section Heads and MEFT staff members in ENP. There was no Key Informants, or the community around the National Park involved in the study because of the sensitivity of poaching in the region.

3.7 Sample

Because of the impossibility of interviewing every member of the anti-poaching unit and the sensitivity of poaching as a topic (which results in information being kept strictly confidential), the researcher drew a sample from the population of interest. The researcher selected commanders, section chiefs and patrol team leaders who, for all intents and purposes, may be imagined to have credible information related to poaching and poaching activities in ENP. In this study, the researcher used purposive sampling in selecting persons to interview and these comprises of nine (9) NDF Commanders, six (6) NAMPOL Section Heads and five (5) MEFT staff members in ENP. It was the researcher's belief that the chosen individuals possess the qualities and characteristics necessary to provide accurate and trustworthy information. The designated sample thus comprised 20 participants.

3.8 Research instruments

Generally, research instruments are those tools a researcher uses to collect, measure, and analyse data. Pierce (2008) also supports this and adds that a research instrument is a survey, questionnaire, test, scale, rating or tool designed to measure the variables, characteristics, or information of interest, often a behavioural or psychological characteristic. In conducting the current study, the researcher gathered data by examining official documents as well as utilising an interview guide. The guide comprised of a semi-structured interview schedule, and which made use of open-ended questions to collect data deemed to be vital for this study. In addition, the researcher designed the demographic questionnaire to capture the demographic data of participants. A survey on official materials such as reports, newsletters, and notebooks was also conducted to augment the data collected through interviews.

3.9 Data collection procedure

Rueda et. al., (2016) assert that data collection procedure refers to the techniques that allow researchers to obtain sensitive information while guaranteeing the privacy and confidentiality of participants. In addition, Wahlinet. al., (2003) affirm that a good data collection procedure is crucial to ensure the reliability and trustworthiness of the collected data. To ensure that quality data is collected, the researcher should ensure collection consistency, completeness and measurement system consistency (Wahlinet. al., 2003). The researcher also conducted three focus group discussions in order to solicit for more data from the three groups of participants – NDF, NAMPOL and MEFT staff. A semi-structured interview guide comprised of open-ended questions was developed and administered to collect further data from participants. The participants' responses were noted in a notebook and classified into three categories, whereby category "A" = NDF, "B" = NAMPOL and "C" = MEFT. The researcher then used the three letters (A, B, C) to label and identify data given by participants from these three different categories accordingly. In addition, the researcher obtained the records and reports on poaching trends, species mortality rates, population sizes, and arrests for review from the MEFT and NAMPOL, respectively. This was done in order to provide answers to the questions and objectives set out by the research.

3.10 Data analysis

Sharma (2018) defines 'data analysis' as systematically applying statistical or logical techniques to describe, illustrate, condense, recap and evaluate data. 'Data analysis' reflects efforts by the researcher in transforming, cleaning, and exhibiting the data collected into useful and meaningful information that answers the set research objectives and questions. In this regard, notes taken during data collection were written

in reflective passages. After that, the researcher highlighted the information in a descriptive report which is presented as ‘Research findings’ in Chapter 4.

3.11 Trustworthiness and reliability

To ensure the trustworthiness and reliability of this study, careful consideration was given to: credibility, transferability, dependability and confirmation. Credibility was maintained by conducting a thorough evaluation of the research design, data collection methods, and analysis techniques used to assess the dynamics of the NDF’s anti-poaching operations. The rigor in the methods employed and clear reporting enhanced the study's credibility. Equally so, with a focus on ENP, the study conducted a comprehensive evaluation of the applicability and transferability of its findings to similar contexts and populations facing similar poaching challenges. The study assists readers in determining the potential applicability and transferability of the findings to other conservation areas by providing a thorough description of the park's characteristics, the intervention strategies employed, and the anti-poaching activities in the region.

The study's dependability was ensured through firm consistency and stability in its research methods. A detailed account of the research methodologies, data collection protocols and data analysis techniques employed throughout the study was provided. This thorough documentation and adherence to standard methods, not only increased the study's reproducibility, but also its overall reliability. To ensure the impartiality and confirmability of this study, special attention was paid to the potential influence of researcher biases or interpretations on the research findings. The comprehensive documentation of the research process, including key decisions made during data analysis and interpretation, demonstrated a commitment to transparent reporting. In addition, a proactive approach to discussing potential limitations and alternate

explanations for observations contributed to a fair and impartial presentation of the findings.

3.12 Research ethics

'Ethical considerations' in research refers to a set of principles that guide research designs and practices (Bhandari, 2021). These include specific codes of conduct scientists and researchers must always adhere to when collecting data from people. Further to that, a researcher has the moral responsibility to safeguard the participants' rights and privacies (Leedy & Ormrod, 2012). Before embarking on the data collection exercise, the researcher obtained an ethical clearance certificate from the University of Namibia Ethics Committee that allowed them to have engagements with different stakeholders. The researcher has obtained permission from relevant authorities, the Namibian Defence Force, the Namibian Police Force and the Ministry of Environment, Forestry and Tourism to conduct research. Participants were also informed of their rights, that their participation in the study was voluntary, free from any coercion or unjustified influence, and that their rights, dignity and autonomy would be respected and appropriately protected. Participants were informed that they were free to withdraw from participation at any time, if they felt uncomfortable with taking part in the study. Since the study is meaningful and provides value that outweighs any risk or harm, the researcher ensures to maximise the benefit of the research and minimise the potential risk of harm to participants and the researcher. Participants were assured that the data collected would only be used for academic purposes. The participants were also informed that their identities would remain anonymous. Information gathered would be handled confidentially and never be made known to anyone or authority without their express consent to avoid any damage to the organisations' reputations and harm to the persons or personalities of the participants. All participants were

requested to sign the consent form, which illustrates free and voluntary participation. The researcher carefully considered the overall societal impact of the study both in the selection of participants and the benefits and burdens arising from it. Appointments were made personally with individual participants who took part in the survey. Besides, participants were informed of the purpose of the study beforehand and thus, participants were subsequently interviewed, and the survey was conducted in a secure environment.

3.13 Summary

This chapter presented the methodology that the researcher employed in this study. The research method employed was mixed, and it adopted a descriptive research design. The study's population comprised 296 individuals. From these, a sample of 20 participants was selected through a non-probability purposive sampling method. An interview guide, with a semi-structured interview schedule that utilised open-ended questions, was used as the research instrument for collecting data. The researcher obtained permission for data collection from relevant authorities. Research began in earnest after receiving an approval letter from the university. The researcher also strove to observe all ethical standards in order to safeguard the participants' rights and privacies. The next chapter presents and analyses the collected data.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the research findings of the research that seek to address the set objectives and research questions on the effect of the NDF's intervention in anti-poaching operations within the Etosha National Park (ENP) between 2016 and 2022. The study was conducted in response to the observed escalation in poaching trends in ENP, which is a major concern for Namibia. This concern is demonstrated by Article 95 (l) of the Namibian Constitution which mandates the government with the responsibility for the protection of ecosystems, ecological processes, and biodiversity for the benefit of all citizens.

4.2 Response Rate Data

There were 20 participants who participated in this study, derived from the anti-poaching unit. The participants were purposively selected. Recognising the sensitivity of issues related to poaching, the researcher organized a focus group meeting, and this was attended by nine commanders from the Namibia Defence Force (NDF), six section leaders from the Namibian Police Force (NAMPOL), and five employees from the Ministry of Environment, Forestry, and Tourism (MEFT). These participants were carefully selected to ensure diversity of representation from all the three zones of ENP: the eastern zone, the central zone, and the western zone. It is worth noting that the participants from the interviews and focus group constitute approximately 6.75 per cent of the total members constituting the anti-poaching unit in ENP.

Table 4.1

Response Rate Data

Institution	Number of participants	Percentage
NDF	9	45%
NAMPOL	6	30%
MEFT	5	25%
TOTAL	**20**	**100%**

Source: Adapted from author initiative (2023)

The table 4.1 provides a breakdown of the number and percentage representation of participants from each institution. According to the data, nine participants represented the NDF, constituting 36%. Additionally, NAMPOL had six participants, accounting for 24%. The MEFT had five participants, corresponding to 20%. In total, the study involved twenty participants. It is worth noting that the reliability and validity of the findings in a mixed study are not necessarily impacted by the response rate as the emphasis is on the richness and depth of the data (data saturation), rather than on achieving a particular response rate (Kothari, 2004).

4.3 Demographic Data

The demographic data of the participants includes the following key variables: participant genders, age groups, affiliations with specific institutions or ministries, tenure in their respective roles, duration of service in anti-poaching operations, and their highest educational qualifications.

Table 4.2

Demographic Data

Participant	Gender	Age category	Qualification	Experience	Agency/office/ministry
P1	Male	36 – 45	Grade 12	11 – 13	NDF
P2	Male	36 – 45	Grade 12	11 – 13	NDF
P3	Male	36 – 45	Grade 12	20 – 22	NDF
P4	Male	36 – 45	Grade 12	20 – 22	NDF
P5	Male	36 – 45	Grade 12	11 – 13	NDF
P6	Male	26 – 35	Diploma	7 – 10	NDF
P7	Male	26 – 35	Grade 12	7 – 10	NDF
P8	Male	26 – 35	Diploma	11 – 13	NDF
P9	Male	36 – 45	Diploma	11 – 13	NDF
P10	Male	36 – 45	Diploma	23 and above	NAMPOL
P11	Male	26 – 35	Grade 12	7 – 10	NAMPOL
P12	Male	36 – 45	Diploma	20 – 22	NAMPOL
P13	Female	36 – 45	Diploma	11 – 16	NAMPOL
P14	Female	26 – 35	Grade 12	11 – 13	NAMPOL
P15	Female	26 – 35	Grade 12	7 – 10	NAMPOL
P16	Male	56 – 60	Diploma	23 and above	MEFT
P17	Male	46 – 55	Diploma	14 – 16	MEFT

P18	Male	46 – 55	Bachelor's Degree	23 and above	MEFT
P19	Female	26 – 35	Master's Degree	1 – 3	MEFT
P20	Female	36 – 45	Master's Degree	7 – 10	MEFT

Source: Adopted from author's initiative (2023)

4.3.1 Gender of the participants

Gender in demographic data is aimed at revealing whether both men and women were represented in the study.

Table 4.3

Gender of participants

	Female	**Male**	**Total**
Participants	05	15	20
Percentage	25%	75%	100%

Source: Adapted from author's initiative (2023)

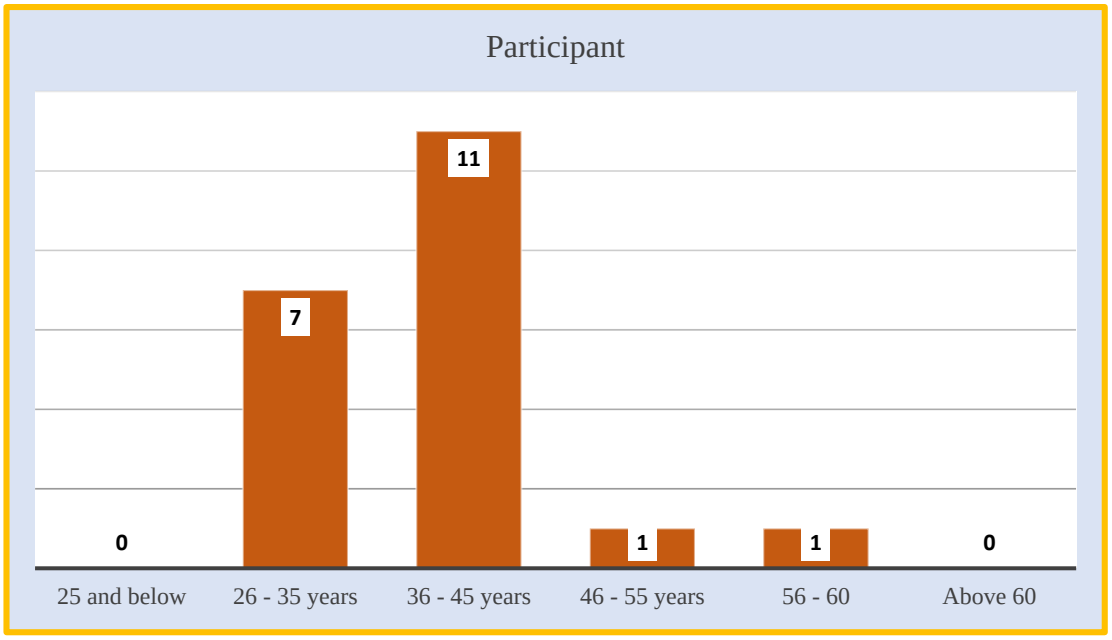
Table 4.3 demonstrates that 25% of the total number of participants were females, while 75% were males. Gender representation is increasingly crucial in all sectors of Namibia. Nevertheless, due to the crucial and demanding nature of wildlife conservation efforts which involves extended periods spent in remote areas, there is a greater male participation in these operations compared to females. However, it is important to note that this should not be construed to be suggesting that females possess lower levels of physical strength and ability when compared to males.

4.3.2 Ages of participants

The participants in this study were classified into distinct age categories, forming five groups based on their age ranges. The first group consisted of individuals aged 25 years and younger, the second group included participants aged 26 to 35 years, the third group encompassed those between 36 and 45 years old, the fourth group comprised individuals aged 46 to 55 years, and the fifth group consisted of participants older than 56 years. The purpose of providing these age groups was to ensure that all participants were adults, capable of discerning between right and wrong, and did not fall into the category of minors or pensioners. This approach sought to ensure that the study's findings were applicable to a specific demographic of mature individuals.

Figure 4.1

Ages of participants



Source: Adapted from author's initiative (2023)

Figure 4.1 illustrates the distribution of participants across six distinct age groups. Notably, there were no participants aged 25 years or below. In the age range of 26 to

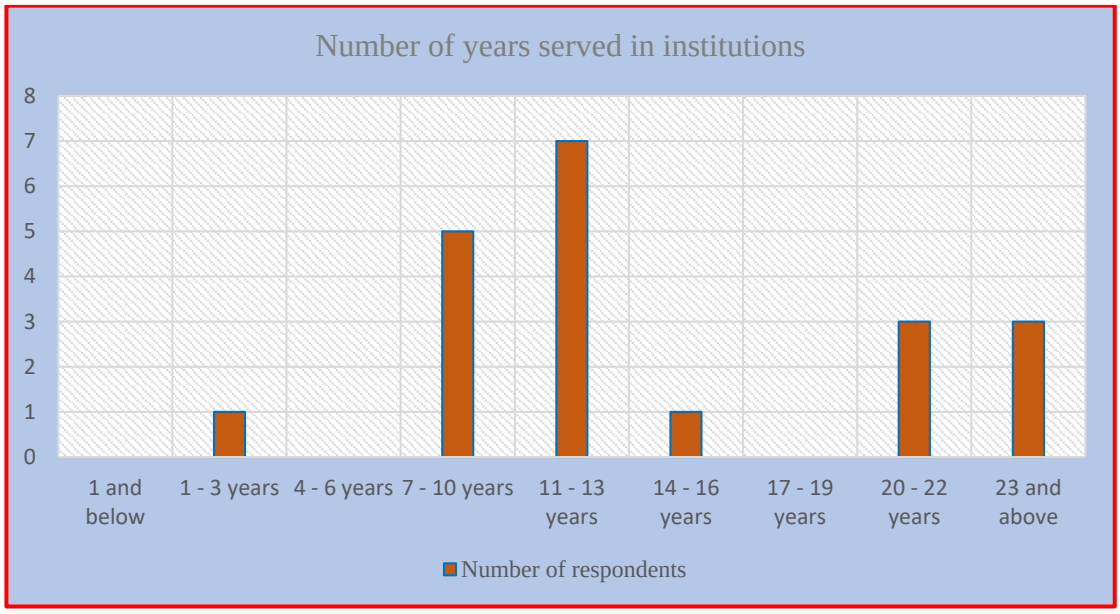
35 years, there were seven participants, while the age group of 36 to 45 years consisted of eleven participants. Additionally, there was one participant each in the age brackets of 46 to 55 years and 56 to 60 years. The study did not include any participants above the age of sixty. It is important to highlight that all the study participants fell within the age range of 26 to 60 years, meeting the criteria for government employment without any individuals below the minimum age requirement or above the age of sixty. Therefore, the study did not involve minors or older individuals as observed from the age levels of the participants. Consequently, the presented data confirms that all participants possessed the legal capacity to participate in the study, and their contributions are deemed reliable.

4.3.3 Service experience

The inclusion of the length of service for each participant in their respective institutions is vital to this study as it serves to indicate the length of period during which these individuals have acquired the necessary understanding of their institutional roles and have developed a sufficient grasp of the subject matter under investigation. The years of service have been meticulously categorised into nine distinct groups, namely: less than one year, one to three years, four to six years, seven to ten years, eleven to thirteen years, fourteen to sixteen years, seventeen to nineteen years, twenty to twenty-two years, and twenty-three years and above.

Figure 4.2

Number of years served in the ministries by participants



Source: Adapted from author's initiative (2023)

Figure 4.2 depicts that among the participants, no one had served for one year or below in their respective ministries, there was one participant who served for a period between one and three years in the ministry. The figure further illustrates that there was no individual participant who served for the period between four to six years in their respective institution. However, five participants indicated that they had served in their respective institutions for periods between seven and ten years. Participants who had served within their respective institutions for periods between eleven and thirteen years were seven, whereas, there was only one participant who had served their ministry for fourteen to sixteen years. The figure above also demonstrates that no participant had served in their respective institutions for a period between seventeen and nineteen years. However, as the data shows, there were three participants who served for periods between twenty and twenty-two years, and the other three participants had served for twenty-three years and more. The data presented in the

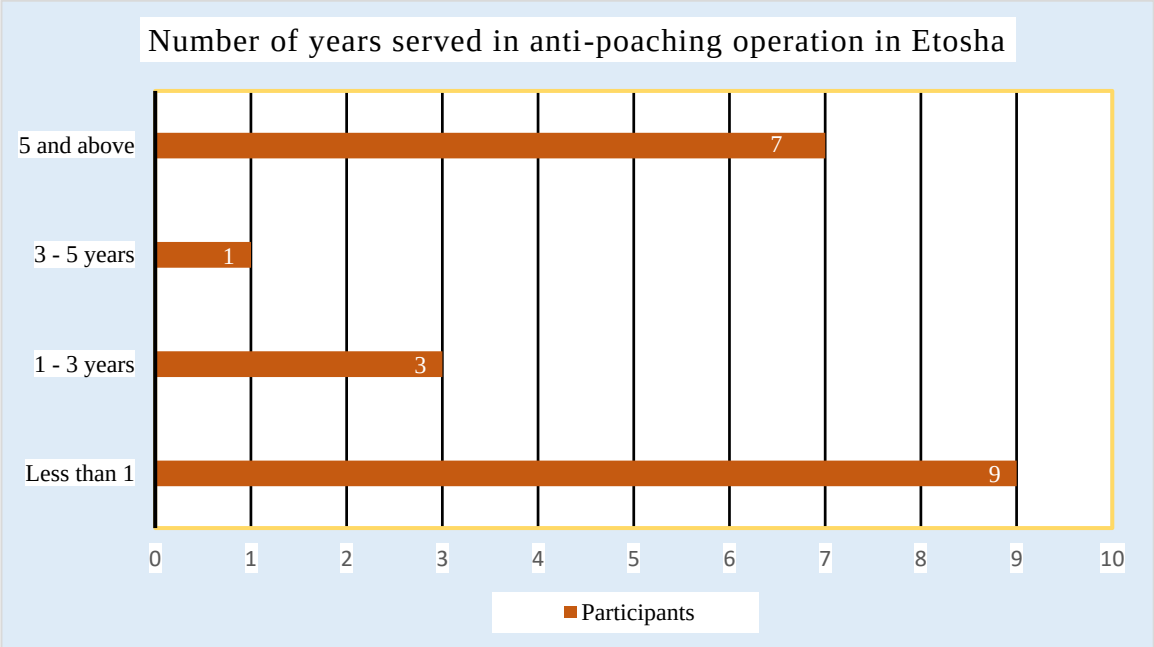
above figure demonstrates that 95% of participants have experience in their respective institutions for seven years and above. The figure shows that the majority of participants have had seven and more years of experience, which enabled them to grasp and understand the roles of their respective ministries as well as to have sufficient knowledge of the subject matter.

4.3.4 Experience in anti-poaching operations

The demographic data also includes the number of years that each participant has served in the anti-poaching operations in ENP. This variable is necessary for this study because it reveals the experience that every individual participant has acquired from the anti-poaching operation in ENP. It is generally believed that the more the period individuals have served in certain positions, the higher the knowledge they would have acquired. Inversely, the less the period an individual works in a certain position, the less experience such an individual would have gained. The numbers of years served in anti-poaching deployment in ENP are classified into four categories as follows: less than one year; between one and three years; between three and five years; five years and above.

Figure 4.3

Number of years served by each participant in anti-poaching operation in Etosha



Source: Adapted from author's initiative (2023)

Figure 4.3 shows that nine participants have been involved in anti-poaching operations in ENP for less than one year. Participants who served in anti-poaching in ENP for a period of between one and three years were three, whereas, only one participant served the anti-poaching operation in Etosha for a period of between three to five years. The figure also demonstrates that seven participants have served in anti-poaching operations in ENP for five years and above. 45% of the participants have been in anti-poaching for less than one year in Etosha, whereas, 55% of participants served for one year and above in ENP in the anti-poaching operations. The percentage variation illustrates that the majority of the participants have been involved anti-poaching operations for quite a substantial amount of time. Therefore, the periods served is testament to the fact that most of the participants have gained a wealth of

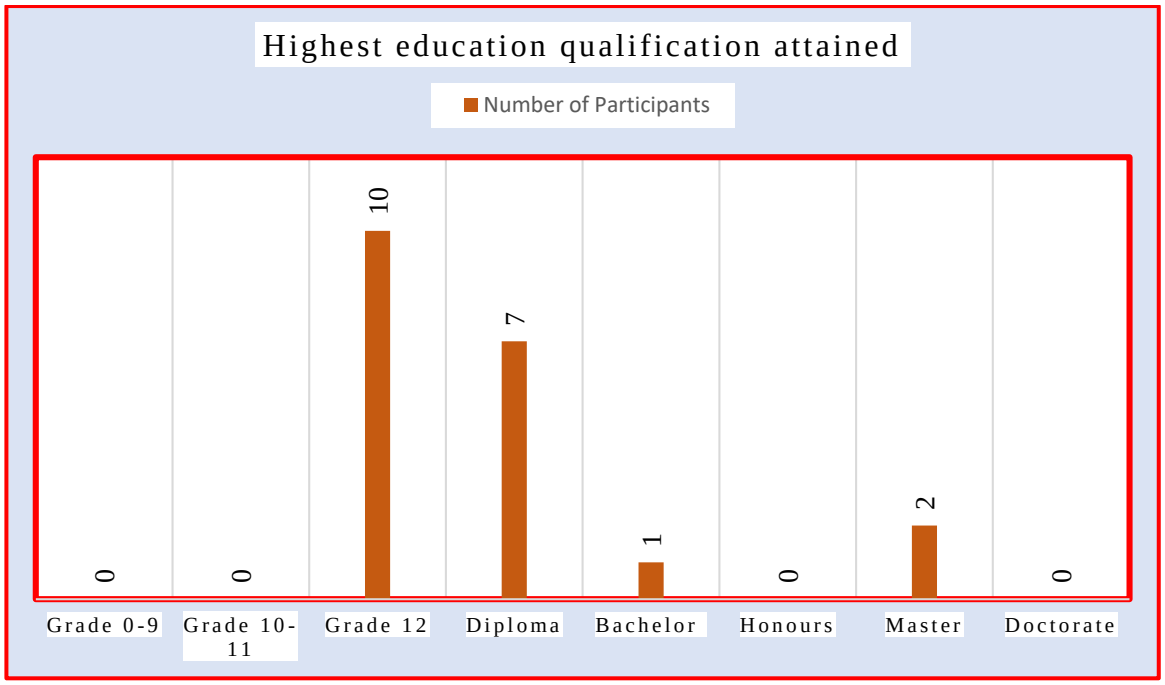
knowledge regarding anti-poaching operations, making them qualified to provide accurate data for this study.

4.3.5 Participants' qualifications

It is essential to establish the highest level of education attained by each participant. It is commonly believed that an individual's reasoning ability is determined by his or her level of education. In seeking to establish this, the current research, set up the following categories to ascertain the highest level of education: Grade 0 – 9; Grade 10 – 11; Grade 12; Diploma; Bachelor Degree; Honours/Postgraduate Diploma; Masters' Degree; Doctorate/PhD.

Figure 4.4

The highest educational qualifications each participant has attained



Source**:** Adapted from author's initiative (2023)

As demonstrated by the data presented in Figure 4.4, none of the selected participants fell in the grades 0 to 9 or 10 to 11 categories. A significant number of ten participants held a high school certificate as their highest educational qualification. Seven

participants have a diploma, while only one of the participants had a Bachelor's Degree. Furthermore, none of them had acquired an Honours Degree, whilst two participants hold Master's Degrees, and none of the selected participants held a Doctorate or PhD. Half of the participants held a high school certificate as their highest level of education, while the other half held at least a degree from a post-secondary institution. From the above statistics, it can be deduced that all selected participants acceptable educational backgrounds and that their characteristics, behaviours, and attitudes enabled them to provide qualitative descriptions in response to the research objectives/questions.

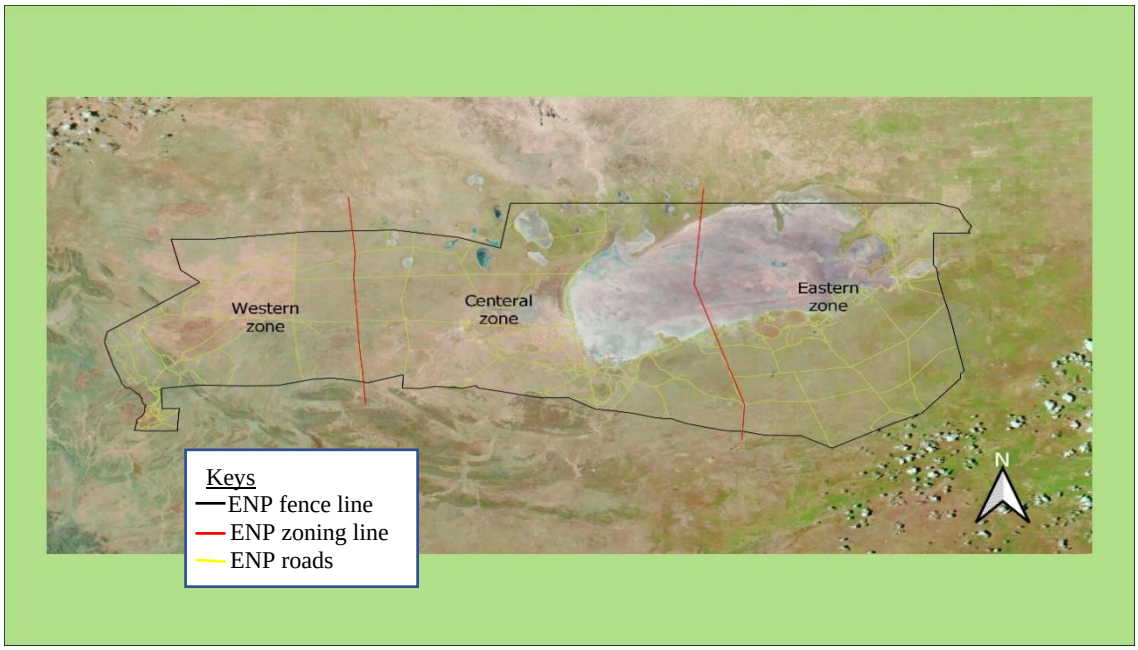
4.4 Findings

4.4.1 Zonation of Etosha National Park

ENP’s vastness made it quite challenging for the anti-poaching teams to perform their tasks effectively. For thorough and effective operations, the park has been divided into three operational zones. The Western Zone, Central Zone, and the Eastern Zone. Each zone is further divided into two sectors.

Figure 4.5

The operation zones of Etosha National Park



Source: Adapted from author's initiative (2023)

Each sector is placed under the control of the anti-poaching team which operates within its boundaries. The anti-poaching teams are actively to ensure that no poaching activities occur in their respective zones.

4.4.2 The notion of anti-poaching

The study observes that the concept of anti-poaching in ENP is crucial for preventing the extinction of endangered species and ensuring that future generations benefit from the valuable resources that such species represent. This is evident from the assertions made by P7 who asserts that;

> *"Anti-poaching efforts are essential for preserving wildlife in Etosha National Park and ensuring that future generations will be able to enjoy these valuable resources. I support government initiatives and collaborative efforts to safeguard our wildlife and the natural beauty of the park."*

The park is a government-approved location in which wild animal populations are protected to prevent their extinction and ensure that future generations can benefit from these valuable resources. Poaching, to kill or remove wildlife from ENP is illegal, unless the individual has a permit from the appropriate authority. The study also recognises that poaching does not also include the killing, capturing, or driving of domestic animals, such as cattle from their designated grazing areas without the owner's consent. Poaching can occur on private property, wildlife reserves, natural parks, and protected lands, and can also occur in rivers and the open ocean.

This is evident from P16 who indicated that;

> *"Poaching does not include the illegal killing, capturing, or driving of domestic animals like cattle from their designated grazing areas, such activities fall under the framework of stock theft. Poaching can happen anywhere, including private land, national parks, wildlife reserves, protected land, oceans and rivers."*

Anti-poaching is the direct opposite of poaching, and the government has enacted environmental laws, such as the Nature Conservation Ordinance Act No 4 of 1975, as amended in 1996. The MEFT has embarked on rhinoceros dehorning, engaged in collaborations with private organisations, sourcing funds from NGOs, conducting community awareness on the importance of wildlife, mobilising the human populations near game parks to embrace wildlife ownership, employing and training anti-poaching personnel, and deploying conservancy games.

It was established during the study that the fight against poaching in ENP is a collaborative effort, with the MEFT being the leading institution in anti-poaching operations. Secondary stakeholders include conservancies, the farmers' community, the Blue Rhino Task Force, private sectors, development partners, game farms, and

non-governmental organisations such as the World Wildlife Fund and Namibia Nature Foundation. Each stakeholder in the fight against poaching in ENP has a distinct role to play. The MEFT is tasked with preventing wildlife crime, conducting public awareness campaigns, patrolling designated areas, apprehending suspected poachers, investigating crime scenes, mobilising resources for operation, coordinating the general operation, data capturing, and updating the database. The NDF, NAMPOL, and the National Central Intelligence Services are also involved in the anti-poaching operations. The findings further indicate that the Namibian Police Force have been entrusted with securing Namibia's internal security and maintaining law and order, and are responsible for vehicle and foot patrols, conducting ambushes, manning roadblocks outside the park, stopping vehicles and searching for suspected poachers, arresting and investigating wildlife crimes. Namibia's government has made amendments to combat poaching by increasing the penalties within the provisions of the Nature Conservation Ordinance 4 of 1975, which the Office of the Prosecutor General is responsible for enforcing.

The findings regarding the concept of anti-poaching appear to concur with the World Wildlife Funds' (2020) assertion that "anti-poaching" refers to preventing the killing and removal of wild animals from their natural habitat. Therefore, it is related to the conservation of wildlife and the environment.

4.4.3 Negative effect of poaching on politics

The study established that the management of national resources is the responsibility of the government, and any blame for mismanagement lies with government leaders. The study observes that ENP as a valuable species reserve attracts both local and foreign poachers. The study observes that joint syndicates of local and foreign poachers pose a significant threat to Namibia's national security, as they may develop

the capacity to launch attacks against law enforcement or security personnel engaged in anti-poaching operations. Namibia has signed numerous treaties and agreements related to environmental protection, such as the 1992 Convention on Biological Diversity (Biodiversity Convention), the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the 1992 United Nations Framework Convention on Climate Change and the more recent Paris Agreement of 2015. Nevertheless, if poaching becomes uncontrollable, the country may lose its international reputation and result in poor international cooperation. Additionally, the presence of foreign ex-soldiers and the discovery of combat material in the park are signals of an adversary, potentially putting the lives of the local population and anti-poaching operations in danger. If the local population feels threatened by the presence of poaching syndicates, they may resort to demonstrations criticising the government for failing to provide adequate protection, culminating in distrust in the ruling party's leadership and resulting in potential commotion and despondency within communities. This is demonstrated through verbalisations from P7 who intimates that,

> *"The state is entrusted with the national wealth of the country, including its diverse wealth of fauna and flora. Any form of mismanagement thereof can taint the image of the state, lead to conflict and undermine national security."*

The study established that there is a great concern with regards to the final destinations of millions of dollars generated through illegal dealings in wild animals and wildlife products. The study proposes that governments worldwide should strengthen investigation capabilities and collaboration through Interpol to track the final destinations of such monies and identify the nature of projects funded with such ‘dirty’ money. P6 cautions in this regard that;

"Some poaching syndicates may have links with world-known hostile and rebel organisations, where millions of dollars generated through poaching and illicit trading of wildlife products are used in hostile projects such as the procurement of arms and ammunition, research and development of sophisticated war equipment, and other pyrotechnics to support rebel groups and extremist organisations that seek to disrupt international peace."

The success of such schemes may affect the political stability of targeted nations and beyond. However, as the world becomes smaller, these challenges may also affect the politics of Namibia, either directly or indirectly. Well-managed natural resources can maintain political stability, but international peace and stability can vanish in a blink of an eye when natural resources fall into the wrong hands.

These findings appear to be consistent with those of Felbab-Brown (2017), who states that illegal wildlife killing, including wild species trafficking and its associated activities, negatively affects national and international security in a variety of ways and may lead to global political instability if not aggressively addressed. Wildlife trafficking has the potential to fund criminal organisations, increase the risk of disease outbreaks, and further degrade the ecosystems on which humans rely.

4.4.4 Dynamics of poaching on wildlife and protected resources

From an environmental perspective, the well-being of living organisms takes the form of a cycle known as the food chain, which literally means that wildlife is cycle dependent as living organisms depend on one another for survival. The study recognises that every individual living species have diverse roles to play in the ecosystem as some species are surviving because of the existence of other organisms. Poaching threatens to lead to the extinction of many species in the world, hence it is a

serious challenge everywhere on the globe. “The disappearance of ancient dinosaur species from the earth occurred because of human existence. However, if we remain quiet about the poaching of animals like rhinoceroses their population will be extinct one day from this planet” According to observations made by the current study, when hunting is permitted, consideration is always taken regarding the category of animal, number of animals, gender, and time frame for such specific animals to be hunted. However, poachers do not take into account whether animals are young females that are still in the most productive years reproductively.

The study observes that the manner in which poachers kill wild animals is distressing because poachers have no time to contemplate the ages and genders of the wild animals they are killing. The study further recognises that poachers do not consider whether an animal is pregnant or has young offspring. Most times in ENP, the carcasses of mother rhinoceros have been discovered alongside those of their offspring. The indiscriminate shootings of wild animals could lead to the extinction of the most targeted species in ENP in the near future. P10 observes in this regard that;

> *"Illegal hunters disregard environmental regulations and policies, leading to a decrease or extinction of plant and animal population as poachers do not contemplate on aspects like the age of the animal, the reproductive stage or whether the animal has a young offspring".*

The study gave a series of reminders that the extinction of one population of wild animals could have negative consequences for other species, as wild animals are essential for maintaining the ecological equilibrium. It was alluded that, for example, if the populations of carnivores such as lions and cheetahs happened to decline because of poaching, the populations of herbivores will rapidly increase in ENP because there

will be insufficient predators in the wild to prey on them. The increase in the number of herbivores harms pastures, as there will be insufficient grass to feed these kinds of animals. This may lead to wild animals' mortality because of starvation.

The study further recounted that the lack of sufficient pastures may force elephants and other large mammals to migrate from ENP to the farmlands in search of food for survival. This ultimately results in such animals feeding on crops in the fields, which may result in human-wildlife conflict. Human-wildlife conflict occurs when encounters between humans and wildlife lead to negative consequences, such as loss of property, livelihoods, and even life. In addition, the study observed that large mammals such as rhinoceroses are believed to be browsers of the ecosystem, based on the manner in which they graze. Rhinos graze on shrubs and they consume kilograms of small bushes within a day in ENP. The study established that if the population of browsers diminished because of poaching the bushes will grow thicker and lead to bush encroachment, which in turn leads to poor grazing. The study also believes that Namibia's cultural values are connected to wild animals, especially among Aawambo tribes. Various clans such as; *aakwananime, aakwaanyoka, aakwamhalanga,* and *aatundu* are associated with lion, snake, elephant, and zebra respectively. If the population of such wild animals become extinct, it will have a negative effect on the future generations of those specific clans.

Some communities in Namibia receive communication messages through animals' actions and behaviours. P9 on this note provided an example of the people from the San community who translate wild animals' sounds and actions into meaningful events. *"Among the San community, the roaring of a lion, is believed to be an omen of an impending death in the community,"* P9 narrates. This is because the San perceive the roaring of a lion as mourning or death that will befall the community in a short

period to come. If poaching continues unaddressed, it may negatively affect wildlife and protected resources. These findings align well with those of Matungwa and Wawa (2021, p. 1), who assert that wildlife poaching is a global problem that has resulted in the extinction of animal populations. Similarly, World Wildlife Funds (2020) states that poaching deprives communities of their natural capital, cultural legacy, impedes sustainable economic growth and poverty alleviation, and has the potential to cause animal and plant populations to decline or become extinct.

4.4.5 The animal species that are poached mostly in ENP

ENP is believed to be one of the largest parks in Africa, housing thousands of animals of different species. Despite playing host to countless wild animal species, due to the perceived high value of certain wildlife products, these wild animals in ENP became the targets of poachers. The exorbitant prices charged on the wildlife products on the Asian black market may have led to an increase in demand, which in turn drives the upsurge of poaching incidences in ENP. In illegal Asian markets, the study established that a rhino horn is worth tens of thousands of dollars, among other products. This is observed from evidence provided by P16, who states that;

> *"Rhinos and pangolins are the most poached animals in the park due to their high demand in Asian markets, which has, in turn, increased the number of poaching incidents involving these species."*

The study further recounted that poaching in ENP is classified into two based on the different reasons for such poaching. There are poaching activities for commercial purposes, and poaching activities for subsistence purposes. Commercial poaching is referred to as the illegal killing or capturing of animals of high value from the wild, to remove animal products and trade such products illegally on domestic or international

markets. Animals that are poached for commercial purposes in ENP include the following: rhinoceros for their horns; elephants for ivory; and pangolins for their scales. In addition, leopards and lions are poached for their skins and fats, which are in high demand, mostly on the domestic market. Poachers are frequently using hunting rifles to bring down valued wildlife species.

The current study believes that rhinos are the most frequently poached of wild animals for commercial purposes in ENP. Some media outlets, such as *Business Lives of South Africa,* support the preceding statement by reporting that "Namibia rhino poaching increases by 93%, primarily in Etosha National Park". The study submits that ENP was the epicentre for rhino poaching in Namibia, where both the white and black rhino populations were under threat. A trend of poaching for subsistence purposes also exists in ENP. Subsistence poaching occurs when wild animals are illegally killed in the forest to satisfy individuals' household needs. Poaching for subsistence purposes is observed to frequently occur amongst the San community, and other communities surrounding ENP. The study further established that subsistence poachers use traditional methods such as bows and arrows, spears, assegais, traps, and snares to hunt down wild animals illegally. Bush meat is the driving force for subsistence poaching, targeting wild animals such as; Springbok, Antelope, Impala, Eland, Zebra, Steenbok, Gemsbok, and Guinea Fowls. The current study also established that Springboks, Elands, and Guinea Fowls were the most poached species by subsistence poachers in ENP.

4.4.6 NDF's intervention in the anti-poaching operation

Following the exorbitant pricing of wildlife products such as rhino horns on the Asian black market, the demand for wildlife increased massively, and the supply of such products was low. The syndicates of foreign dealers from Asia, frequently topped by

Chinese natives embarked on establishing extensive networks in search of wildlife products worldwide to satisfy the demand of such products on the Asian market (Fynn & Kolawole , 2020). It is commonly known that Africa has several precious wild animals in the world. The wildlife traffickers extended their networks to Africa, where foreign wildlife product dealers began to recruit local people to hunt and kill wild animals in exchange for money. The study narrated how the illegal hunting of wild animals for commercial purposes spread to Namibia, where many wild species were poached through collaborations between foreign illicit dealers and local poachers. Through such collaborations, ENP fell in the purview of the poaching syndicates. ENP was located and targeted by poachers because of its abundance of wildlife.

Between 2014 and 2015, poaching in ENP surged dramatically. The study observes that ENP became home to daily discoveries of carcasses for wild animals such as rhinoceros and elephants. Accordingly, the populations of rhinoceros and elephants began declining. The study narrated how poachers were moving freely in search of wild animals in the park. In certain instances, incidences of exchanges of gunfire between poachers and law enforcement officials were reported in ENP, one in which a police official was wounded by the poachers in the process. The study further established that poaching in ENP involved both local and foreign nationals from neighbouring countries such as; Angola, Botswana, Zambia, and Zimbabwe. Amongst the poachers who were arrested for wildlife related crimes in ENP, were ex-soldiers from the aforementioned countries.

The study recounted that there were also discoveries of war materials such as; sniper rifles, SKS and AK-47 ammunitions in Etosha National Park between 2014 and 2015. In addition, the study revealed that in the past, between 2014 and 2015, the relationship

turned sour between law enforcement officials and local people within areas surrounding ENP. Countless incidents of law enforcement officials being physically assaulted or nearly assaulted while on patrols by members of local communities were also recorded. The MEFT, in collaboration with the Namibian Police Force attempted different strategies to arrest the rising trends in poaching. Efforts made include the extension of patrols, the strengthening of the general operation, and researching on how other countries like South Africa and Kenya have succeeded in the fight against poaching related crimes. Despite countless efforts to suppress poaching in ENP, limited resources were noticed as one of the major challenges.

The study pointed out the following factors as the main driving forces that prompted the NDF's intervention in Etosha National Park for anti-poaching operations: the upsurge in poaching activities; the decline in the populations of rhinos and elephants; the involvement of foreigners in poaching; the involvement of ex-soldiers in poaching; the use of war material by poachers; exchanges of gunfire between poachers and law enforcement officials; harassments experienced by peace officers from the local populations; physical and verbal assaults to law enforcement officials by local people; lack of manpower for MEFT and NAMPOL; lack of capacity for field combat operations by the MEFT and NAMPOL; the need to militarise anti-poaching unit as is the case in Kenya National Parks and Kruger National Park in South Africa. These observations are also made by P20 who explains that;

> *"I strongly believe that the intervention of the Namibian Defence Force was made necessary by the growing demand for ivory and rhino horns especially in the Asian market, but the supply was low and prompted an increase in poaching and collaboration between international poachers and local individuals."* P14

adds, *"the involvement of ex-military in poaching coincided with the surge in poaching incidents due to high international demand for ivory, pangolin, and rhino horns," and that "incidents of undermining NAMPOL by individuals involved in poaching was on the rise."*

Lastly, the study alluded that, in responding to all the challenges faced by the MEFT and NAMPOL to address matters pertaining to poaching in Etosha, the NDF's intervention in ENP for the anti-poaching operations was institutionalised and came into effect in 2016.

The NDF's anti-poaching operations have significantly impacted anti-poaching efforts in ENP, resulting in increased human resources and improved wildlife protection. The presence of the NDF has supplemented the number of law enforcement officials with professional military personnel, enabling the anti-poaching patrols to cover a greater part of the park within a targeted period and dominate all previously declared poaching hotspot zones.

The presence of the NDF has spread fear among poachers, as their movements are under strict monitoring. Poaching incidences have reduced in some zones, particularly in the Central and Eastern Zones, and species like rhinos and elephants are rejuvenating in numbers. Previously, rhinos were removed from the Western Zone to safer zones, but now they are returning to their natural habitats and being spotted roaming naturally in the Western Zone.

The presence of the NDF in anti-poaching operations has led to fewer exchanges of gunfire between law enforcement officials and poachers, and more suspected poachers have been arrested. The majority of local populations living in the areas surrounding ENP have fostered cordial relations with law enforcement officials, while a small

number still support poachers. The study also highlights the importance of protecting wild animals in the environment and the determination of local people to support the anti-poaching operation to suppress poaching in the park. This is evident through verbalisations by P12 who opines that; *"The presence of the NDF has boosted manpower enabling wider coverage and deterring poachers, this has also reduced incidents of exchange of fire with poachers."* These findings seem to agree with the findings of Community Conservation Namibia (2021) who, in 2021, opined that the reduction in poaching incidences and the gradual increase in elephant and rhino population can be attributed to the NDF intervention in the ENP.

4.4.7 Anti-poaching operations arrangement in ENP

The study established that primarily, the government's goal with regards to anti-poaching operations is to stop poaching and prevent the illegal trading in wildlife products. The primary goal of the government was derived at the strategic level, where strategic decisions are made. The objective of the MEFT regarding anti-poaching operations is to protect wildlife. The ministerial objective was derived at the operationalisation level, where operation decisions are made. The study further explicated how the mission of the anti-poaching operations in ENP is to fight poaching and crimes against wildlife in the national park.

The mission of the operation was derived at the tactical level, where all tactical decisions are mapped out. The tactical level is where NDF members, NAMPOL members, and staff of the MEFT's anti-poaching unit plan the day-to-day activities. *"Here is where the real combating of poaching is happening, a level where one may experience injury from the poacher or from the rhino he is protecting"*, P15 narrates. The study established that even though the anti-poaching operation is being conducted

by teams from various government institutions with different tasks, the mission's goal is singular -combating poaching and crimes against wildlife.

The current study has established that, initially, in the early days of the NDF's intervention in ENP, each team was operating independently. However, that modus operandi ceased at a later stage due to issues of mistrust that developed amongst members of different teams. In the meantime, most, if not all, of the activities are planned and carried out jointly. Regardless of the fact that teams are operating jointly, each team is assigned specific tasks. The study stressed that the anti-poaching operation does not have a single guideline that can be used to enhance and envision the outcomes of specific tasks assigned to each team.

The operations of each team are guided by specific legislation that established the respective institution. The preceding statement means the operations of the NDF team are guided by the Defence Act and the NDF Rules of Engagement, whilst those of NAMPOL are guided by the Police Act, and so forth. The study observed that in conducting their daily operations, each team provides members that, together with members from other teams, constitute a joint team. When the joint team is pursuing suspected poachers on the run, the members responsible for tracking footprint perform such tasks diligently. When suspected poachers are approached members responsible for providing quick reaction response have to be on alert for any eventuality.

Furthermore, if poachers are being surrounded and apprehended, the members responsible for effecting the arrest are to carry out the task. The preceding statements are translated to mean that, in case of any attack by the poachers, the NDF is the one that provides a quick response in accordance with the NDF Rules of Engagement. In the event on which suspected poachers are surrounded and apprehended, NAMPOL

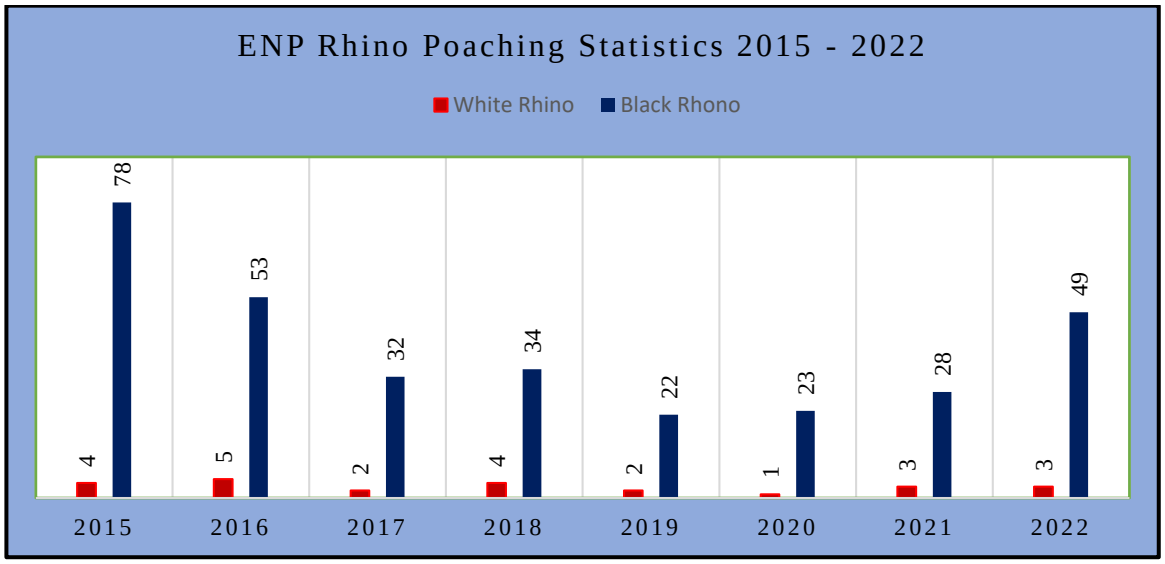
has the mandate to arrest the poachers and file charges against them in accordance with the set rules and procedures. The study recounted and observed that activities in anti-poaching operations in ENP are planned and performed jointly to ensure professionalism and transparency. This is evidenced in the assertation by P3 who opines that;

> *"various forces are operating in Etosha National Park; however, all these entities are there to carry out the state's goal of preventing anti-poaching, all responsible for performing a certain task as mandated."*

The main factor that led to the NDF's intervention in ENP for anti-poaching operations was the distressing surge in rhino poaching, and the observed rapid declines in both the black and white rhino populations. As far as the current study has established, between 2014 and 2016, poaching of the two species of the black and white rhinos was rose tremendously in ENP. Although elephants and rhino species were all under threat from poaching, the poaching of rhinos was more profound. Therefore, in assessing the poaching trends in ENP this study used the official statistics for rhino poaching incidents. The study assessed the statistics for both white and black rhinos poached in Etosha National Park from 2015 to 2022.

Figure 4.6

Etosha National Park Rhino Poaching Statistics 2015 -2022



Source: Adapted from official statistics (2023)

Rhino poaching poses a serious challenge in ENP. The statistics above illustrate that in 2015 alone ENP lost 78 heads of black rhinos and 4 white rhinos to poachers. Following the introduction of the NDF intervention in ENP for anti-poaching operations, the number of black rhinos poached in Etosha reduced from 78 in the previous year (2015) to 53 rhinos in 2016, a reduction of 25 rhinos which represent a 31.2% decrease. However, the number of white rhinos poached increased from 4 to 5 rhinos in 2016, which represents a 25% increase.

In 2017 the number of black rhinos poached was 32, a decrease of 21 from 53 rhinos poached in 2016, which represents a 39.62% decrease, while the number of white rhinos poached in 2017 dropped to only 2 rhinos. 34 black rhinos were killed by the poachers in 2018, this accounts for an increase of 2 black rhinos when compared to the 32 black rhinos poached in 2017. The number of white rhinos poached in 2018 increased to 4 rhinos an increase of 2 from the 2 white rhinos poached in 2017. In

2019, ENP lost 22 black rhinos to poachers. This shows a decrease by 12 black rhinos in comparison to 34 rhinos killed in the previous year, which represents a 35.30% decrease. Two (2) white rhinos were poached in 2019, which accounts for a decrease by 2 from 4 rhinos poached in 2018, and this represents a drop by 50%.

ENP lost 23 black rhinos to poachers in 2020, an increase of 1 rhino compared to the 22 black rhinos poached in 2019, which represents a 0.43% increase. Comparatively, there was only one white rhino poached in 2020. In 2021, the number of black rhinos poached in Etosha stood at 28 rhinos, while that of white rhinos were 3. This represents an increase of 17.90% in black rhino poached in 2021, and an increase by 67% in white rhinos poached. In 2022, 49 black rhinos lost their lives to poachers, while 3 white rhinos were poached in ENP. The 49 black rhinos poached represent a 75% increase, whereas that of 3 white rhinos represents a 0% increase. The statistics presented illustrate that the poaching of black rhino was very high before the introduction of the Namibian Defence Force in ENP for anti-poaching operations. However, immediately after the NDF intervention, the poaching of black rhinos declined drastically. Another significant drop in the trend for black rhino poaching was recorded in 2017. However, in 2018 the number of black rhinos poached went up for the first time despite the NDF intervention. In 2019 the number of black rhinos poached dropped significantly, only to rise again in 2020, 2021, and 2022 when steep increases were recorded.

The study observes that the poaching of black rhinos in ENP decreased in 2016. However, from 2016 to 2021, it was fluctuating, and increased significantly in 2022. The study further established that the poaching of white rhinos in ENP has been fluctuating between 5 and 1 from 2015 to 2022. It is important to mention that the study observed that white rhinos were hunted to extinction in Namibia during the 1880s. All presently occurring populations originate from re-introduced stock, mainly

from South Africa. White rhinos' population is small and they are rare in ENP, that is the reason why ENP has lost only 24 white rhinos, while 319 black rhinos were poached during the period between 2015 and 2022. In total, ENP lost 343 heads of rhinos to poachers within a period of eight years.

4.4.8 Law enforcement collective approach

Before the NDF intervention, law enforcement members experienced physical and verbal assaults, death threats, and harassment in communities near ENP. They were perceived as members of the cruel forces that had used fatal force against civilian population during the South African apartheid regime in Namibia known as "Omakakunya", by the public. In return, law enforcement officials claimed communities in the vicinity of ENP were infiltrated by poachers. P7 observes that;

> *"In some areas, like Onanke village in the Oshikoto region, villagers believed wild animals were a blessing from nature and that they should benefit from them"*. P7 added that, "*In other areas, like Uutsathima, Onamatanga, and Amalika, poachers were protected."*

In some cases, villagers ganged up in mobs to stop law enforcement officials from effecting arrests.

The study established that law enforcement officials were alerted during Personal Safety and Security Training, to avoid buying food or drinking stuff from cuca shops to avoid food poisoning incidents. Currently, cooperation between law enforcement officials and local people has improved and they have become more supportive. However, this cooperation is dependent on the community's understanding of the environment and the need to protect wildlife. A few individuals within these communities, however, have been observed to still be against wildlife protection. The

majority of the local communities, apart from a few which are still harbouring poachers, are supporting efforts by the law enforcement officials. Local people have provided accurate information that had in many instances led to the arrests of suspected poachers. The farmers' community in the Eastern Zone of ENP has established a network to combat poaching and share information on suspected poachers. The study also commends the cordial cooperation between the farmers' communities in the eastern part of ENP, where improvements in relations have been noticed.

4.4.9 Community based anti-poaching strategy

Community has the significant a role in environmental preservation. This is the evidence from the assertions of P5 who observes that; *"In many cases, poachers were not alien to villagers, especially in the communities surrounding the Western Zone of ENP, poachers were from these local communities."* The study established that poachers are heads of families, family members, breadwinners, relatives, friends and respected people in those communities. Poachers move freely, operate freely, and sneak into the ENP to poach and return freely to these communities without being reported to the authorities. Poachers felt secure because they were within their territories, socialising with their people. This is evident from the assertations of P16 who observes that;

> *"In most incidences, poachers and their associates are not strangers to the community these are family members, friends and locals that live and move among the local inhabitants."*

The study recounted that there were some places in the Western Zone of Etosha National Park where one could find entire villages occupied by poachers. P8 explains that;

> *"In places like Onamatanga, Amalika, and other small villages in the surroundings of the aforementioned places, poachers were harboured and concealed by their communities."*

The study observed that even small children in those villages were reluctant to reveal the presence of poachers in the community. Poachers who were terrorising the Western Zone of ENP were coming from as far as Kamanjab, Opuwo, Ruacana, Okahao and Oshakati. However, they have been sheltered, accommodated, and given all forms of support by the villagers in villages surrounding ENP.

Furthermore, the study recounted the situation in the Western Zone has currently improved for the better. P13 narrates that; *"Through the influence of community leaders, the local populations began to isolate themselves from poachers."* For example, the local people have begun reporting information regarding poaching to the authorities. The circumstances in the Central and Eastern Zones are quite similar to those above, reported for the Western Zone. In the Central Zone of ENP, especially to the north of the park where the local people were harbouring poachers in the past, the locals have had a change of mindset and have been reporting poachers' activities to the authorities. The study established that the community living adjacent to ENP's Eastern Zone has no associations with poachers. This community is conducting patrols along the corridors, searching for poachers, because in most cases if poachers fail to kill wild animals they divert their missions from poaching to stock theft.

The farmers' community in the East of Etosha lost their livestock at the hands of failed poachers. The study revealed that in some communities surrounding ENP local people have cordial relations with poachers, while in others, poachers are being targeted by local people.

4.4.10 Anti-poaching challenges in Etosha National Park

The study highlights the challenges faced by the anti-poaching unit in combating poaching in ENP, despite the deployment of soldiers. The lack of human resources, vast terrain, mountainous areas, dense bushes, and dense vegetation makes it difficult for the unit to provide wildlife protection in all corners of the park. The rainy season also makes certain areas no-go zones for patrols, making them vulnerable to poachers' attacks. Improper control at all entry posts and the falling apart fencing perimeters further hinder the anti-poaching operations. The flying of private drones over certain parts of the park, particularly in the northern parts of the Central and Eastern Zones, further exacerbates the problem. The possession of weapons of war and unlicensed weapons by poachers presents another challenge to anti-poaching operations. The involvement of foreign nationals and ex-military persons in poaching activities also poses a significant challenge to anti-poaching operations. The exchange of gunfire between law enforcement officials and poachers also poses a challenge to peace officers. This is evinced through the verbalisations of P1 who believes that;

> *"Protecting wildlife in the park is hard because there are no enough people, the land is big, it rains a lot, there are private drones, people have guns, foreigners are involved, and there have been firefights with law enforcement."*

Poachers who are released on bail, have on several occasions, posed a significant threat to the operation. Offenders may plan to harm or shoot law enforcement officials who arrested them before, evading trial and evading court proceedings. Additionally, habitual offenders or regular poachers who do not respect bail conditions often commit offences of the same nature while on bail, hindering progress and the achievement of set goals. The study also highlights the lack of laws protecting law enforcement officials in the event of poaching-related incidents. Although there are no precise legal

instruments enacted by the government to protect members of anti-poaching operations, the NDF Rules of Engagements cover NDF members. The cordial cooperation between community members and poachers remains a significant challenge in anti-poaching operations. In-house challenges include a shortage of transport, inadequate communication network coverage, financial support, and contingent funds for members of the public who may provide valid information that may lead to the arrest of persons involved in poaching activities. Addressing these challenges promptly will help combat poaching in Etosha National Park and ensure an end to poaching in the park. This is evident in the words of P19 who asserts that;

> *"Letting poachers go free on bail is a big problem for us. They could hurt officials and continue poaching. Also, the lack of laws to protect anti-poaching officials, a lack of transportation, problems with communication, and a lack of funding for informants make it harder to fight poaching effectively."*

4.4.11 Effective strategies that can be implemented to reduce poaching

The MEFT has revised its National Strategy for Wildlife Protection and Law Enforcement for 2021-2025, but the strategy has not yet been fully implemented. The study recommends the full implementation of the Revised National Strategy, emphasising the importance of indigenous knowledge of wildlife and involving communities surrounding ENP in the fight against poaching. These communities have extensive knowledge of the grazing areas and habits of the species most frequently poached. The study also suggests the establishment of a contingent fund to reward public information on poaching that may lead to the arrest of poachers, which will be used to hire informants in communities bordering the park.

The study also advocates for the establishment of a fully-fledged Anti-Poaching Unit within the MEFT, with personnel trained in field operations, administration, investigation of wildlife-related crimes, and courtroom presentations. The unit should include both ground and aviation components for air patrols and park surveillance. The NDF should be tasked with training the Anti-Poaching Unit's personnel. The study also recommends rehabilitating habitual poachers and a longer intensive rehabilitation services for wildlife crime offenders in order to ensure a comprehensive adherence. It also recommends treating wildlife-related offences differently and avoiding bail for suspected poachers. This is demonstrated by P3 who submits that;

> *"In my opinion, the urgent establishment of a fully-fledged Anti-Poaching Unit within the Ministry of Environment, Forestry, and Tourism is needed." Field operators and crime investigators should be well-trained. Park surveillance requires both aviation and ground components. The Namibian Defence Force could train this crucial unit's personnel. Wildlife crime offenders should be severely punished. I support denying poachers bail and treating wildlife offences differently."*

Poaching in ENP is primarily due to the demand for wildlife products, and the study suggests addressing the underlying causes that motivate people to poach. It is essential to prohibit the use of unidentified drones for aerial surveillance, use technological mechanisms to intercept drones, and ensure proper control measures at entry points. The study also recommends the repairing and fortification of fencing perimeters, procuring vehicles, procuring fuel for ground and air mobility, securing communication equipment and providing for the welfare of anti-poaching personnel. Additionally, the study recommends installing hidden surveillance cameras in areas where poaching occurs frequently.

4.5 Summary

This chapter analysed data and the research results from 20 participants responding to the questions on the dynamics of the deployment of the NDF in anti-poaching operations in ENP. The park is divided into three zones, with each comprised of two sectors in order to ensure thorough operations. Poaching is the illegal killing of wild animals, while anti-poaching aims to prevent the illegal hunting and killing of wildlife. The improper management of poaching activities negatively impacts the country's political stability and international peace. The most common poached animals, as demonstrated from the results from the data collection exercise are rhinos.

The NDF intervention in ENP was prompted by a surge in rhino poaching as well as a rapid decrease in rhino species populations. The anti-poaching efforts require coordinated efforts from various stakeholders. The poaching of black rhinos decreased significantly after the NDF intervention, however, from 2017 to 2022, the poaching statistics of black rhinos fluctuated. Between 2015 and 2022, there were 343 black and white rhinos poached in the park. Some communities in the vicinity support law enforcement officials, while others support poachers. The NDF intervention has improved the situation in the park, but challenges remain and strategies need to be devised and implemented to prevent poaching. The next chapter concludes, summarises, and provides recommendations for strategies for the prevention of poaching activities in ENP.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a comprehensive summary of the study, including highlights of the key findings, their implications, and the conclusions drawn from the data analysis and interpretation. In addition, it provides essential recommendations for mitigating and preventing incidents of poaching within ENP.

5.2 Summary of key findings

The summary of key findings is presented in line with the objectives of the study as set out in Chapter 1.

5.2.1 Objective 1: To determine what the notion of anti-poaching entails

The study emphasises that the killing or removing wildlife from ENP or its natural habitat is strictly prohibited and punishable by law, unless such activities are authorised by a valid permit from the appropriate authority. The term "poaching" was defined throughout the study as the illegal hunting of wildlife in its natural habitat. On the other hand, "anti-poaching" refers to an organised effort to combat poaching. These efforts include the formulation of anti-poaching policies, the engagement of law enforcement officials to enforce these policies, the coordination of anti-poaching operations with relevant stakeholders, the provision of financial resources, and the provision of technical support.

5.2.2 Objective 2: To determine the effect of the NDF intervention made in Etosha

The findings of the study revealed a concerning trend in the poaching of black rhinos in ENP. Before the deployment of the NDF in 2015, the poaching rate of black rhinos was alarmingly high. However, following the NDF's intervention in anti-poaching efforts, black rhino poaching decreased significantly in 2016. Consequently, the poaching of black rhinos in the park fluctuated in number from 2017 to 2022. Throughout this period, a total of 343 black and white rhinos were poached in ENP.

5.2.3. Objective 3: To determine strategies that can be employed to curb poaching in the Etosha National Park

The study suggests the full implementation of the MEFT's Revised National Strategy on Wildlife Protection and Law Enforcement. The study also suggests the establishment of a fully-fledged Anti-Poaching Unit under the MEFT. It also advocates, among other suggestions, the renovation and maintenance of the fencing perimeter of ENP and its electrification.

The study further suggests collaborations with stakeholders (law enforcement), by so doing anti-poaching initiatives can benefit from skills, training, information and data integration. The study also suggests community-based anti-poaching strategies which give the community a sense of ownership and responsibility for wildlife conservation. The use of technology is another key strategy. Key among this is the employment of drones which can be used to monitor and collect information from vast areas of the park.

5.3. Conclusion

The study of the dynamics of the NDF's intervention in ENP was conducted to establish/examine the contribution of the NDF to the anti-poaching operations. Based on the findings, the following conclusions are drawn.

To determine what the notion of anti-poaching entails

In fact, the study concludes that the killing or removing flora and fauna from its natural habitat is strictly prohibited and punishable by law, unless such activities are authorised by a valid permit from the appropriate authority. The study also concludes that the term "poaching" is defined as the illegal hunting of wildlife in its natural habitat. On the other hand, "anti-poaching" refers to an organised effort to combat poaching. It further concludes that anti-poaching efforts are essential for preserving wildlife in Etosha National Park and ensuring that future generations will be able to enjoy these valuable resources.

To determine the dynamics of the NDF intervention made in Etosha

The study concludes that, before the NDF intervention, the poaching of rhinos was very high. It concludes in this regard that in 2015 alone 82 rhinos were poached. By 2016, when the NDF was deployed in Etosha National Park the number decreased to 58 rhinos. The study concludes that in 2017, the number of rhinos poached decreased again to 34. Between 2019 and 2022, the number of rhinos poached has been fluctuating between 24 to 52. The study concludes that the NDF intervention in anti-poaching has resulted in a decrease in rhino poaching between 2016 and 2022, with some fluctuation recorded between 2019 and 2022, which require investigation.

To determine strategies that can be employed to curb poaching in the Etosha National Park

The study concludes that there is a need for the full implementation of the MEFT's Revised National Strategy on Wildlife Protection and Law Enforcement. The study also concludes that poaching can only be fought siginificantly through the establishment of a fully-fledged Anti-Poaching Unit under the MEFT. It also concludes that, the renovation and maintenance of the fencing perimeter of ENP and its electrification may stop poachers to enter freely in the National Park. The study further concludes that collaborating anti-poaching initiatives between stakeholders (law enforcement) have benefits ranging from skills, training, information and data integration. The study also concludes that community-based anti-poaching strategies give the community a sense of ownership and responsibility for wildlife conservation. Finally, the study concludes that the use of technology such as the employment of drones which can be used to monitor and collect information from vast areas of the park as another key strategy.

5.4 Recommendations for actions

Based on the research findings and conclusions, this study offers the following recommendations to in order to effectively ensure that ENP is free from poaching:

- The government is to provide resources for anti-poaching operations including the establishment of a fully-fledged Anti-Poaching Unit in the paramilitary form under the MEFT. The Unit should recruit youth, mostly from the community surrounding ENP.
- The MEFT should consider repairing and fortifying the ENP perimeter fence as well as electrifying the fence, especially in the hotspot zones.

- The MEFT should construct permanent monitoring bases 5km to 7km after one another along the perimeter fence of ENP, to enable the detection of poachers' movements.
- The MEFT should ensure proper access control at all entry posts to the ENP in order to prevent the movement of prohibited items into and out of the park.
- The K9 Unit must be expanded and, if possible, there must be a sniffing dog at each entry point to ENP.
- The MEFT should consider the installation of hidden surveillance cameras at reasonable distances within the poaching hotspot areas which are to be monitored by a 24-hour' operation centre.
- The government should procure long-range drone cameras such as DeltaQuad Pro # VIEW, and the Namibia Civil Aviation Authority (NCAA) should allow a conducive operational environment in ENP.
- The NDF and the NAMPOL should extend their period of operation and if possible increase the strength of their members in ENP.

5.5 Recommendation for further studies

Based on the research findings and conclusions, this study offers the recommendation that other scholars should investigate the cause of the fluctuation in the number of rhinos poaching in ENP between 2019 and 2022.

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APPENDICES

APPENDIX A: ETHICAL CLEARANCE CERTIFICATE

UNAM
UNIVERSITY OF NAMIBIA

ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: SOS-0051 **Date: 12 October 2022**

This Ethical Clearance Certificate is issued by the University of Namibia Ethics Committee (REC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the ethics committee.

Title of Project: THE IMPACT OF NAMIBIAN DEFENCE FORCE INTERVENTION IN ANTI-POACHING OPERATIONS: THE ETOSHA

Student: PETRUS GEORGE KORNELIUS

Student Number: 201601650

Supervisor(s): Dr. PILISANO MASAKE
Mr. MUMBA MAHELA

Centre for Research Services

Take note of the following:

1. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the ethics committee. An application to make amendments may be necessary.
2. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the ethics committee.
3. The Principal Researcher must report issues of ethical compliance to the ethics committee (through the Chairperson) at the end of the Project or as may be requested by the ethics committee.
4. The ethics committee retains the right to:

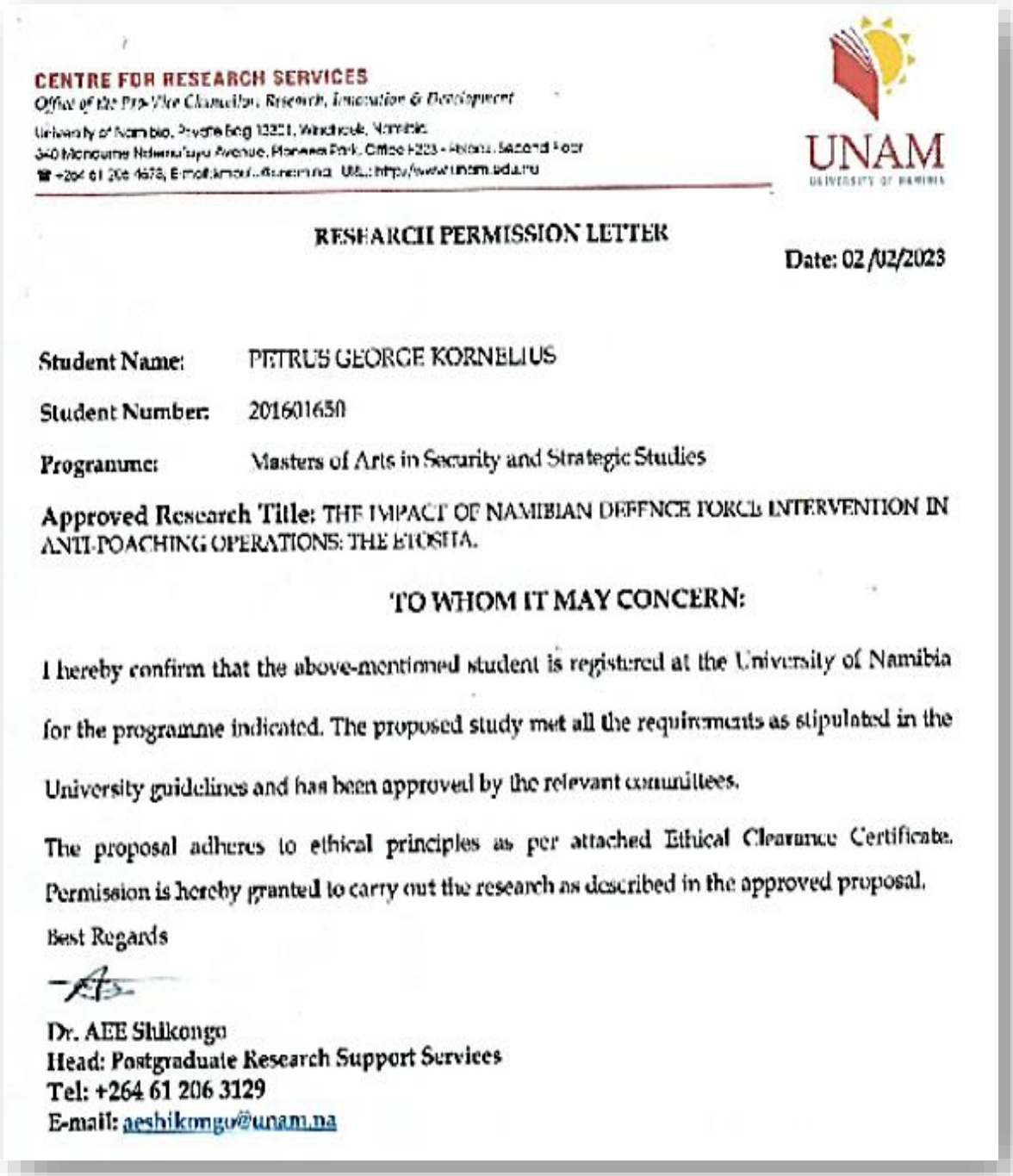
i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
ii) Request for an ethical compliance report at any point during the course of the research.

The ethics committee wishes you the best in your research.

Dr. Zivayi Chiguvare (Chairperson Ethics Committee)

Prof. Davis Mumbengegwi (Head, Multidisciplinary Research)

APPENDIX B: RESEARCH PERMISSION LETTER



CENTRE FOR RESEARCH SERVICES
Office of the Pro-Vice Chancellor, Research, Innovation & Development
University of Namibia, Private Bag 13301, Windhoek, Namibia
340 Mandume Ndemufayo Avenue, Pioneers Park, Office H223 - Hosea, Second Floor
☎ +264 61 206 4678, E-mail: kmout...@unam.na URL: http://www.unam.edu.na

UNAM
UNIVERSITY OF NAMIBIA

RESEARCH PERMISSION LETTER

Date: 02/02/2023

Student Name: PETRUS GEORGE KORNELIUS

Student Number: 201601630

Programme: Masters of Arts in Security and Strategic Studies

Approved Research Title: THE IMPACT OF NAMIBIAN DEFENCE FORCE INTERVENTION IN ANTI-POACHING OPERATIONS: THE ETOSHA.

TO WHOM IT MAY CONCERN:

I hereby confirm that the above-mentioned student is registered at the University of Namibia for the programme indicated. The proposed study met all the requirements as stipulated in the University guidelines and has been approved by the relevant committees.

The proposal adheres to ethical principles as per attached Ethical Clearance Certificate. Permission is hereby granted to carry out the research as described in the approved proposal.

Best Regards

Dr. AEE Shilkongo
Head: Postgraduate Research Support Services
Tel: +264 61 206 3129
E-mail: aeshilkongo@unam.na

APPENDIX C: AUTHORIZATION OF RESEARCH PROJECTS

NCRST

AUTHORIZATION OF RESEARCH PROJECTS

Authorization is hereby granted in terms of Section 21 of the RST Act No. 23 of 2004, to:

Name: Petrus George Kornelius

Address: P.O. Box 97657, Maerua Park,
Windhoek, Namibia

Coworkers: N/A

Certificate Number (if applicable): RCIV000022018 **Authorization No:** 202304032

Type of Research:
Non- Commercial research and the use of resources be limited to what is in the proposal.

Title of Research Authorized:
The impact of Namibian Defence Force intervension in Anti-Poaching operations: A case study of Etosha National Park (2016 - 2022).

Locality:
Etosha National Park.

Duration: 13 April 2023 - 30 April 2024

Research / Sample Collection Conditions:
See the research conditions on the next page.

Yours sincerely,

National Commission on Research Science & Technology
14 APR 2023
P/Bag 13253
Windhoek, Namibia

Prof. Anicia Peters
Chief Executive Officer

Head Office:

Innovation Hub:

APPENDIX D: APPROVAL FOR DATA COLLECTION (NDF)

NAMIBIAN DEFENCE FORCE

Tel: (061) 204 9111
Fax:: (061) 204 2124
E-mail Address: cdefence@mod.gov.na

Chief of the Defence Force
Private Bag 13307
WINDHOEK

Enquiries: Air Cdre RHB Muhenje x2802

29 May 2023

Our Ref: CDF/3/2/5/14 Your Ref:

See Distr

RE: APPROVAL TO CONDUCT AN ACADEMIC RESEARCH

1. The student 17157124 Col Petrus George Kornelius, student number: 201601650, studying at the University of Namibia, towards a Master of Arts in Security and Strategic Studies, is hereby granted permission to conduct an academic research at the Etosha National Park.

2. The research topic concerned is titled: **''The Impact of the Namibian Defence Force's Intervention in Anti-Poaching Operations: A Case Study of Etosha National Park (2016-2022).''**

3. Therefore, render him your support in this regard especially in the area where our internal information is not highly classified. This permission does not allow in any form, hard or soft to be published or acquired through your research, without obtaining prior authorisation from my office.

4. Attached hereto, are the supporting documents from the institution as a proof of study.

REPUBLIC OF NAMIBIA
MINISTRY OF DEFENCE
2023 -05- 29
CHIEF OF THE DEFENCE FORCE

MK PINEHAS 'G.C.O.E' ''psc' ''BCom'' ''MBA''
CHIEF OF THE DEFENCE FORCE: AIR MARSHAL

VKK/GS

Enclosures: a. Letter to CDF (from the Institution)
b. Research Proposal
c. Research Questionnaires
d. Research Timetable Programme
e. Ethical Clearance Certificate

All official Correspondence must be addressed to the Chief of the Defence Force

APPENDIX E: PERMISSION TO CONDUCT RESEARCH (NAMPOL)

POL 716

REPUBLIC OF NAMIBIA

Namibian Police Force

MINISTRY OF SAFETY AND SECURITY

Tel. No: (+264 61) 209 3111
Fax: No: (+264 61) 220 621

OFFICE OF THE INSPECTOR-GENERAL
Namibian Police Force
Private Bag 12024
Ausspannplatz
WINDHOEK
Namibia

CONFIDENTIAL

Enquiries: Comm. Mafwila/Insp. Namunyakwa

Our Ref.:
Your Ref.: 8/3/1

21 February 2023

Mr. P.G. Kornelius
P.O. Box 97657
Maerua Park
WINDHOEK

Dear Sir

REQUEST FOR PERMISSION TO CONDUCT RESEARCH: MR. P.G. KORNELIUS: SCHOOL OF MILITARY SCIENCE, UNIVERSITY OF NAMIBIA

Your letter dated 3 February 2023 regarding the above subject matter is hereby acknowledged.

Your request to conduct an academic research study in the Namibian Police Force, Etosha National Park titled: ***"The Impact of the Namibian Defence Force's Intervention in Anti-Poaching Operations: A Case study of Etosha National Park (2016-2022)"*** is hereby **approved.**

Therefore, you are urged to ensure that information that will be provided to you will be treated with high level of confidentiality and will not be used for any other purpose except for only this academic research.

Your interest and willingness to carry out a research study within the Namibian Police Force is highly appreciated. It would be appreciated if the final research paper could be shared with Human Resources Directorate, National Police Headquarters.

Thanking you in anticipation.

Yours sincerely,

NAMIBIAN POLICE WINDHOEK 21 FEB 2023 INSPECTOR-GENERAL

LT-GEN
J. S. SHIKONGO
INSPECTOR-GENERAL: NAMIBIAN POLICE FORCE

APPENDIX F: PERMISSION TO COLLECT DATA (MEFT)

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

Tel: (00 264) 61 284 2111
Fax: (00 264) 61 232 057

Cnr Fidel Castro &
Dr Kenneth Kaunda Strct
Private Bag 13306
Windhoek
Namibia

Enquiries: B. Kotting

Mr. P. Kornelius
P. O. Box 97657
Maerua Park
WINDHOEK

1 June 2023

Dear Mr. Kornelius,

RE: PERMISSION TO COLLECT DATA FROM STAFF OF THE MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM ANTI-POACHING UNIT IN ETOSHA NATIONAL PARK

You are hereby granted permission to interview MEFT WPS staff for the purpose of your research, provided that some of the questions are removed from the questionnaire due to their sensitive nature:

- Question 10: How often do you conduct operation in your respective zone?
- Question 12: In your own opinion, do you think there are members of NDF, Nampol or MEFT that are working together with poachers?
- Question 13: Do you think residents in Etosha National Park are aiding poachers?

The results of this study should be used for academic purposes only and be made available to the Director of DWNP. A copy of the final thesis should be shared with the Etosha Ecological Institute.

You are expected to report to Ms. Claudine Clocte, head of the Etosha Ecological Institute in Okaukuejo, upon your arrival in the park so that she can review the questionnaire and issue you with a free entry permit to the park for the duration of your stay.

Yours sincerely,

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM
Director
2023 -06- 01
Private Bag 13306
Windhoek
DIRECTORATE OF WILDLIFE AND NATIONAL PARKS

Bennett Kahuure
Director: Wildlife and National Parks

"Stop the poaching of our rhinos"

All official correspondence must be addressed to the Executive Director

APPENDIX G: FREE ENTRY PERMIT TO ETOSHA NATIONAL PARK

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

Directorate of Wildlife and National Parks

FREE ENTRY PERMIT TO ENTER NATIONAL PARK

Name	P. G. KORNELIUS (ID 74042910017)
Residential Address	Erf 1012, Ceona Village, Okahandja
Postal Address	P.O. Bo 97357, Moreua Park, Windhoek

Permission is hereby granted in terms of the Nature Conservation Ordinance, 1975 (Ordinance 4 of 1975), as amended:

To enter the Etosha National Park for research purposes.

Vehicles: N 3 3C

Valid from: ...18/06/2023...to...21/06/2023

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

Deputy Director N.J. IIPINGE:

ISSUING OFFICER (NAME, POSITION AND SIGNATURE)

UNDER THE AUTHORITY OF THE MINISTER IN TERMS OF SECTION 78(1) OF THE NATURE CONSERVATION ORDINANCE, 1975 (4 OF 1975), AS AMENDED

Conditions

It is required that you:

a) Be in possession of an unexpired or lawful firearm
b) Bring into the Park any pets, domestic or otherwise;
c) Leave a road camp before sunrise or reach it after sunset, or cross the borders of the Park, between sunset and sunrise;
d) Make fires at places other than the officially designated fire places or make excessively large fires
e) Stay overnight at any place other than a rest camp;
f) Throw away burning or smouldering objects or leave them at places where they may ignite something;
g) Drive at places other than roads marked by official road signs
h) Kill, injure or molest any state bird or wild animal;
i) Pick, collect, uproot or disturb any flower, annua, herb or any other plant
j) Damage or spoil any object in the park;
k) Leave the road camp in any other way than in a vehicle, or leave or hang out from the vehicle in any other place than in a rest camp or an assigned camping site;
l) Throw away refuse or rubbish, except at places provided for this purpose
m) Make a noise which may disturb other people
n) Drive or park in the Park in such a way that it may constitute a nuisance, disturbance or inconvenience to other people, or drive faster than the official speed limit of 60 km/h;
o) Enter the Park in an open vehicle or on a deck of a motor truck not fitted with a grid cage or other effective protection;
p) Ignore the lawful instructions of MET Park officials;
q) To hitch-hike;
r) To use the tourists' facilities, i.e. swimming pool etc

Arrival in the Park must immediately be reported to the nearest Park Management Office.

Your visit to this Park is at your own risk and the Ministry of Environment, Forestry and Tourism will not be held liable for any injuries, damage or losses you or your possessions may sustain.

All other park rules and regulations must be adhered too.

Dates for which the permit is granted must be clearly adhered too.

APPENDIX H: INTERVIEW GUIDE

MASTER OF ARTS IN SECURITY AND STRATEGIC STUDIES

Researcher: Petrus George Kornelius

Contact number: +264 812440811

email: korneliuspetrusgeorge3@gmail.com

Supervisor: Dr Pilisano Masake

INFORM CONSENT

Dear Participant

As a participant required to participate in this study. You are required to understand the purpose of the study and what the study will involve. You are therefore required to acquaint yourself with the following information. The study is titled; dynamics of Namibian Defence Force intervention in anti-poaching operations of Etosha National Park (2016 -2022).

The study will use a semi-structured interview for data collection. The semi-structured interview is designed to take as little time as possible, hence, it will be short and brief. Kindly note that your participation is voluntary, and you can withdraw from participating in the study anytime you wish to do without any harm.

All information provided will be treated with utmost confidentiality and anonymity will always be granted as you are not allowed to indicate your name on the interview guide. Please ensure that you answer all questions honestly and based on your experience.

In case of any query, do not hesitate to contact the researcher on the contact details provided above.

I have read and understood the information provided above. I understand that my participation is voluntary, and I can withdraw anytime without harm. I further

understand that information provided will be treated with confidentiality. I therefore voluntary agree to participate in this study by placing my signature underneath.

Participant's_____ Date_____

Researcher's Signature_____ Date_____

Semi-structured interview

Please answer all questions truthfully in the space provided

Section A: Demographic information

Please fill in the following

1. Your gender _____
2. Department _____
3. Age group Below 25 ____, 25 – 35 years ____, 36 – 45 years____, 46 – 55 years____ , 56 and above years____
4. Tenure in anti-poaching_____

Section B: The notion of anti-poaching

5. In your own understanding, do you understand what anti-poaching entirely means?

Yes __

No __

6. Does poaching negatively impact political stability if not properly managed? If yes, please explain

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7. Do you think poaching negatively impact on wildlife and protected resources? If yes, please explain briefly.

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8. What are the types of animals that are being poached by the poachers?

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Section C: Impact of Namibian Defence Force intervention in anti-poaching operations

9. What do you think drives the government's decision to deploy NDF members to anti-poaching operation?

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10. How often do you conduct operation in wildlife protection?

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11. Ever since the deployment of NDF, do you think poaching has declined? Please explain.

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12. In your own opinion, do you think there is cordial cooperation between members of NDF, NAMPOL or MEFT and the local population?

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13. Do you think local population within the proximity of Etosha National Park are aiding poachers?

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14. Ever since the deployment of NDF, what do you think are the changes brought about due to this intervention?

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15. As a member deployed in Etosha for anti-poaching operation, what challenges do you experiences that are hindering your success?

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Section C: Strategies to remedy poaching

16. What do you think are the effective strategies that can be implemented to reduce poaching?

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