The makings of field rangers in Limpopo province, an exploratory ethno-perceptive study

by

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This thesis is submitted in accordance with the requirements for the

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DECLARATION

Submitted in fulfilment of the requirements in respect of the Master of Arts (M.A.) Degree with specialization in Anthropology in the Department of Anthropology at the University of the Free State. This is my independent work, and I have not previously submitted it for a qualification at another institution of higher education.

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ABSTRACT

Field rangers are the first and last line of defense in environmental protection, working on the ground to ensure the integrity of conservation areas. In the previous decade, the ranger’s responsibilities have shifted from a conservation-based outcome to para-militarization in protecting high-value species, such as the rhino. Increasingly, rangers are drawn into law enforcement responsibilities and away from the breadth of other duties relating to biodiversity and conservation. Recruits often originate from communities living around protected areas, lacking alternate employment opportunities. Rangers often live among those connected to transnational wildlife trafficking networks, making them targets for intimidation and corruption. This further contributes to the social and familial pressures rangers face from hostile or co-opted community members involved in poaching or actively supporting poaching networks. Due to these circumstances, rangers may place their lives at risk daily in carrying out their work and may face increasingly significant challenges. Although some literature is available on rangers’ activities in preserving biodiversity globally, little is known about the rangers themselves. This narrative is not an exhaustive work on them but instead offers a glimpse, lifting the veil for the reader to see and experience a moment in the lives of the rangers. The research focuses not on military perspectives but on the human dimension behind firearms and uniforms.

Keywords: Rangers, the militarization of conservation, human dimension of militarization, warscape, South Africa

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- To the **wardens**, **rangers**, anti-poaching units, and frontline staff protecting our global natural heritage – **"This one is for you."**

LIST OF ABBREVIATIONS

APU	Anti-Poaching Unit
ECIS	Environmental Crime Investigative Unit
GKEPF	Greater Kruger Environmental Protection Foundation
GRAA	Game Rangers Association of Africa
K9	Canine
KNP	Kruger National Park
KZN	KwaZulu-Natal
OPS	Operations
PTSD	Post-Traumatic Stress Disorder
SADF	South African Defence Force
SANDF	South African National Defence Force
SANParks	South African National Parks
SAPS	South African Police Service
SAWC	Southern African Wildlife College
WWF	World Wildlife Fund

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The author interviewed the head of ranger training at the South African Wildlife College, Andy Davies (†)

(Photo taken by Prof. Stuart Marks, April 2019)

CHAPTER 1: INTRODUCTION

Where it all began:

Two definitive moments contributed to my research interest in field rangers.[1] The first definitive moment was a photograph of an anti-poaching ranger photographed in Zakouma National Park, Chad, for National Geographic (Neme, 2014). This photograph intrigued me. The ranger is standing alert, wearing a camouflaged uniform flecked with browns, greens, blacks, and neutrals, and holding his semi-automatic weapon. A black-and-brown-patterned turban around his head and backpack on his back complete the picture. With the color of his camouflage uniform, he blends effortlessly into the background; the only contrast is the little bit of blue sky framing him. His emotionless eyes stare straight at the camera, a furrowed brow indicating the seriousness of the patrol. His finger is on the trigger, ready to fire in a split second. The photo intrigued me as not much information on rangers is available.

A couple of days after seeing the photograph, the second definitive moment shaped my research interest from a piqued curiosity to a desire to know more –much more. A ranger acquaintance who often shares interesting articles, stories, updates, and video clips, especially on rhino poaching, shared a video with me. The scene involved a rhino cow butchered alive; half of her face was removed when her horns were hacked off. A blow from a machete had severed her spine, leaving her paralyzed. Her Achilles tendons were cut, thus incapacitating and paralyzing her, rendering her unable to move. She was still alive and mercifully put out of her excruciating agony by an experienced ranger in the team. This ranger described his agony, devastation in seeing the rhino, and his sense of failure and loss in not having protected her. His trauma was real and deep. And so was mine. The horror of this clip still stays with me. I was unaware to what extent the brutality in the images of poached wildlife I saw (and still continually see) would touch me. It is still difficult to express my sense of loss and despair that human beings can be cruel and brutal to helpless animals.

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[1] Even though both men and women work as rangers, I will generalize the gender to he/him/his for ease of writing, although thereby not excluding female rangers.

This video impacted me so much that I decided to pursue my research for my master's degree on rangers and their plight to save wild animals. Curious to know more about the involvement of rangers in protecting the rhino, an online thread on an aviation forum giving feedback on anti-poaching flights further caught my eye. Wanting additional information, I contacted a pilot acquaintance who heads up anti-poaching flights over private reserves. In a conversation about the rangers and me wanting to know more about their involvement in anti-poaching operations, he invited me to join him on the first of many anti-poaching flights. I delved into all relevant academic databases, articles, and websites for information on South African rangers to understand who they are, what they do, what it takes to make a ranger, and how they experience loss and trauma when witnessing poaching or coming across a poached carcass.

As I searched, researched, and read, I realized that current information on rangers from an anthropological and academic perspective in a South African context is sparse. Beleckey, Singh, and Moreto (2019:5), in a World Wildlife Fund (WWF) report on ranger well-being, emphasize my point:

> *Given their central and indispensable role in preserving global biodiversity, one might wonder why there is not already a broad library of information on rangers. While there is a growing body of literature on ranger activities (e.g., patrol), little is known about the individuals.*

There have been attempts at quantitative and qualitative research on the effectiveness of law enforcement in protected areas (Bruner et al., 2001; Hilborn et al., 2006; Moreto, 2016a; Warchol and Kapla, 2012). Other research covers aspects of rangers' experiences and perceptions of working on the frontline. Currently, an estimated 1.5 million active rangers are globally (McPherson, 2021). Rangers are a crucial human element in conservation science, but little research has explicitly focused on their perceptions and experiences (Moreto, Brunson, and Braga, 2015). Mascia et al. (2003:649) note that "*social science has a considerable place within conservation, particularly in the investigation of the human dimension of conservation science*."

Research on rhino poaching and broader themes is currently a salient topic, focusing on criminological and sociological perspectives, such as investigating opportunity structures (Eloff and Lemieux, 2014; Herbig and Warchol, 2011). Fenio (2014) focuses on poverty and community anger towards conservation. Corruption and transnational organized crime, rhino horn trafficking networks, wildlife crime, illegal wildlife trade, and criminal networks are investigated by Van Uhm (2016), Hübschle (2016a, 2017), Rademeyer (2016), Montesh (2012), Ayling (2013), and Milliken and Shaw (2012). Furthermore, Hübschle (2016a) focuses on the socio-economic factors driving poaching and marginalized local communities; Massé (2016) on the political ecology of human-wildlife contact; Lunstrum (2014) on green militarization; and Büscher and Ramitsindela (2015) on green violence. Sas-Rolfes (2012) published on rhino economics. A highly controversial topic is the legalization of the rhino horn trade, deeply dividing researchers and conservationists.

Further studies focusing on rangers are varied. These include a focus on their occupational stress (Ledford et al., 2021; Moreto et al., 2015), well-being (Singh et al., 2021), employment relationships (Moreto et al., 2015; Singh et al., 2020), working hours (Beleckey et al., 2019; Moreto et al., 2015), and the effect of hazardous work environments on their safety (Baker et al., 2012; Eliason 2011). According to Bjarnesen and Vigh (2016), research on conflict and warfare in the social sciences is lacking. Due to this lack of available studies on rangers (Jachman, 2008; Moreto et al., 2015, 2017), a comparison can be drawn from another parallel frontline vocation, such as the policing sector, as both these vocations are situated in an enforcement role. Studies on policing focused on their (the police's) jobs, their relationships with the community, stress, job satisfaction, and police culture (Manning and Van Maanen, 1978; Skolnick, 1975).

From an anthropological perspective, a few published articles and books on fieldwork in challenging circumstances are available. Maček (2009) lived through and documented the Siege of Sarajevo from 1992 to 1996, recording the Sarajevo citizens' coping strategies amidst the political violence, distrust, shelling, and hostile narratives of politicians. Lubkemann and Hoffman (2005) portray their ethnographic fieldwork in Sierra Leone and Liberia as messy and situated in a *warscape*. Seasoned anthropologist Caroline Nordstrom (1997, 2007), known for her research on warfare, conflict, political violence, and transnational crime, focused on politically unstable countries, portraying their visible and hidden realities of war through her in-depth ethnographic research. At what cost, one wonders when looking at Nordstrom's 1995 publication, *Fieldwork under fire*, focusing on the trauma of political violence experienced first-hand by anthropologists. Lombard has published numerous articles on the Central African Republic's threat economies, including various actors, such as anti-poaching guards and rebels (Lombard, 2012, 2015; Lombard and Tubiana, 2020).

I selected a few private game reserves in the Limpopo province, situated in the north of South Africa, for my fieldwork location. These reserves border the Kruger National Park (KNP). Due to time and work constraints, only short research trips were undertaken. My main objective was curiosity about the rangers' everyday lives, training, and challenges. These challenges include their perceptions of their changing environment from field rangers to para-militarized entities. How have they internalized, adapted, and experienced this environmental and life-changing process? Which identities do they portray, live, and practice? My positionality as a white female could potentially affect the data collection by biasing my access to participants, their responses, and fieldwork analysis. I soon realized that to be objective, , needed to be open-minded to understand the different black people I would interview for my research.

According to Le Masson (2013:1), whose research focused on gender issues in India, gender is framed in a researcher's identity, age, race, and sexual orientation, which can influence the research. I wondered how the black rangers I interviewed would respond to my positionality as a white Western female. Positionality examines how we are impacted by the data generated, focusing more on race, gender, and class and less on controversial issues such as personality and emotions (Punch, 2012:87). How authentic and honest would the rangers be in their responses? Or would it be a scenario of giving me the answers they thought were correct and that I wanted to hear? The reality is that we have different perceptions. Warden’s (2012:4) words apply to my reality: “*Gaining and maintaining access is a constant give and take of time and resources. It involves a continuous web of observation, understanding, and negotiating the ever-changing relationships and roles while observing ethical codes and uncovering relevant data*." How would the rangers perceive my gender and race, and the specific interview questions? What would their responsiveness be? I wondered. Chapter 5 is reflexive – a soul-baring exercise of the researcher’s self, my biases, and how it affects my interpretation of this research (Jacobs-Huey, 2002:791; Rose, 1997:308).

I attended the first African Ranger Congress at the Southern African Wildlife College (SAWC) in August 2018. One hundred and five rangers from fourteen African countries attended: Angola, Benin, Cote d’Ivoire, Democratic Republic of Congo, Gabon, Kenya, Malawi, Madagascar, Mozambique, Namibia, South Africa, Uganda, Zambia, and Zimbabwe. The rangers used the conference platform to share their concerns, successes, questions, and stories, strengthening their networking relations in facing adversity and danger in an increasingly difficult conservation working environment. Common issues were identified: insufficient training, outdated weapons, lack of continuous upskilling, and ranger well-being. Other matters included legal proceedings, such as court cases, experiencing severe stress during incursions, and illegal poaching. Solutions were brainstormed, and critical themes were addressed and debated to ensure that these rangers from across Africa could fulfill their various mandates by strengthening their effectiveness and capability across borders and different countries of operation. The available support systems to assist the rangers in their duty, such as the equestrian and airwing units, were eye-opening. Canine (K9) unit dogs showed their obedience skills, sniffing out drugs, ivory, rhino horn, and ammunition. In addition, the medical intervention team trained the rangers in using primary medical interventions on patrol. For emotional and mental issues or debriefings, attendees could request a session with a psychologist.

Talking to random conference attendees, I struck up a conversation with a white ranger. Probably my age, I thought, as I listened to him referencing and highlighting some memorable points in his life history. As I explained my research to him, he interrupted me, pensively stating (conference attendee, personal communication, August 2018):

> *Most rangers come from a military background. Military and conservation have always been linked. Rangers and the military were always connected, even when looking back at the Kruger National Park's start. We left the then South African Army, not knowing where we would slot in, and somehow ended up in conservation.*

I explained to him that I wanted to focus on those rangers who did *not* have a military background but were retrained as a paramilitary force due to the current poaching crisis in South Africa. He was adamant that everyone in his age group and older in conservation had a military background. He emphasized his point thus: “*Militarization has always been part of conservation, especially the Kruger National Park from its infancy in the early 1900s. Remember that military training was compulsory for all white South African men until 1994.*”[2] Averting his eyes when I asked him how the *pantsertjies*[3] were doing, his voice was soft as he haltingly replied: “*We are losing them left and right.*” I experienced a sense of emotional despair and hopelessness in his words as the stark realization of his response sunk in. My next question to him: “*Will we ever win this war against the poachers?*” He answered dejectedly in the negative. He had spent a quarter of the previous day flying, providing air support for the rangers on the ground, tracking poachers. He closed with: "*It is taxing – physically and emotionally. We have to carry on; we do not have a choice*."

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[2] Compulsory military conscription was officially disbanded in 1995 (Edlmann, 2015).

[3] *Pantsertjies* is an Afrikaans diminutive word for battle armor. This ranger used it as a term of endearment when referring to the rhino.

The conference attendees' reactions regarding my research project on the rangers ranged from positive to surprised and supportive. How did I feel after my conversations at the conference? A bit out of depth, as this was an unfamiliar research field. Building connections and networks take time to understand the rangers' operational and work context. I felt admiration for their commitment to a more significant cause and frustration at the slow progress in the judicial system and the often light sentences for poachers. I also experienced emotional heaviness hearing the rangers talk about how poaching affects them and their families. Their tenacity stood out for me as most of them still believed in their cause to protect the rhino amidst a poaching onslaught and severe pressure. Even though the rangers support a noble and moral cause through their outward actions in saving the rhino, a vital question begs to be answered: What effect do internal belief systems, personality clashes, cultural differences, racism (between various cultures), and gender issues have on the rangers?

Following my initial fieldwork encounter in October 2018, when I commenced data collection, I returned a few times after that, in January, February, April 2019, and November 2021.[4] My fieldwork techniques throughout that time included direct participant observation, interviewing informants, taking photographs (where permissible), making notes, taping conversations, and transcribing the material. The bulk of the data gathered here stems from informal interaction and additional discussions with various stakeholders in the anti-poaching industry as they attended to their daily challenges and activities. I quickly learned and familiarized myself with a new "language" and way of speaking as conversations and interviews were dotted with "military talk". Narratives, dialogues, debates, and discussions involved the use of military terms such as armed conflict, patrols, incursions, deployment, the war on the poachers, insurgency, the war between the rangers and poachers, the Galil, and the battle for the soul of the rhino. This language framed the rangers' work in a war narrative. These military concepts and lingo formed the basis in which I interpreted the paramilitary environment to situate the rangers and understand how they operate.

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[4] Due to the Covid-19 pandemic and subsequent provincial and institutional lockdowns during the past two years, I was unable to resume fieldwork before November 2021.

Apart from the academic fieldwork, I further immersed myself into ranger culture and research on a more personal level as I authored a ranger report on the working conditions of South African rangers. In 2020, I wrote a developmental proposal called "Boldheart", focusing on ranger well-being, which was accepted at national, regional, and provincial levels in South Africa.[5] Furthermore, I was a technical advisor and author of specific chapters in the Braveheart Ranger Leadership Training Programme and Resource Protection modules at the SAWC in 2020 and moderator of specific subjects.[6] I was also interviewed for an international report, *Towards gender equality in the ranger workforce: Challenges & Opportunities*, by Joni Seager (2021), published by the Universal Ranger Support Alliance.[7]

The four private reserves that are part of my fieldwork border the KNP and fall under the Greater Kruger Environmental Protection Foundation (GKEPF) alliance. GKEPF'S establishment in 2016 was in direct response to the alarming number of rhinos poached in the KNP and surrounding private game reserves. This alliance comprises nine private reserves, one national park, and one provincial park, encompassing more than 20 million unfenced hectares of wilderness. They aim to combat wildlife crime through effective coordination and enforcement operations and efforts and service the protection needs of the western and eastern flanks of the KNP and the Greater Limpopo Transfrontier National Park. Most private reserves bordering the KNP have dropped certain communal fences, including international fences between the KNP in South Africa, Gonarezhou National Park (Zimbabwe), and Mozambique's Limpopo National Park. This was done to create one of the world's most significant wildlife conservation reserves, enabling the free roaming of wildlife. Although this free-roaming space keeps ecosystems undisturbed across these international borders, it conversely contributes to the uncontrolled and illegal movement of humans through porous international borders, thus increasing poaching opportunities. Figure 1.1 below indicates the international wildlife conservation area the Great Limpopo Transfrontier Park, where international fences were dropped to create a significant wildlife conservation area, as well as some of the reserves where I did my fieldwork.

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[5] See Addendum B.
[6] See Addendum C.
[7] See Addendum D, page 6.

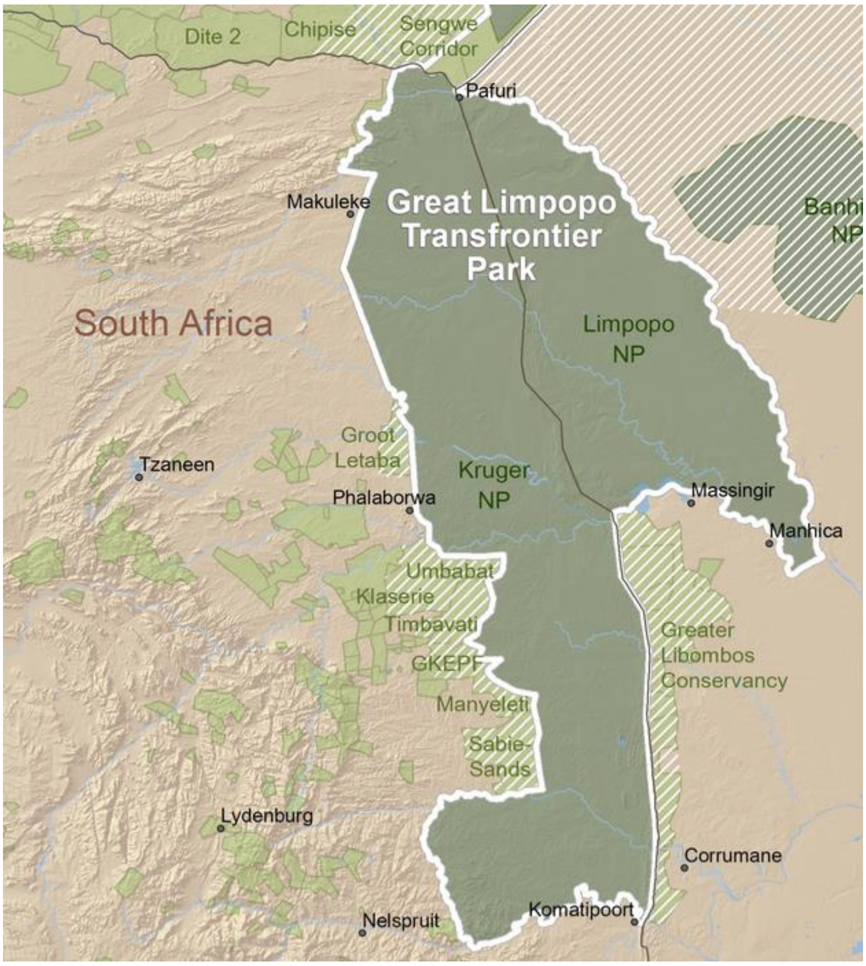

Dite 2
Chipise
Sengwe Corridor
Pafuri
Makuleke
Great Limpopo Transfrontier Park
Banhi NP
South Africa
Limpopo NP
Groot Letaba
Tzaneen
Kruger NP
Phalaborwa
Massingir
Manhica
Umbabat
Klaserie
Timbavati
GKEPF
Greater Libombos Conservancy
Manyeleti
Sabie-Sands
Lydenburg
Corrumane
Komatipoort
Nelspruit

Figure 1.1: Map of the GKEPF reserves in the larger Greater Limpopo Transfrontier Park, indicating some of my fieldwork sites

Source: GKEPF (n.d.)

The current global epidemic, Covid-19, has added another layer of pressure, including financial difficulties, too many reserves. Covid-19 had a severe impact on the private reserves as their primary source of income is tourism based. Due to the closure of international borders, restrictions on tourism, and prohibition of travel across provincial borders in South Africa, reserves have cut back on anti-poaching patrols and salaries. The initial lockdown restrictions showed a positive upside as rhino poaching numbers fell to 394 in 2020, indicating a 30% drop compared to 2019. However, rhino poaching is currently rising again in South Africa since the government relaxed Covid-19 travel restriction levels. Many rangers lost their livelihoods as private reserves could not afford them, and had to return to their communities. Ranger corps often originate from communities living around protected areas, lacking other employment opportunities.

Relationships between some rangers and their community members are strained, although not all. Often, rangers are seen as the enemy, especially in areas and circumstances where the community aids and abets poachers. Or, in a village where unemployment is rife, some rangers experience vindictiveness and jealousy against them. One community believes that a specific ranger works as a miner, as he purposefully misleads his community as a form of protection for himself and his family. I have also heard stories of verbal abuse and physical threats against rangers and their families. What contributes to complex interpersonal relationships is when rangers have to arrest a family member, friend, or neighbor who turned to poaching. This creates stressful circumstances in which the community ranger and his family might be targeted. Not everyone is negatively inclined towards rangers, though, as one respondent described a celebration held in his honor by his community after completing his ranger training. I noticed trust, mistrust, and distrust issues among some of the rangers and their communities. According to the rangers, trust is one of the vital components for success on patrol. When in hot pursuit on the track of poachers, it is imperative for rangers to trust their fellow teammates.

The following narrative is based on my perceptions of the field rangers *in situ.* This research intends to bring awareness to the rangers rather than provide an exhaustive narrative. This thesis offers a nuanced approach to understanding the rangers, who and what they embody, what they face, their training and well-being, and the current realities of frustration and trauma experienced.

1.1 Setting the Scene

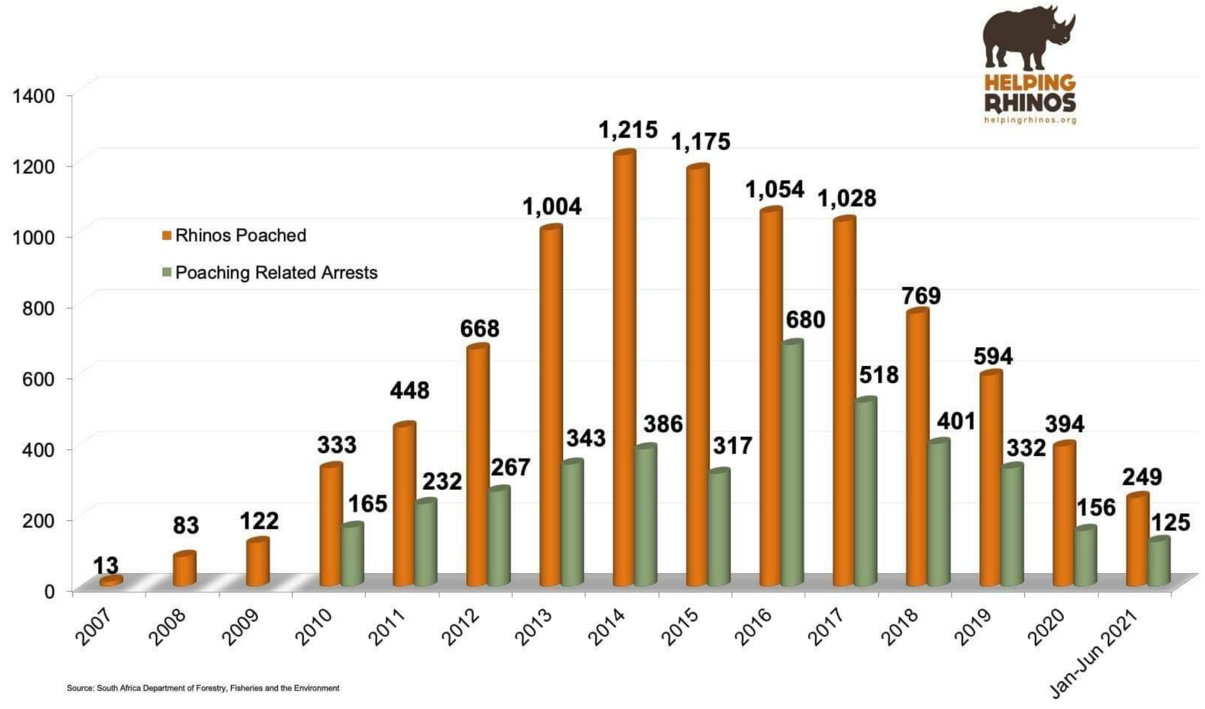
Before we can understand how rangers' focus has changed from conservation to militarization, it is imperative to understand some of the factors that led to the militarization of conservation. The pressures on rangers increase as illegal trade in high-value wildlife products such as rhino horn and ivory results in more poaching of rhino and elephants across Africa. Rangers are increasingly drawn into law enforcement responsibilities and away from the breadth of other duties relating to biodiversity conservation. This chapter focuses on issues such as the current epoch we live in (the Anthropocene), illegal wildlife trade, the current rhino crisis, and background on poachers and poaching.

The irreversible negative impact of humankind on earth has been given a formal scientific name, the Anthropocene. This geological epoch, a term coined by Crutzen and Stoermer (2000), refers to how humanity has exerted significant cataclysmic influence over ecological and geological changes. Humans have exploited and destroyed natural resources, adversely affecting climate change through negative human drivers, such as excessive use of fossil fuels (coal, gas, and oil) and the destruction of natural habitats. In a published study in *Science*, Watson et al. (2018) indicate that approximately "*one-third of the global protected area estate (a staggering 6 million* km^2*) is under intense pressure created by humans*". The demand for illegal wildlife products as a commercial and cultural commodity has further hastened the loss of biodiversity and species extinction (Murcott, 2017). Rangers act as the first line of defense in environmental protection, working as the boots on the ground responsible for ensuring the integrity of global conservation areas and protecting fauna and flora from the plundering of ecological resources.

Due to the influence of humans, many wildlife species are facing extinction or have gone extinct through poaching, as porous borders, environmental destruction, demand, consumption, and globalization enable the international illegal wildlife trade (Dalby, 2020). Extinct species include the dodo, West African black rhino, Pyrenean ibex, quagga, Tasmanian tiger, Javan tiger, and passenger pigeon. Rangers' focus has shifted from a conservation perspective to one of wildlife-asset protection through active law enforcement, such as pursuing and arresting perpetrators committing wildlife crimes and investigating these crimes. A significant focus is on physical security, namely patrols and fences used for perimeter control and restriction of access to unwanted elements. Many rangers feel that their lives are at risk in carrying out their work and facing increasingly significant challenges in maintaining personal well-being in performing their duties. Globally, approximately 1038 field rangers were killed in the line of duty from 2009 to 2019 (Willmore, 2015). An estimated 48.36% of the rangers killed were from Asia; 36.71% from Africa; 5.68% from the United States of America; 4.05% from South America; 2.99% from Europe; 1.35% from Central America; and 0.87% from Oceania (Beleckey et al., 2019; Singh and Lee, 2016). In Africa, 55 rangers lost their lives between 2016 and 2017. The greatest threat to ranger safety is armed and illegal poachers, responsible for nearly half of the rangers' deaths. The number of rangers killed might be much higher, as not all deaths are reported (Beleckey et al., 2019; Game Rangers Association of Africa [GRAA], 2018a). The KNP lost its first ranger in 50 years in July 2018. Countries such as the Democratic Republic of Congo, Thailand, India, and Kenya have seen the highest increase in ranger deaths at poachers' hands. This correlates to the current hot-spot poaching places, with increased poaching of ivory, rhino horn, and plant life (for wood), such as sandalwood and rosewood (Global Conservation, 2020).

Rangers face severe safety challenges and have been murdered, stoned, stabbed, shot at point-blank range, raped, ambushed, trapped by poachers, and attacked and killed by wild animals. On 24 April 2020, 60 Democratic Forces for the Liberation of Rwanda (FDLR) fighters ambushed a convoy of civilians accompanied by 15 rangers from Virunga National Park in the Democratic Republic of Congo. Twelve rangers and five civilians were killed, and many others were seriously injured (Holland, 2020). Although the rangers were not the target of the ambush, they came under fire while protecting the civilians. Notorious as the world's deadliest park, Virunga National Park is well known for protecting the critically endangered mountain gorilla (Larsson, 2017). Two hundred rangers at Virunga National Park have died in militia attacks over the past two decades.

In South Africa, poaching started escalating in 2008. The demand for rhino horn is entrenched in traditional Chinese medicine (TCM), whether produced in a factory and marketed under brand names or prescribed by TCM practitioners. TCM practitioners prescribe rhino horn alongside other natural medicines when treating patients. Rhino horn is used in other Asian countries also, such as South Korea and Taiwan. However, the upcoming Viet Nam middle class is currently the biggest consumer of rhino horn and a significant importer of illegal rhino horn, driving the surge in poaching (Milliken and Shaw, 2012). By the end of 2012, the KNP had implemented a paramilitary approach. Thus, militarization, the dominant anti-poaching strategy in South Africa, was implemented to stem the tide of poaching. Figure 1.2 illustrates an overview of the number of rhinos poached from 2007 to 2021 in South Africa, leading to additional para-militarization of the ranger corps to stem the tide of poaching.



Source: South Africa Department of Forestry, Fisheries and the Environment

Figure 1.2: Number of rhinos poached in South Africa from 2007 to 2021

Rangers spend 80% to 90% of their time in military-style law enforcement (Neumann, 2004), with less time for conservation duties, thus only spending 10% to 20% of their time on biodiversity and conservation matters (Serino, 2015). The KNP has employed ex-military staff to train rangers and executed security measures by converting the existing ranger corps into general anti-poaching units (APUs). Additional security specialist paratroopers of the South African National Defence Force (SANDF) have been deployed. The SANDF has focused on safeguarding South Africa's borders by arresting illegal immigrants, and performing counter-poaching duties in close collaboration with the KNP K9 unit, field rangers, the stock-theft unit, and the South African Police Service (SAPS) (Martin, 2018).

According to Glasson (personal communication, August 2018), extra security measures in the KNP include electric fences, tracking dogs, drones, satellite imagery, remote camera sensors, early surveillance, warning, and multi-sensor technologies, and artificial-intelligence camera traps. Other measures are connected live networks, ear-notching, microchipping, and dehorning of the rhino. Add to these security measures around-the-clock watch by rangers, additional fixed- and rotary-wing air support, the establishment of an environmental crime investigative unit (ECIS), and DNA analysis on rhino horn. Maj. Gen. (ret.) Jooste, appointed in 2012 to militarize the ranger corps in the KNP, states that although enhanced militarization and law enforcement strategies were not the chosen toolkit, it was done to buy time for the rhino. Critical work was required to reduce the demand for rhino horns, change end-user behavior, and incorporate local communities into the solutions (Jooste, personal communication, January 2019).

Even though the best hardware and software have been implemented, the wetware, such as the field rangers, control room operators, pilots, dog handlers, and law enforcement officials, make it all work (Glasson, personal communication, February 2019; Jooste, personal communication, January 2019). The cost of combatting poaching in the KNP in 2017 was close to R270 million, compared to R14 million in

2014, as additional rangers were trained in paramilitary tactics and tactical equipment bought (Sibaya, 2017). Approximately 400 field rangers protect nearly 20 000 km^2 of the KNP (Ramsay, 2014). Massé, Lunstrum, and Holterman (2018) and Annecke and Masubelele (2016) confirm the para-militarization, noting that the field ranger corps have received more intensive para-militarization training than seen previously.

Currently, most rangers focus their time on anti-poaching security at the expense of broader conservation mandates such as concentrating on vulnerable species and the upkeep of conservation areas. Massé et al. (2018) and Annecke and Masubelele (2016) note that the intensive militarization contributed to low morale and unhappiness. However, during my fieldwork, none of the rangers interviewed alluded to low morale or unhappiness. In working through the data afterward, it was a concern that my findings on the rangers' lack of low morale or unhappiness are in direct contrast to that of the research findings of other academics. Was it perhaps because of my positionality as a white female that the rangers gave me the answers they thought I wanted to hear as it was least likely to cause further investigation and job loss? Or, perhaps the wardens had had a hand in it, as the rangers I interviewed were handpicked by them beforehand, thus excluding those rangers who complained about low morale or difficult working conditions from being interviewed?

South Africa's wealth of natural resources, such as minerals, timber, wildlife (fauna), and flora, is an essential revenue source. Wildlife conservation is recognized for providing sustained socio-economic development through tourism, safari trips, and hunting operations, contributing to much-needed foreign currency and increased employment (Runhovde, 2017). Tourism accounted for R412.2 billion of South Africa's gross domestic product (GDP) in 2017, with 1.5 million people employed by the industry in 2016 (Smith, 2017). In 2019, tourism-related activities contributed 3.7% to South Africa's GDP, having been responsible for employing 4.7% of the total workforce (Stats SA, 2021).

Private reserves do not receive government funding and need to be financially self-sufficient, generating revenue through tourism and hunting to finance their security operations. In contrast, the KNP, a government-owned entity and the country's largest government-funded park, has an extended security plan, financial donors, and infrastructure, which the private reserves lack. The private reserves do not have the same financial wherewithal as the KNP to secure their boundaries yet face the same poaching threats. Private game reserves followed the KNP's example by providing paramilitary training for their rangers when the poaching crisis escalated in 2008. The security budgets of private reserves have not been shared as shareholders regard this information as confidential. However, an article by Africa Geographic indicated a staggering 850% increase in the security management costs of private reserves from 2014 to 2018, after an upswing in poaching (Africa Geographic, 2018). Many private reserves do not have a dedicated K9 unit or ECIS like the KNP. Should air support be required, the private reserves use the GKEPF Airwing consisting of voluntary pilots flying anti-poaching sorties when backup assistance is requested or during the tracking of poachers from the air after an incursion.

Millions of rands, effort and training have gone into militarizing the rangers to combat poaching, with some success for them in apprehending the poachers. Poaching mostly continues unabated and the onslaught on the rhino is still severe. Although there is a direct link to the communities who, at times, harbor and protect the poachers, who are the rangers responsible for the protection of the rhino?

1.2 Purpose of this Research

This research study aims to explore the bigger picture of rangers – who they are and what they do. It seeks to investigate their attitudes, values, and norms, how they cope with everyday issues, and what it takes to make a ranger. The objectives of this study are not coupled to specific chapters. For this study, the following objectives were pursued:

- To explore the many facets of rangers' identity in their work and social environments.
- To report on rangers' everyday lives and the challenges that they face.

This research is valuable in that it can contribute to creating an understanding of who the rangers are.

1.3 Research Methodology

The research design in this thesis is an endeavor to describe the lives of the rangers based on my perceptions. As the study of Anthropology focuses on broad-themed accounts and descriptions of lived lives, such as daily routines, interactions, practices related to religion, beliefs, livelihood, stresses faced, and social relationships, it forms the basis or "bread and butter" of cultural and socio-anthropological theories and subsequent analyses. I documented the rangers' experiences, expressions, and actions to obtain a glimpse into some cultural aspects of their lives through narrative. Everyone has a story that needs to be told (Ortner, 1999), leading to a transformative experience for the researcher (Campbell and Lassiter, 2015). I noticed a change in my research as I was brought face to face with my biases, judgments, assumptions, contexts, ethnocentrisms, and beliefs. This has fundamentally shifted my understanding of myself.

Scutt and Hobson (2013:17) explain that this type of narrative research allows one to "*tell these rare tales – oddly shaped personal narratives ..., with unusual characters,* *quests, reversals, and tricksters, and stories that ultimately morph back into questions – allowing us to find again some of the forgotten things …’*”. Using emotive language and free-writing, I sketch the intensity of the rangers’ emotions through their spoken words, frustrations, silences, and the stark reality of their working conditions. I concur with Nordstrom (as cited in University of Notre Dame, 2021), who refers to her research as wanting to “*develop a form of creative non-fiction that explores the lives of real people working in this complex, extra-legal network without revealing their location”*. This study is exploratory as this is one of the first studies from an anthropological perspective done on rangers in South Africa. One of the shortcomings of this type of study is that participants “*seldom provide satisfactory answers to research questions …*” (Babbie and Mouton, 2001:80). This empirical study is not an exhaustive work on rangers as my perceptions are based on a glimpse into their world. The focus of this exploratory study was to obtain a better understanding of the rangers and to test the feasibility of possibly pursuing further study on this topic in the future. Thus, this research currently acts as a preliminary study laying the groundwork for further research and more in-depth analysis when I pursue a PhD degree.

1.4 Research Techniques

1.4.1 Interviews

I used semi-structured questions[8] with a series of pre-set open-ended questions to guide me in the interviews, allowing for more informal chats between myself and the rangers. According to Burgess (1993), a semi-structured interview has more of a conversational and natural feel, allowing for meanderings and digressions away from the questions asked. A semi-structured interview is thus a “*construction site of knowledge, a conversational journey, a professional conversation with a professional stranger in the anthropologist*” (Kvale, 1996, as cited in Skinner, 2012:8). This give-and-take process co-creates and co-produces new knowledge, and thus provided me access and insight into the lived-in worlds of the rangers, who made their “*invisible visible*” (Kvale, 1996:53) through their explanations, perspectives, reasonings, understandings, reactions, and concerns.

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[8] See Addendum E for the questions asked during the interviews.

Anthropologist Sarah Lamb (2001:28) sees semi-structured interviews as a creative social practice reflecting on the way interviewees perceive experiences. The subjects express their lives through the telling of their stories, through reflection, through agency, and through their interpretations and understanding of things, meaning, and emotions. According to Skinner (2012), semi-structured interviews are a ritualized performance space full of structure, purpose, and definition. My interviews with the rangers had a beginning and ending, with questions, answers, and digressions brought about by listening, absorbing, and reflecting. The information I focused on and understand is qualitative and descriptive, seeking the nuances and particularities of the human condition in a humanist tradition. Seeing that interviews are language-based, both interviewer and interviewee open themselves up to possible interpretive misunderstandings and gender biases (Skinner, 2012).

One may wonder how much of the data from the semi-structured interviews for this research are actually usable or whether large chunks of conversational data are possibly worthless as the rangers were allowed to digress and freely speak in my conversations. All interviews were treated as confidential and were digitally recorded. Before starting an interview, I explained the background of my research, my link to the University of the Free State, the lack of available studies on rangers in South Africa, what I wanted to achieve with this research, and what would happen to the data afterward.

I also believe, (or think so at least), that the interviews with the rangers, away from the wardens and their fellow rangers, enabled them to express their views freely. How truthful the rangers were in their answers, I do not know. All conversations were recorded digitally with the participants’ permission to ensure accountability, verification, and truthfulness in reporting. I transcribed the voice recordings. It is kept in a locked safe in my office at the University of the Free State, to which I have the only key. None of my research is backed up to any cloud-based platforms.

The interview questions were specific and asked in such a way that the possibility of the rangers manipulating me was mitigated to a minimum. It was also inferred that the rangers might provide standardized industry answers and tell me what they think I might want to hear. Through the technique of triangulation, the responses were verified by speaking to the wardens and military intelligence on an anonymous basis. Further triangulation and confirmation of answers were done by comparing the responses between rangers from different reserves and further comparing them to the literature (Beleckey et al., 2019; Bruner et al., 2001; Hilborn et al., 2006; Moreto, 2016b; Warchol and Kapla, 2012). I used various methods to collect data, such as field notes, journals, audio recordings, photographs, participant observation, and media articles.

Even though I am fully conversant and prefer writing, reading, and speaking in English, it is not my mother tongue. It was frustrating at times to capture the essence of a word, a specific moment in time, or a sentence to relay the depth of feeling and context. The wardens (white) spoke either Afrikaans or English. Most of the Tsonga rangers who participated in the interviews were fluent in English, even though it was not their mother tongue. Two black rangers insisted on doing their interviews in Afrikaans. Even though one Tsonga ranger could speak English during the interview, he felt more comfortable having an interpreter. I asked questions in English, which were then translated into Tsonga. His responses were reinterpreted back to me in English. I am fully bilingual, and the data-gathering process and the dissemination of data in English were not hindered. The participants' responses were kept as close to the original meaning as possible.

1.4.2 Introducing the participants

Nine private reserves were contacted to participate, of which five initially responded positively. One private reserve subsequently withdrew due to a late change in management. The other four private reserves confirmed their participation.

Furthermore, I interviewed rangers at the ranger camp based at the SAWC, which trains rangers. After initially meeting the wardens, the college registrar, and the head of training at the ranger camp, I performed data collection and fieldwork on these reserves in October 2018, January, February, April 2019, and November 2021.

The primary focus was on black rangers in the Mpumalanga and Limpopo provinces. Demographically, the participants included 33 black males, two colored males, and two black females, ranging between 23 and 39 years of age, with employment tenure varying from 10 months to 20 years. Most of the rangers were from the communities surrounding the private reserves, and one was from a neighboring country. Interviews occurred either while the rangers were at work on the reserves or at their accommodation pickets, before going on patrol or just returning from it. The rangers in the operations (OPS) room were interviewed on the job, and I watched them continue monitoring the live camera feeds and responding as the two-way radios crackled to life.

The interviews did not impinge on the rangers' time or compromise any of their responsibilities as they could continue with their daily responsibilities. The rangers were predominantly of Tsonga descent, living in the Lowveld area of the Limpopo province, South Africa. The wardens were all white males. No white females participated. Prior to data collection, a few rules were laid down by some of the wardens. This included that for any photographs taken of the rangers, their faces must be blackened out. No faces were photographed for their own safety and that of their families and the reserve and its employees. I was not allowed to photograph any uniform insignia/epaulettes nor any specific landmarks such as gates, trees, rock formations, mountains, or anything that can identify the reserves.

One warden indicated a cautious curiosity about my research as no one had ever approached their reserve to research their rangers. I was informed by one warden that should the interviews turn into a complaining session from rangers, the focus of the interview was to be adjusted immediately. I wondered whether a complaining session would not bring out subsequent unaddressed issues or perhaps even matters that the rangers are not at liberty to share with their employers. Different rangers were interviewed, from junior rangers to wardens, including literate and illiterate rangers. Participants also included those who had not experienced trauma and those who had had run-ins with poachers or dangerous wildlife.

Thirty-seven interviews were conducted with fence-repair team rangers, OPS-room controllers, rangers working as gate guards, K9 rangers, field rangers, APU rangers, and information technology (IT) staff. Interviews and subsequent conversations took place in offices, cockpits, a shebeen (tavern), vehicles while driving, boardrooms, lounges, restaurants, in the middle of the bush, at ranger pickets (sitting on the opened tailgate of a truck), in training facilities, at a conference, etc. Apart from the IT guy (who had a formal qualification) and a female employee working in the OPS room who received in-house training, all the participants had completed a basic ranger training course. The majority had completed their training at the SAWC, Mpumalanga. Two wardens requested permission to observe a random interview, which both myself and the participants agreed to. The rest of the interviews were done in private, eliminating possible discomfort to the participants. However, I did not see this peculiar request as intrusive or bordering on suspicion or mistrust. I did not perceive it as curiosity, as I was the first researcher that requested permission to interview their rangers. Another reason they wanted to sit in and observe an interview was for accountability reasons in protecting their staff and giving feedback to the reserve management and stakeholders.

The rangers were flagged as a vulnerable population due to possible involvement in previous poaching activities or the possibility of family/community members being involved in poaching. Being identified as a vulnerable group may lead to physical or reputational harm or emotional distress if they are suspected of sharing confidential information with the researcher. Participating rangers signed a confidentiality agreement. The confidentiality of this research and the protection of the identity of the participants and reserves are of utmost importance and are maintained. The names of participants and of the reserves were anonymized at the time of transcription. For direct quotes by the rangers in this thesis, I added their gender, years of experience (yrs), and date (month and year) of the interview. Only I had access to the data and did coding/transcription myself. Data/information were not shared with anyone.

The potential benefit for the rangers for participating in this study was to fill a gap in the knowledge that currently exists on this topic in academic research. Regarding potential risks of participating in this research, rangers participated in this research voluntarily. However, should situational/positional impairment possibly have placed them in a vulnerable position where they could not talk freely, they had the freedom to decide whether they wanted to participate in this voluntary study. There was no undue pressure on them to participate, neither coercion nor reprisal should they not participate in this research. I did *not* approach the research participants myself. The wardens approached the potential participants first to see whether they were willing to participate in the interviews. All information shared by the participants is kept confidential.

Should further research in a journal article/conference presentation/research report flow forth from this thesis, all the data will be anonymized, and individual participants will not be identifiable in such writing. The rangers' real names and employment reserves were not divulged or indicated. This was done to protect their identity and safety, as anonymity and confidentiality are paramount. Participants willingly signed a "Consent to participate in this study" form,[9] thereby permitting me to interview them. They also received a research information leaflet explaining the focus and purpose of the research and interviews.[10] Included were the contact details of the Ethics Committee[11] of the University of the Free State and of one of my co-supervisors. The participants were informed that no payment or reward (financial or otherwise) would be offered as they would participate in this research voluntarily.

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[9] See Addendum F.

[10] See Addendum G.

[11] Ethical clearance was received from the Central Committee of Senate of the University of the Free State in November 2018.

No photographs were taken of the rangers and staff, nor of the insignia, facilities, and landmarks that could identify the reserves, as per the wardens’ request for privacy. Neither was sensitive (or sensational) information requested, such as the number of live rhino on the reserve, how many poachers had been eliminated, the number of incursions by and firefights with poachers, the number of rhino poached, the security budget, etc. These were not the aim of the study. The wardens requested an integrated generic report on my fieldwork and findings.[12] It was my perception that they (the wardens) were curious to read the results of an independent researcher rather than checking up on my work. This report also highlights specific aspects of the rangers’ lives that the wardens did not notice or were unaware of. Examples of two matters that the wardens were unaware of include the ranger’’ request for a religious leader to pray with before a full moon, and the rangers’ involvement in social media. This generic report did not contain any information that could pose a security risk to the reserve and the rangers.

1.4.3 Participant observation

From the outset, my role as an external researcher was made clear. Although I would have loved to join the field rangers on active foot patrol, the wardens did not permit me to do so. Their concern was that I might be injured in the event of a run-in and subsequent exchange of fire between the rangers and poachers. The wardens deemed the liability against the reserve would be significant in the unfortunate event of me getting injured. The head of security offered to drive me to where the rangers were in the veldt as their patrol positions are not common knowledge. I tried to fit into the surrounding areas by wearing neutral and military-type colors – beiges, whites, greens, browns, and khakis – comfortably dressed in a t-shirt, trousers, and boots. Full-time employment and family commitments made the task at hand challenging and impossible to ensure continuous fieldwork visits at times. Moreover, a great delaying factor was the coronavirus, which hung up my research to dry for approximately two years.

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[12] The report is included in this thesis as Addendum H.

Conversational and background data were drawn primarily from naturally occurring encounters, chance phone calls, networking, conferences, and “this one knows that one who knows another one” meetups. Additional conversations, brainstorming sessions, formal discussions, and informal chats were held with approximately 45 additional individuals. This included wardens, retired rangers, security managers, pilots, game farm owners, the ECIS, military personnel, a mercenary, retired and current academics, retired scientists, and wildlife vets. This also included intelligence operatives and conservationists (current and retired), specialists in the field of wildlife poisoning and poaching, and the international and local chairpersons of GRAA. Thus, although interviews were done with the rangers, the bulk of the data in the research was gathered from far less structured situations. This was done to understand the context of who the rangers are, what they are doing, why they are doing it, and the outcomes and background in which they operate.

This research focused on semi-structured interviews and observation in multiple sites. Through the interview process, I became part of the cultural context I was exploring at that moment in time. Participant observation as a research technique helps the researcher to collect, interpret, and analyze the data, including exploring new research questions and research areas and formulating new hypotheses (DeWalt and DeWalt, 2011).

Spradley (1980) outlined different participation levels (or the ’continuum of involvement’), namely non-participation, passive participation, moderate participation, active participation, and complete participation. Researchers embed themselves into specific roles in the context of participant observation. According to Spradley, *non-participation* occurs outside the physical research area. This takes place, for example, when the researcher watches television or reads the paper, diaries, blogs, social media posts, etc. without active interaction with people but by acting as an observer without actively participating. *Passive participation* is when the researcher is in their fieldwork area but does not interact with subjects and fulfils the spectator/observer role. When the researcher is present in their fieldwork arena and only interacts in a limited way as an observer, it is known as *moderate participation*. My level of involvement based on Spradley's continuum with the rangers was on this level. I had limited interaction with the rangers through the interviews and vehicle patrols with the wardens. *Active participation* is when the researcher engages with other people to learn cultural behavior, for example living with them to learn and experience the culture. The final participation level is *complete participation,* where the researcher becomes a member of the cultural group they are studying. Spradley draws a distinction, noting that this category is not the same as going native, but rather where the researcher "*suspends other roles, to more fully integrate with the phenomenon, but continues to record observations in field notes"* (DeWalt and De Walt, 2011:24). For this study, the names of the reserves as well as of the rangers that participated are not mentioned to protect everyone's safety and identity. The data collected are not backed up to any cloud-based platforms and are safely kept in a locked safe in my office.

As my fieldwork focused on less traditional ethnographical landscapes, my safety was paramount. During the interviews with the field rangers, the respective wardens were within a safe distance, minimizing personal risk to me. I did not feel uncomfortable walking in the veldt with the cocked pistol of the commander behind me on our way to an APU outpost, or sitting behind a desk interviewing armed rangers. Nor did I feel threatened (emotionally, verbally, or physically) being the only female surrounded by armed male rangers on the reserves.

However, there was an isolated experience when interviewing two APU rangers where I felt distinctly uncomfortable and unsafe in the presence of one of them, even though the senior commander was standing next to me, observing the interviews. (He had asked permission to observe.) I was not threatened physically nor verbally accosted or

intimidated, but I felt unsafe and very uncomfortable in the APU ranger’s presence. These two Zulu APU rangers I interviewed confirmed their participation in cultural rituals in their rural village. As I probed them for more details, they became uncomfortable and refused to elaborate. I was quite surprised at their hostile reaction of complete silence and perceived animosity towards me after asking probing questions about the traditional rituals they participated in when back in their native village in KZN. A few moments of uncomfortable silence ensued. I carried on with the following questions, which they responded to naturally. As I re-listened to the interview recording, I noticed the apparent change in their attitude and the ensuing uncomfortable silence again. I can only surmise that I had committed a cultural offence in asking them about their Zulu culture's traditional rituals and sacrifices. Or perhaps my positionality as a white female excluded me from gleaning cultural information from the two male Zulu rangers’ traditional practices back home?

1.5 Challenges Experienced

1.5.1 Lack of time and funding

One of the biggest challenges throughout my studies, including undergraduate studies, is that I was never a student full-time. Thus, fieldwork included juggling time between studies and full-time employment with its challenges and commitments. Although full participation in this exploratory study would have been ideal, it was impossible to fully immerse me in the ranger culture due to external obligations. Being a single parent of two teenagers compounded and intensified my challenges, with time dedicated to my studies being the most challenging aspect. Fieldwork trips were scheduled mainly during the school holidays, ensuring my children were cared for. An unfortunate scenario was that I could not live with the rangers for extended periods, immersing myself in the ranger culture and dedicating my days to participant observation and writing. According to the wardens, the liability on the reserves would be too significant if I were injured while with the rangers on patrol. I therefore had to make do with whatever time and opportunities I had available. Apart from the warden’s negative response to me physically staying with the rangers, my employer would not have granted extended leave for fieldwork either.

Many questions crossed my mind and led to a concern while busy with my studies. For example: How objective and analytical was I as a researcher and outsider during participant observation? How objective and analytical was I during the writing-up phase as my experiences and observations are subjectively experienced and interpreted? How did my subjectivity, beliefs, culture, and upbringing influence my interpretation of my fieldwork?

In her research, Le Masson (2013:5) refers to the French anthropologist Géraud, who indicated that "*one should recognize one's subjectivity, acknowledge one's cultural background and perspective and accept their constraints on observations and interpretations*." Will the subjectiveness and possible bias of my research subjects (and perhaps myself) influence the interpretation of data? I believe that all anthropologists are subjective in their interpretations of the contexts in which they are working. For example, I may have a bias against poachers for slaughtering the rhino. I understand the rangers' frustration, anger, and despair when coming across a carcass. However, do I in the same breath understand the reason why the poachers kill? I have never had to suffer hunger to the point where I am willing to pull the trigger. At times, it is difficult to remain neutral and understand and interpret culture through an anthropological lens.

The thesis excludes community involvement/non-involvement in the current poaching crisis, understanding human-wildlife conflict, and negative perceptions of conservation initiatives. Neither were displacement through historical apartheid injustices perpetrated against the communities living adjacent to the KNP and private reserves addressed or researched. This study is a study on its own.

As ethnographic research entails substantial time and focus, my social science research among the rangers had its drawbacks and a series of limiting factors. Due to time constraints, employment demands, and domestic challenges, I could not embed myself into fieldwork for prolonged periods. Sadly, the strict lockdown and prohibition of crossing provincial borders implemented in South Africa in March 2020 due to Covid-19 prevented me from pursuing additional fieldwork. I could not get back to the rangers for approximately two years, and my last fieldwork was done in November 2021.

1.5.2 Racism

I would like to make a note on racism. South Africa is one of the most socially unequal countries globally. Under apartheid in the 1940s, specific political and national laws divided people by race, going as far as affecting their quality of life and access to jobs. The laws promulgated resulted in forced removals, racial segregation, uneven wealth distribution, and a lack of basic human rights. White South Africans were seen as superior, and anyone with different skin color was seen and treated as inferior. Most white male wardens are in hierarchical positions of power on the reserves and in the environment where the rangers work, and racism often rears its ugly head. Even though racism has been noted, experienced, and highlighted on different levels between wardens and rangers and among rangers through personal experiences or published in secular media articles, racism in its various forms, contexts, and applications was not the main focus of this study.

However, during my last round of fieldwork in November 2021, I raised the topic of racism among the black rangers I interviewed. A term invariably used by the black rangers is *tribalism* (as they termed it). The rangers referred to tribalism as "*jobs for brothers*", where someone in a position of importance or power employs those of the same culture/tribe whether they fit the position or not. Perhaps this will be seen as nepotism or as the person in power being their brothers' keeper. As I was driving the 900 km back to my hometown after the interviews, I could not shake the feeling that the answers given by the rangers had left me disappointed and with more questions than satisfactory answers. Racism was a topic that they did not want to address. I concluded that the rangers were uncomfortable addressing this controversial topic with me, a white female. We had not built a relationship of mutual trust, friendship, and understanding, as I did not live with them for extended periods. Thus, perhaps they did not want to address the racism topic by viewing me, my race and my gender through a lens of paternalism and a cultural disconnect. My perception was these Black rangers were uncomfortable addressing the issue of racism with me.

1.6 Chapter Layout

This thesis consists of six chapters. In order to address the objectives of the study, the chapter layout is as follows.

Chapter 1 presents the background and introduction to the study, the problem statement, research objectives, methodology, and literature review.

Chapter 2 looks at the Tsonga cultural practices, beliefs, rituals, symbolism, and taboos, considering that the majority of the participating rangers were Tsonga.

Chapter 3 provides insight into the rangers' warscape, focusing on an initial historical overview of rangers in South Africa and understanding the processes from conservation to green militarization.

Chapter 4 focuses on the rangers' warscape and provides an overview of their collective experiences as rangers, combined in a single narrative.

Chapter 5 focuses on my reflections during fieldwork

In **Chapter 6**, I conclude this thesis by thinking through and highlighting areas of concern and providing recommendations.

CHAPTER 2: BELIEFS, RITUALS, SYMBOLISM, AND TABOOS

2.1 Overview of the Tsonga Culture

The rangers participating in the interviews were primarily from the Lowveld, Limpopo province and are known as the Tsonga (Xitsonga), a Bantu-speaking ethnic group with native and current roots in South Africa and southern Mozambique. According to Seripe (2022), the Tsonga people consist of a diverse grouping of tribes, such as the Shangaan, Thonga, Tonga, Vandzawu, VaTshwa, Vakalanga, and Valoyi. Although they share one origin, each tribe has assumed different identities. Junod (1927) wrote one of the earliest reputable classic texts on the complete life of the Tsonga, entitled *The life of a South African tribe.* More recent texts reflect the “modern” cultural tendencies of Tsonga culture. Anthropologists such as Boet Kotzé (1992), At Fischer (1992), Kees van der Waal (1991), and Isak Niehaus (2002) have captured rich ethnographies of their work among Tsonga communities. Niehaus’ research firmly focused on witchcraft, power, politics, danger, taboos, rituals, murders, and the personhood of these communities.

During the 1^{8t}h century, the Tsonga forefathers were traders bartering salt, copper, and ivory following the rivers on their journey inland into South Africa. Steeped in tradition reflected in their daily lives, each Tsonga family lived in their own “village” made up of kraal, houses, grazing areas, and fields; their subsistence focused on crop cultivation and fishing. Cattle raising was not common due to the tsetse fly-infested areas where they had settled. To ensure continuousness in the family, children are given the names of their ancestors (Siyabona Africa, 2022). In addition, having more than one wife is culturally acceptable. (This was confirmed by the rangers – many of whom had a girlfriend away from the homestead.) The Tsonga are known for their vibrancy in color and clothing. Their unique high-tempo music beat depends on drums and tambourines. The *tsomane*, a tambourine-like instrument, is used during ritual healing practices. The traditional drums, the *ndzumba* and *xigubu*, are used during cultural initiation ceremonies, whereas a unique drum, the *ngoma*, is used on various festival occasions to entertain guests (Kinuthia, 2020).

The Tsonga also have certain taboos that affect their lives and livelihoods. The transgression of taboos has led to deadly afflictions, especially during the first half of the 1900s. Local beliefs span time and space from the 1900s with current relevance in the present time. Mbhiza (2017) found that traditional local beliefs and local influences among the Tsonga still affect communities in the current time. In his research on Tsonga learners in Acornhoek, he discovered that learners believed that witches active in the community ensured weak academic performance through spells and curses placed on them. Religious taboos include neglecting one's ancestors, while social taboos are mostly connected to hierarchy and respect.

Nature taboos and specific beliefs related to nature include aspects such as protecting species. For example, it is believed that killing a crocodile attracts headaches and flu, spilling a pangolin's blood brings on the drought and a dead sparrow attracts swarms of birds that would eat their sorghum crops. An agricultural taboo relates to the non-cutting of reeds and grasses during sowing until the harvesting of the last crops. The Tsonga belief here is that soil also dries out as does the cut grass (Niehaus, 2002). Niehaus (2002) notes that these taboos were strictly enforced by chiefs, headmen, and guards, and trespassers were fined a cow.

As subsistence agriculture progressed to a migrant labor economy, the impact on their cosmological beliefs was profound, as many Tsongas joined Zionist-type churches (Niehaus, 2002; Sundkler, 1961). This was confirmed during my interviews, as most participants indicated that they were part of a Zionist Church and professed strong religious beliefs. Many rangers confirmed attending church when off duty and back in their community. They cannot leave the reserve during active patrols, and therefore regular opportunities to attend church are not readily available. Prayer, a belief in God, and church seemed to feature strongly in the rangers' daily lives. Saying prayers was one of the daily rituals mentioned often. They prayed when they woke up, while on patrol, and at night before bed. The younger rangers said that although they were aware of specific cultural practices (e.g., visiting a *sangoma*)[13] while growing up, they, as the younger generation, did not believe in it, nor did they participate in any rituals as their belief was in God. This is contrary to what the Zionists believe, for example, practicing rituals related to the ancestors (the ritual slaughtering of animals), which are endorsed by the church (Sundkler, 1961).

According to Ntombana (2015:2), some church members keep back in expressing their "Africanness" when in the church, but outside the confines of the church they perform and partake in African cultural rituals and customs. These include "*ukubuyisa (the ritual reincorporation of the living-dead), imbeleko (ritual inclusion of babies into the clan), ukwaluka (rite of passage into adulthood), and visiting of traditional healers to seek guidance from ancestors*" (Ntombana, 2015:2). The reality, it seems, is that the younger generation is not comfortable with specific African practices behind closed church doors, as it contributes to and translates into two identities.

The older generation rangers were more inclined to follow specific rituals, practices, and beliefs prescribed by sangomas, which they partake in for their protection. The practice of visiting a sangoma is widespread in South Africa. However, further desktop research revealed that society (in the Tsonga cultural belief) consists of living members and those who have died (Kinuthia, 2020; Seripe, 2022; Siyabona Africa, 2022). Although a "Supreme Being" is acknowledged, a strong belief in magic and ancestor worship influences and affects their lives. Evil spirits, controlled by sorcerers, can cause harm to the community, whereas good spirits will cause good things to happen. According to Magubane (1998:96), the Tsonga believe that a

> *… man has a physical body ('mmiri'), and a spiritual body with two attributes 'moya' and 'ndzuti'. The 'moya' associated with the spirit enters the body at*

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[13] A sangoma is an African traditional healer.

> *birth, and on death is released to join the ancestors. The 'ndzuti' is linked to the person's shadow and reflects human characteristics.*

As mentioned later on in this chapter (page 38), shadows played an important cultural role to rangers on patrol. In the unfortunate event of a poacher being killed, rangers have to go to the sangoma for a cleansing ceremony, as they will become infected by picking up the shadow of the dead poacher. Furthermore, they have to avoid that area at all costs, as the shadow of the dead person will attach to them again, causing further costs in repeated cleansing ceremonies. They believe in life after death and strong links between the dead and the living. An important feature in Tsonga culture is passing into the spirit world. Death causes all affected household members to be unclean, and only through ritual cleansing ceremonies do they become clean (Siyabona Africa, 2022). Much recognition is given to dreams, as it is one of the pathways through which the ancestors make contact. Burial grounds and sacred spaces have great significance as that is where the ancestors live. The Tsonga take great care to appease their ancestors through offerings in the form of beer and animal sacrifices, as restless ancestors are believed to cause trouble (Siyabona Africa, 2022).

The Tsonga believes their sweat and aura stay in the clothes they wear. Clothes are seen as an extension of themselves as a person. It is not separate from their body; thus, clothes can be used as a substitute for a person. The younger generation of Tsonga males believes that contamination from outside forces is lessened and their immunity heightened by multiple people using the same toilet (Niehaus, 2002). As the male rangers live together in pickets, their chance for contamination is thus lessened and immunity is strengthened by using the same ablutions.

"*Tell them that you are not stealing their soul when you record their voices*," one warden mentioned in regard to me taking voice recordings of the interviews, as it is a cultural belief that voice recordings steal their soul. The "younger" rangers I spoke to laughed it off, while the "older" rangers just nodded politely. According to Nwoye (2017), the African self is seen as "*umuntu ngumuntu ngabantu*" (a person is a person through other persons), a Nguni proverb explaining that the physical body, image, and voice all belong to the person's self. The Africentric perspective sees humans and reality as a holistic unit, unlike the Eurocentric perspective, which sees humans as dualistic. As such, the rangers have to protect themselves from harm against their self/person.

Although cleansing ceremonies (normally taking place after contact with poachers when the ranger is ritually unclean/polluted) are respected as part of the Zulu ranger culture, the white wardens and the private reserve management did not believe in it. The wardens I spoke to were unaware of any cultural rituals among the Mpumalanga and Limpopo rangers. Reserve management in KZN seemingly portrays a lack of cultural understanding by refusing to pay for the rangers' cleansing ceremonies, as they feel that a cleansing ritual by a sangoma is a private issue. This shows a lack of understanding on their part since rituals and cultural beliefs play a strong role in the Tsonga as well as the Zulu cultures. Some reserves seem more open to cultural practices by paying for the rangers' transport fees to go to the sangoma and then reaping the benefits as they see a change for the better in their rangers after having participated in a cleansing ceremony.

However, do the employers' lack of understanding and insensitivity to the rangers' cultural practices undermine their patrol efficiency and the effectiveness of their anti-poaching efforts? I suggest that regular training in cultural sensitivity can benefit both the reserves and the rangers, creating a frank discussion platform for both sides to hear and understand the "other" and understand different cultural practices. The South African legal system recognizes the role and importance of traditional health practitioners through the Traditional Health Practitioners Act (No. 22 of 2007) (Republic of South Africa, 2007), as healing rituals are part of the African belief system.

How do the risk and uncertainty of the daily unknowns affect rangers? Being a ranger is an occupation, a calling even for some. Since their livelihoods and lives depend on understanding nature and reading her signs, what built-in rituals or even occult practices do the rangers internalize and incorporate into their lived-in worlds? Routines bring order and comfort into lived-in worlds. Habits often become rituals. In Gmelch's (1992) *Baseball magic,* he differentiates between rituals, taboos, and fetishes. He states that American baseball players, for instance, use specific rituals believing it to reduce chance and bring luck to the team. These include adjusting their caps, making the sign of the cross, swinging their bat, or bouncing a ball a specific number of times. He further notes that during World War II, American soldiers used fetishes as notions of faith, luck, or belief as a psychological crux. Fetishes are objects such as Bibles, amulets, medals, coins, crosses, crucifixes, and charms believed to endow supernatural power to an inanimate object. Believers in fetishes believe that the fetishes will protect them and keep them safe and sane. Rituals highlight the enigmatic quality of symbols in their capacity to embody various meanings (Kertzer, 1988:11). Symbolism and rituals have different subjective meanings and are thus interpreted differently and in multiple contexts. Or, as Schieffelin (1985:722) suggests: "*participants in ritual may not all experience the same significance or efficacy … one might even argue that there was no single correct or right meaning for a ritual at all.*" Ritual is an intensely personal experience.

The older rangers confirmed their belief in visiting a sangoma to perform cleansing rituals and to cast away bad luck from them after a run-in with poachers, more so than the younger rangers.[14] The rangers believed that as poachers use *muti*[15] to protect them and ensure success, they also should use it for protection and success. The rangers believed their cultural practices enabled them to continue their dangerous vocation and claimed it contributed to their mettle. They believed that a visit to the sangoma protected and strengthened them against the power of the poachers, wild animals, and lurking danger when on patrol.

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[14] In questioning their viewpoint on superstitions, most of the rangers did not understand the term *traditional healer*. However, they all understood the word *sangoma* (another term for traditional healer).

[15] Muti is traditional African medicine prescribed and mixed by a sangoma who is also an herbalist. It might be in the form of a special concoction that rangers use against poaching/poachers believing that it would endue them with supernatural powers and protection. It might also be something that rangers have to drink, smoke, inhale, or burn, smear on their body or their weapons, or wear on their body in the form of an amulet (like a string of beads around the neck or wrist) that is smeared with a special mixture mixed by the sangoma.

These cultural practices were seen to hold value (like an insurance policy), as the consequences of not going to the sangoma might mean not having protection when out on patrol and could mean death or loss of work. Nonetheless, the rangers bemoaned getting into debt by applying for a bank loan to pay for cleansing rituals. One ranger told me: *"I go to the sangoma because the muti works. Because the poacher is going to the sangoma, I must go to the sangoma*." The KZN rangers confirmed the importance of a cleansing ceremony. Mathekga (2017:196) confirms this thus:

> *The majority of rangers follow the Zulu tradition. Normally, after a Zulu person has killed somebody, he has to go and be cleansed. If somebody has shot and killed someone, he needs to buy a goat and do some cleansing. If there could be a monetary value attached to cleansing, it would go a long way in alleviating pressure from the person financially. It is part of what is important to the rangers and cannot be ignored.*

According to Mathekga (2017), a ranger cannot return to the spot where the poacher was killed as he will become infected by picking up the shadow of the dead poacher. The rangers confirmed that misfortune would befall them if a ceremonial cleansing after contact with poachers is not performed. Misfortune here includes flashbacks and nightmares of the killing of a poacher. Some rangers might even commit suicide, as they believe the poacher's family would apply witchcraft to the poacher's corpse as a form of revenge, negatively influencing and bringing bad luck to the ranger.

Repeated cleansings from the sangoma and costs are on the cards every time the ranger walks through the same spot – indeed, an expensive exercise for the ranger's purse. Nonetheless, as most rangers are African and cleansing ceremonies for ensuring protection are part of their cultural upbringing and lifestyle, it has to be done regularly. Still, the management of many private reserves does not see this in the same light. Zulu rangers indicated that if they do not shoot at a poacher, they will become the target and incur additional expenses, as a cleansing ceremony is inevitable. They lamented that reserve management is oblivious to their cultural practices by not assisting them financially with cleansing procedures, enabling them to pay the sangomas, and thus becoming compromised.[16] Can this non-involvement of the white wardens/white reserve owners be seen as a form of economic racism or economic exclusion, as they are not willing to assist financially by not understanding black culture?

2.2 Cultural Misunderstanding

An uncomfortable discussion with the rangers revolved around the lack of insight from the reserve management into the traditional culture of the rangers. Mathekga (2017) noted in her interviews with Zulu rangers that they had difficulty accepting treatment from a female reflexologist. In my opinion, it portrays a lack of cultural insight from the reserve management. One ranger she interviewed responded as follows:

> *… but some of it is not culturally fit for our people. Because some of our people don't want to be touched by a woman they are not related to. I'm talking about the deep Zulu men and older people. People with maybe four wives say, "it is only my wives who have the right to touch me. I cannot be touched by another woman."* (Mathekga, 2017:196)

Although the reserve's motive might have been sincere, the fall-out and outcome did not contribute to the rangers' emotional and psychological well-being or their financial well-being.

The misunderstanding from a European, white, Western perspective regarding black rangers' cultural practices is still an area that needs in-depth research. In business anthropology, many international companies have had to heed various cultural practices and beliefs to ensure steady profits and success by, for example, selling specific products and getting support from a specific culture (Lillis and Tian, 2010). If this is true of these big companies, it would definitely be in the interest of local reserves to also give more attention to the concerns of their employees.

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[16] Becoming compromised in this context refers to a ranger that can no longer afford to pay the sangoma for cleansing ceremonies. This might lead him to pass information on the whereabouts of rhinos to the poachers as they (rangers) will be paid for intel on rhino herds.

An issue of deep unhappiness among the ranger fraternity was reserve management's misunderstanding of their cultural practices. The rangers believed that uncleanliness originates from their work activities and actions and felt that their employers should help them be more productive by paying for cleansing rituals by traditional healers. Cleansing ceremonies contribute value to the reserve, as rangers subsequently show a more positive attitude and increased productivity and focus. According to Mathekga (2017), rangers are convinced to be more focused on their work and achieve greater success if the reserves pay for cleansing ceremonies. Reserves willingly fork out lawyer fees, and bail money should a ranger be arrested and jailed for a poacher's death. However, they are unwilling to pay for or contribute to a cultural cleansing ceremony. The rangers felt that the burden of killing a poacher and the value of their own lives being saved through cleansing ceremonies carried more weight than lawyer, bail, or court fees.

Many rangers use their own money or apply for cash loans to pay for cleansing ceremonies and consultations with sangomas. This leads to a negative outcome where rangers will willingly not shoot at a poacher as they have to pay for a cleansing ceremony from a sangoma. The rangers avoid shooting at the poachers because they are financially indebted to the traditional healer or repaying the original bank loan for a cleansing ritual. This compromises and jeopardizes the safety of the rangers and animals as they, due to possible looming financial stress, end up not doing their jobs properly. Mathekga's (2017:192) research confirms this notion: *"... they [rangers] sometimes had to avoid shooting at the poachers because they already owed the traditional healer money for cleansing, or they were still repaying the bank loan for the money they used for the cleansing."*

According to the registrar of the SAWC, if a ranger kills a South African poacher, the cost for the cleansing ceremony is somewhere between R2000 and R3500. If a ranger kills a Mozambican poacher, the price increases to R5000. Interestingly, there is a view that Mozambican and Zimbabwean muti is stronger than South African muti, so some rangers will seek out expatriate sangomas for more effective cleansing rituals (Glasson, Personal communication, March 2022). Lastly, well-known sangomas may also charge a higher fee for the services if they have a reputation for effective cleansing rituals. Rangers visit sangomas for cleansing ceremonies as they strongly believe in the restorative powers thereof, providing closure to negative experiences and possible consequences related to a poacher’s death should the ceremony not be performed.

Who are the poachers, you may wonder? To understand what rangers face on their daily patrols, what can be gleaned from the way poachers are doing things in order for the rangers to be successful?

2.3 Overview of the Poachers

According to statistics released by the KNP, there were approximately 2500 to 3000 poachers in and around the KNP in 2015, and this number increased to over 6000 in 2016 (Hübschle, 2016b). In 2017, 3700 incursions by poachers into the KNP were logged (Martin, 2018; Watson, 2017). In 2008, 262 rhinos were poached in South Africa. The number of poached rhinos surged to more than 1000 per year from 2013 to 2017, whereafter it dipped to 769 in 2018 and dropped further to 594 in 2019 (Save the Rhino, 2019). Rhino poaching has now evolved into a multi-billion-dollar transnational organized crime network. Who, then, are the poachers willing to risk life and limb to hunt and kill the rhino?

Some poachers are unemployed, uneducated, immersed in a background of poverty, and drawn by profitable economic motives (Duffy, 2014). They are enticed by the promise of the “gold” in the horn, as farming, animal husbandry, and selling charcoal cannot compare with the price of rhino horn. Other poachers are former military operatives, police service members, or game scouts (Montesh, 2012). Jasparro (2018:19) confirms the involvement of military operatives in poaching by stating that “*former non-state combatants, insurgents, and corrupt military personnel*” are militarized actors among the poachers. They are often involved in other serious syndicate crimes, such as carjacking and robberies. A group of three poachers might earn up to R200 000 between them per killing, explaining their brazenness to commit these crimes. Poachers can be from either the same community or different geographical regions, even provinces, to collaborate on a “project” (i.e., poaching). Poaching groups comprise between two and six individuals illegally entering parks or reserves for three to six days at a time. They can walk up to 25 km per day searching for rhinos.

Race does not play a role in poaching. Not all poachers are black. White pilots, businesspeople, farmers, rogue game ranch owners, professional hunters, game capture operators, and wildlife veterinarians have been caught in illegal rhino poaching operations. Becoming a poacher seems to be an intentional decision, referring to voluntary comradeship (Uys, personal communication, July 2017), although coercion has played a role before. As is popular in many African cultures, initiation practices have not been noted among poaching gangs. Poaching is gender oriented as, traditionally, poachers are male (Hübschle, 2017). Females do not form part of active poaching groups during incursions but play a supportive role in driving the getaway vehicle, hiding the horn, and providing the poachers with a hiding place and comfort (Uys, personal communication, July 2017).

Poaching is not weather-bound. Mouton and De Villiers (2012) deduce from their research that there is no direct correlation between inclement weather, rain, and poaching. Temperature does not seem to play a role either, and it is safe to assume that poachers do not have weather preferences when carrying out poaching attacks. Poachers will cut a security fence in a few different places simultaneously, a few kilometers apart, putting the rangers in a difficult position to decide which intrusion area to react to (conversation with a warden, January 2019). More poaching incidents take place on Thursdays and Fridays. Furthermore, poaching is not seasonal, as rhinos are poached throughout the year. However, there is an increase in poaching before the East Asian holidays and the Christmas season.

Daffue (n.d.) notes that when going on a poaching incursion, poachers, due to superstitious beliefs, take along muti wrapped in newspaper and tied with string, given to them and blessed by a sangoma. Poachers believe that the muti will ensure their invisibility from rangers, endowing them with specific supernatural abilities, such as being bulletproof and having great speed. To ensure a poaching group’s success, sangomas sprinkle muti on the poachers and their getaway vehicles using a cut-off rhino tail. Traditional healers advise poachers on the timing of their poaching expeditions, and poaching groups carry muti with them to ensure a safe and successful hunt (Daffue, n.d.; Hübschle; 2016a). The traditional healer does not accompany the poaching group.

Hübschle (2016a:334) further confirms the involvement of sangomas in poaching groups: “*Many poachers related how the sangoma’s sanctioning of a planned hunt was as important as leasing the gun. In essence, the sangoma ‘legitimized’*[17] *the illegal expedition in the Park by providing protection and the go-ahead*." According to Hübschle’s (2016a) sources in the KNP, some Mozambiquan sangomas are in charge of poaching groups – not participating in the hunt themselves but running the illegal hunting incursions. Poverty is often touted as the main reason why rhinos are poached. Organs are only harvested for muti, enforcing this belief. Cutting off an ear from a rhino carcass indicates the presence of an informant in the poaching group, whereas cutting out an eye serves to ensure that the poachers will remain unidentified for the crime. The genitals, teats, and eyeballs are harvested for muti (Daffue, n.d.).

In speaking to the wardens on the various reserves during my fieldwork, they informed me about the habits of poachers (personal conversation with various wardens, October 2018, January 2019, and February 2019). As poachers are frequently creatures of habit, many will follow a similar route into reserves. Alternatively, they will use the lights of the various lodges within reserves to find their way. Although many lodges do not run on total accommodation capacity, the lights are on at night, making it easy for poachers to find their way. Poachers find their way at night by looking for a specific or familiar mountain top, rock outcrop, tree, or lodge to ensure that they stay on course, with dry riverbeds being the preferred routes of use. It is difficult to discern friend from foe. Some poachers enter parks and reserves as guests or pose as tourists eager to go for a weekend away from the busyness of life or keen to start their holidays. Once inside the reserve, these poachers are dropped off at a specific spot in the veldt to search for rhino herds and begin their poaching quest. Some poachers also wear similar camouflage uniforms and the same make of boots as the rangers, which makes tracking them challenging (GRAA, 2018b).

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[17] The sangoma cannot legitimize illegal actions. Their rituals validate the poaching in the minds of the poachers.

A more recent tactic by poachers is to wear sponges under their shoes as it leaves no shoeprint or to sew the soles of their boots on backward to mislead the rangers (informant conversation, October 2018). During patrols, rangers need to be vigilant and look out for poachers or discarded effects such as equipment, trash, backpacks, footprints, clothing, muti, or evidence of where poachers had pitched camp. The illegal poaching group entering the reserve usually consists of three or four people, including a tracker, expert shooter, cutter, and "OPS" guy. The tracker knows his way around the reserve or park during the day and night. The shooter would have to be a proven shooter. The current weapon of choice is high-caliber weapons such as the .458, .375, or semi-automatic rifles, which are seen as high-value assets. The cutters' tools of the trade include a machete, axe, knives, and pangas, although flat blades, saws, and (less often) chain saws are also used. One of the uses of a machete is to break the spine of a rhino calf so that it does not run away. The OPS guy/bearer is seen as the lowest-ranking member of a poaching group. He carries the group's food provisions, water, axe, and muti, as well as a few rounds of ammunition (usually fewer than 10), often a silencer, a machete, and knives.

Warchol and Johnson (2009) mention that the Mkuze community in northern KZN collectively raised funds to post bail and pay fines for community members who were prosecuted for poaching. Hobsbawm (1959) confirms the "Robin Hood" notion by mentioning the transformation of common criminals into "social bandit heroes" that seemingly stand up for justice. This Robin Hood hero notion of the poachers stealing from the rich to give to the poor is also confirmed by Uys (personal communication, October 2018) and Daffue (n.d.). I believe the poachers also buy the loyalty and silence of the villagers and the rangers, whether through coercion, threats, or the promise of employment.

According to Hübschle (2016a), in Massingir, Mozambique, the kingpins are seen as the "saviors" or Robin Hoods of their community, as the illegal poaching trade has lifted the economy of this town out of dire poverty and brought obscene wealth to some. Poachers and kingpins are viewed as role models as they contribute to the upliftment of the community by ensuring their own children receive an education by sending them to school, building houses, and purchasing expensive clothes and cars. Community members often assist in organizing poaching raids. They may, for example, provide accommodation for the poachers and can thereby make a substantial profit, without necessarily feeling that they are doing anything wrong. If one family in the community does not help the poachers, they will simply go to the next family. The community turns against conservation every time a poacher is killed (Smith, 2017). Oftentimes, poachers will be from the communities surrounding the parks or reserves.

According to the wardens I interviewed, poachers will explore areas where there is more informants harvesting information regarding the whereabouts of rhino herds. Poachers have their own counter-intelligence and will often infiltrate local communities by gathering intelligence, watching waterholes, observing rhino farms, and obtaining word-of-mouth info about the whereabouts of the rhino. Corrupt field guides (those tasked to protect the rhino), contractors, tourist guides, delivery vehicle drivers, lodge staff, security staff, and even rangers have been known to supply info to poaching informants. Corrupt lodge staff/workers are paid and even bribed by the poachers through illegal and illegitimate funds regarding the whereabouts of rhino herds. Should these informers be caught, they are replaced.

In an interview, free-lance journalist Scott Ramsay asked General Jooste to explain the typical poacher. Jooste referred to the poachers as formidable opponents with no rules nothing their resilience, survival, tracking, ex-military skills, and remarkable bush-craft skills, where they do not need much to survive as they live off the land (Ramsay, 2014). Daffue (n.d.) emphasizes Gen. Jooste's opinion in referring to their tactical advantage, dictating "*time, space and the rules of engagement, infiltrating and exfiltrating at will*". Poaching gangs will target a specific area, "*purposefully stretching ranger capacity,*", especially during a full moon, also known as poacher's moon, knowing that the "*rules of engagement favour them [poachers] and puts us [rangers] on the back foot*" (Ramsay, 2014). Poachers have their own counter-intelligence, access to funding used in bribes, and the necessary expertise (Daffue, n.d.). Poachers are generally involved in other dangerous crimes, and many pursue a "gangster" lifestyle of fast cars, alcohol, and women.

Daffue (n.d.), Hübschle (2017), and Uys (personal communication, July 2017) mention that Mozambiquan poachers see themselves as professional hunters, local heroes, and the Robin Hoods of their community, often displaying their weapons in public. Illegal rhino poaching has lifted the economy of the town Massingir in Mozambique, located not far from the KNP border fence, out of dire poverty and ruin and has brought wealth to many. The town stands in stark contrast with some of the other surrounding villages. In the villages, houses are built out of clay, straw, and corrugated sheet metal, whereas in Massingir, dozens of houses are built from brick and cement. Totland (2016:12) calls these '*ostentatious signs of wealth*', with expensive 4x4 pickups, satellite dishes, and air conditioning units part of the illegal wealth compounds of the local crime bosses involved in poaching. He further mentions that many of the vehicles had South African number plates – more than likely an indication that the vehicles were stolen and smuggled across the border. Up to 80% of the population of Massingir are involved in poaching to some extent. Involvement may include bribing the police and officials, keeping poachers out of jail, renting out rifles for poaching, providing lodging for poachers, or supplying them with goods. A sign of status among poachers in Massingir is wearing red athletic shirts (Totland, 2016:13).

According to Totland (2016), the pseudo-name of the kingpin in Massingir is Navara. His real name is Simon Ernesto Valoi, and he made a living in South Africa as a hijacker in 2016. South African authorities want him on multiple murder charges, including that of his brother, whom he shot in the head as they fought over a rhino horn. Crime bosses and kingpins in Massingir are respected as they employ many of the unemployed young people in the town. Strangely, however, Totland (2016:14) also noticed that the children of one of the crime bosses suffered from a severe protein deficiency called kwashiorkor, with physical symptoms such as swollen bellies and discolored skin and hair. The ten poverty-stricken children of this crime boss scrounged for rice or grains due to a low-income family living in a dilapidated shack close to the compound as their crime-boss father was so consumed by greed that he did not look after them (Totland, 2016:14).

Women are not actively engaged in poaching themselves (i.e., during poaching excursions) but rather fulfil a supportive role by driving the getaway vehicle, hiding the horn and the poachers, and providing comfort to them. Traditionally, wildlife poaching is perpetrated by men (Hübschle, 2016a; Uys, personal communication, July 2017).

Daffue (n.d.) indicates that, in general, poachers, due to cultural beliefs, leave behind some "*kind of signature*". Muti, wrapped in newspaper and tied with a string given and blessed by the sangoma, will ensure that the poachers are invisible and have certain supernatural abilities, such as being bulletproof and having great speed. Sangomas sprinkle muti on the poachers and their getaway vehicles

Poachers use their own rhetoric when talking about poaching. They are also referred to by specific names such as *sisluiti/oguluva/tsotsi,* meaning poacher. In South Africa, various expressions are used to refer to poaching. *Emasimini/siya e masimini* means "We're going to the fields", *ephondweni* means "Going to the horn", and *We are going* *to Skukuza* means that they are going to poach (Hübschle, 2016a). In Mozambique, the term *xibanjane* is used when poachers are going for the horn. Alternatively, the following terms are used to refer to poaching: *Vamos a machamba/nas menas*, which means "Going to the farm/the mines", and: *Lugar onde tudo acontesse,* which means "The place where all is possible" (Fenio, 2014:10).

There are two opposite views on poaching. According to the Game Rangers Association of Africa website, Nicholus Funda, chief ranger of the KNP, referred to the motivation for poaching, stating the following:

> *When one doesn't have anything to eat, one cannot prioritize respecting natural-resource conservation. The truth is that until poverty is resolved in South Africa, particularly in areas surrounding reserves, syndicates will have a pool of poor people to recruit, and poaching will continue. For the desperate man trying to feed his children, the financial reward he receives in exchange for rhino horn is an offer he can rarely resist.* (GRAA, 2018a)

In contrast to Funda, one of the rangers I interviewed was outspoken about poverty used as an excuse and reason to poach:

> *Money is not the reason to poach. It is not really poverty. No one is really poor. They fail to think what can take them out of poverty. I opened a tuck-shop for myself to sell bread to stay alive. I used my brain to think. If I can do that, someone next to me can also do that.* (Male, 3 yrs, February 2019)[18]

The U.S. Department of State (Fenio, 2014) published a report that comprehensively examines the factors driving poaching. Factors playing a vital role included marginalization of communities, limited employment opportunities, little economic incentives trickling down to the communities, corruption and fear, political will, and anger towards wildlife parks. Poaching in South Africa has direct roots in the current socio-economic situation and reaches far beyond the frontiers of conservation.

One of the factors contributing to poaching is the lure of **economic incentives**. The current going rate per kilogram of rhino horn is estimated at between US$60 000 and

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[18] For all quotes by rangers, I note the ranger's gender, the number of years he had worked as a ranger, and the date I interviewed him.

US$70 000 (Joshi, 2019; Oberem, 2019; Sas-Rolfes, 2012), making it more expensive than gold, cocaine, and platinum. Young people are drawn by the promise of the “gold in the horn”, as farming, animal husbandry, and the selling of charcoal cannot compare with the price of rhino horn. There are two broad levels of poaching – either for subsistence and large-scale commercial poaching – with varying differences and grades. Commercial poaching is more opportunistic or is commissioned, focusing on high-value parts such as rhino horn or ivory (Jasparro, 2018), which has now evolved into a multi-billion-dollar transnational organized crime network where commercial poachers use weapons. Families focus on subsistence poaching, killing for bushmeat using snares and poison. According to Hübschle (2017) when interviewing incarcerated poachers and asked about their poaching motivations, cited feelings of shame in not being able to provide for their families (and shame of having to do so through illegal means).

Another factor contributing to poaching, as indicated in Fenio’s (2014) report, is **poverty, anger, and marginalization**. Communities around the KNP were forcibly evicted during apartheid and resettled in areas close by. Furthermore, displacement of local communities during the Mozambican Civil War between Renamo and Frelimo from 1977 to 1992 as well as many refugees opting to seek asylum in South Africa led to increased settlements around the KNP. There is an estimated two million people currently living within the 1000 km boundary of the park. These traditional communities surrounding the KNP and private reserves identify little in the way of employment through available employment opportunities filtering down to them. Because of community members’ perceived lack of support from the parks and reserves, they will assist the poachers. Their attitude is captured in the following statement: “ *We know these poachers, but … because Skukuza doesn’t help us, we won’t help them”* (Fenio, 2014:17). Their daily focus is on economic survival and not wildlife conservation. There is a concerted effort by some parks, reserves, and lodges to focus on community initiatives such as education, nature conservation, and vegetable gardens. Many of the communities around the parks/game reserves fall under the absolute poverty definition, meaning they cannot even afford basic subsistence and will poach bushmeat as a source of nourishment and income (to sell). On the other hand, some community members fall under the relative poverty umbrella, referring more to their standard of living or their way of life, whose standard is below that of the society where they live. There is no way of confirming under which category – whether absolute or relative poverty–- the poachers operate.

Greed, political will, and corruption is another factor that contributes to poaching. A group of three poachers might earn up to R200 000 between them per killing, explaining their brazenness to commit these crimes. Even though there are official procedures in place to charge the guilty, the court process is fraught with complications due to corruption on multiple levels. For example, the court case of Kingpin Gwala was postponed 21 times since his arrest in 2014. There were indications of bribery in this case, as 80% of the poached rhino horn in KZN went through his hands (Singh, 2018). Corruption, however, is not exclusively based on outsiders or external influences. Corruption found in state conservation agencies is a chief concern, "undermining park, institutional, national and regional anti-poaching strategies" (Haupt, as cited in Glasson 2020:40).

Furthermore, **porous borders** play an important role in poaching. In 2002, one of the world's greatest wildlife reserves was formed, called the Greater Limpopo Transfrontier Park. Certain sections were combined and specific fences dropped between the KNP in South Africa, Gonarezhou National Park (Zimbabwe), and Mozambique's Limpopo National Park. This enabled free roaming for the animals, creating a space for conservation and for ecosystems to flow undisturbed across international borders. However, it unfortunately also contributed to the uncontrolled movement of humans through permeable borders and dropped fences between the KNP and the private reserves surrounding it.

Muth and Bowe (1998:10) refer to poaching as being "*embedded in subcultural webs of meaning that involve tradition, ethnic heritage, individual and social identities, and other socio-cultural factors*". What additional factors, apart from poverty, contribute to poaching? What role do social and cultural capital and enculturation play through socialization? Alternatively, what influence do factors such as neo-liberalism or perhaps urbanization/adaptation to different lifestyles that are the driving factors, highlight? What role do tradition, ethnic heritage, and individual and social identities play in the illegal poaching of rhinos, if any? Hübschle (2017:428) mentions that "*the role and motivations of rhino poachers need further unpacking if we are to understand the push-and-pull factors underpinning the illegal rhino horn economy*".

2.4 Chapter Summary

Cultural customs, rituals, and taboos play a role in how we see our surroundings and the way we process our beliefs and make decisions. This chapter gave an overview of beliefs, rituals, taboos, and symbolism. It further highlighted the general misunderstanding of the Western mind regarding the importance of specific traditions and cleansing rituals among rangers should a poacher be eliminated. To understand the context and pressure under which rangers work, a brief overview of the modus operandi of poachers was given.

These factors are by no means extensively unpacked and warrant additional research. Studies can also be done on community perceptions and involvement in the illegal wildlife trade, community involvement in stopping illegal poachers, and poaching and the various driving factors contributing to poverty. A further in-depth anthropological study needs to be done on community conservation and the implications thereof. The following chapter focuses on the history of rangers situated within a South African perspective, contrasting and comparing it with a basic overview of the ranger corps in other Southern African countries. This is done by looking at the available literature on rangers and presenting an oversight and insight into their training.

CHAPTER 3: EXPLORING THE RANGERS’ LANDSCAPE: FROM CONSERVATION TO MILITARIZATION

Conservation is caring for and protecting natural resources and maintaining the diversity of species and ecosystems. Conservation duties performed by rangers are extensive, varied, and multifaceted. Rangers’ job description includes ensuring wildlife’s well-being; conservation, biodiversity management, and data collection; animal tracking, capturing, and relocation; public and local community relations; and infrastructure and equipment maintenance. Security aspects encompass territorial and border integrity through patrols, law enforcement, protecting hot-spot areas, and removing snares. Militarization, the current dominating paradigm and anti-poaching strategy, lead to rangers spending 80% to 90% of their time in military-style law enforcement (Serino, 2015). The focus on enforcing conservation laws (Neumann, 2004) results in less time for conservation duties. How has this adjusted focus from conservation to para-militarization[19] influenced the rangers’ lives? As discussed later in this chapter, the rangers I spoke to confirm this shift in focus, leading to frustration and ineffective performance of conservation duties.

3.1 A Brief Historical Overview of Game Reserves and Rangers

Although there is a growing body of literature on ranger activities, little research is available on the rangers themselves. From a biographical perspective, the elephant-hunter/poacher-turned field ranger, Nyschens (1997), in his autobiography, *Months of the sun*, focuses on some of the historical backgrounds of the field ranger. Another Saul-to-Paul conversion is seen in Peter Stark’s (2008) biography, *The white*

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[19] As the name suggests, the paramilitary force is semi-militarized. Those working in the paramilitary force follow training, tactics, and structure similar to the military force. However, the paramilitary force is not a part of the formal army that looks into external security. The duty of paramilitary services includes protecting the resources from internal threats, whereas the military force’s duty includes protecting the external borders of a nation from aggression from other countries and terrorism.

bushman, with Stark being known for his tracking skills and reputation as a fearless lion killer. Wildlife conservation officials saw Stark as a poacher until he was offered a job as a game ranger and went from poaching to policing. Leakey and Morrel's (2001) *Wildlife wars: My fight to save Africa's natural resources* focus on Leakey's experiences and operational duties during his tenure in the 1980s with the Kenyan Wildlife Service (KWS). Leakey highlighted low morale and low remuneration contributing to rangers' stress in feeding and clothing their families. Problems included inadequate equipment, of which he stated: "*You couldn't expect a man with a .303 Enfield to take on someone wielding a modern assault rifle*" (Leakey and Morrel, 2001:63).

In their article on elephant poaching in Zambia, Jachmann and Billiouw (1997) explain ranger operations and implementing a cash-reward system for arresting offenders and confiscating ivory. The study of the KNP by Du Toit, Rogers, and Biggs (2003) focused on management issues, such as the early development of the park and the primary role of field rangers during the first years. Carruthers (1995) probes the social and political positions and responsibilities of white rangers versus black game guards[20] in the KNP. Furthermore, research by Carruthers (2008) and Root (2005) focused on the duties, distinctions, and racial issues between white game rangers and black game guards during the apartheid era.

White rangers wrote all the current available autobiographies. Dlamini (2019) is a black South African historian who wrote about his experience as a black man attending a ranger training course where the white trainers were labelled offensive, insular, seclusive, and paranoid. Apart from this, no other writings are available telling the stories of black rangers in published book form. Even though the KNP permitted me to write up and document the life and personal stories of black rangers, the timing of this project had not come to fruition. Further academic articles on ranger satisfaction in Nigeria by Ogunjinmi, Umunna, and Ohunjinmi (2008) indicated that corruption played a significant role in enabling rangers to accept bribes from poachers and be complicit in relaying the whereabouts of wildlife. Besides current literature, how does history support the connection between militarization and conservation?

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[20] During the apartheid era, black game rangers were called game guards, which denoted a lower position as that of a white game ranger.

Historically, militarization and conservation went hand in hand over much of the modern era in South Africa and the United States of America. In 1886, Captain Moses Harris, from the First United States Cavalry and the War Department, established a military base at what was then called Fort Yellowstone, a park in Wyoming, USA. He replaced the park's civilian administration, governing the park under military administration for the next 32 years. Although the military enforced anti-poaching and conservation laws in Yellowstone, they also developed infrastructure and established logistical and administrative expertise (Massé, 2018). Further duties included patrolling the perimeter, setting up camps, establishing informant networks, and enforcing legislation.

To understand the interconnections between militarization and conservation, we can look at the historical connections between these topics. Each colonial culture brought its own military identity, legal frameworks, and national culture, with national parks, reserves, and forest regions generally preserving the history of these colonial settlers (Somerville, 2016). Colonial administrations policed and rapidly militarized these protected areas, earning an income from selling hunting permits and licenses. Militarization and conservation have always been interlinked. It is not a new concept but a coexistence of older and newer forms of militarism (Cock, 2004).

In South Africa, the early rangers at the Sabi Game Reserve, established in 1898, and Singwitsi Reserve, founded in 1903, focused more on security and protecting wildlife than observing scientific matters and managing the environment. Apart from Stevenson-Hamilton, who accepted the warden position in 1902, the Sabi Game Reserve's first workforce consisted of black men. Unimpressed with the white rangers' capabilities at his disposal, Stevenson-Hamilton did not trust the white game rangers with absolute authority even after they had completed their duties successfully

(Carruthers, 1995). The early white rangers were representative of various trades, such as the railways, civil service, storekeeping, and the hotel industry. Stevenson-Hamilton thought university qualifications were unnecessary. Instead, he preferred rangers with bushcraft skills, physical strength, working knowledge of weapons, agricultural expertise, and an understanding of the surrounding communities. His preference was to employ active, reliable, and unmarried young men.

According to Carruthers (1995), Stevenson-Hamilton further organized the reserve personnel along paramilitary lines by dividing specific geographical areas into sections. A white ranger was in charge of a park section assisted by a new African worker category, the African Native Police Force (NPF), established in 1941. He believed they would be more effective in the local community and familiar with the physical landscape, language, and culture. Despite insufficient remuneration and incentives, Stevenson-Hamilton admired the African rangers' commitment and sense of duty. White sergeants appointed in the Kruger were responsible for conducting regular patrols, arresting poachers, giving feedback on wildlife matters, and monitoring the African Native Police Force to execute their duties.

During apartheid, a clear distinction emerged between game guards and rangers (Carruthers, 1995). Black men employed as game guards had a lower rank/designation, earned a lower salary and had more basic lodging throughout the park. Their appointment as game guards indicated their focus was on protecting the game. White rangers had higher ranks, higher salaries, and different responsibilities, such as maintaining boreholes and fences and capturing and relocating wildlife. They were given more suitable accommodation that often-included family lodgings (Warchol and Kapla, 2012).

As defenders of wildlife, wearing a uniform[21] was an essential element of the image that the rangers portrayed to the outside (Carruthers, 1993). The paramilitary hierarchy described above and wearing a uniform is still in force in the KNP and surrounding private reserves today, as it is globally. The militarization of the rangers is further enforced by specific military-type procedures in the rangers' daily rituals, such as the morning parade and the hoisting of the flag. Further procedures such as parades, room inspections, drilling, and discipline, which were part of the previous government's Border War initiatives, are still implemented in the ranger rituals. During apartheid, young white men were conscripted into compulsory army training and saw the flag hoisting, discipline, and parades as part of their rituals during their time in the army. The wardens that I interviewed were all ex-military officials. I wonder how the current black African rangers experienced the discipline, military uniform, and ceremonial and militaristic procedures that were part of the apartheid military culture, as these are now part of their lived-in experiences on the reserves.

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[21] Rangers are dressed in a dark olive green and khaki uniform, with the reserve logo/name embroidered on the shirt. The fabric is not a lightweight, thin, and breathable cotton but thickly woven, thorn and bushveld resistant,

Since the late 1980s, South Africa's emphasis on wildlife and environmental conservation has shifted from a community-based resource management model to a militaristic slant in an escalated battle to protect endangered wildlife (Büscher, 2015; Neumann, 2004). Some soldiers were redeployed under the guise of conservation in the 1980s. The members of a counter-insurgency military unit named Koevoet[22] were surreptitiously redeployed in 1989 as APUs within newly formed game conservation units. These conservation units, funded by the international conservation agency the WWF, patrolled the Namibian bush by putting their tracking and bushcraft skills to good use. Other Koevoet members resurfaced as security guards in the private security industry or were employed as policemen in KZN.

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with the earthy colours adding a dimension of camouflage. As the summer temperatures in the Lowveld hits the high 40°C mark during summer, these uniforms must be uncomfortable and hot to wear in the heat and humidity. Their boots are polished, dark brown, all-terrain shoes, completing the camouflage uniform. One of the rangers responded as such to the question regarding their uniform: "*The boss decides which uniform, and it must be different from the other reserves to identify where you are from.*" Rangers on the private reserves are issued with two sets of uniforms a year and a pair of boots.

[22] Koevoet, the multi-racial counter-insurgency branch of the South West African Police (SWAPOL) (patterned on the Rhodesian military unit, the Selous Scouts), specializing in counter-insurgency operations, was active during the South African Border War between 1979 and 1989 (Stiff, 2004).

Ellis (1994) continues that white South African Defence Force (SADF) army officers trained black youths in paramilitary training, insisting that the black youths' training was solely focused on being game wardens. Additional military involvement included the SADF 121 Battalion (a Zulu ethnic unit), whose members were trained as game wardens in KZN. The KZN Department of Nature Conservation employed a secret intelligence unit keeping specific targets under surveillance, such as David Webster (an anthropologist) shortly before his murder two years earlier. The motive behind his murder was never established. A possible cause raised was that he had come across evidence implicating the role of South African security in the smuggling of contraband – tusks, rhino horn, and weapons – during his fieldwork in Kosibay on the South African–Mozambique border (Ellis, 1994). A further partnership between conservation and the military is confirmed by the involvement of a military unit patrolling the KNP during the early 1990s, trained by instructors of the SADF's 111 Battalion (Ellis, 1994).

Using the military in conservation is not specific to South Africa. The Rhodesian Selous Scouts received their initial training in 1973 as trackers and reconnaissance scouts in a wildlife park, focusing their recruitment on those with an in-depth knowledge of bushcraft or former game wardens (Ellis, 1994). Ex-military soldiers were seen as efficient game wardens as they were accustomed to being in nature and had trained using various weapons. Ellis (1994) reaffirms this connection between game parks and the military by explaining that those with a military background were often the right choice for warden or ranger as they were used to outdoor life and trained in weapon usage. All the wardens I interviewed had a military background. Another example of the military and conservation interconnection is the training of rangers from Malawi, Congo, Kenya, and Gabon in various anti-poaching measures by ex-military veterans from the United States of America and the United Kingdom (Haslam, 2016; Jasparro, 2018:10). On top of this trend of using foreign soldiers to train rangers, many wildlife and anti-poaching non-governmental organizations (NGOs) are currently militarizing their staff. Further afield, the national armies of Nepal, Cambodia, Guatemala, and Indonesia have played a vital part in implementing conservation measures.

Furthermore, French troops and mercenaries constantly battle militarized elephant poachers in Cameroon and the Central African Republic (Duffy, 2014).

3.2 The Influence of Militarized Masculinity

How easy has the adaptation from conservation to para-militarization been for the rangers? Gun culture is still very much alive in South Africa's diverse social categories, feeding into and reinforcing an ideology of militarism. According to Bahro (1982), South African society is riddled with the "*disease of militarism*", which is embedded into the daily lives of South Africans. Legal gun ownership is permitted for the private security industry, the SANDF, SAPS, and civilians. There is an estimated 3.8 million unregistered, illegal firearms in South Africa, Mozambique, and Zimbabwe (Qhobosheane, 2021). South Africans lean towards consumerist militarism, as evident in the values and social practices of citizens. Gun culture and violence are normalized on TV, discussed in daily chats, and even promoted in children's toys. Cock (2004:10) confirms this normalization – and even glorification – of war, weaponry, military force, and violence through TV, films, books, songs, dances, games, sports, and toys, calling it a kind of "*banal militarism*".

The concept of militarism and the ingrained effects of militarized masculinity on society must be understood in the context of especially the South African White culture. Banal militarism operates near the surface of social life as it is embedded in our agency and daily activities. Our rituals make war, weaponry, and violence appear natural. Militarism was embedded in everyday activities. This started at the school level, even in the 1950s where high school boys had one compulsory class a week called Cadets, where they were taught to march, drill, and receive orders. They were being prepared for two years in the military, as conscription for white males was mandatory during the apartheid years. Young white men who disobeyed the mandatory army conscription were jailed.

Black men were excluded from the national military service and thus denied access to firearms. However, some (majority) black men joined Umkhonto weSizwe (the armed wing of the African National Congress), which operated inside and outside of South African borders as part of the struggle against apartheid through urban terrorism and conflict. The organization was also based on a military model with training camps for predominantly black South African men. According to Cock (2004), the exclusion of arms to Blacks was a denial of African manhood and citizenship. The outcome of this historical legacy is militarized citizenship and militarized masculinity, which has devastating social consequences and will be very difficult to dislodge. Among many black South Africans, there is a widespread understanding that access to legal gun ownership is a marker of liberation and full citizenship in the post-apartheid state.

The majority of the rangers on the reserves and in the national parks are black. Are the current bearing of arms by the black rangers seen (by them) as markers or reinforcement of liberation? Does carrying a weapon enforce their gender and full citizenship in the post-apartheid state? Has their African masculinity been reaffirmed as the prohibition on arms was a denial of their African manhood and thus a "*perverse indicator of changing power relations?*" (Cock, 2004:10). Alternatively, is the need to economically survive in a country with high unemployment more critical to the rangers bearing arms than affirming their masculinity and changing power relations? The rangers' identity is reinforced through popular culture, portraying them as heroes in protecting the rhino and affirming their masculinity through militarization. In the current unemployment context in South Africa, the economic motivation of being employed is important. In the African worldview, a male should be able to provide for his family, even if it means carrying a gun. However, masculinity and guns are not only about economic issues but filter out to sexualized issues of dominance and violence (or the prevention of violence perversely by providing more guns). Providing rangers with guns pervades this idea of male 'corrective violence' to address what they regard as 'evil' or 'bad' violence. Rangers [should] use their guns for good intentions as opposed to poachers who use their guns for bad intentions, such as to kill and maim wildlife (and at times, rangers). Perspectives and issues of corrective violence are a much-needed research topic between rangers and poachers.

3.3 Green Militarization

Rhino poaching started escalating in 2008, with over 1000 rhinos poached per year from 2013 to 2017. Rhino poaching was declared a matter of national security and a priority crime by the South African Government in 2012. Diplomatic and international relations with other countries, our economy, and our heritage were negatively affected. The South African Government followed an interdepartmental and multi-sectoral approach to combatting poaching, involving various governmental entities. These were the Department of Environment, Forestry and Fisheries; Environmental Management Inspectorate (EMI)/Green Scorpions; South African National Parks (SANParks) ECIS; Department of Defence; SAPS; Directorate of Priority Crime Investigation (Hawks); State Security Agency; South African Revenue Service; Department of Justice and Constitutional Development; Department of Correctional Services; and provincial conservation authorities. These role players thus became involved in fulfilling the mandate of the National Environmental Management Act (No. 107 of 1998) (Republic of South Africa, 1998). The act requires protecting the environment for current and future generations through reasonable legislative and other measures (Jooste, personal communication, April 2019).

The term *green militarization* was coined by Duffy (2014:816), who defines it as the “*use of military and paramilitary personnel, training, technologies, and partnerships in the pursuit of conservation efforts*”. Green militarization focuses on conservation initiatives using paramilitary actions and partnerships to protect nature. Although the term green militarization is a new buzzword, the concept is not new. Shaw and Rademeyer (2016) confirm Duffy’s (2014) notion that green militarization uses security actors and security techniques through military and paramilitary approaches to respond to threats to wildlife. Runhovde (2017) further indicates that green militarization leads to green violence through using instruments of violence. On the opposite side, Jooste and Ferreira (2018) see militarization as an act by authorities to assemble and put into readiness people, equipment, funding, or approaches for war, ensuring mission preparedness, equipment, techniques, and resources to sustain budgets and protect wildlife.

Green militarization has enabled a surplus of actors, such as conservation NGOs, private reserves, private rhino owners, and private protected-area landowners, in retraining their staff to be para-militarized in protecting the rhino. NGOs and role players in the private sectors have had to rapidly raise funds from various local and international donor organizations to support their day-to-day paramilitary operations as poaching increased from 2012 onwards (Glasson, personal communication, April 2019). Green militarization is supported as the avenue of choice to prevent environmental emergencies or threats, such as wildlife trafficking, resulting in the plundering and degradation of ecological assets (Jooste and Ferreira, 2018).

In 2012, Maj. Gen. Jooste, a retired army general from the SANDF after 36 years of service and a veteran of the South African Border War in Angola (1966–1989), was appointed as head of special projects in the KNP in 2008 and tasked with militarizing the rangers. He opted for a paramilitary approach to stem the tide of poaching by employing ex-military staff. He further increased the KNP's security measures by converting the ranger corps into general APUs through paramilitary training and additional security measures. Jooste (personal communication, August 2018) further justified the militarized interventions implemented in the KNP by stating:

> *Out of necessity, anti-poaching interventions and operations in Kruger were adapted to become paramilitary. This was never seen to be a long-term solution, as law enforcement is an interim measure of necessity with many unintended consequences. Still, it was necessary to contain the plundering of environmental assets ….*

Green militarization should not be seen as a long-term approach in this context. Jooste (as cited in Glasson, 2020:49) further states:

> *Green militarization, I think, despite the one-sided criticism, it's a reality. If there is an alternative, then one must consider it. You first go to your own forces, your police forces – but police in the bush, it's not a good fit. The army is*

> *conventionally trained. It's not a good match either. In Africa, these forces have other priorities – crime-fighting and peace-support operations. So now you are back to the rangers. Yes, militarization is certainly not the preferred option in the bigger scheme of things. But what must we do to make sure that it doesn't last a day longer than it must? One would like a discourse on that, to say, "Let's make sure that this necessary intervention doesn't last another 20 or 30 years."*

These two distinct groups – those against militarization and those enforcing militarization – have led to many debates, creating an even more significant divide between stakeholders, scholars, funders, and ordinary people. According to Maguire (2018:5), militarization is only one dynamic in the current poaching and wildlife trafficking crisis, giving us a basic view of poaching and countermeasures that need to be implemented. A more nuanced approach should address broader forms of criminality, including rangers' involvement in poaching.

Due to the increase in poaching in South Africa, efforts to keep fauna and flora safe have intensified. The one-sided criticism Jooste refers to is primarily from academics who are outspoken against the militarization of rangers, being vocal and critical of the militarization of conservation initiatives as implemented by Jooste. Dowler (2012) sees militarization as a malevolent process. Somerville (2018) further argues that the securitization and militarization of conservation and anti-poaching measures are counterproductive. It does not focus on the issues that matter, such as the alienation of communities and the mismanagement of funds.

Jooste (personal communication, February 2020) counteracts Sommerville's claim above by stating that by providing opportunities for career and economic advancement in the surrounding communities and securing their community areas, rangers contribute to the improved protection of said communities. The result is crime reduction; thus, anti-poaching measures are not counterproductive, nor are the communities alienated. Rademeyer (2016) asks whether we are not reducing a complex battle against transnational criminal networks to an ongoing war between rangers and poachers. Lunstrum (2014:819) indicates that the militarization of conservation is seen as a "*just war leading to the normalization of practices like shoot-on-site policies*".

However, Lunstrum portrays a misleading narrative, as all South African law enforcement practitioners do not subscribe to a shoot-to-kill policy as per the general rules of engagement. "No Ranger may fire warning shots or fire at a fleeing poacher" (Correspondence with Gen Jooste, Sept 2022).

Nordstrom (cited in Borofsky, n.d.) mentions that "*[s]ocieties create myths about a war that are widely believed"*. Could the severe criticism that rangers receive from academics thus be touted as "myths" created and believed by society at large? I refer to these myths that frame the rangers in a primarily negative context. During my interviews with the rangers involved in daily anti-poaching operations, they had a different perspective than the academics who are outspoken against green militarization. While they agreed that the militarization of conservation is not ideal and community involvement is vital in countering poaching, their main concerns remained the daily practicalities of keeping wildlife safe.

Peter Mills, Chairman of GRAA, in his annual end-of-year letter (GRAA newsletter, December 2020), focuses on an often-overlooked sentiment on militarization, driven by well-meaning social scientists, a sensation-seeking media, and uninformed public but not by the rangers. The idea that rangers are being militarized is a growing popular narrative giving the impression that rangers are part of a paramilitary force or movement. Although many rangers and APUs face militia and armed poachers in their daily operations, many rangers do not. Maguire (2018) confirms Mills' statement that the ranger corps' para-militarization does not represent a military movement but was done as an interim measure to contain the plundering of South Africa's environmental assets. Mills (personal communication, December 2020) further emphasizes that rangers should actively counter the impression that they are militarized and drive this narrative. He states:

> *Although rangers' jobs are multi-faceted, the para-militarization and anti-poaching focus is only a part of their work. We understand the dynamics of the communities where we work and know that we need to support each other. While the rangers' community capacitation toolbox might not be full, we are*

> *developing innovative ways to build bridges with the people around us. We must be conscious of our image and work hard to counter the idea that we are "military".* Mills (personal communication, December 2020)

Although not all rangers face poachers, some rangers do. A question I asked the rangers was how they viewed poachers. One ranger's response reflected his anger and frustration:

> *The poaching must stop. They give us trouble. They are bad people. They shoot the rhino and then the rhino will be finished (extinct) in South Africa. I go and look for that bastard and I will shoot him. That poacher must not be caught, I will kill him.* (Male, 19 yrs, October 2018)

Even though this ranger was the most vocal regarding the poachers, many of the participants expressed the same sentiment. Other rangers gave similar answers when asked how they saw their employment. Some mentioned that being a ranger is a calling, a desire to protect their heritage for generations to come. Further positive responses were: "*I love being in nature*", "*I'm doing it for my children*", and "*I am protecting the rhino*".

It is not only South African rangers focusing on a narrative highlighting their love for nature or protecting it for their children. A ranger from India commented: "*I am from the local community, and I am proud to protect this biodiversity and these wildlife species for future generations because they are facing the curse of extinction. I want my children to see elephants and gorillas*" (Beleckey et al., 2019). The wardens in this study confirmed the rangers' sentiments, echoing that the majority see their involvement in protecting nature as a calling. Not all the rangers expressed positive opinions regarding their employment, as it was a matter of (financial) survival. One noted: "*It is only a job to get money.*" A warden confirmed this sentiment: "*Some rangers see their jobs as a calling, whereas others see being a ranger as the only job and receiving an income.*"

Jacob Dlamini, a South African historian, studied the labor history of the KNP. He notes that a black ranger responded to a question about his job by telling him that he was sick and tired of these "*bloody animals*", referring to the wildlife he was charged with protecting (Dlamini, 2019). I asked the rangers whether they would have liked another career apart from being a ranger. An often-repeated answer was a desire to have joined the army or the police force. However, the majority emphasized their love for their work, their love for wildlife, and their desire to protect this legacy for their children and their children's children. A few thoughts come to mind – perhaps these were regurgitated answers, or maybe they were seen as the "correct answer" to give the researcher. Then again, maybe it is none of these, and some rangers have the insight, compassion, and commitment to make a difference to protect wildlife, leaving a legacy for their children. Two perspectives are emerging – those rangers who see their work as as a 'bloody' job and those who have committed heart and soul to rangering and protecting the rhino. The focus of their daily jobs is now between 80% - 90% militarization and only 10-20% conservation. Many rangers were unwittingly 'forced' into a role of military protector of nature. Receive training and become militarized to protect the rhino and have employment or refuse and lose your job. Militarization, the dominant anti-poaching strategy in South Africa, was implemented to stem the tide of poaching. It was done out of necessity and to buy time for the rhino - it was never seen as a long-term solution. Yet, rangers were not initially aware of the consequences of militarization in relation to their jobs, family relationships, and the communities where they live. Their lived-in lives had become a daily warscape in dealing with incursions and poachers, whom to trust, racial issues, and being under severe mental and physical stress leading to psychological disorders and psychological trauma, combat-related stress, and anxiety regarding their families' safety in their home communities as many rangers live in the same communities as the poachers. So, yes, there is a lack of buy-in from some rangers in protecting the rhino.

3.4 Gendered Dynamics Among the Rangers

Ranger culture is framed in a male-dominated nexus, with different functions allocated according to race, gender, and military hierarchical spaces. Various roles, responsibilities, and military hierarchies, such as section ranger, regional ranger, field ranger, warden, anti-poaching ranger, sergeant, etc., are primarily based and appointed on gender. Only 3% to 11% of the world's rangers are female (Seager, 2021:11); and gendered dynamics among rangers worldwide have been relatively under-researched. This impacts operational focus, roles, expectations and regulations, human rights, equality, and workplace safety. Although more females are joining their male counterparts in certain ranks, research on ranger culture globally indicates that hegemonic masculinity still pervades the ranger workforce (Franklin, 2007; Gripp and Zaluar, 2017). South Africa's ranger corps are no exception.

As my fieldwork demonstrates, the conservation industry is still male-oriented, as 33 black males, 2 colored males, and 2 black females participated in the interviews. Despite some operational changes, research on South African ranger culture indicates that it is in line with global ranger culture, that it is still male-dominated and male-driven. The two female rangers were not in any leadership positions. They were excluded from leadership roles and from active patrols. Whereas the male rangers were active on patrol duties, the female rangers performed more sedentary duties, thus reflecting and reinforcing gender stereotypes. One female ranger worked as a gate guard inspecting vehicles entering the reserve for illegal substances (drugs, ivory, rhino horn, and ammunition). The other female ranger was employed in the OPS room, monitoring the live-feed cameras for illegal incursions by poachers. This one-sided male domination is confirmed by Dlamini (2019) and Mathekga's (2017) research. These authors have found that South Africa's conservation industry is still primarily based on patriarchal and male-dominated structures, with less inclusion and integration of females. Despite the male patriarchal top-down structures, the number of females signing up for ranger training programs in South Africa is slowly increasing (personal interview with the head of ranger training, SAWC, November 2021).

In other parts of the world, female rangers are also struggling. There is a difference between the work dynamics of South African female rangers and those working in other parts of the world. In South Africa, female rangers are not allowed on active and armed patrol on the private reserves, whereas this is allowed in other parts of the world. In a WWF report focusing on the working conditions of rangers in Asia (Beleckey et al., 2019), a female ranger working in India is quoted bemoaning the fact that although she was pregnant, she still had to execute her responsibilities as a ranger, including patrols for up to 15 days. This continued up to her second trimester (6th month of pregnancy), posing a risk to the mother and unborn child. She could not decline as she needed the extra allowance (Beleckey et al., 2019). One of the wardens in this study does not allow the female rangers on active patrol, as according to him, hyenas will follow them during their monthly menstrual cycle as they smell blood. Thus, for their protection, they are not allowed on patrol. In the 2019 WWF report on the working conditions of rangers, a female ranger from India elaborated on the challenge of having her monthly cycle unexpectedly while on patrol. The only protection available was her socks, which she used as sanitary pads (Beleckey et al., 2019).

At one of the Limpopo reserves where I did fieldwork, female rangers are employed only as gate guards, drivers, or controllers in the OPS room. According to the warden, they are employed on active patrol duty to mitigate danger and risk to the reserve. He further continued that the lack of gender-specific accommodation and ablution facilities at accommodation pickets was another reason for not employing females on patrol, further highlighting gender bias against females. Contrary to the private game reserves, the KNP (SANParks) employs females as rangers on active patrols. This widely differing modus operandi of employing female rangers is perhaps attributed to the KNP being a national government institution/state entity, whereas the private reserves are privately owned.

Compared to the SANDF in South Africa, which endorses females in leadership positions, training, and tactical deployment, why are female rangers not employed on patrols or appointed in leadership and authority positions, especially on the private reserves? What effect does the militarization of the ranger corps have on females? It is my critically imperative opinion that female rangers on the private reserves should progress through various military hierarchies, such as section ranger, regional ranger, warden, and reserve management, to overcome current gender bias, and be appointed in leadership positions in conservation-oriented entities. This is the case in the KNP, where females are employed in the various ranks and hierarchies. They progress through the ranks and are appointed in various leadership positions. For example, the current head ranger of the KNP is female. This is not the case on the private reserves, however. Is being a female therefore an obstacle to their career employment and development? Are the wardens on the private reserves giving female rangers the same opportunities for development, growth, progression, and promotion as their male counterparts? Or are cultural and racial norms so ingrained that the lack of female rangers on active duty on the private reserves[23] is not seen as a transformative issue? Employing females across the hierarchical spectrum in private reserves will add a dimension of diversity, contributing to different competencies and perspectives otherwise not found. Boundaries, interactions, and communication-based on gender are challenging to navigate. In a research report by Seager, Bowser, and Dutta (2021:206), a female ranger commented on the working conditions of female rangers:

> *Unlike some years ago, when they used to say this job is for men, now there are women who are working to protect wildlife. It means a lot to us and makes us continue to do our job because we know that people are behind us, supporting us.*

According to Moran (2010), Thomas and Bond (2015), and Henshaw (2015), conflict and war have been (generally) historically framed, understood, and researched in the context of male experiences, excluding the voices of and impact on women. Looking back across history, women have been part of military employment and military culture in conflict zones. White women serving in the old SADF under apartheid symbolized white unity and they served in a subordinate nature that failed to destroy patriarchal authority relations (Cock, 1994; Unterhalter, 1987). Currently, women are employed in various military positions in the SANDF under the current ANC-led government. Yet, comparatively, in the contemporary para-militarized and field ranger spaces, the lack of employment and training of females as field rangers, especially on private reserves, still confirms a largely patriarchal focus and commitment. Do some black rangers' patriarchal and cultural attitudes enforce resistance to women being appointed as rangers and treated as equals? In conversations with some of the male rangers, they noted that it is difficult to take orders from women. In their traditional culture, women are seen as lesser and subservient.

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[23] The KNP employs female rangers on active duty, which is not the case on the private reserves where this fieldwork was done.

In 2019, the WWF performed a global survey on the working conditions of rangers. The survey encompassed 500 sites in 28 countries, with 6131 respondents participating, of which only 462 (7.5%) were female (Beleckey et al., 2019). A recent research report by Seager et al. (2021) focused on the role of female rangers. However, research on the militarization of females in combat roles, represented by academic fields such as sociology, political science, gender studies, and anthropology, is increasing (Di Leonardo, 1985; Segal, 1995).

There are various viewpoints on the militarization of women. One perspective espouses that militarization is rooted in patriarchy, leading to women's marginalization (Enloe, 2000; Kirk 2018). This view ties in with the practice of the SANDF under apartheid, where patriarchal and relational authority relegated the majority of females to subordinate positions, although some did attain high ranks. Another view emphasizes that the military can provide women with available employment opportunities, upliftment to the same level of citizenship as men, agency, and responsibility to improve women's rights (Feinman, 2000).

South Africa was one of the first African countries to create the Black Mambas (Helping Rhinos, 2022). They are an all-female anti-poaching team formed in 2013, patrolling Balule Nature Reserve in the Limpopo province. They believe that the war on poaching is not effective through guns and violence, but emphasize social upliftment and the education of their communities. The Black Mambas are trained in tracking and combat but are not armed when on patrol. They believe that they create a visible "police" presence through their patrolling. Their daily modus operandi includes patrols, checking the reserve fences for incursions and unknown footprints, gathering intel, and removing snares, armed only with two-way radios should backup be needed (Barbee, 2015).

Further to the north, the Akashinga is Zimbabwe's first all-female armed anti-poaching unit (IAPF, 2022). These women are from disadvantaged communities and have experienced dire domestic and abusive circumstances. Receiving strict paramilitary and weapons training, they are empowered to restore and manage wilderness areas. Their focus is daily patrols, deployment in catching poachers, sting operations incepting illegal ivory, and confiscating illegal weapons and contraband.

According to Seager et al. (2021), the upside of employing female rangers is that it ensures additional benefits such as better relationships with the surrounding communities and reserve management, conservation and sustainability initiatives, and community-based diplomacy. Further in-depth research is imperative, probing and unpacking the impact and effect of militarization on female rangers. Unaddressed issues include structural changes, gender-based violence in the workplace, assessing gender-differentiated needs, and gender-enforced employment and training practices.

I was left surprised after a conversation with the head of ranger training at the SAWC during November 2021. He had recently trained a group of more senior rangers, all in different leadership positions on various reserves. Many of these senior rangers acknowledged that they were "blessers" or "sugar daddies". In the South African context, these are older men who shower younger women (often a girlfriend) with expensive gifts in exchange for sexual favors and companionship. The ranger would have his wife and children at home in the village and a girlfriend on the side. The ranger's wife would often be of a "lower" standing (being uneducated) and would be dependent on him for financial survival. He does not want to be alone and thus has a girlfriend close by and his wife at home. The warden explained that according to him, many of the older rangers who are blessers have a "god"-complex. Their wives look to them to "save" them and their children. One of the rangers has 17 children and sends his wife R1000 a month. "*She has to make magic happen with that money to feed everyone*," the trainer informed me. As I approached the rangers to ask for more information about their blesser status, they acknowledged its existence but refused to elaborate. Many of the older black rangers relayed their negative gender sentiment regarding females in leadership positions as they felt women are supposed to be subservient. It was difficult for them to take orders from a female.

3.5 Racism

An interesting discussion with the rangers in November 2021 focused on the "elephant in the room" called racism. Racism has been highlighted as one of the main issues between black and white rangers. Some newspaper articles (Dlamini, 2019; Yende, 2021) and emails (correspondence received from informants, 2021) were forwarded to me highlighting blatant racism between white wardens and black rangers receiving training. These reports emphasize the superiority of white rangers over poor black rangers, insisting that this disparity is still present among the ranger corps.

During my fieldwork in November 2021, I tried chatting with some black rangers at the SAWC about racism; attempting various ways to ask about their own experiences of racism between white wardens and black rangers. My efforts proved unsuccessful. The result was silence and uncomfortableness from their side. It does exist, of course. Perhaps it is even more prominent than we think. The black rangers highlighted that the issue was not so much racism, but that tribalism[24] seemed to be a significant concern and cause of friction among the ranger corps. They saw tribalism as black culture against black culture, such as Zulu versus Xhosa, Tsonga versus Venda, etc. I asked them to explain. They explained that when a black head ranger appoints staff, the dice of preference will fall towards those of the same culture. For example, a Zulu head ranger will select a fellow Zulu (who might be less qualified) rather than appointing a Xhosa ranger whose qualification and experience might be better suited for the job. Nepotism is alive and well among the ranger corps.

An interesting dichotomy through a cultural lens is the following. When a white warden appoints a white ranger above a black ranger, it is classified as racism. When a black head ranger appoints another black ranger from the same culture rather than someone better qualified from a different culture, it is seen as tribalism. The black rangers did not feel comfortable telling me their personal experiences of white versus black racism. Perhaps my whiteness and femaleness in addressing black males on this controversial topic had led them to not be as forthcoming as I had hoped. It proved to be quite a frustrating exercise.

3.6 Ranger Training

In 1996, the WWF in South Africa established the Southern African Wildlife College (SAWC)[25,26] a private and accredited ranger training institution. The SAWC offers qualifications in nature conservation management, natural resource management, wildlife guardianship, community and youth development, and, among various other courses, the Protected Area Integrity Training, which students complete to qualify as a ranger. Close to 10 000 field rangers have been trained since the college's inception.

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[24] Tribalism is the word that was used. The more correct word would be ethnicity.

[25] I have worked closely with the SAWC, as a technical advisor and author of specific chapters in the Braveheart Ranger Leadership Training Programme and Resource Protection modules as well as moderator of specific subjects presented at the college.

[26] The SAWC was not the first wildlife training college in Africa. The College of African Wildlife Management (CAWM), established in Mweka, Tanzania, started training African wildlife managers in June 1963, being formally established in 1964 by an act of parliament (Garland, 2006; CAWN, 2020).

The following information was gleaned from the registrar and the head of the ranger training camp at the SAWC (Glasson, Gysman, personal conversation, October 2018). The SAWC adopted a four-tiered approach: boots on the ground, aerial capabilities, K9 support, and community engagement. Boots on the ground refers to specialized training for anti-poaching operatives and rangers.[27] Formal basic training covers six weeks of intense physical and practical training, which is instructor-driven and paramilitary in scope, emphasizing fitness, teamwork, leadership, military drills, and discipline. Topics covered include conservation ethics; arrest procedures; survival and bushcraft skills; patrol, combat, and survival tactics; radio use; navigation; combat; dangerous-game control; and firearm tactics. Exposure to conservation matters is covered alongside paramilitary training. Massé (2018) confirms the intensive and refocused training, noting that rangers are receiving more intensive paramilitary training after basic training, focusing on covert operations, tactical ambushes, and intelligence gathering. To stem the tide of poaching, the KNP and private reserves increased security measures by converting their ranger corps into general APUs through paramilitary training by the end of 2012. One of the wardens indicated that ranger selection and the effectiveness of ranger training organizations are imperative in producing successful recruits.

After completing the basic six-week course, rangers have basic, general paramilitary and fieldcraft skills training, focusing on operating safely within a dangerous-game environment. Most rangers participating in this study received their training at the SAWC. Funding to study at the SAWC is done either privately or through bursaries or private and corporate sponsors. Further in-house training on the reserves is the norm to keep rangers abreast of new developments. The basic field ranger course is six weeks long. Selection criteria to the field ranger course are stringent, including no previous criminal record and a focus on physical and mental fitness. Physical fitness training includes running 8 km ensuring the trainee can track in operational environments. Further training includes push-ups for strengthening the arms and lower back, sit-ups for strengthening the abdominal muscles for carrying heavy backpacks, and pull-ups to further enhance the trainees' arms for carrying a firearm and for use in self-defense during an arrest. The trainees' attitude towards the organization, teamwork, accepting authority, and discipline are measured by mental fitness. Upon completing the training, the ranger can provide basic security to protected areas and gather valuable data on the natural resources under their care.

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[27] The ranger selection and activity data were gathered from the interviews at the ranger training institution and a private anti-poaching training group through interviews and observation looking at field operations and the training offered.

This training further aims to prepare the rangers for actual circumstances encountered in the day-to-day tasks as a ranger. The training outcomes at the SAWC are holistic, including basics in financial budgeting; pursuing a healthy lifestyle (nutrition, understanding drug abuse, hygiene); conservation principles, ethics, and ecosystems; and identification, monitoring, and recording of local fauna and flora. Other topics cover group dynamics; training in security practices such as map reading; planning routine security patrols, deployment, tactical tracking, and navigation; court procedures; basic first aid; firefighting; and handling and using a manually operated rifle or self-loading rifle or carbine. Medical criteria are stringent to protect both the organization and the ranger. It focuses on the following medical aspects: heart problems, epilepsy, diabetes, asthmatic conditions, blood pressure-related issues, back problems, and previous surgical operations.[28]

Separate from the basic ranger training is a dedicated K9 unit at the SAWC that trains dogs in counter-poaching operations such as tracking and apprehending poachers. The dogs will differentiate between ivory, rhino horn, drugs, and ammunition. The K9 rangers receive specific training to be dog handlers. The free-running packs of foxhounds and coonhounds trained to track at high speeds have successfully combatted wildlife crime and apprehended poachers. Specialized flight training provides aerial support for the field rangers and ground-to-air support. A recent government-funded program launched at the SAWC aimed specifically at training 119 young men and women from the local communities, thereby equipping them to serve in wildlife reserves close to where they live and where they will have the ability to influence the community to take conservation seriously (Torchia, 2016).

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[28] Applicants with medical conditions are excluded from training.

Another private anti-poaching training organization, Protrack, has provided ranger training for the past 25 years, offering a 6-week course to prospective ranger recruits. Although there is a similarity with some of the training at the SAWC, Protrack focuses more on advanced[29] skills such as firearm competency, patrolling, tracking, sweeping for snares, and apprehending poachers. Their training further includes first-aid and basic fire-fighting accreditation, advanced snake handling, and other specific skills. These specific skills include air-to-ground operations, map reading, crime scene investigation, clandestine patrols, ambush planning, poaching methods, handling dangerous game, vehicle extraction drills, arrest and court procedures, roadblock procedures, general bush knowledge, public relations, self-defense, and identification of illegal substances. There is, however, less focus on conservation principles and conservation ethics. Physical fitness is paramount, emphasizing a rank system with daily early morning drills, obstacle courses, road runs, and bush runs. Protrack has full accreditation only for their weapons training.

In South Africa, many ranger and APU training organizations have sprung up overnight since the rhino-poaching crisis started. There is no governing body under which all ranger training organizations have to be registered, which I deem problematic. Foreign military personnel (e.g., from Russia, France, USA) also offer training initiatives in Southern Africa without understanding recruits' various cultures and contexts. Further research and an investigative analysis are needed to see how various training organizations compare in quality of training, accreditation, and qualification.

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[29] Another term for advanced skills is hard skills.

In a discussion with a warden, he emphasized that (in his experience), ranger selection for training from the institutions is imperative, as many trainee rangers are not chosen for their insight into the bush and commitment to protecting nature. (However, many hopefuls apply due to the current unemployment crisis in South Africa.) Chadwick (2018), an independent trainer for rangers, notes:

> *It is easy to train up for physical fitness and even to train a ranger to operate with military-type precision at the point of contact, but if these rangers are inherently afraid of the bush they will fail in their task and the poacher will always own the night. More focus is needed during ranger selection and throughout training to ensure strong bush skills ....*

How would you know which rangers are mentally tough and which are not? Most of the rangers I interviewed indicated they were not afraid when going on patrol. However, three rangers confided that they were petrified of being in the bush and doing active patrols. It is my opinion that the inner drive for economic survival and being employed is so strong that rangers are willing to lie about not being afraid, believing that they would be effective during a crisis. Perhaps open and honest conversations between rangers and reserve staff would be beneficial and thereby redeploying these rangers to a more controlled and safe environment would contribute to more effective rangers.

Another warden explained that during the previous two to three recruitment drives for new field rangers at their reserve, they experienced many shortcomings in their recruits' training. He investigated the root cause of rangers not being up to the standard. He found that they lacked the practical application of their knowledge on fence alarms and tracks found at entry and exit points of poachers. He highlighted three areas of concern: focusing on recruitment, expectations from the reserve, and current reality.

The standard practice for recruiting rangers at one reserve was through a liaison officer's involvement at the community level, targeting the 18-year-old, mostly unemployed age group. This liaison officer focuses on education, fitness, and interviews and not necessarily on "bush skills", generational knowledge imparted, or a passion for wildlife. These recruits are provided with some information regarding the threat levels they will be facing. Still, the liaison officer does not want to scare them about the actual reality awaiting them as field rangers.

A third warden complained that ranger training institutions are out of touch with what is happening on the ground, including too little time spent in the field applying the practical application of theory learned. Some of the rangers I spoke to felt their training was sufficient; others thought they needed more training in handling firearms. The warden further bemoaned the current age of electronics. Time is mostly spent on cell phones and social media, with the young recruits being unfamiliar with knowledge of the veldt, having insufficient exposure to nature, and lacking self-motivation to better themselves. As training facilities use the designation "field ranger", it creates expectations from the side of the reserve to have a fully trained recruit.

The warden further noted that language is an additional barrier for many recruits, as English is not their first language. English is often a second or even third language for many ranger recruits, leading to a misunderstanding of expectations between reserve management and the rangers. He emphasized that recruits do not have the knowledge and practical know-how of what is expected of them, indicating the quality of training provided is insufficient in the context of the reality on the ground in which the rangers will find themselves. Regular training and upskilling of rangers are not always a priority due to insufficient time for training and a lack of extra staff to cover work-related responsibilities. This increases the financial burden on the reserves. However, when reserves do in-house training, it has to be conducted over a short period as rangers need to rest before their next 12-hour shift.

According to one of the wardens, the hard reality of being a ranger in a paramilitary operation with possible run-ins with poachers who are more than capable and ready to start a gunfight is not adequately explained during recruitment. The third warden explained that during training (at their specific reserve), the drop-out/failure rate is negligible, but as soon as the recruits get into real work and life-and-death situations, the drop-out rate rises to about 40% per year. Although rangers have debriefing sessions with a psychologist, warden, or religious leader, the daily stress of being in danger and antagonism from the communities contribute to fear. Drop-out rates were also attributed to good rangers being “poached” by other reserves by being offered better financial benefits, leading to an annual staff turnover of about 20% for this private reserve. Rangers working for the government-funded SANParks have better and more regular training than rangers on private reserves. The driving force behind the application of the majority of applicants is the possibility of earning an income and having a job, yet without the necessary passion for it.

The reserve expects the recruits to be fully qualified in handling a firearm. During training, the trainee ranger does not fire more than 15 rounds with a weapon (discussion with informant, October 2018). Other expectations from a reserve include how to act when confronted with poachers and how to deploy and what to do during an ambush or while at a listening post. In addition, recruits must have tracking skills for wildlife spoor and the ability to read, interpret, and evaluate human footprints, including which follow-up decisions have to be made when presented with the evidence around them. Recruits are expected to possess the ability to distinguish between various sounds, such as shots fired, wires being cut, and people walking in, for example, a bush or grassy area during the day as well as night. Furthermore, they should have received training and have the subsequent ability to read a compass or map with coordinates should it be required by the patrol vehicles or air support. Rangers are further expected to be alert, but there are often no real-time or operational events to keep them alert, focused, and busy. Time for retraining and upskilling is lacking as the recruits are preparing for patrol and immersing themselves in their roles at their new place of employment.

Current weapons used by the rangers are self-loading magazine-fed firearms such as the .223, .556, and 7.62. In South Africa, rangers, like the South African Police Force, are not legally permitted to pursue poachers across international borders, and neither are they allowed to shoot at poachers unless in self-defense. In the unfortunate event of a poacher being neutralized (killed), the ranger will be charged with murder and face prosecution and an investigation. This causes severe stress for the ranger, his team, his place of employment, and his family.

Various factors contribute to levels of dissatisfaction and motivational lack among the ranger corps. These include remote and challenging working conditions; being surrounded by predatory wildlife; exposure to hazardous terrain, including rivers; lack of adequate and advanced training; low remuneration; and limited promotion opportunities. In an article on wildlife law enforcement rangers on game reserves in South Africa, Warchol and Kapla (2012) note that comprehensive studies regarding the processes of ranger selection and training and understanding of their day-to-day activities are lacking. Their research further highlights rangers’ isolation from their communities despite their contribution to the local economy. According to the wardens that I spoke to, the rangers receive regular training in the rules of engagement, keeping detailed records of incidents, sightings, exchanges of fire between rangers and poachers, and arrests. Even though the rangers enjoy their training, they do not feel adequately equipped for their job. Although they have received some paramilitary training, bearing arms and wearing a camouflage uniform do not make them soldiers. To be employed as a security guard, rangers need a specific security industry qualification (PSiRA), enabling them to find outside work. All private sector rangers should be registered with PSiRA if they do asset protection as part of their jobs. Many state rangers are not PSiRA registered.

Not all rangers are convinced that their training is adequate, as seen in the following quotes (Beleckey et al., 2019): “*The problem faced by rangers during patrol is that we don’t have adequate equipment to perform our work, like boots and raincoats,*" and: “*training opportunities are not equally shared. That is very disappointing. Lack of equipment leads us to expect results to be poor.*" There is a lack of “soft skills training” in many ranger training programs. These soft skills include personal development, ethics, integrity, resilience, conflict handling, human rights, gender-based violence, communication skills, and cultural sensitivity training.

3.7 The Fall-Out of Militarization

One may argue that recruits know what they are getting into when signing up for ranger training. However, it seems as if most recruits do not understand the environment and unfamiliar landscapes they will enter and face daily. According to Gustafson, Sandstrom, and Townsend (2018), conservationists and ecologists working as managers in a specific protected area have been countering poaching. Many of them do not have a background or training in law enforcement, paramilitary, or security. Their initial focus is managing the environment and animals, with tactical counter-poaching as a regular additional responsibility to their education and training.

Some factors disenabling regular progressive upskilling and retraining of rangers are insufficient time, limited capacity due to working shifts, financial constraints, and overall cost-cutting. A consequence is a neglect in certain areas of conservation, as Annecke and Masubelele (2016) confirm that rangers spend only 10% of their time on biodiversity and conservation, whereas anti-poaching activities take up the balance of their time. This contributes to low morale and unhappiness, as rangers cannot routinely monitor the various ecological systems and vulnerable species due to their anti-poaching operations. Jooste (personal communication, August 2018) confirms that due to the immense strain that law enforcement operations are placing on resources, there has been "*unintended neglect of pure conservation. Apart from funding, management attention and ranger effort are inadvertently focused on this urgency that overrides conservation priorities*".

During the interviews, the rangers confirmed a shift to more extended patrols, anti-poaching activities, and tracking, leading to longer working hours and staying in the bush for extended periods. The rangers lamented the lack of involvement in conservation issues and showed their frustration with the current focus on poaching.

> *Whilst on patrol, the focus is to find signs of poaching and not what is happening in nature around you, and you become insufficient.* (Male, 6 yrs, October 2018)

> *There is more of a focus on poaching than dealing with purely conservation work, such as species diversity or erosion control.* (Male, 10 yrs, February 2019)

> *If poaching happens in one area, then the rangers are focused on that area, even though there are some other tasks needed to be done.* (Male, 5 yrs, October 2018)

> *We don't have time for other duties like drill; we shift the focus to anti-poaching.* (Male, 8 yrs, April 2019)

> *Because of the poaching in my reserve, we spend much time on patrols and do not have time for education awareness.* (Male, 8 yrs, October 2018)

> *The focus is on rhino poaching, and we forget about the other things happening in conservation.* (Female, 4 yrs, October 2018)

> *You always have to change the plan or focus because there is a crime scene in that area.* (Male, 4 yrs, October 2018)

> *Poaching affected other tasks like field rangering as they can no longer identify soil erosion; instead, when they went for patrol, only human tracks, animals, and dogs barking can be identified.* (Male, 12 yrs, October 2018)

> *We are now in a poaching war, and we are not fully informed about what is happening and do not have advance training to properly prepare us for the dangers we might encounter.* (Male, 9 yrs, January 2019)

3.8 Camouflage, Identity, and Invisibility

Part of the KNP rangers' militarization included changing the one-color green ranger uniform to a military uniform, indicating that they would camouflage better. However, the rangers on the private reserves still wear ranger uniforms of either a one-color khaki or a dark green, and not a military uniform as was implemented in the KNP. In 2012, Jooste (personal communication, April 2019) switched to military uniforms, enforcing the image of militarization. In my opinion, this situates the rangers in a warscape. The invisibility of the ranger uniform allows them to camouflage and blend into their surroundings when on patrol. The uniform further builds ranger identity, culture, camaraderie, and uniformity, on the one hand, and authority and social distance, on the other. In addition, it visually classifies rangers when seen by community members, which I believe bestows authority upon rangers. Furthermore, it also contributes to invisibility, camouflage, and blending into their surroundings when on patrol. In contrast, for many rangers, wearing a ranger uniform in the community often contributes to labels of social ostracism, suspicion, and mistrust. The rangers further commented in the interviews that they frequently faced intimidation from communities that are economically dependent on the income that illegal poaching enables. Many rangers expressed that they lived in daily fear for their own lives and that of their families.

Eyal Ben-Ari (1989), an Israeli anthropologist, confirms this concept of camouflage and dual behavior. He frames Israeli soldiers’ behavior in terms of symbolism through the metaphor of masks and disguises. He suggests that,

> *… for the limited period of reserve duty, the reservists cease to be the normally identified, circumscribed, constrained members of Israeli society who must be concerned with how they are regarded by themselves and by others. Donning of masks disguises […] during which they become an another person.* (Ben-Ari, 1989:378–379)

During the interviews, rangers relayed their experiences regarding embracing disguising and dual identities. They must behave differently at the reserve and during off time in the community, hence portray dual behavior. One ranger explained his dual identity, becoming “another” person, as follows: “*When I am at work, I behave in this reserve’s style, and when I am at home, I behave in another way.*” This ranger acknowledged his dual identity, which forced him to behave differently (depending on his position at work, at home, or in the community), contributing to internal role conflict. I enquired whether he confided in his spouse regarding work issues and concerns. He answered in the negative.

Rangers sign a confidentiality clause prohibiting confidential discussion of sensitive information with their spouses, friends, or family members. This includes contact with poaching gangs, rhino carcasses discovered, intrusions into the reserve, etc. One ranger had broken the confidentiality clause and discussed his stressful working conditions with his wife. He was summarily fired. This enforced silence further confirms rangers' duality, becoming another person, further confirming the rangers' visibility and invisibility on the margins of society.

The rangers' social invisibility further filters through into their identities by adoption of camouflage in the sense of "wearing a mask" for their own protection. The rangers wear this mask or even cloak of social invisibility to safeguard their families. This confirms Vigh's (2018:489) notion of dual identity, which leads to marginalization issues. Linking to Vigh's point of view on invisibility is Lombard's (2015) research in the Central African Republic referring to camouflage as a mode of agency and collaboration. Rangers use camouflage in a physical, social, and material sense. Camouflage confirms their multiple identities and role conflicts as they work under an umbrella of concealment and camouflage. This concealment and camouflage prohibit them from revealing their true identity to the surrounding communities out of fear of retaliation, criticism, or even threats from within the wider community.

Camouflage is not a new concept, as we embrace and use it in our daily lives. Rangers use camouflage in various contexts and with multiple identities, as they work under an umbrella of concealment and camouflage. Lombard (2015) further confirms this focus on rangers' skillfulness in a social sense, as rangers only show a specific part of their identity. Another ranger highlighted that no one in his community knew that he was a ranger. He had made them believe that he worked in a mine, as his family would be unsafe should the community know his real vocation. Camouflage, in this sense, covers a broader context than just wearing a physical ranger uniform. Rangers cannot reveal their true identity to the surrounding communities for fear of reprisal, retaliation, criticism, and even death threats. The rangers need to be socially invisible when back in their community – whether intentional or not – due to antagonism experienced at the hands of their community.

Rangers are located in a dual landscape. They are not soldiers in the true sense of the word but para-militarized corps, yet they are civilians; thus, they are situated inside yet outside the military system. The dual landscape is further enforced by the ranger culture and their training. There is the idea that they are doing good work, and that they are situated within a non-racist and neutral environment as custodians. And this is the public face of rangers. But the private inner life of black rangers reveals a more problematic side - a world that is still beset with racism and where rangers are themselves part of a dual world. Lomsky-Feder, Gazit, and Ben-Ari (2008:598) elaborate on the two worlds:

> *These are not soldiers whose lives are almost totally appropriated by the armed forces but troops who are involved only partially. They are also not professionals in the word’s proper sense, but their military work often draws on their civilian experience and knowledge.*

These paramilitary entities are thus rooted in duality. Rangers walk a fine line between various dimensions of time, space, and social contexts, thus reinforcing their dual identities. “*Moreover, by moving between these two worlds reservists [and rangers] are mediums for a constant flow of ideas, identities, and social links between them*" (Lomsky-Feder et al., 2008:594). How does this moving between two worlds influence the rangers’ internal landscape? How do they perceive their involvement in the militarization of conservation? I would even suggest that those who see being a ranger as a calling have internalized and owned their identity instead of those who see being a ranger as only a job.

The majority of rangers have to practice caution while back in the community during their off time. A ranger in this study frequents the local shebeen when back at his home village. However, living in an antagonistic community, he prefers to be on the safe side. He pensively said: “*You have to be extra careful when you are in a bar, and you need to get home before it gets dark,*" emphasizing his focus on alertness. Vigh (2018) refers to taking on a daily persona of apprehensivity, living in a state of awareness, confirming this ranger’s perception of vigilance and personal safety.

A 2019 WWF survey of 570 rangers in 12 African countries highlights the intensity and plight of rangers' daily exposure to danger (Beleckey et al., 2019). Many rangers have been in dangerous situations, threatened by mostly community members due to their work (Singh and Lee, 2016). Thus, the negative experiences of the African rangers at the hands of the community are nothing new, as rangers globally face similar adverse circumstances and experiences. Many of the rangers in my research had a negative perception of their relationships with the community, as can be seen in their responses:

> *Communities threaten our lives and that of our families.* (Male, 6 yrs, February 2019)
>
> *My relationship with them is bad, because they hate us.* (Male, 3 yrs experience, January 2019)
>
> *Arresting my community members* (he noted it as the most challenging part of his job). (Male, 12 yrs, February 2019)

I spoke to various wardens and stakeholders on the responses of the communities towards rangers and even their (wardens') perceptions. This allowed me to hear different perspectives on the militarization and non-militarization of the ranger corps and whether this "battle for the soul of the rhino" could be won. The wardens expressed various opposing viewpoints on my questions about whether we will win this war.[30] A few different answers surfaced, swinging like a pendulum, from one extreme to the other:

> *Yes, I do not doubt that we will win this war.* (Warden 1, white, 30+ yrs in conservation, October 2018)
>
> *Yes, but not in our lifetime. As soon as our government wills to do something about it and address the international situation.* (Warden 2, white, 38+ yrs in conservation, October 2018)
>
> *On our level, we are standing with our finger plugging the hole in the dam wall. We can only protect; we cannot win. This is outside our control. On our level, we are not going to make a change. We can prolong the war, but we are not*

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[30] War here refers to whether the rhino as charismatic species will survive this poaching epidemic.

> *going to make a change. If it were not for the rangers, the rhinos would have been extinct.* (Warden 3, white, 35+ yrs in conservation, October 2018)
>
> *No, because history speaks for itself. Look at Zambia and Zimbabwe – there is only a pocketful rhino left. We'll have small, isolated populations left in the country or a few on private reserves. It is depressing to most people. We have huge socio-economic problems. HUGE! People underestimate that poverty in SA is enormous. Corruption is bigger than people know; unemployment is sitting at 27%. The rhinos are a very, very small problem for our people and politicians. There is no ownership. A rhino horn is worth more than gold. There is no money. If we had money and good intelligence, we'd make a difference in this war. We have already lost the war.* (Warden 4, white, 33+ yrs in conservation, October 2018)

Do rangers disassociate themselves from identification to achieve some form of invisibility? Deleuze and Guatarri (1987:308) question our relationship with the world to produce invisibility and imperceptibility. They believe our lives are automatically programmed for recognition, acknowledgment, and the need for acceptance and to be seen. Are invisibility and imperceptibility perceived by the rangers as negative or undesirable societal traits to escape being judged? Many rangers choose to live in a dual landscape (visibility versus social invisibility), not as a result of neglect. Still, it is instead seen and implemented as a careful and conscious strategy for ensuring their safety. The concept of invisibility and one-sidedness involves a broader audience as just the ranger. It also involves his family, where his spouse is referred to as "*the wife of ...*", positioning her as invisible. Sabelis, Van Vliet, and Wels (2016:132) reiterate this perception of invisibility, stating that the spouses of rangers "*remain hidden, together with ways in which they contributed to and enabled much of the conservation work of their husbands*". The hiddenness or invisibility of the ranger's wife is enforced when he takes on the blesser/sugar-daddy role in getting a girlfriend.

3.9 The Personal Cost of This "War"

The unintended consequences and costs of wildlife crime are measured in more personal ways, apart from the financial and environmental costs. There is a personal (human/mental) cost, a health cost, and mostly negative interpersonal relationships with the villagers that also come into play. The personal cost involves patrols and firefights and the trauma of seeing animals maimed. The broader fall-out negatively affects the rangers' mental and physical health and family and interpersonal relationships. One ranger expressed his concern and challenges being away from his family, unable to contact them (due to non-availability of cell phone reception). He felt cut off from the outside world, which contributes to additional stress and concern for his family as they cannot contact him. Patrol rosters ensure many rangers work up to six weeks before returning to their home and family for a few days. This lack of contact and family time contributes to marital strife and difficulty between rangers and their spouses. Rangers also miss out on their children's upbringing and achievements. A ranger confirmed that this leads to marital problems.

According to a ranger that Mathekga (2017:156) interviewed:

> *When we go away, the rhino gets shot, and now we must investigate it. You don't go home; your family life just kind of goes down the toilet. Your wife starts not understanding anymore; your kids start seeing that dad is just concentrating on work.*

Due to the long hours on patrol, low salaries, and lack of airtime to contact family, some rangers indicated strained relationships with spouses and family members. Some female rangers only see their children once a month or once every six weeks during their off time, depending on the rotation schedules of their reserve. Many children of rangers are raised by the grandmother as both parents work far away from home. Female rangers often miss out on developmental milestones, birthdays, celebrations, and the bond between a mother and a child. A female ranger confided in me, stressing her concern for her children (ages two and four), who live with her mother in a village approximately 60 km away. Her mother was scheduled for a hysterectomy in the weeks to come. This female ranger had already depleted her designated annual leave at the reserve. She was in tears, explaining to me her worry as no other family member was available to look after her children during her mother's surgery and recovery process.

Children and spouses do not stay with the rangers on the reserves. They also cannot visit the ranger at his place of work. No private accommodation is available, as the rangers live in communal pickets. Being away from home affects family life and intimate/social relationships and adds to the rangers' additional stress, as they cannot provide support at home during a crisis. Staff shortages, unfilled vacancies, and extended patrols disenable rangers to visit their families and fulfil parental or spousal responsibilities, further contributing to marital and family conflict. Many rangers cannot take time off to visit home and family, as many of the reserves are understaffed.

Another personal cost of this war is the rangers' health. In 2018, the WWF published a report on 4373 rangers globally participating through a survey. Statistics on their health indicated that 25% had malaria, 5% dengue fever, and 22% another severe disease or infection during the previous 12 months. Six percent had broken a bone, and 16% had existing health problems made worse by work (Beleckey, Singh, and Moreto, 2018). Before a ranger heads out to the field on patrol, thorough preparations are compulsory, such as pre-patrol checks, patrol planning, etc. As no patrol is the same as the previous one, rangers must be prepared for every eventuality, including a medical emergency. Involvement in firefights is a common occurrence, and fatalities do occur. In 2015, up to three firefights between rangers and poachers occurred in the KNP per day (Daffue, n.d.; Hübschle, 2016b; Serino, 2015). Firefights are a less common occurrence on private reserves; however, the daily expectation of running into a possible firefight is ongoing.

According to Warchol and Kapla (2012), rangers living in communities surrounding parks and reserves are often seen in extremes by the communities. For example, some are viewed with suspicion, as they must enforce anti-poaching laws in their communities. Given that illegal hunting or snaring is sometimes committed by locals living adjacent to reserves, a ranger might likely arrest one of his neighbors (Gibson, 1999). At other times, they are viewed with respect, as their steady employment contributes to the community's economic benefit. These differing points of view were confirmed during my interviews:

> *Some members of the community know, and they are afraid of me. They give me a lot of respect.* (Male, 7 yrs, February 2019)

> *I am making a difference in the community and for the upcoming generation. They will know and see the Big Five. The community knows me and supports me. Those in the community that loves nature is motivating me to continue and to do good.* (Male, 15 yrs, October 2018)

> *No one except my family knows that I am a ranger. The community does not support you because they are listening to too many rumors and believe the rumors and not the truth.* (Male, 6 yrs, October 2018)

There is also the personal cost of mental health. One of my questions focused on how the rangers felt when seeing a rhino carcass. They used expressions to create a mental picture, such as their hearts are bleeding or their hearts are too painful to talk about what they had seen. Regular exposure to mutilated carcasses had had severe adverse psychological effects on the rangers as individuals and teams. The rangers emphasized despair, shock, anger, and hatred towards the poachers and sadness at seeing a poached carcass or trauma if they have to shoot an animal that a veterinarian cannot save. One ranger answered my question thus:

> *It is very bad and very painful. I feel very emotional when seeing this. The suffering is too much. I hate the poachers and can't forgive them due to the cruelty done to wildlife, feeling bad to see the scene in front of me. I feel like my child is dying.* (Male, 8 yrs, January 2019)

Another traumatic experience is coming across animals caught in snares (wire traps). Snaring bushmeat for subsistence has always been part of poaching. One ranger respectfully requested not to answer the question on how he felt when seeing a rhino carcass as the trauma to relive it in his mind's eye was too overwhelming. Another participant ended his response woefully, saying that he wished to fly away when confronted with these snaring scenes. Subsistence poachers often live in rural communities around parks/reserves. Villagers often set wire snares to catch game due to unemployment to supplement their income for economic survival. The focus of these subsistence poachers is on economic survival and not on killing high-value wildlife.

Rows of poached-rhino skulls and snares outside one warden's office painted a depressing picture in my mind as I silently surveyed it. It screamed a silent homage to poached rhinos and elephants. The bones were bleached white from the harsh Limpopo sun. The shorter row of rhino skulls packed under a windowsill was from rhinos who had died of natural causes, whereas the long row of skulls was from a poached rhino, as evidenced by the hacked-away base plate on the skull bones. A white-bleached elephant skull completed the row. I silently wondered whether these white-bleached skulls, mostly from poached rhino and elephants, found next to the warden's office served as a sober reminder of the battle they face daily. Or, perhaps these skulls served as a reminder that they had lost the fight to the poachers? Do these skulls serve as a reminder of why they had signed up for this job, as it is a high cost to pay financially, environmentally, and mentally?

The unintended consequences and costs of wildlife crime are measured in three areas: financial cost, environmental cost, and human/mental cost. Anti-poaching operations, training, and equipment are costly as hard-earned resources are drained through tourism initiatives, donor funding, and grants from the state. These could have contributed to communities' development and conservation projects (Jooste, personal communication, October 2018). Wildlife crime is one of the most expensive security challenges South Africa currently faces (Institute for Security Studies, 2017).

Some rangers expressed concern, explaining a sense of loss and even acknowledging a sense of depression, talking about the traumatic loss of the rhino they are tasked to protect. Could their negative perception fall in the broader category of solastalgia? Subject to continuous stress and changes in their environment, solastalgia is defined as negative feelings due to changes in one's environment. This term, coined by Albrecht et al. (2007), was originally characterized as the result of negative environmental change at the hands of humans. Solastalgia further triggers a sense of distress, loss, hopelessness, emotional stress, sadness, and anger as places, spaces, and attachments to the things around you no longer resemble that which is familiar, safe, and comfortable (Albrecht, 2007; Warsini, Mills, and Usher, 2014).

Warsini et al. (2014:1) define solastalgia as "*feelings which arise in people when an environment changes so much that it negatively affects an individual's quality of life, longing for that which was familiar and safe*". For the rangers, solastalgia affects their quality of life, as prolonged exposure to trauma and a dangerous environment has lasting adverse effects on their environment and sense of place and space. During the interviews, rangers confirmed that the exposure to prolonged stress and pressure due to the demands placed upon them by external circumstances and by themselves is taking its toll. The rangers mentioned experiencing guilt when returning from patrol early (in case they had missed something), and failure when coming across a carcass of an animal they had failed to protect.

> *I feel guilty and classify myself as a failure to combat or control poaching practice.* (Male, 3 yrs, January 2019)
>
> *I feel like they kill my parents* (when seeing a carcass). (Male, 5 yrs, January 2019)
>
> *I feel like I'm not doing proper job for losing animals during my watch.* (Male, 11 yrs, January 2019)
>
> *It is my duty to conserve wildlife, and it means that I failed to protect it.* (Male, 9 yrs, January 2019)
>
> *I am back at camp after patrol at 2 p.m. to 3 p.m. Then I cook dinner and sleep. A ranger never sleeps with both eyes closed. You sleep with one eye open, 'cause you have to be aware of what is happening. Due to the silence, you can connect with something that is happening far. No background music from cars or people, so you have an advantage. If you hear a gunshot, you'll be able to tell them if it comes from the north, south, east, or west and give them grid references where the shot is coming from. Back at camp, I prepare for tomorrow; then you are on standby. You listen the whole time.* (Male, 12 yrs, January 2019)
>
> *This job never ends; it never ends. You wake up at 02:00 and you think about the possible incursion areas and where the guys may come and shoot around and how you are going to counter that, ideas of how to stop it, things like that. It is ongoing, you constantly worry about the moon that is coming back. During the moon phase, we work the whole day and I tell our guys to sleep early*

> *because we are probably going to be woken up at 24:00, 01:00, 02:00 by gunshots that have been reported and you need to scramble for your clothes and go out into the bush again and that can carry on until 04:00 or 05:00.* (Male, 13 yrs, January 2019)

Their work-life situation is unfavorable, and they are exposed to excessive work pressure and stress that often isolate them. Although many rangers are proud to be involved in conservation and saving wildlife for their children, many indicated that they do not want their children to become rangers due to the accompanying stress and daily uncertainty about their safety as a ranger.

In a study on soldiers, McGarry and Walklate (2011) refer to the hidden wounds or the invisible harm caused by post-traumatic stress disorder (PTSD) or stress-related symptoms resulting from the war. Also experiencing these hidden wounds and hidden harms are those who have not suffered direct contact with the "enemy" or those who have not been classified with a psychological impairment or disorder. Although rangers have had basic paramilitary training, bearing arms and wearing a camouflage uniform do not make them soldiers. Being involved in a semi-"war" and a military lifestyle is unfamiliar for many rangers, as they are not soldiers in the true sense of the word.

McGarry and Walklate (2011) found higher incidences of PTSD, alcohol abuse, suicide or attempted suicide, and various anxiety disorders among service men – a situation that is similar among rangers. The rangers also bear these hidden wounds and invisible harms, especially if cultural practices, such as visiting a traditional healer/sangoma for a cleansing ceremony after a run-in with poachers, are not permitted by the reserve management. I heard of a ranger who had become an alcoholic as he could not deal with the prolonged exposure to stress and trauma he regularly witnessed due to rhino poaching.

Following an interview with a South African psychologist working among rangers, Nuwer (2017) highlights in an article the rangers' psychological trauma, severe mental stress, anxiety, depression, and PTSD due to their working conditions and inadequate support systems. Every poached rhino, elephant, lion, and pangolin is a constant reminder of failure. Rangers spend hours and days tracking poachers; yet, should a rhino be poached, the backlash and criticism from the general public (especially on social media), the community in which they live, and even from their colleagues are severe. They are labelled incompetent or corrupt, further contributing to feelings of failure, further contributing to stress.

Haupt (as cited in Glasson, 2020:36), a leading field-ranger anthropologist and environmental law-enforcement researcher, highlights that psychological disorders, combat-related stress, and institutional issues have become commonplace among the ranger fraternity. Some scenarios affecting rangers employed in Southeast Asia and Africa's national parks include (Glasson, 2020:36):

- *Combat stress, anxiety disorders and psychological trauma due to armed contacts with poachers.*
- *Ongoing anxiety and concerns over personal safety in their home communities when they are off duty (many rangers live in the same communities as the poachers).*
- *Direct threats, intimidation and the persecution of rangers' families in their home communities by poachers and members of poaching syndicates.*
- *Whistle-blowing and a lack of trust within park organisations. Rangers are uncertain of who to trust if they detect corruption or the complicity of park staff in poaching and other crimes.*
- *The increasing personal risk to life and limb has also meant that danger-pay and other benefits are in demand. Traditionally, public-sector field rangers are paid anywhere between $500 and $1,000 a month, which may exclude other benefits.*

According to Nuwer (2017), only 30% of rangers will recover entirely from PTSD. Rangers are often wrongly diagnosed with PTSD and do not see a psychologist for therapy. In addition, adequate support systems may not always be in place to assist them, lacking psycho-social support. Debriefing and counselling sessions are compulsory for rangers if they have had "contact" with the poachers. Rangers can also request counselling sessions. Rangers are not allowed to speak to their closest family members about a difficult day in the field. The warden informed me that a ranger was dismissed from employment after he shared confidential information on his work with his family.

Cesur, Sabia, and Tekin (2011:21) explored

> *"whether observing someone wounded, killed, or dead affects soldiers' mental health. [...] The results suggest that seeing a coalition/ally member or civilian killed, dead, or wounded has adverse psychological consequences for those serving in combat zones. However, we find that observing the killing, death, or wounding of the enemy has no independent adverse psychological consequences." This combat induced PTSD costs the US health care system an estimated $1.5 to $2.7 every two years.*

This would be an interesting study to do with the rangers as anxiety and stress-related disorders, PTSD had been noted among them. Was it caused by serving in a 'combat zone'; or perhaps the daily stress of being 'hunted' by a poacher, as the US troops portrayed that the killing, death and wounding of the enemy did not have adverse psychological consequences for the troops.

Whenever we as human beings face a tough time, a compassionate and understanding voice from a family member brings comfort and soothing to an upset human heart. The rangers do not have this privilege. I believe this contributes to their possible high levels of stress, furthering a sense of alienation in an already alien and semi-warlike landscape. The danger of living in such an environment, where there is regular and repeated exposure to tragedies and stress, is that it evokes feelings of loss and hopelessness among the ranger fraternity. These, in turn, challenge a person's sense of identity and sense of belonging to a place, contributing to feelings of despair, helplessness, and depression. Prolonged exposure to these dangers has lasting adverse effects on people as their environment rapidly changes. These feelings of hopelessness, stress, and anger are true for the rangers. How would not having a close friend/partner to speak to affect the rangers' productivity?

Jooste (personal communication, October 2018) reiterates his stance that the adaptation to anti-poaching and paramilitary interventions in the KNP and private reserves was never seen as a long-term solution. It was done to contain the plundering of South Africa's environmental assets. The financial and physical resources to train rangers and combat poaching have increased exponentially. Jooste (personal communication, October 2018) elaborates:

> *The human cost of wildlife crime is immense as poaching can drive away tourism in the economic engine of areas like the Lowveld in Mpumalanga province. Pockets within local communities are criminalized, the same communities where many rangers and their families live.*

The rangers and their families' psychological well-being is constantly threatened, contributing to possible psychological harm. This is aggravated by alienation from family members, friends, and the community, in turn aggravating personal circumstances, where rangers might be harmed for arresting a family member or friend. Morale is affected when rangers betray their colleagues after being recruited by poachers and coerced into sharing rhino whereabouts.

One modus operandi of poaching syndicates is to obtain a ranger's banking details and deposit money into their account, informing the ranger that more money will follow once they share info on rhino herds. Should the ranger refuse, they are blackmailed about the deposited money in their account, thus at times leaving them with little choice but to comply (Groenewald, 2016). Another modus operandi of the poachers is for women to befriend and seduce male rangers, feigning an interest, with the express goal of obtaining information on the rhino herds. Some poachers remain in a controversial position as both poacher and informant – they get paid to poach and provide reserve/park security with positive leads. The rhino they poach thus serve as collateral.

Although not much information is available on this, some rehabilitated poachers become field rangers. The number of South African poachers that have become rangers is unknown. In my opinion, the stigma attached and severe mistrust between a rehabilitated poacher and current rangers will make it unworkable. A very high premium is placed on employees with a low deception score, as those inclined to deceive are forever at risk (Uys, personal communication, October 2017).

Even though there are official policies in place, sentencing poachers is fraught with complications due to corruption on multiple levels. For example, the Groenewald Gang case was postponed to 2021 after being implicated in 2010. This gang's rap sheet is 637 pages long, with 1872 confirmed counts of illegal hunting, dealing in rhino horn, racketeering, money laundering, and fraud (De Lange, 2018). Another complicated court case is that of Dumisani Gwala, who is implicated in 80% of KZN's rhino poaching cases. The court case against him was postponed 21 times, with indications of judicial bribery as reported in mainstream media (Singh, 2018). To combat this kind of corruption, the South African Government's Crime Line now offers a R100 000 cash reward for information leading to the arrest of the head of a criminal poaching gang, and a R1 million bounty for his successful conviction (Duffy, 2014).

Although some rangers expressed support from their families, not all were so fortunate. One commented on the dual life he lived:

> *I have my parents and six siblings. My parents want me to leave because this job is too dangerous. I am the breadwinner in the family. My parents are unemployed. Only certain friends know that I am a ranger. Not everyone in the community knows.* (Male, 7 yrs, October 2018)

According to the white wardens that I spoke to, all employees on their private reserves are subject to compulsory integrity testing. This contributes stress levels and general mistrust of the process. Before being offered employment, a standard vetting process as part of the rangers' conditions of service must be done, which includes integrity testing, a police background check, and verification of a possible criminal record. Integrity testing, also referred to as polygraph testing or deception testing, measures a person's physiological indicators, such as blood pressure, heart rate, and respiration, while being asked a series of questions.

One of the wardens informed me that integrity testing is an acceptable labor practice in consultation with labor organizations. Even though a recommended 25% of all reserve staff should be polygraphed annually, one reserve implements annual polygraph testing for 100% of its staff. However, the OPS room (control room) staff are polygraphed every three months, as they see where rangers are deployed and can easily leak this confidential info to poachers. Should a ranger member fail a first polygraph test, a second, subsequent test is done. If found guilty, he will be relieved from duty, fired immediately, and blocked from accessing the reserve. Another measure implemented for testing a reserve staff member's integrity is a lifestyle audit by external investigators. This audit focuses on the staff member's income and expenditure, abnormal or expensive purchases, and a "sudden upgrade" in lifestyle, such as an expensive car, watches, TVs, designer clothing, and jewelry to name a few.

Rangers have to be constantly vigilant and have to watch what they say. Specific information cannot be shared, even with their fellow rangers, to ensure no leaking of sensitive information about rhino whereabouts. Although a few rangers in this study welcomed polygraph testing, most were quite suspicious of the practice. They perceived it as a sign of distrust from the management's side. Some of their remarks portray their suspicion and mistrust of this Western concept. A ranger needs to feel that management trusts them. Still, with compulsory integrity testing on the private reserves, they felt as if they were the suspects when subjected to polygraph testing. Their comments reflect their uncomfortableness with this process:

> *I feel bad because we are loyal and participative in our work and polygraph tests work on the condition of a person.* (Male, 3 yrs, February 2019)
>
> *I feel bad because we need to do our job with your heart and for the cause; there is then no need for polygraph. Honesty must be in the midst at all times, trust and love for the job. It would feel as if we do not trust each other.* (Male, 9 yrs, February 2019)
>
> *It is bad because sometimes this thing of polygraph test might choose the wrong person instead of taking the right person. Other people know how to pretend on the situation.* (Male, 2 yrs, October 2018)

> *I feel bad, 'cause I feel that they don't trust me or my colleagues. I also know that if the polygraph test is not accurate, it is just a way to get rid of you.* (Male, 2 yrs, January 2019)
>
> *It is an idea, but it shows that they are not trusting us, and money is spent on expensive equipment rather than to better the working conditions in which rangers are working, also bettering their salaries, so that they are not looking for ways to make money to support them or their families.* (Male, 10 yrs, February 2019)

3.10 Chapter Summary

A rhetorical question, perhaps – Should the South African Government (as guardian of the national parks in South Africa) and private reserve owners not take responsibility for rangers' mental and physical well-being as poaching is now a national priority crime? The rangers' outer identity is seen through camouflage and concealment as part of their physical and social landscapes in the way they dress (uniform). Their inner identity reflects their dual behavior, as they are required to wear different masks – at work, at home, and with the community.

In this chapter, some challenging emotions regarding militarization were unpacked through the rangers' narratives. Furthermore, the chapter looked at how rangers are selected and what training opportunities are available to adequately prepare them for active patrols. How can training be adapted to the current challenges faced? Ranger selection and subsequent mental strength are the most critical indicators of a ranger's success. Additionally, the various costs of wildlife crime, such as the environmental, financial, and human costs, were measured against being a ranger. The concept of solastalgia was also introduced, which relates to how rangers are affected due to a change in their physical environment.

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CHAPTER 4: INSIGHT INTO THE RANGERS' WARSCAPE

4.1 War and Warscape

What is the meaning of the term *warscape*? How does it embed itself into the rangers' daily lives? Nordstrom (2007) first coined the term warscape as a conceptual framework, explaining how war is manifested and experienced in life's everyday messier dimensions. Warscape affects the various actors involved, whether voluntary or involuntary, directly or indirectly, soldier or civilian (Von Boemcken, 2016:1). Korf (2013:68) refers to warscape as "*fluid landscapes of warfare*", including "*differentiated areas, networks, and connections of relational spaces in which differentiated human trajectories coexist*". Von Boemcken (2016:3) argues that warscapes are not only limited to war zones but also occur in settings characterized by "*brutal violence, political volatility, physical insecurity and the disruptions and instabilities that exist in many civil war zones that different social actors navigate*". The concept of warscape embeds the combatants in a specific landscape defined by violence, physical insecurity, and the unknown. The field rangers are situated in a similar type of warscape or even security-scape.

Apart from Nordstrom (2007), other anthropologists have explored the term warscape in their research. Referring to their ethnographic fieldwork during the wars in Sierra Leone and Liberia, Lubkemann and Hoffman (2005:316) describe their fieldwork as messy, portraying it as a warscape. Korf, Engeler, and Hagman (2010:2) define warscape as "*a complex and multidimensional agenda of social struggles … projects in which the certainty of uncertainty has become a fundamental reality in the lives of social actors*". Duffy and Marijnen (2018) ask a pertinent question on whether the rangers focusing on conservation initiatives are not merely innocent victims of the war against poachers, or whether they are inherently part of this warscape. Somerville (2018) further argues that militarization conservation, inclusive of anti-poaching measures, is counterproductive, as ground-roots issues, such as alienating the communities, mismanagement of funds, and corruption, are not investigated. However, not all viewpoints on the militarization of conservation are negative. Jooste (personal communication, October 2018) points out that by providing career opportunities, economic advancement, and security in the surrounding communities, rangers contribute to the improved protection of communities, resulting in crime reduction.[31]

> *"Come on! They know what they are getting into!" you might argue. However, most rangers do not understand the complexity of the unfamiliar landscape. At times, insufficient time for retraining, limited capacity due to working shifts, financial constraints, and overall cost-cutting factors negatively affects rangers' relationships with these landscapes.* (Jooste, personal communication, October 2018)

The run-in between the rangers and poachers has been termed a *war* in the mainstream media and academic publications (Chadwick, 2022; Duffy, 2014; Granat, 2018; Videmšek, 2021). This word is incorrect. A question I pondered is whether the word *conflict* is not perhaps more accurate in describing the run-in between rangers and poachers, or maybe the term *war of attrition*? A conflict is a violent clash between opposing groups. A war of attrition is defined as an extended period of conflict, with both sides wearing the other one down through continuous losses through a series of small-scale actions (Lexico, 2020). On the opposite side, warfare is the constant military engagement with specialized military forces against the enemy, focusing on large-scale, armed conflict between countries, nationalities, and ethnicities. This is not the case between the rangers and poachers.

I discussed the various definitions describing this "war" between poachers and rangers with Nico Beneke, an ex-member of the 44 Parachute Brigade (the parachute infantry brigade of the South African Army in 1978). He believes that the rangers rather fulfil a policing role, as the characteristics defining warfare, armed conflict, or war of attrition are not present (Beneke, personal communication, April 2021). The term war used in the mainstream media and academic articles to describe the run-in between poachers and rangers is incorrect, as it frames the rangers as soldiers in an ongoing convoluted battle with the poachers.

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[31] Not all rangers keep their chosen vocation a secret from their communities.

The former chief ranger in the KNP, Dr Funda, who has more than 40 years of experience as a ranger and lecturer in nature conservation at the Tshwane University of Technology, also disagrees with the notion that this poaching crisis in South Africa is a war. Funda (as cited in GRAA, 2018a) states:

> *It will only be a war once it is declared as such by the president. War implies that the rules of battle are used by both parties. Poachers are criminals that are not guided by rules. Rangers, however, are governed by the law and respect South Africa's Constitution, which enshrines the rights of all people in South Africa and affirms the democratic values of human dignity, freedom, and equality.*

One of the wardens shared Funda's point of view, referring to the current state of militarized affairs on the reserves as a peace-keeping scenario where you have to prepare for war. Yet, there is no war, as he stated: "*It is a contradiction – there is a war, and there is not a war. It is a low-intensity battle*" (conversation with a warden, October 2018).

According to Lomsky-Feder et al. (2008), many academic scholars perceive supplementary government forces, such as the police, paramilitary units, border control, and civil guards, as genuinely professional. Nonetheless, their training lacks a degree of expertise when compared to regular military personnel. Thus, only military personnel are acknowledged as real professionals through their hard-core, lengthy, focused, and standardized training in skills of warfare and defensive manoeuvres. Rangers are situated inside yet outside this warscape in different networks and disruptive settings that they navigate as social actors.

Lomsky-Feder et al. (2008:598) confirm these two worlds by stating:

> *These are not soldiers whose lives are almost totally appropriated by the armed forces but troops who are involved only partially. They are also not professionals in the word's proper sense, but their military work often draws on their civilian experience and knowledge. Finally, their social status may be anchored in contexts outside the military.*

Rangers walk a fine line between time (on and off patrol) and space (in the bush or back at the reserve) dimensions. Thus, they are rooted simultaneously between two worlds, continually moving between dimensions of space, time, and camouflage. As the rangers move between these two worlds, as para-militarized rangers and civilians, it allows for a constant flow of ideas, identities, and social links. Their involvement and movements are circular as it involves "*continuous mobilization, service, demobilization, civilian life, and mobilization yet again*" (Lomsky-Feder et al., 2008:599). How does the continuous mobilization, demobilization, and mobilization influence the rangers' internal landscape? How do they perceive their involvement in the militarization of conservation? This movement of the rangers between these two worlds enforces a unique behavioral camouflage frame.

4.2 Community Views on the Rangers

A recent survey by the WWF of 570 rangers in 12 African countries highlighted the intensity and plight of rangers' daily exposure to danger (Singh and Lee, 2016). The survey showed that 63% of the rangers had been in life-threatening conditions, and 74% felt ill-equipped without proper equipment to ensure safety. Furthermore, 48% of the rangers indicated insufficient training, whereas 45% noted a challenging work-life imbalance, and 30% reported that low and irregular salaries contributed to their daily battles. The rangers did not indicate their wages. Data from the 2019 WWF survey indicated that the average ranger salary (averaged from 26 countries) was US$345.27[32] a month, whereas the average monthly police salary was US$865.27 (Beleckey et al.,

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[32] Conversion equivalent to R5500 per month.

2019).[33] This significant salary discrepancy reinforces the negative perception that a ranger's vocation is not a priority.

Furthermore, little reward and recognition, basic employment conditions, and job motivation were highlighted as some of the worst aspects of being employed as a ranger. In South Africa, SANParks (our government-funded parks organization) pay for medical aid/medical insurance, whereas not all private reserves pay medical aid/medical insurance for their rangers. As part of their employment, UIF (Unemployment Insurance Fund – a compulsory government initiative) is deducted monthly, with additional benefits such as a provident fund covering basic life insurance and a funeral plan. This is quite concerning, as rangers face life-and-death situations daily. Some private reserves pay a basic pension, and none pay life insurance. In June 2016, a wildlife allowance was approved by the Indian State for its frontline staff, benefitting nearly 1500 Forest Department staff (Kumar, 2016). The South African Government should be able to enforce a wildlife allowance for South African rangers.

In the 2016 WWF *Rangers perceptions: Africa* report, 75% of the rangers indicated that they had been threatened by community members or other people because of their work (Singh and Lee, 2016)[34]. In my conversations with the rangers, they spoke about their lack of relationships with their community: "*My relationship with them is bad, because they hate us*" (Male, 5 yrs, February 2019). Another ranger mentioned the toughest part of his job is "*Arresting my community members*" (Male, 7 yrs, January 2019).

A ranger's responsibility or policing agenda might not be clearly demarcated when back in the village. By whose rules and authority does he operate when arresting a fellow community member involved in poaching, as he is not part of the local law enforcement? The ranger's capacity to act as a ranger is either embedded or transient within specific frameworks when back in the community. The interaction between the rangers, the community, and the poachers causes new forms of mistrust and hatred, contributing to unsolvable current geopolitical arrangements. The next quote is from a ranger I interviewed when asked what his biggest fear was:

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[33] Conversion equivalent to R13 700 per month.

[34] Not all rangers are threatened by their communities. Some rangers enjoy the support and trust of their communities.

> *When communities threaten our lives and those of our families.* (Male, 8 yrs, November 2018)

Mathekga (2017) performed research on resilience among rangers from a social work perspective. She interviewed rangers regarding this aspect and recorded their responses.

> *Since the poachers are from the community, you find that we don't feel safe when we go back to the community as the poacher's family wants to know who has killed their relative and the community does not understand the importance of protecting ("umkhombe") black rhinos because it is business to them, they make money out of the poached animals.* (Mathkega, 2017:199)
>
> *There are rhino ambassadors who are supposed to build relationships with the community, but their efforts are not working, since people are angry for not being compensated for their livestock loss, the communities are not cooperative.* (Mathkega, 2017:199)

As noted above, many rangers and their families have been threatened by community members. According to Mathekga (2017), a ranger's family was nearly killed when one of their water tanks was poisoned. Fortunately, they had two water tanks. The tank from which their animals drank was the poisoned one, and some of their animals died as a result. This ranger wanted to uproot his family and relocate but stayed with support from his reserve and colleagues.

Amidst the warscape in which the rangers in this study found themselves, various strong emotions came to the fore portraying their inner conflict. During their conversations with me rangers have described the intensity of their feelings:

Aggression:

> *They give us trouble. I go and look for that bastard and I will shoot him. That poacher must not be caught, I will kill him.* (Male, 20 yrs, January 2019)

Anger:

> *The word 'poachers' make me very angry. Animals also have rights, and the poachers are taking the rights of the animal away. Poachers are killing everything. In a few years, we will see the Big Five only on a banknote. They are a bad idea. They compromise the image of wildlife.* (Male, 17 yrs, October 2018)

Stress:

> *I don't like poachers. They make the ranger's job difficult.* (Male, 3 yrs, February 2019)

Failure:

> *The worst part is to find out that poachers were in the reserve.* (Male, 7 yrs, January 2019)

Danger:

> *We get attacked by dangerous animals like lion, buffalo, hippo, leopard, elephant, dangerous snakes like black mamba; now we also face poachers every day.* (Male, 13 yrs, February 2019)

Frustration:

> *The reserves need to go to government and force government to do something about this. The Big Five is helping the economy and tourists are paying a lot of money and flying very far to come and see the lion. Why can't government open their eyes to see that these animals are helping us boost the economy of the country? Each contract has terms and conditions. The government should tell China, "Even though we are in partnership with you, you are not allowed to take our things illegally." The government should try harder in convincing people not to take wildlife.* (Male, 20 yrs, January 2019)

Fear:

> *The poachers are dangerous and too much clever. We have to protect ourselves. I don't like them. I must be strong, but I am still afraid at times when going out on patrol. The poachers are not afraid, and they shoot to kill. We can be killed by the poachers and the wild animals.* (Male, 7 yrs, February 2019)
>
> *Threats by the poachers when they confront me and they say I am preventing them to come and poach. Sometimes they want to know how we operate.* (Male, 2 yrs, January 2019)

> *I've been attacked by black rhino, buffalo and nearly a black mamba. You are in the veldt. The scare was so big that another ranger and I literally wet our pants, and I physically struggled to breathe due to the sheer shock thereof. I thought that I had had a heart attack. Rangers are in danger. Rangers are under extreme stress. They can never relax. They have to be on their guard the whole time. When rangers break for lunch, the poachers cut the wires of the fence.* (Wildlife security analyst, 20+ yrs, October 2018)

Pressure:

> *Rangers have to be there to prevent it from happening again. We need to track them and arrest them.* (Male, 3 yrs, November 2018)

Trauma:

> *Very painful to see the animal that you like, killed.* (Male, 10 yrs, November 2018)

Despair:

> *It is sad to see unauthorized actions in reserve. Animals have to survive because we get paid from them. It's bad to realize other people have bad intentions to come and attack our nature to get rich and have money.* (Male, 11 years, January 2019)
>
> *Poachers are a bad idea. We must strengthen security systems.* (Male, 5 yrs, January 2019)

Hopelessness:

> *We can win if we arrest them and they do not get bail. Why is the justice system against us?* (Female, 6 yrs, February 2019)
>
> *At the end of my conversation with a ranger, one sergeant pleaded with me to talk to the corrupt government to speak to China about their demand for rhino horn. He was terrified of being unemployed should the rhino species become extinct.* (Male, 18 yrs, November 2018)

Mistrust:

> *We are blamed by management and accused of not doing our job properly when a rhino carcass is found.* (Male, 12 yrs, February 2019)

> *Management makes us feel as if though we had not done enough in an area that is too large to protect with an inadequate number of rangers employed to effectively patrol.* (Male, 18 yrs, November 2018)
>
> *I can experience only guilt, because when a rhino is poached, and the poacher runs away, the suspect will be me.* (Male, 3 yrs, February 2019)
>
> *No one trusts no one.* (Male, 11 yrs, February 2019)

Trust seemed to be a sensitive issue between some of the rangers and reserve management. “*How can we trust management if they test us to see if we lie?*", a ranger wanted to know. Although some rangers approve of regular compulsory polygraph testing, the majority disapproved, seeing this Western concept as a sign of mistrust between management and themselves. The rangers expressed their need to feel that their management team trusts them. However, some felt like suspects when called to be polygraphed.

Perhaps the rangers' negative vocalizations of this are but only one side of the coin? It cannot be excluded that some rangers, as local actors, have collaborated with poachers in the poaching of rhino or relaying sensitive information to the poaching teams. Not all rangers can be trusted; therefore, not all the intelligence data filtering down can be shared with all the rangers. What would the rangers' efficiency be if they knew they were suspected of not being trustworthy? Is the head ranger or warden's mistrust based on facts, race, or personality clashes? What attitude do the rangers portray that has led wardens not to trust all their men? How can effectiveness be measured due to the non-sharing of intelligence and operational data among stakeholders, reserve managers, wardens, and regional rangers? How big an influence do corruption and nepotism have on those fighting wildlife crime? Mistrust is a contributing element that brings the concept of warscape “home”.

I further noticed a glaring absence and lack of collaboration among various stakeholders, private reserves, national parks, and APUs in sharing vital intelligence data. When questioning their stance on the non-sharing of intelligence, some wardens offered multiple reasons. First, they believed their informants will be “head-hunted” by other reserves to serve as informants, which will affect their efficacy and efficiency and standing in the greater conservation framework. They thus safeguard their assets by not sharing intelligence data.

Many NGOs have sprung up overnight (and continue to do so) raising funds for rhino orphans or struggling conservation groups. The photographs shared of poached and mutilated rhino carcasses or neglected rhino calves stir the human heart emotionally and purse strings financially. Apart from one or two reputable organizations raising funds for the rangers, most funds raised are designated for rhino welfare. Perhaps the controversial South African politician Julius Malema was not wrong in asking whether the rhino had more value than human life (Balogun, 2021). How much of the funds raised in the name of conservation and designated for ranger training and equipping are spent accordingly?

One training organization expects its rangers to be involved in community service. I was shown photographs of their involvement with the community’s children through activities such as soccer and games, friendship-building, and mentoring initiatives. The aim is to build trust from the side of the community toward the rangers. However, what is puzzling to understand is that most of the rangers I interviewed are viewed with suspicion and have experienced antagonism from the community. Only a few of them enjoyed support from the community. Even though the idea of rangers doing community service is noble, the long-term effects and practicality thereof I find questionable. Exposing rangers to community involvement only highlights their vulnerabilities. This leads back to their dual identities, as discussed previously, and exposes their family members at home to negative backlashes or intimidation from other community members. During the Namibian War of Independence, the SADF implemented the Winning Hearts and Minds (WHAM) initiative. The crux was getting the population to cooperate with authorities by voluntarily establishing a concept of legitimacy, as legitimacy was seen as ensuring long-term success through the cooperation of the population with the authorities (Eloff de Visser, 2012). How successful is the ranger community service campaign? Are the rangers seen as legitimate actors in this attempt to win the hearts and minds of the communities? On the periphery, it seems as if some communities pledge their loyalty and support to whoever supports them financially.

4.3 Preparations, Plans, Pickets, and Protecting

For the rest of this chapter, I created a single narrative on my fieldwork. Included are my initial experience meeting with the various wardens, their practical preparation for patrols, and a further description of their daily lives. I have combined data from the various reserves, thereby excluding repetition.

a. Background

The wardens in this warscape were all ex-military officials. Some had even trod on foreign soil before getting into militarized conservation in South Africa. As Lunstrum (2014) notes, those involved in conservation have generally had the necessary tactical, strategic, and military training to look after conservation areas. My first visit to the wardens aimed to introduce myself, discuss any concerns about the research, and establish clear guidelines and expectations from both sides. These wardens wanted accountability, trust, and integrity from my side. They had been "burned" before in the name of journalism and research, with their words either twisted, misquoted, or painted in the wrong context, with promised feedback never given. They were understandably suspiciously weary when they heard the word *researcher*, as they receive requests from researchers or people wanting to become involved in conservation. Very little to no feedback is received, or information shared in confidentiality is often blown out of proportion and quoted out of context.

Some of the wardens had been in conservation for decades and lamented that their career would likely end on a low note as the rhino might become extinct on their watch. Their words, "*It is depressing*," carried more weight than they let on. They also expressed frustration at the current status quo, highlighting a sense of entitlement by young people and a lack of commitment from rangers in general, bemoaning their lack of dedication, discipline, and passion for this job. How do one warden's sentiments in framing the young rangers in a negative context contribute to building trust between the wardens and rangers? Some wardens highlighted the vast inequality and poverty in the country and the massive ongoing corruption, referring to everything as a "political game" played by politicians. One warden expressly stated:

> *Our job is to 'afkak'.*[35] *You walk in high-40s degrees, sit in the rain in an ambush when it is freezing cold in winter, surrounded by lions and elephants, there are mosquitoes, and you say that this is a nice job. I get many volunteers*[36] *from overseas. They last a week, two weeks. It's not a nice job. They want high pay for little work. They don't want to 'afkak'.*

One becomes aware of the severity and reach of this warscape when entering a private reserve. Entry into most reserves requires stringent security, and biometric cameras are pointed at your vehicle from various angles. Upon arrival at one of the reserves, my identification was requested, and appointments were verified by radioing the reserve security before entering. Access to the reserve is prohibited if your name is not on the gate security's list. Sniffer dogs walk around the car smelling for the scent of illegal substances such as drugs, ivory, rhino horn, and explosives. A notice on a reserve's guardhouse wall stated:

> *In order to assist with the combatting of Rhino poaching with the [...] reserve, a substantial financial reward is offered by the Reserve's Executive Committee to any person who willingly provides information that will lead to the arrest and conviction of any Rhino poachers. For more information, please contact the reserve Warden.*

The majority of the reserves employ rangers belonging to the local community. One participating reserve, closer to the Mozambique border, does not, however, hire locals as rangers, only ex-military outsiders unfamiliar with the resident culture. The head of security justified his reserve’s decision thus: “*The risk of using someone from the local community is too big due to intimidation and threats, especially from poachers*.” He explained that there is also less of a risk of collusion with poachers or the possibility of being bribed and influenced to relay sensitive information on rhino whereabouts. He assured me the surrounding community understood.

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[35] The term *afkak* is part of South African military dialogue, even though it is an Afrikaans word, which literally means to "shit yourself" or to be in a situation that is unpleasant/unenjoyable.

[36] In the context of this sentence, where the warden mentioned "volunteers", I suspect that he was referring to "'interns". Volunteers are paid, whereas interns are not.

One reserve had an aptly named “War Room”. Large detailed laminated maps on the reserve’s walls indicated adjacent reserves, airfields, security gates, lodges, fences, and private residences. The locations where security had been breached, GPS coordinates of poaching incidents, and “popular” routes that poachers clandestinely use were also marked. Photographing these maps was not permitted. Next to the charts on the walls were statistics comparing month-on-month data indicating the number of rhino poached and how many poachers had been arrested/neutralized. These statistics showed weapons recovered and listed the various poaching activities, such as fence cutting, crossings, sightings, shots heard, tracks observed, contacts with poaching groups, environmental incidents, etc.

Another reserve’s OPS room had large wall-mounted TV screens, forming a large square with 24/7 live feeds. All the infrared cameras, signal boosters, fiber-optic cables, and detection equipment, such as GSM-enabled camera traps and night vision equipment, relay continuous data to the headquarters. Magnetic sensors buried underneath the soil pick up vibrations. It detects human or animal movement, relaying the data to the OPS room. The TV screens stream live camera feeds from entrance gates, fences, and various strategic places on the reserve, detecting any movement. One controller is on duty in the OPS room during the day and two at night, ensuring 24-hour monitoring for illegal activity. The rangers must check in with the control room to report their whereabouts every hour during the day and every half hour at night. Should rangers fail to check in, backup is dispatched immediately.

I was shown footage recorded from the live camera feeds and looked on in dismay at the infrared camera footage of four poachers illegally entering the reserve at night.

(This is actual footage of the poachers illegally entering the reserve and not an enactment.) Crossing in front of the infrared camera mounted on the external reserve fence, their images reflected grey on the control room screens. On the footage, two poachers bend down, camouflaging their footprints by putting sponges on their feet. The axe and rifle appear in a glaring white. A database of laminated photographs of the shoe soles, pencil drawings noting the fine detail of the shoes' undersides, and imprints of the boots in the sand is used in checking shoe imprints found at poaching scenes. One of the photographs clearly showed that the wearer of the shoes was carrying a heavier weight than usual. The amount of sand displaced and the clearness of the shoe imprint indicated a heavy load. Through current intelligence data and historical data collected and collated, and considering the lunar cycles, the security team can predict, with 60% to 70% accuracy, when and where poachers will strike in their reserve. More rangers are generally deployed during a full moon, referred to as poacher's moon. The illumination from the moonlight makes it easier for poachers to find their way. Ranger capacity is often stretched on purpose during poacher's moon. In the KNP, rangers are allocated to patrol an area of 50 km^2 during poacher's moon, against the norm of 10 km^2 (Mathekga, 2017); thus, the rangers are overstretched. I wonder whether the focus on the protection of wildlife takes priority over rangers' well-being.

The reserves operate on a military hierarchy with various roles, such as warden, sergeant, corporal, lance corporal, and field ranger. Most of the rangers interviewed completed their basic training at the SAWC. They received further in-house training, such as marksmanship/shooting, computer literacy, and leadership courses at the various reserves. There is a distinct difference between the rangers and APUs. The APUs refer to themselves as soldiers and not as rangers. How are they allowed to operate in a South African military context, as they do not have a mandate to refer to themselves as soldiers (thus military trained)?

b. Patrols, Processes, and Routines

Rangers gather intel by stopping game drive vehicles transporting tourists and making small talk with them and the tour guide. Information gathered included the guests' nationality, the length of their stay, the routes they had driven, and what animals were seen. All of the private reserves except one employ local community members. This reserve only employs outsiders to work as rangers and APUs, believing it will be harder to bribe them for information on the rhino's whereabouts as they are seen as "outsiders" by the local community. I wonder if employing outsiders influences the community's perception of xenophobia, as these outsiders take local jobs?

One interviewee was Angolan, an ex-32 Battalion soldier working as an APU ranger. He spoke broken but understandable English with a heavy Portuguese accent. I rephrased the questions in easier-to-understand English. He answered slowly to ensure both of us understood the other. 32 Battalion, founded in 1975, was an elite light infantry battalion of the South African army consisting of white troops and black commissioned enlisted personnel from Angola. The Angolan soldiers, mainly deployed in southern Angola, were a buffer between the SADF's regular forces and socialist enemies. This battalion comprises mostly former *Frente Nacional de Libertação de Angola* (FNLA) (National Front for the Liberation of Angola, in English) and anti-communist fighters from Angola, having sworn allegiance to the South African Government. At the end of the Border War, some Angolan war veterans settled with their families in Pomfret, a former asbestos-mine camp that became a South African military base (Clark, 2018). Although residents still consider themselves Angolan, and Portuguese remains their lingua franca, they are all South African citizens, and many have known no home but Pomfret. Only a handful of the 100 remaining military veterans have returned to Angola. Some rangers with a military background are part of armed[37] APUs. They seemed more at ease "in the bush", as their military background had prepared them for similar experiences.

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[37] Even though all rangers receive firearm training, not all of them are armed when on patrol.

After my interview with the Angolan ranger, the warden and I drove deep into the bush, with the warden taking one too many minor dirt roads for me to keep track of where we were going. I tried to look for specific road markers along the route to orient myself, such as a stream, a specific tree, rock formation, termite mound, or anything to remember the bush route by, but to no avail. We stopped in the middle of literally nowhere. Interestingly, the commander did not park the nose first but reversed the vehicle into position to drive away immediately should the situation require. He got out, cocked his pistol, and told me to get out of the car and walk ahead of him on the footpath. I remember thinking, this would be a good place to get killed. It is in the middle of nowhere. Not even the lions or the vultures will be able to find me here. I walked ahead on the little footpath, and he walked behind me, pistol in his hand. We came to a small enclosure or boma, not even 2 m in diameter, made from thorn branches and covered with some plastic, providing shade. Two young APU rangers dressed only in camouflage pants and flip-flops and armed with semi-automatic rifles came out of the enclosure. Their weapons never leave their sides. These APU rangers are not locals (Tsonga) but Zulus from northern KZN.

These two-person APUs establish an outpost in the veldt for five days at a time. No fires are allowed as they might attract unwanted attention – whether from poachers or predators. Thus, no hot tea or coffee, no hot water, no hot food, no electricity, and no cell phones. Their only way of outside communication is through radio to contact headquarters. Their diet consists of tinned food, only water to drink, and porridge with cold water. APU rangers sleep in the open, contending with mosquitoes and predators at night and nature's elements. Drinking water is delivered in large containers. After returning from their patrols, they first check for any unwanted footprints around their boma, whether animal or human.

As it was my last interview for the day, I interviewed the two APU rangers together, with the warden standing guard, pistol ready, as we were in the middle of predator territory. I was grateful for deciding to interview them together as one of them made me feel distinctly uncomfortable by the way he looked at me; I felt exposed and unsafe under his glaring stare. Most of their answers were similar to the rangers on the other reserves I had interviewed, thus confirming and verifying what I had heard from the other rangers and APU rangers. However, towards the end of the interview, I asked these two APU rangers two specific questions: "*How did you feel when you saw the rhino carcass?*" and "*Do you think we will win this war on poaching?*", which elicited a stony, uncomfortable silence. It was quite a surreal experience – it seemed as if someone had flipped a mute switch as they both refused to answer the questions. I waited a few seconds, respecting their silence, before continuing with the rest of the interview questions, which they answered without any trouble. Nonetheless, the tension was noticeable and confusing to me. All the other rangers had answered these questions without hesitation. I listened to this specific recording again in the safety of the lodge where I was staying to verify whether my perception of their silence and lack of answers was correct. It was. I wondered if I had inadvertently trespassed or misinterpreted some cultural taboo? It cannot be easy to be in combat mode 24/7. These APU rangers sleep in the veldt on the ground, eating only cold porridge or cold tinned foods as no fire is allowed. They thus have no comfort and have to contend with nature's elements. Speech is kept to a minimum, as sound travels and poachers might hear you.

The reserves follow different work strategies. Some rangers work 21 days followed by 10 days off; others work for 6 weeks followed by 2 weeks off. During their active patrol period at the reserves, no one can leave. Off time excludes their annual leave. Effectively, one-third of the staff work during the day, another third is on night shift, and the last third has off time. The reserves' office and administration staff work eight hours per day, whereas rangers work twelve-hour shifts. Day shifts are generally from 06:00 to 18:00, and night shifts from 18:00 to 06:00. Rangers who work on Christmas one year will be off the following Christmas. On Christmas day, one of the wardens takes a cooler box filled with soft drinks and snacks and drives by every ranger on patrol, handing them each a gift. This small gesture on Christmas day means a lot to them. "*As the poacher does not take off on Christmas, the rangers have to work*," the warden stated. In addition to their salaries (which were not indicated), the rangers receive a night shift allowance.[38]

The rangers from the one reserve receive rations packages to the value of R700 per month, containing food basics such as maize, salt, corned beef, cooking oil, sugar, and salt, and toothpaste. They are taken into town for shopping once a month, for which they only have two hours. The warden of this reserve keeps the time deliberately short, so they cannot visit the local shebeen, which in the local language is an informal licensed (and, at times, unlicensed) drinking place in a local township. If rangers smell like alcohol, they lose their jobs immediately. He explained: "*We work with weapons and ammunition. The risk is too big to have someone under the influence of alcohol working with weapons*." Rangers' contracts, approved by the Commission for Conciliation, Mediation, and Arbitration (CCMA) and the unions, stipulate that if a ranger is under the influence of alcohol, he is summarily fired.

After each morning parade, the day-patrol rangers are taken to a specific location for their shift, with the night-patrol rangers relieving them at 18:00. The foot and vehicle patrols inspect the boundary fences daily for cuts or breaches in the fence or unauthorized footprints showing signs of entry or exit. Daily responsibilities include sweeping for snares or looking for animals caught in traps. All incidents and animal deaths are logged on a database. Vultures circling will indicate a carcass. A ranger confirmed their daily duties: "*On patrol, you look for poachers, rhinos, fences, and footprints*." Should anything untoward be seen, the warden is notified immediately. Rangers will track illegal footprints, determining whether the poachers are still inside the reserve or have exited. Or, as one ranger informed me: "*You follow the spoor, you stop, listen, smell, and rest and continue. You listen for the gunshot and when poachers*

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[38] Only some private reserves give a night shift allowance, not all.

talk." Listening and being quiet on patrol are two of the most important tracking and survival skills in the bush. "*... observe, the bush talks to you*," is how the ranger ended his sentence.

Apart from the visible signs, such as footprints in the sand from poachers walking or discarded effects such as trash, trackers will look for signs where nature was disturbed, such as dew drops gone where there should be, grass stalks bent, etc. On the topic of silence and listening, a ranger (male, 13 yrs, November 2018) remarked: "*You keep silent that they do not see you. If you make a fire, then you will be the target.*" This confirms Vigh's (2018:495) viewpoint: "*Not knowing when, but knowing only that it will happen, leads my informants back to the practice of scanning environments for signs of anything out of the ordinary, ... staying alert to early warning signals and pre-emptive measures.*"

In addition to patrolling the fence lines, listening posts (ambushes) are set up at the day and night patrols at various strategic spots to observe and check for illegal movement and noise. The fence-patrol rangers are the first responders to alarms breached on the fence line, detecting and determining the entry or exit method and the direction of the incursion, whereafter the covert teams and K9 rangers take over. The covert field rangers are the reaction teams working on the inside of the fence perimeter, covering the possible infiltration routes. They are also responsible for tracking illegal suspects either on foot with specially trained bloodhounds or by helicopter. These teams will backtrack on the poachers' evidence, such as tracks or footprints or entry/exit points after a poached rhino carcass has been found.

Each reserve has a fence-repair team, as poachers cut fences or damage is done by especially elephants. Approximately 40 000 volts run through the live wires, triggering an alarm whenever the fence is breached. One member of the fence-repair team stated: "*The fire, he bites!*" (Male, 14 yrs, February 2019), in reference to being shocked by the live wire. Should a breach/cut in the fence be discovered, dedicated fence-repair teams are dispatched. All rangers are taught to fix a fence sufficiently until the specialized teams arrive. This ensures that the alarms and electricity on the fence are in working order. It is not only incursions by poachers/illegals that trigger fence alarms, as elephants also regularly break the fences, tripping the alarms.

The day-patrol rangers' backpacks weigh around 2 kg each, with the contents carried on patrol varying from person to person. Additional weight includes the weapon and additional ammunition. For more extended patrols stretching over a couple of days, a backpack can weigh up to 40 kg. Included in a daypack may be Bioplus, an energy booster assisting with fatigue and contributing to an alert state of mind. A notebook is compulsory to keep diary of the day's patrol and observations noted. These notebooks are used as reference should an incident be reported and for debriefing after patrol and compiling reports. Other compulsory articles include rain suits to keep the rangers dry, as the weather quickly becomes inclement. A medical kit consisting of painkillers (tablets), bandages, toilet paper, Savlon (wound disinfectant), a tourniquet, and malaria medication is essential. Bread and tins of cooked beef (minced corned beef), tinned fish, or pap (maize meal) are taken on patrol.

The majority of the rangers know which plants and fruits in the veldt are edible. Two to three liters of water are compulsory. Rangers become familiar with the location of water holes in a patrol area should they run out of potable water. If deployed to an unfamiliar area, they take additional water to drink. Dehydration can happen quickly in the hot Limpopo sun, causing a headache; thus, sufficient water intake during a patrol is vital.

Rangers listen to nature to be aware of their surroundings, such as the chirping of birds and the behavior of animals, for example vervet monkeys and impala (gazelles). When the birds go quiet, it indicates that something or someone may be approaching. Vervet monkeys are a good (if noisy) indicator of imminent danger and impala are quite skittish when predators are around. Therefore, rangers have to be continuously aware of their surroundings.

The rangers further said that focus, concentration, and dedication are vital components for a successful tracking ranger. Only handheld radios are allowed on patrol. Taking cell phones on patrol is prohibited. Their employment contract condition stipulates that should a ranger be caught with a cell phone on patrol, he will be fired immediately and blocked access to the reserve. Should a ranger be tempted, when back from patrol, to relay information on rhino herd whereabouts, the information will be old and dated as rhino continuously move around, grazing. Rangers radio the reserve's control room to report or request backup for any emergencies in the veldt or while on patrol. Rangers do not go on an active patrol at night due to dangerous wildlife or a possible run-in with poachers.

Listening posts are set up at various strategic points in the reserve, giving the covert teams a commanding view of their surrounding area. Three rangers demonstrated a waylay (ambush), taking position under some trees. Their green uniforms and balaclavas provided the ideal camouflage as they blended into their surroundings. They never sit facing the same direction as they have to look for wildlife and poachers from all sides. Minimum movement and talking only in a whisper for hours are a challenge. And should Mother Nature call, all solid bodily excretions and tissue paper have to be collected in a plastic bag and discarded at the picket or compound. Nothing can be left behind in the veldt. Should anything untoward be seen or heard during a listening post, backup assistance is requested by radio. During nightly listening posts, patrol teams radio their position to the control room every 30 minutes, thus updating the operators on their whereabouts. During day patrol, they radio their position in the veldt hourly. Should the patrol team fail to initiate contact, backup is immediately dispatched.

Dog breeds making their mark in anti-poaching patrols include the Texan black-and-tan, redtick, and bluetick coonhounds, which work as free-running hounds to pursue and apprehend poachers. These dogs are chosen for their scent-tracking skill, aggressiveness, baying capability, and ability to make a free-running pack hound.

Other dog species used in anti-poaching operations include German, sable, and Belgian shepherds. Malinois are trained as tracker and sniffer dogs, whereas bloodhounds and beagles are trained to find and follow a scent trail. The K9 gate guards work with sniffer dogs, checking all vehicles and guests, as well as staff, coming into the reserves. These dogs are trained to detect ivory, rhino horn, drugs, firearms, and ammunition. Should a dog scent a specific smell, it will sit down, after which the vehicle is searched. When field rangers come across any initial signs of an incursion or cut fences, the K9 rangers and their dogs are the first responders called. If the dog sits down while on patrol, something is in the vicinity, such as an animal or person. Thus, a handler needs to know the behavior of his dog. Dogs are taught not to bark at elephants. Tracking dogs pick up the scent of poachers and follow their tracks. Excessive movement around a crime scene must be minimal so as not to contaminate it, as the scent/spoor may be compromised (Groenewald, 2016). Should a dog pick up a scent in pursuit, the handler runs behind his canine on an 8 m long leash. The other rangers' responsibility is running alongside and flanking him on both sides, continuously surveying the area for signs of possible danger or an ambush.

The dog handler is only focused on his dog running. He does not have time to look around and be aware of his surroundings. At one accommodation picket, a tracking dog in one of the kennels started eating soil due to his handler being on leave, thus showing signs of kennel stress. Rangers will be armed when taking their dogs for exercise or training as their accommodation is in the middle of the bush, surrounded by predators. One ranger wryly remarked that leopards prefer dog meat. Daily reports on the dogs' well-being include their feeding schedule, exercise and training, and investigative and tracking skills. These reports are signed off by another dog handler, ensuring accountability. In addition to the K9 ranger's water and food on patrol, an additional two to five liters of water for his dog are compulsory. Water is used for drinking and cooling the dogs by sponging their heads and bodies due to the intense Lowveld heat and humidity, primarily when they track a spoor. Additional water supplies are requested via radio and delivered by patrol vehicle or helicopter, depending on the location of the ranger’s teams.

Rangers throw stones at rhino grazing close to fences to frighten them away, as they will be visible from the road. Certain reserves number their rhino through specific ear notches, and the rangers check daily to confirm whether all the rhino are present. Should a particular rhino not be spotted, the rangers will go scouting to find it. Throughout their daily patrol, rangers become acquainted with the animals around them, their different personalities, and their favorite grazing areas. One ranger remarked that should his patrol finish early for the day, he feels uncomfortable going back to their basecamp early in the event their patrol team may have missed something. He explained: “*If something happens in the area where you were on patrol, they’ll tell you that you are not doing your job*.” A perceived lack of support from the South African judicial system leaves the rangers frustrated, as one ranger commented: “*We can win if we arrest them and they do not get bail.*”

Rangers receive training on doing autopsies on poached animal carcasses, as it is vital to find the used bullets as evidence. Spent cartridges are sealed and sent for ballistics testing on the Integrated Ballistics Identification System (Groenewald, 2016). This system makes tracing weapons and ammunition possible, enabling the relevant authorities in court to link the shell to a firearm, crime scene, and carcass. Should rangers come across an elephant or rhino carcass which has not been stripped from ivory or horns, it might indicate that the poachers were disturbed and might still be in the vicinity. To continue tracking the poachers, the GPS coordinates of the carcass are relayed to the backup teams, namely air support, trackers, and K9 units.

The rangers stay in solar-powered accommodation pickets. Rangers are expected to remain alert for unfamiliar sounds and gunshots even during their off time. At one of the pickets I visited, the soil around the picket had been freshly swept, with a couple of tree trunks sawn in half to provide seating. The picket was fenced and electrified, with a gate to keep leopards out and humans inside at night. A small greenhouse dome bought by the reserve housed trays of onions, spinach, chilies, and beetroot. Rangers are provided with basic foodstuffs. They complement their diet by keeping a vegetable patch. For relaxation, the rangers constructed homemade gym equipment to keep themselves occupied after patrol as there is no television. They sleep four to a room on bunkbeds and share ablution facilities. The kitchen had a two-plate gas stove, and next to it, on the wall, was a USB plug socket to charge cell phones.

Cell phones are allowed only at the rangers' accommodation pickets, but they are prohibited from taking it on patrol. It is used to communicate with family and friends. The rangers lamented the price of data and airtime. Some rangers are active on social media such as Facebook. They do not post any messages or photographs but use them to keep track of their friends. None of the rangers were active on Twitter or Instagram. One ranger understood the danger associated with his job and being on social media and commented as follows:

> *I am on Facebook, and I use WhatsApp. I just read to know what is happening as my friends post things. I am careful about what I comment on. Not everybody on Facebook knows what I am, where I work, and what I do.* (Male, 6 yrs, February 2019)

The head ranger is responsible for keeping their picket neat, and should they fail a picket inspection, he has to answer for his rangers.

What do the rangers do for relaxation? The majority indicated that after a patrol, they might exercise, read, chat to friends on WhatsApp, catch up on sleep, listen to the radio/music, cook dinner, prepare their kits and food for the following day's patrol, clean their room, or play soccer or card games. I asked about illegal economies such as drugs or alcohol and was immediately corrected. No alcohol was allowed at the pickets, as they work with weapons and live ammunition. One ranger said: "*The only time you drink is when you go home.*" The majority of the rangers did not smoke, but a few would light up a cigarette at their accommodation picket after returning from patrol. It is prohibited to smoke while on patrol as the strong smell of tobacco, especially with the wind blowing, can indicate the rangers' position to poachers. One ranger spoke about his taste in music called *maskandi*. This type of music, full of expression and melancholy, defines love and loss, the joys and sorrows of a man having the Zulu blues. It is similar to Portuguese *fado* and helps him forget his daily difficulties and dangers as a ranger.

c. Difficulties and Problems Rangers Face

Understanding wildlife behavior, which is the ability to read, interpret, and understand animal behavior, can save a ranger’s life. In response to my question on wildlife behavior, one of the rangers humorously responded: “*I know if I am going to get into trouble with wild animals*” (Male, 19 yrs, February 2019). From a curiosity point of view, I asked all the participants which animal was their favorite. The rhino and elephant represented strength, lion royalty, and cheetah speed. An animal that surprisingly surfaced a few times was the hyena. Upon enquiring, I was informed: “*Because he is strong and clever*.” The leopard was a favorite animal due to its shy and respectful nature. “*He won't attack unless threatened and goes its own way. Don't look it in the eyes*,” responded one ranger. I understood from his explanation that looking a leopard in the eyes was akin to challenging the animal. The two anti-poaching rangers from KZN mentioned the leopard as their favorite animal as they liked its skin and fur. I wondered whether their cultural upbringing had had anything to do with the leopard being their favorite animal. The leopard has cultural and symbolic significance in the Zulu culture. This totem animal is seen as being imbued with extraordinary power, symbolizing courageousness, honorableness, and nobility. Also, leopard skin is traditionally worn by men at cultural celebrations (Ulwazi Programme, 2022).

The rangers were concerned about their job security and full-time employment should the rhino species go extinct. It was interesting to listen to and understand their perceptions of this “war” and the poaching crisis. At the end of an interview, a ranger implored me to speak to our “*corrupt government that they can speak to the Chinese people not to poach our animals*”. Another ranger’s view on the poaching war was: “*We won’t lose our jobs, but losing the rhino is another thing. We still have other animals* *to take care of, the lion, elephant, and pangolin, but it won’t be the Big Five any longer. It is our heritage.*” Was this perhaps a “learned answer” that this ranger may have heard many times before?

Nonetheless, some rangers feared they might lose their only form of employment should the rhino in the wild be poached to extinction. Some rangers expressed their interest in nature and told me of their childhood dreams of becoming a ranger. One ranger had had generational knowledge imparted, as his father was a ranger at an adjacent reserve. He often accompanied his father to the reserve and was shown the “tricks of the trade”. This ranger’s dream was to leave a good legacy and a good name for the ranger community to come after him. His motto was: “*Every day is a new day; don't count today as tomorrow.*” Conversing with the head of the ranger training in April 2019, he informed me that chances of promotion for rangers moving up through employment ranks are low to non-existent. He cited the example of a ranger who had been in the same position and salary for many years. There is little opportunity, in general, to move up through the ranks of promotion, which might contribute to division, exclusion, competition, and negative pressure among the ranger corps, possibly leading to mistrust. Throughout the Southern African region, retiring rangers have not been effectively socially integrated to restore them to their communities with access to civilian employment and supportive social networks that would foster demilitarized social identities.

I asked the rangers: “*How can communities connect to what rangers are doing?*” One ranger lamented that the community is so money-driven, emphasizing the lack of employment opportunities for the community members. Other rangers underscored that reserves need to provide regular information sessions educating the communities on the importance of wildlife and keeping it safe. A few commented on the future, hoping their great-grandchildren would also be able to see rhino. One of the rangers recommended closer collaboration between law enforcement, the security companies at the reserves, the army, and the rangers. Others suggested building a community teaching hall to present information sessions, teach the community the importance of protecting wildlife, and show them "*the effect of what the poachers are doing*" and how they, as the community, can assist the reserves in protecting wildlife. Many private reserves run community development projects such as sinking boreholes for waterpoints and building schools. Yet, some communities surrounding the reserves are antagonistic towards rangers, as 70% of the young people there are unemployed. The community is loyal to whoever brings in the most money. If a poacher pays the community a large sum of money to protect him, their loyalty will be with him and not with the reserve.

Some of the rangers indicated that their families were proud of them as they were the primary breadwinners, financially supporting between eight and ten dependents. In many cases, the rangers' parents, spouses and children, and siblings were unemployed and dependent on their salaries. Should a ranger leave the reserve to visit his family, he dresses in civilian clothes. Due to intimidation and unsolicited antagonism from communities towards the rangers (and their families), they do not wear their uniforms during their off times at home. Many communities do not even know when one of their own is a ranger. It is not shared publicly.

Rangers can face further intimidation, as some poachers may be from their community or even the same family, with many being dependent on the illegal money the poaching industry brings. However, some community members support the rangers and act as informants to relay vital and valuable information/intelligence to the rangers on the whereabouts of poachers or possible poaching plans (discussion with wardens, October 2018, January 2019, February 2019, November 2021). During the rangers' off time in their community, many are responsible for handyman tasks such as fixing broken things and assisting around the house. One ranger is involved in his community as he uses his free time and income to help at a nursing home by fixing broken things and taking the elderly shopping. If he is not around at a time needed, they will wait for him to return.

4.4 The Result of this Warscape

This green militarization warscape that the rangers find themselves in was never seen as a long-term solution as mentioned earlier. It was done out of necessity to stem the tide of poaching and contain the plundering of South Africa’s natural resources and environmental assets. Enhanced militarization and law enforcement strategies were not the chosen toolkit, it was done to buy time for the rhino. Rangers cannot escape this warscape as they spend between 80% - 90% of their time currently focusing on law enforcement initiatives, with less time for conservation duties. Their daily lives are entwined with this warscape in which they operate. The rangers’ warscape is intensified as, according to a recent survey, up to 54% of rangers believe that the law does not do a good job deterring people from committing crimes within the conservation area and 42% are disappointed with the way courts treat people arrested by rangers in the park (Beleckey et al., 2018). The burden of dealing with wildlife crime is often placed on the shoulders of rangers, and the majority of rangers indicate they experience feelings of accountability and guilt as a result of poaching incidents. The work that rangers perform is in vain if weaknesses in the judicial process result in inadequate application of the law in the conviction and sentencing of offenders. Measures that can elevate the seriousness of wildlife crime in the courts, and strengthen the successful prosecution of offenders, are important in supporting the work of rangers. A particular focus on the investigation and prosecution of higher-level criminals will help dismantle crime syndicates, and reduce the burden that is placed on the shoulders of rangers working on the frontline of wildlife crime. This intensive militarization warscape in which the rangers find themselves contributes to low morale and unhappiness.

Does this warscape drive some rangers to corruption? According to my research, the educational profile of many of the rangers within the ranger corps shows low levels of secondary school education, with limited adult learning and personal development opportunities. The former and latter are barriers to advancement within their organizations as well as the capacity to function effectively in a modernizing financial transactional system. These include issues of poor soft skills, adult literacy, numeracy, computer skills, and financial literacy. The prevailing thinking behind it is that rangers are generally underpaid. When I asked why rangers become corrupt, the lack of pay and incentives as a driver for involvement in poaching, hunting for bush meat, the collection of traditional medicinal plants, the supply of information to poachers, the solicitation of bribes, and direct participation in poaching events were mentioned. Some other reasons given why rangers may participate in corrupt activities include not being paid a fair salary, poor management of finances, lack of financial knowledge, money problems and peer pressure, debt, and greediness to name a few. The ranger needs income (which is low), wants to work in conservation (but were trained as paramilitary), and is facing death (from poachers and wildlife on a literally daily basis).

The daily battle for survival is intensifying as poaching seems to be increasing. The psychological impact is increasing through experiencing stress, and psychological trauma due to armed contact with poachers. The rangers have ongoing concerns over their families' personal safety in their home communities (many rangers live in the same communities as the poachers). Rangers often experience direct threats, intimidation, and the persecution of their families in their home communities by poachers and members of poaching syndicates. On top of that rangers are often uncertain whom to trust if they detect corruption or the complicity of park staff in poaching and other crimes. Although rangers have debriefing sessions with a psychologist, warden, or religious leader, the daily stress of being in danger and antagonism from the communities contribute to fear. How effective is counselling sessions with a counselor or psychologist? Would culturally-based trauma counselling have a different effect? These rangers are caught in a warscape web, an unenviable position and difficult circumstances. Not much-published research is available on the mental strain placed on rangers and the potential mental health issues they go through. The physical and mental fatigue is taking a toll on our rangers and some of them have run to substance abuse. These rangers are caught in a warscape web, an unenviable position and difficult circumstances.

4.5 Chapter Summary

In this chapter, I looked at presenting a basic overview of the rangers' daily culture, with the rangers being surrounded by various landscapes of identity (physical and non-physical) situated in a warscape. The rangers' outer identity is seen through camouflage and concealment as part of their physical and social landscapes in the way they dress (uniform). Their inner identity reflects their dual behavior, as they are required to wear different masks – at work, at home, and with the community. Some challenging emotions regarding militarization were unpacked through the rangers' narratives. Furthermore, a brief overview of the life of a ranger was presented by looking at patrols, accommodation pickets, and their modus operandi.

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CHAPTER 5: REFLECTION ON MY EXPERIENCES

Anthropologists were the oracles, scribes, and interpreters over past lifetimes and epochs, noting the adaptability of different cultures' geographical and socio-cultural contexts. Anthropologists can perceive societies' sociocultural contexts and socio-economic processes existing in different topographies contributing to the diverse nuances of an ever-changing landscape in the Anthropocene. The role of the anthropologist is highlighted by unpacking the experiences of specific participants in transforming environments to frame their local concerns and giving them a voice through their gathered stories as a witness to the way their world is changing.

During my fieldwork in unpacking the rangers' experiences, I realized that the horror of coming across a mutilated carcass impacts upon them as despair in having been unable to save a rhino. A rhino had been lost on their watch. It also affects relationships with family and the community, as they cannot share any confidential information as per the signed contract. A community is loyal to whoever brings in the money, be that the poachers or upliftment projects financed by the nearby private reserve. Rereading or relistening to the rangers' stories and hearing their feelings of despair and self-imposed failure should they come across a carcass still touched me profoundly in the process of writing this narrative. It still leaves me with more questions than answers and more negative stark realities than possible solutions.

I am far removed from the rangers investigated in this study in a geographical sense (living in another part of South Africa). Nonetheless, they have become part of my life through interviews, articles, video clips, social media, biographies on rangers, and assisting with surveys on rangers. Understanding the different contexts and challenging circumstances, such as the dangers, concerns, and fears they face daily, has broadened my worldview and added to my life through a rare look into theirs. Their concerns became my concerns, and I celebrated their rare victories with them. I am constantly reminded of the devastation and the effect of poaching in which the research is situated. All this has motivated me to be a voice for South African rangers, who mostly do not have a say, as they are generally low on government priorities. My journey with the rangers was successful, with publications, research reports, workshops, contributing to training modules, and establishing a framework for future personal development. Although my time with the rangers were short, I believe that this thesis is thorough, immersive and an eye-opener on the lived lives of the rangers and provides an excellent foundation for possible further research among them.

As ethnographers, we need to tap into the vast untapped fields of the richness of individual stories at the core of every ranger. We can do so by reflecting on their words, lived and complex experiences, unlived dreams, challenging landscapes, and ever-changing worlds, whether social or political. Ethnographers tell stories of love and loss, hopes and dreams, trauma and devastation. Biehl (2013:591) encompasses this thought with the following:

> *Philosophers tell stories with concepts. Filmmakers tell stories with blocks of movements and duration. Anthropologists, I would say, tell stories with instances of human becomings: people learning to live, living on, not learning to accept death, resisting death in all possible forms.*

Our words are extensions of ourselves. We as ethnographers have the ability and influence to cause our words to be either remembered or forever forgotten. However, despite the lack of time for prolonged and in-depth fieldwork, I know that, with this thesis, I opened the way for fellow researchers to engage in more profound studies on rangers and their continuous and brave efforts to protect wildlife for generations to come.

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CHAPTER 6: CONCLUSION

The focus of this explorative study was to understand a little bit more about the lives of field rangers – who they are, what they do, how they see themselves, how they fit into their communities, their modus operandi, and the historical linkages between conservation and militarization. Due to the lack of available and recent data from a South African academic perspective, this research unpacked the para-militarization role in this “unwitting war” against poachers as they protect wildlife, in particular the rhino. As this was an exploratory study, I was left with more questions than answers, more negative stark realities than possible solutions, as research on rangers is unexplored territory.

Some rangers are side-lined by their communities, accused, attacked, and left excluded on society’s periphery due to their chosen vocation. Poaching gangs bring money to impoverished communities and depend on their support and involvement. Communities are loyal to whoever contributes financially. As the rangers enforce the law even in their communities, they might have to arrest a fellow community member or even a family member, contributing to uneven and difficult community relationships. How can communities’ (sometimes hostile) perceptions towards the rangers be changed? Perhaps by incorporating them into actively protecting wildlife, to have buy-in, taking accountability for and ownership of the wildlife surrounding them.

How can communities’ perceptions of wildlife be changed, as the notion of value is attached to the rhino and the elephant, but not to them? Long-term solutions do not happen overnight, as the implementation of workable human-wildlife conflict solutions takes time. Conservation efforts are suffering, as rangers dedicate the majority of their time to anti-poaching and militarization efforts. What will the eventual repercussions thus be if vital conservation efforts do not receive the attention they demand? How can the communities and the rangers create trust, agency, and mutual commitment to this issue?

Concurrent with this study, a research project on the communities' perspectives and perceptions of the rangers will be vital. This will expose misgivings and misunderstandings between communities and the rangers – that each side can better understand the other. This research can further contribute to diplomacy and even healing processes, especially at the local and community levels, as anthropologists can address mistrust issues between communities and rangers.

Rangers on private reserves do not receive the same benefits, recognition, and treatment as their peers working in, for example, the national parks, military, police, emergency response, and firefighting. Rangers employed by parastatal organizations earn more than rangers on private reserves. According to the WWF (2017), as rangers perform similar functions to other officers (such as private security, police, etc.), they should be professionalized in the same manner and be provided with the same benefits. As rangers' salaries are low, the temptation to stumble or betray trust is strong. Rangers have an indispensable role in protecting valuable state resources. The professionalization of the ranger corps, from a global perspective, is vital to ensure meeting the demands placed upon them.

Specific cultural practices also place a burden on some rangers, for example, a cleansing ceremony or slaughtering a cow or goat from a sangoma after contact with a dead poacher or animal carcass. The cultural disconnect, misunderstanding, and unwillingness to contribute financially from a reserve management perspective regarding these traditional cultural practices lead to continued stress for the rangers and contribute to ineffectiveness in their jobs as they feel unclean. Due to stress factors caused by cultural insensitivity and cultural misunderstanding, what is a ranger's employment span if specific rituals and cleansing ceremonies are neither honored nor understood?

Of concern to me is what happens to a ranger suffering stress-related symptoms who cannot continue working and resigns? Or a ranger who quits as his heart is not "in the job" anymore and he leaves to do something else? Or those rangers whom poachers will knowingly target as they have the know-how and insight into the operations of the reserve? Or what will happen when a ranger becomes injured in the line of duty as his only training is paramilitary? Due to the immense pressure, stress-related diseases, fear, fatigue, and failure, some rangers might adopt unhealthy coping mechanisms, such as alcohol, drug abuse, etc. Some additional hard issues need investigation, such as the possibility of burgeoning illegal economies in the selling of drugs and alcohol[39] or even illegal poaching among rangers as their salaries are insufficient.

African rangers receive the lowest salaries compared to rangers in Asia and Southeast Asia (WWF, 2017). Many rangers earn relatively low wages and support extended families and dependents as is culturally expected. In some cases, the rangers further act as blessers or sugar daddies, supporting a girlfriend on the side. What additional (perhaps illegal) income sources are utilized in supporting all? Illicit economies among the ranger corps includes the selling of critically endangered medicinal plants, such as cycads, aloes, and pepper tree bark, as an additional (illegal) income. These plants are used in traditional medicines or for personal consumption, sold for financial gain, or exchanged for services from traditional healers. Many plants used in traditional medicines are overharvested and are critically endangered, appearing on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species in South Africa. How are rangers coping financially with difficult working conditions and a low wage, with little to no career development? How financially enabling are these illegal economies? According to Lombard and Tubiana (2020), current research on rangers focuses on their anti-poaching work without considering their careers and personal lives.

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[39] Most ranger pickets (accommodation) do not allow alcohol on the premises as they work with live ammunition. However, rangers might still sell alcohol to reap the financial benefits thereof.

Due to the high stress levels under which rangers work, I believe that it is imperative that psychological stress disorders among the ranger corps be researched to determine the long-term psychological consequences of exposure to this “war”. In the long term, this rhino war and the continued exposure to this dark landscape of trauma, stress, fear, and death will have severe and negative psychological consequences for the ranger and his family. Although debriefing sessions are available with a psychologist, it is not compulsory for all the rangers. What guilt/backlash do rangers experience from management or fellow rangers when a rhino was poached during their patrol?

The corruption issue among rangers is not always addressed with the seriousness it deserves. On private reserves, integrity testing is compulsory. In contrast, integrity testing in the KNP is not enforced. Some rangers accuse others of participating in corrupt activities and contributing to illegal economies, such as harvesting endangered plants for resale or selling medicinal plants to the sangoma or villagers. Some of the rangers interviewed said they would report fellow rangers participating in corruption. When I asked whether they had reported a fellow ranger guilty of misconduct, silence ensued. Perhaps it was an unwillingness to talk to a stranger, or maybe the lack of bonding or friendship between myself and the rangers, thinking that I might report them to management should they share their honest beliefs? I do not know. My perception is definitely issues of mistrust, possibly based on my culture and gender (Afrikaans and female) and skin color (white). I wondered how honest their answers were and whether they had the freedom to speak to the chief ranger on essential matters if trust was lacking among them. This lack of trust is confirmed by a research survey on corruption among rangers as over 50% of the rangers who participated in the survey acknowledged that they feared for their safety if they expose corruption in wildlife protection (Beleckey et al., 2019). As explained by a ranger in the WWF survey:

> *Rangers take bribes not because their salaries are inadequate. They take them because they think no one notices. I don’t know how to report anonymously, but it would be good to be able to report in this way to have those responsible charged.* (Beleckey et al., 2019)

This study only scratched the surface regarding issues related to rangers. There are additional questions warranting further research and investigation. Future research can be done on the role of gender (and the misuse of the role of gender) among the ranger corps, focusing on gender-based violence and interpersonal relationships between the communities and the rangers. In addition, future research projects can investigate the concept of lack among the ranger corps, focusing on the lack of training, lack of sufficient accommodation, and lack of career progression.

Apart from difficult working conditions, rangers have to deal with low salaries, low prospects of finding additional employment, animosity, and threats from the communities and poaching groups. Even though militarization is not a long-term solution (Jooste, personal communication, January 2020), some academics still frame the rangers in a malevolent context (Dowler, 2012), terming them as being counterproductive (Somerville, 2018), or accusing them of "shooting-on-site" (Lunstrum, 2014).

A ranger's family life suffers as he is away from his wife, children, parents, and community for long periods, often without regular communication with them. What influence would an "absent" husband/father have on the ranger's wife and his children? Unexplored stories are there to be uncovered to hear and understand the voice of the ranger's wife and his children. How do they process fear in saying goodbye to him every time, not knowing whether he will return safely from a patrol? What rituals, traditions, or rites of passage do ranger dads miss out on? As some rangers have girlfriends/mistresses, how do their wives see their infidelity? Through which cultural lens should their infidelity be examined?

In closing, even though this research was strongly based on my perceptions, it forms a foundation for possibly pursuing further postgraduate studies in the future, focusing on the rangers' inner beliefs and convictions. There is much more to learn, experience, and understand concerning what the makings of a field ranger entail. What are the makings of a ranger's wife and the effect of his absence on his children? How do the rangers really feel about protecting the rhino? How strong are their beliefs in a sangoma’s sacrifice? How do the rangers really feel about the white reserve owners’ inability to understand the black culture and their need to sacrifice for peace? In order to understand the ranger’s soul, the positive and negative spaces between them, the shapes of their ideas and sense of belonging, and their rituals and cultures, it will be vital to spend extended periods of research time with them.

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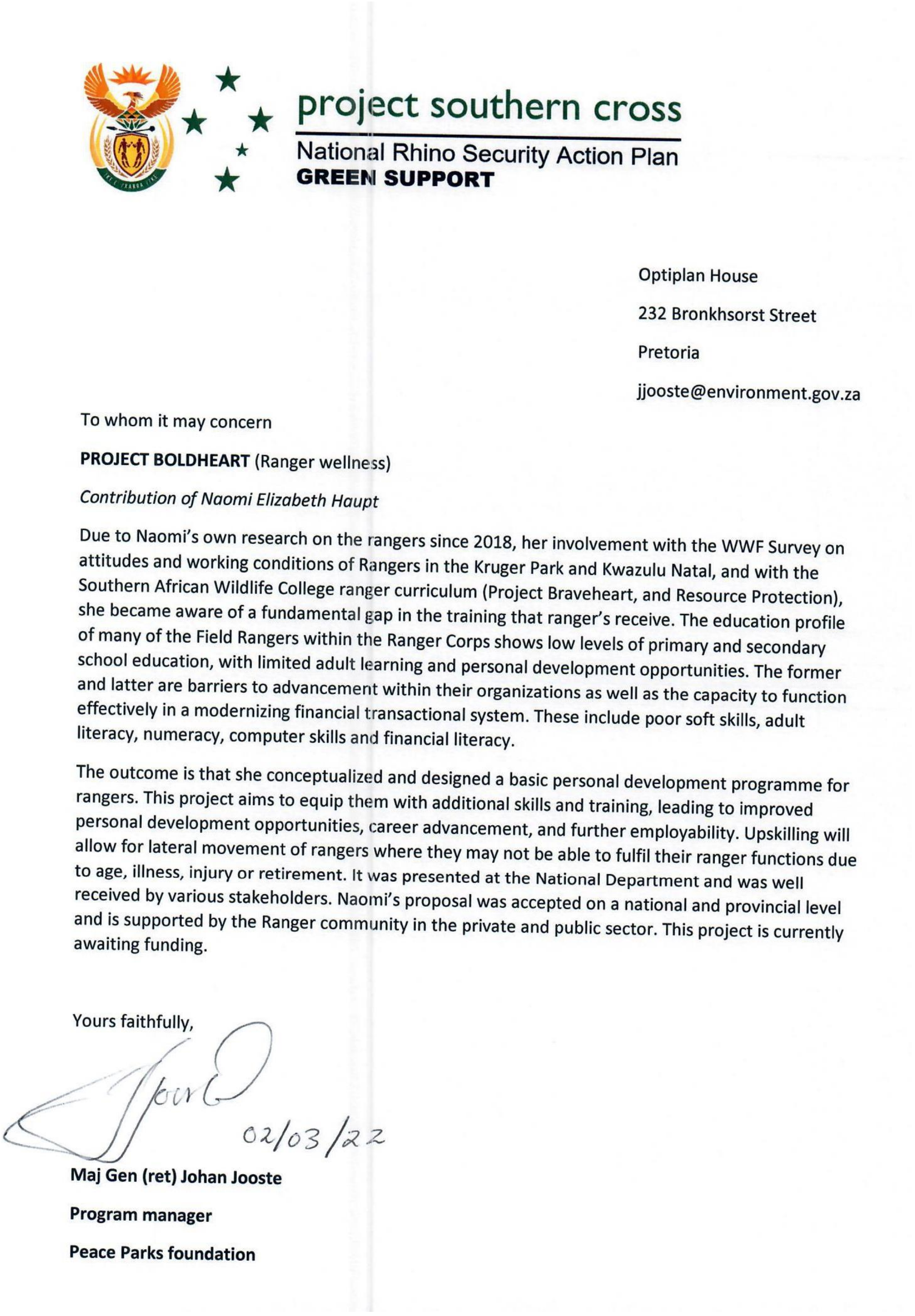
Addendum A: Letter of Confirmation Maj. Gen. (ret.) Jooste



project southern cross
National Rhino Security Action Plan
GREEN SUPPORT

Optiplan House
232 Bronkhsorst Street
Pretoria
jjooste@environment.gov.za

To whom it may concern

PROJECT BOLDHEART (Ranger wellness)

Contribution of Naomi Elizabeth Haupt

Due to Naomi's own research on the rangers since 2018, her involvement with the WWF Survey on attitudes and working conditions of Rangers in the Kruger Park and Kwazulu Natal, and with the Southern African Wildlife College ranger curriculum (Project Braveheart, and Resource Protection), she became aware of a fundamental gap in the training that ranger's receive. The education profile of many of the Field Rangers within the Ranger Corps shows low levels of primary and secondary school education, with limited adult learning and personal development opportunities. The former and latter are barriers to advancement within their organizations as well as the capacity to function effectively in a modernizing financial transactional system. These include poor soft skills, adult literacy, numeracy, computer skills and financial literacy.

The outcome is that she conceptualized and designed a basic personal development programme for rangers. This project aims to equip them with additional skills and training, leading to improved personal development opportunities, career advancement, and further employability. Upskilling will allow for lateral movement of rangers where they may not be able to fulfil their ranger functions due to age, illness, injury or retirement. It was presented at the National Department and was well received by various stakeholders. Naomi's proposal was accepted on a national and provincial level and is supported by the Ranger community in the private and public sector. This project is currently awaiting funding.

Yours faithfully,

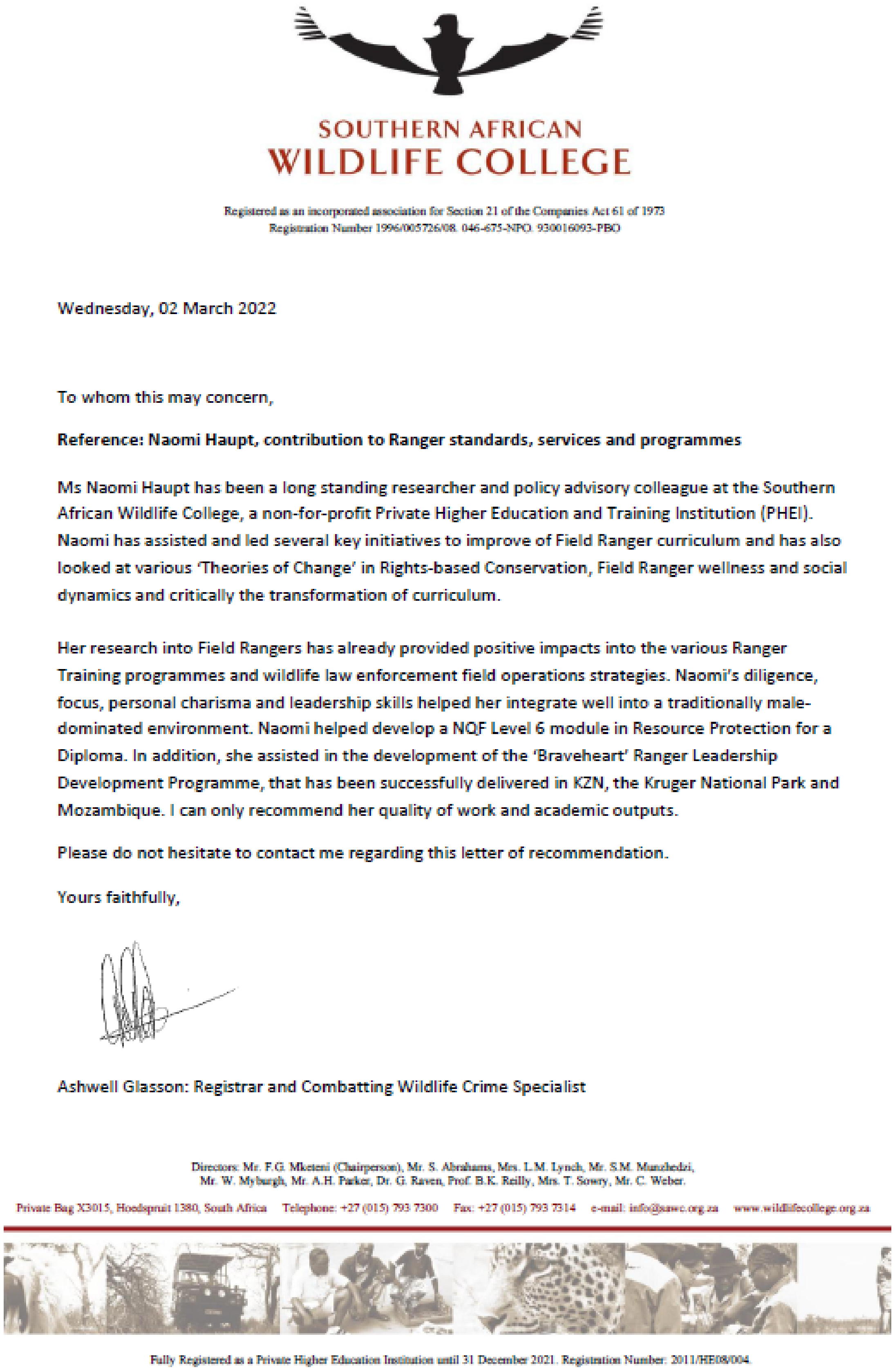
02/03/22

Maj Gen (ret) Johan Jooste

Program manager

Peace Parks foundation

Addendum B: Letter of Confirmation SAWC



SOUTHERN AFRICAN
WILDLIFE COLLEGE

Registered as an incorporated association for Section 21 of the Companies Act 61 of 1973
Registration Number 1996/005726/08. 046-675-NPO. 930016093-PBO

Wednesday, 02 March 2022

To whom this may concern,

Reference: Naomi Haupt, contribution to Ranger standards, services and programmes

Ms Naomi Haupt has been a long standing researcher and policy advisory colleague at the Southern African Wildlife College, a non-for-profit Private Higher Education and Training Institution (PHEI). Naomi has assisted and led several key initiatives to improve of Field Ranger curriculum and has also looked at various 'Theories of Change' in Rights-based Conservation, Field Ranger wellness and social dynamics and critically the transformation of curriculum.

Her research into Field Rangers has already provided positive impacts into the various Ranger Training programmes and wildlife law enforcement field operations strategies. Naomi's diligence, focus, personal charisma and leadership skills helped her integrate well into a traditionally male-dominated environment. Naomi helped develop a NQF Level 6 module in Resource Protection for a Diploma. In addition, she assisted in the development of the 'Braveheart' Ranger Leadership Development Programme, that has been successfully delivered in KZN, the Kruger National Park and Mozambique. I can only recommend her quality of work and academic outputs.

Please do not hesitate to contact me regarding this letter of recommendation.

Yours faithfully,

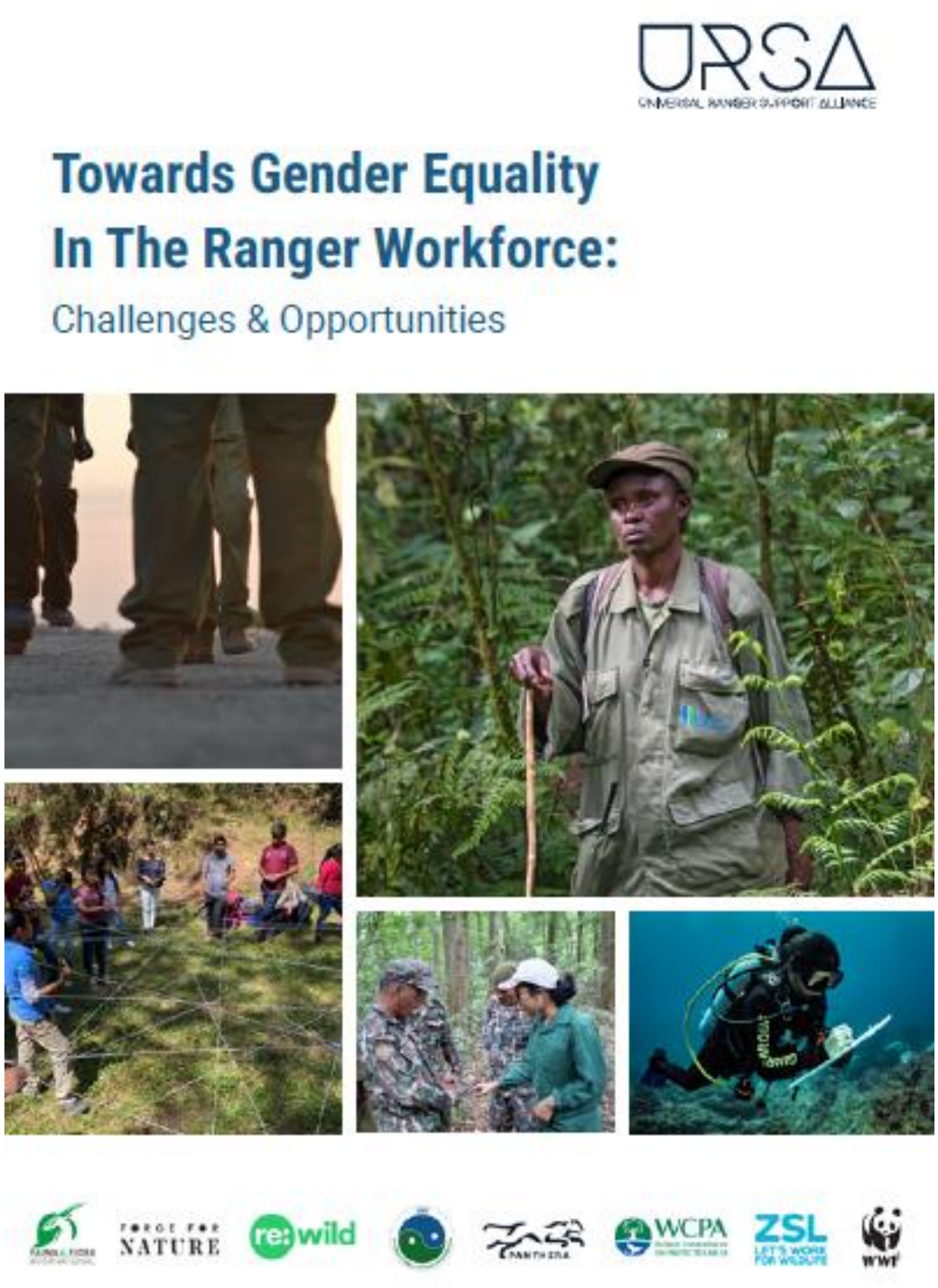
Ashwell Glasson: Registrar and Combatting Wildlife Crime Specialist

Directors: Mr. F.G. Mketeni (Chairperson), Mr. S. Abrahams, Mrs. L.M. Lynch, Mr. S.M. Munzhedzi,
Mr. W. Myburgh, Mr. A.H. Parker, Dr. G. Raven, Prof. B.K. Reilly, Mrs. T. Sowry, Mr. C. Weber.

Private Bag X3015, Hoedspruit 1380, South Africa Telephone: +27 (015) 793 7300 Fax: +27 (015) 793 7314 e-mail: info@sawc.org.za www.wildlifecollege.org.za

Fully Registered as a Private Higher Education Institution until 31 December 2021. Registration Number: 2011/HE08/004.

Addendum C: Gender Equality in the Ranger Workforce



URSA

UNIVERSAL RANGER SUPPORT ALLIANCE

Towards Gender Equality In The Ranger Workforce:

Challenges & Opportunities

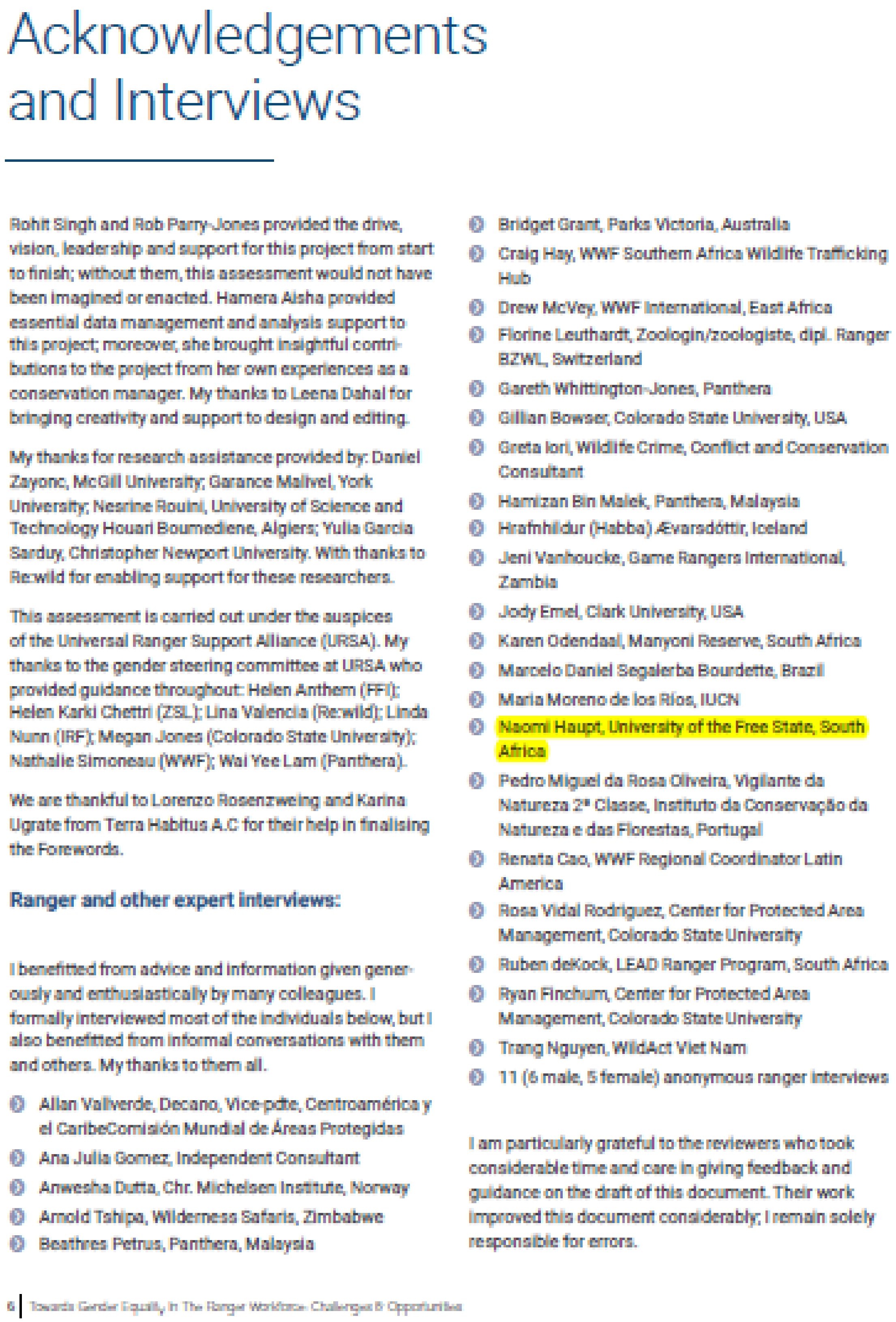
FORCE FOR NATURE

re:wild

WCPA

ZSL LET'S WORK FOR WILDLIFE

WWF



Acknowledgements and Interviews

Rohit Singh and Rob Parry-Jones provided the drive, vision, leadership and support for this project from start to finish; without them, this assessment would not have been imagined or enacted. Hamera Aisha provided essential data management and analysis support to this project; moreover, she brought insightful contributions to the project from her own experiences as a conservation manager. My thanks to Leena Dahal for bringing creativity and support to design and editing.

My thanks for research assistance provided by: Daniel Zayonc, McGill University; Garance Malivel, York University; Nesrine Rouini, University of Science and Technology Houari Boumediene, Algiers; Yulia Garcia Sarduy, Christopher Newport University. With thanks to Re:wild for enabling support for these researchers.

This assessment is carried out under the auspices of the Universal Ranger Support Alliance (URSA). My thanks to the gender steering committee at URSA who provided guidance throughout: Helen Anthem (FFI); Helen Karki Chettri (ZSL); Lina Valencia (Re:wild); Linda Nunn (IRF); Megan Jones (Colorado State University); Nathalie Simoneau (WWF); Wai Yee Lam (Panthera).

We are thankful to Lorenzo Rosenzweing and Karina Ugrate from Terra Habitus A.C for their help in finalising the Forewords.

Ranger and other expert interviews:

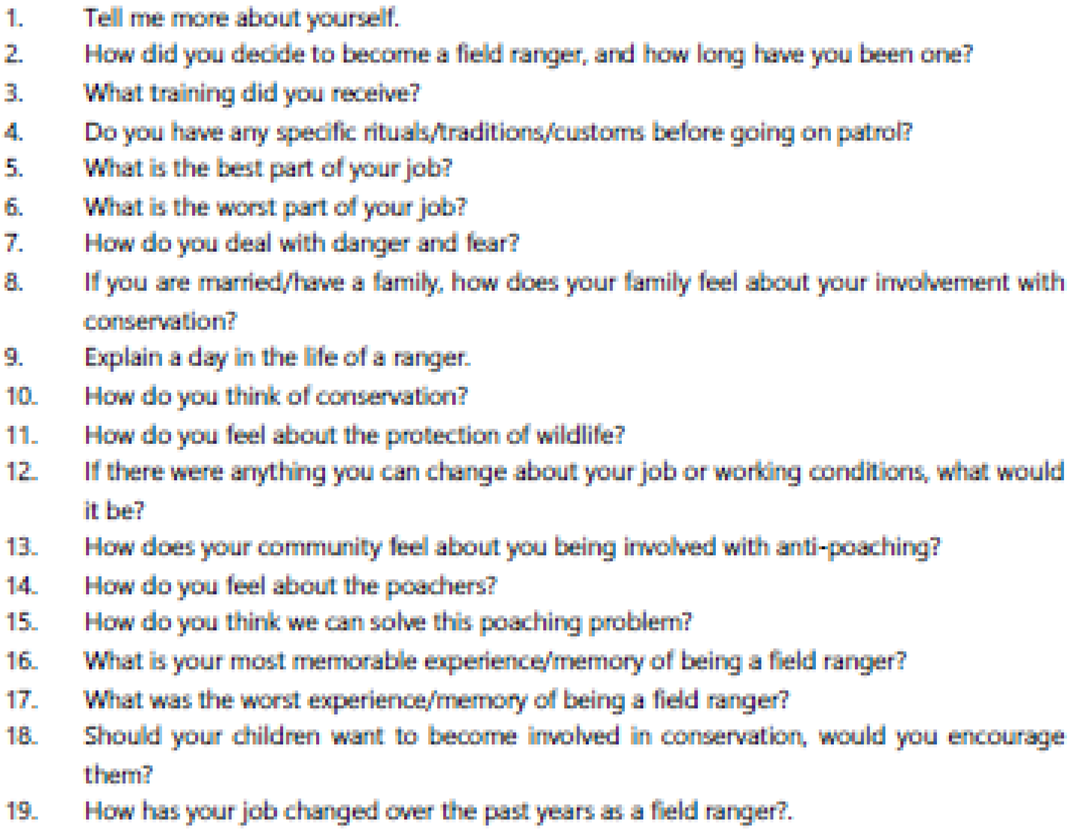
I benefitted from advice and information given generously and enthusiastically by many colleagues. I formally interviewed most of the individuals below, but I also benefitted from informal conversations with them and others. My thanks to them all.

- Allan Valverde, Decano, Vice-pdte, Centroamérica y el CaribeComisión Mundial de Áreas Protegidas
- Ana Julia Gomez, Independent Consultant
- Anwesha Dutta, Chr. Michelsen Institute, Norway
- Arnold Tshipa, Wilderness Safaris, Zimbabwe
- Beathres Petrus, Panthera, Malaysia
- Bridget Grant, Parks Victoria, Australia
- Craig Hay, WWF Southern Africa Wildlife Trafficking Hub
- Drew McVey, WWF International, East Africa
- Florine Leuthardt, Zoologin/zoologiste, dipl. Ranger BZWL, Switzerland
- Gareth Whittington-Jones, Panthera
- Gillian Bowser, Colorado State University, USA
- Greta Iori, Wildlife Crime, Conflict and Conservation Consultant
- Hamizan Bin Malek, Panthera, Malaysia
- Hrafnhildur (Habba) Ævarsdóttir, Iceland
- Jeni Vanhoucke, Game Rangers International, Zambia
- Jody Emel, Clark University, USA
- Karen Odendaal, Manyoni Reserve, South Africa
- Marcelo Daniel Segalerba Bourdette, Brazil
- Maria Moreno de los Ríos, IUCN
- Naomi Haupt, University of the Free State, South Africa
- Pedro Miguel da Rosa Oliveira, Vigilante da Natureza 2ª Classe, Instituto da Conservação da Natureza e das Florestas, Portugal
- Renata Cao, WWF Regional Coordinator Latin America
- Rosa Vidal Rodriguez, Center for Protected Area Management, Colorado State University
- Ruben deKock, LEAD Ranger Program, South Africa
- Ryan Finchum, Center for Protected Area Management, Colorado State University
- Trang Nguyen, WildAct Viet Nam
- 11 (6 male, 5 female) anonymous ranger interviews

I am particularly grateful to the reviewers who took considerable time and care in giving feedback and guidance on the draft of this document. Their work improved this document considerably; I remain solely responsible for errors.

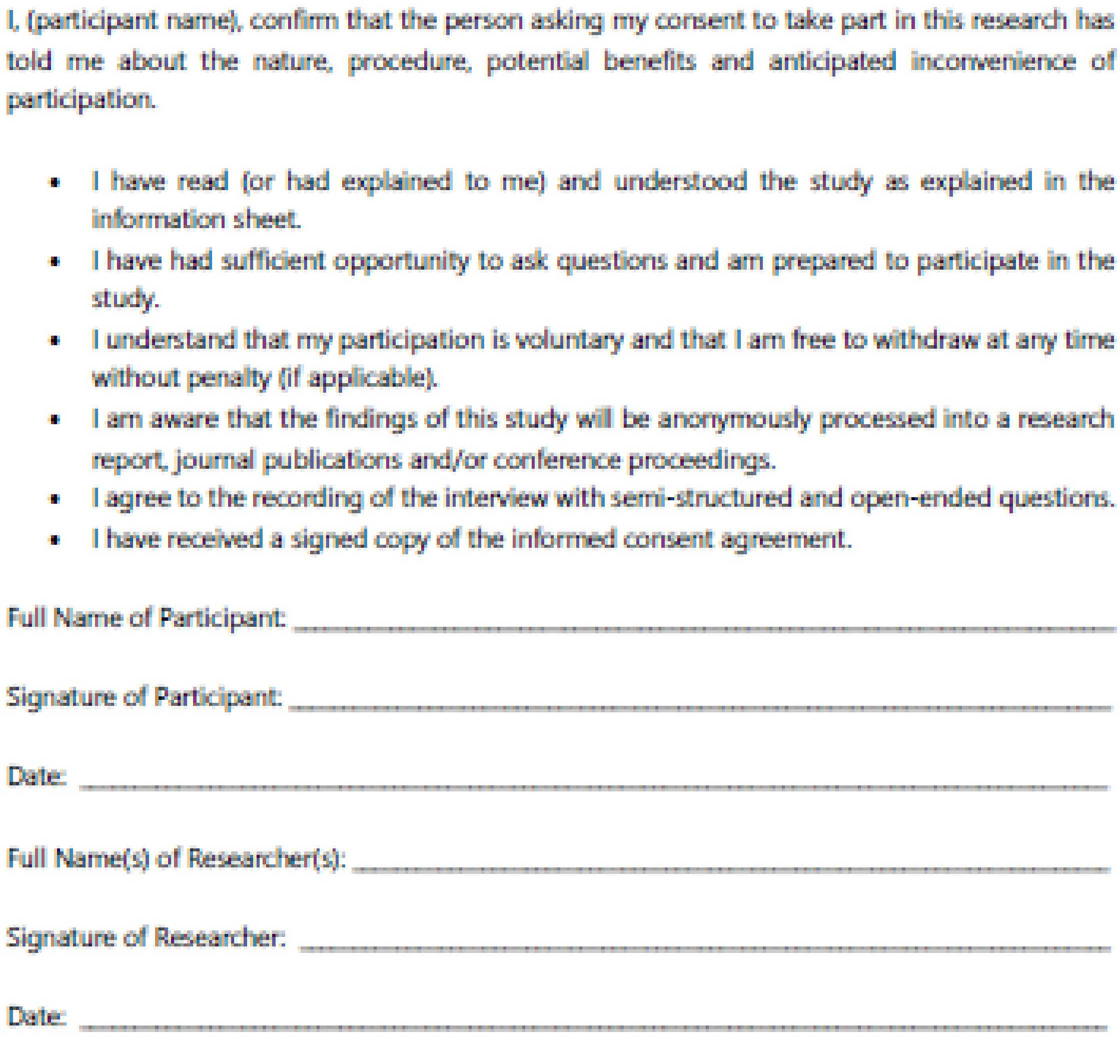
6 | Towards Gender Equality in The Ranger Workforce: Challenges & Opportunities

Addendum D: Interview Questions



1. Tell me more about yourself.
2. How did you decide to become a field ranger, and how long have you been one?
3. What training did you receive?
4. Do you have any specific rituals/traditions/customs before going on patrol?
5. What is the best part of your job?
6. What is the worst part of your job?
7. How do you deal with danger and fear?
8. If you are married/have a family, how does your family feel about your involvement with conservation?
9. Explain a day in the life of a ranger.
10. How do you think of conservation?
11. How do you feel about the protection of wildlife?
12. If there were anything you can change about your job or working conditions, what would it be?
13. How does your community feel about you being involved with anti-poaching?
14. How do you feel about the poachers?
15. How do you think we can solve this poaching problem?
16. What is your most memorable experience/memory of being a field ranger?
17. What was the worst experience/memory of being a field ranger?
18. Should your children want to become involved in conservation, would you encourage them?
19. How has your job changed over the past years as a field ranger?.

Addendum E: Participant Consent Form



I, (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

- I have read (or had explained to me) and understood the study as explained in the information sheet.
- I have had sufficient opportunity to ask questions and am prepared to participate in the study.
- I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).
- I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.
- I agree to the recording of the interview with semi-structured and open-ended questions.
- I have received a signed copy of the informed consent agreement.

Full Name of Participant: ____________________

Signature of Participant: ____________________

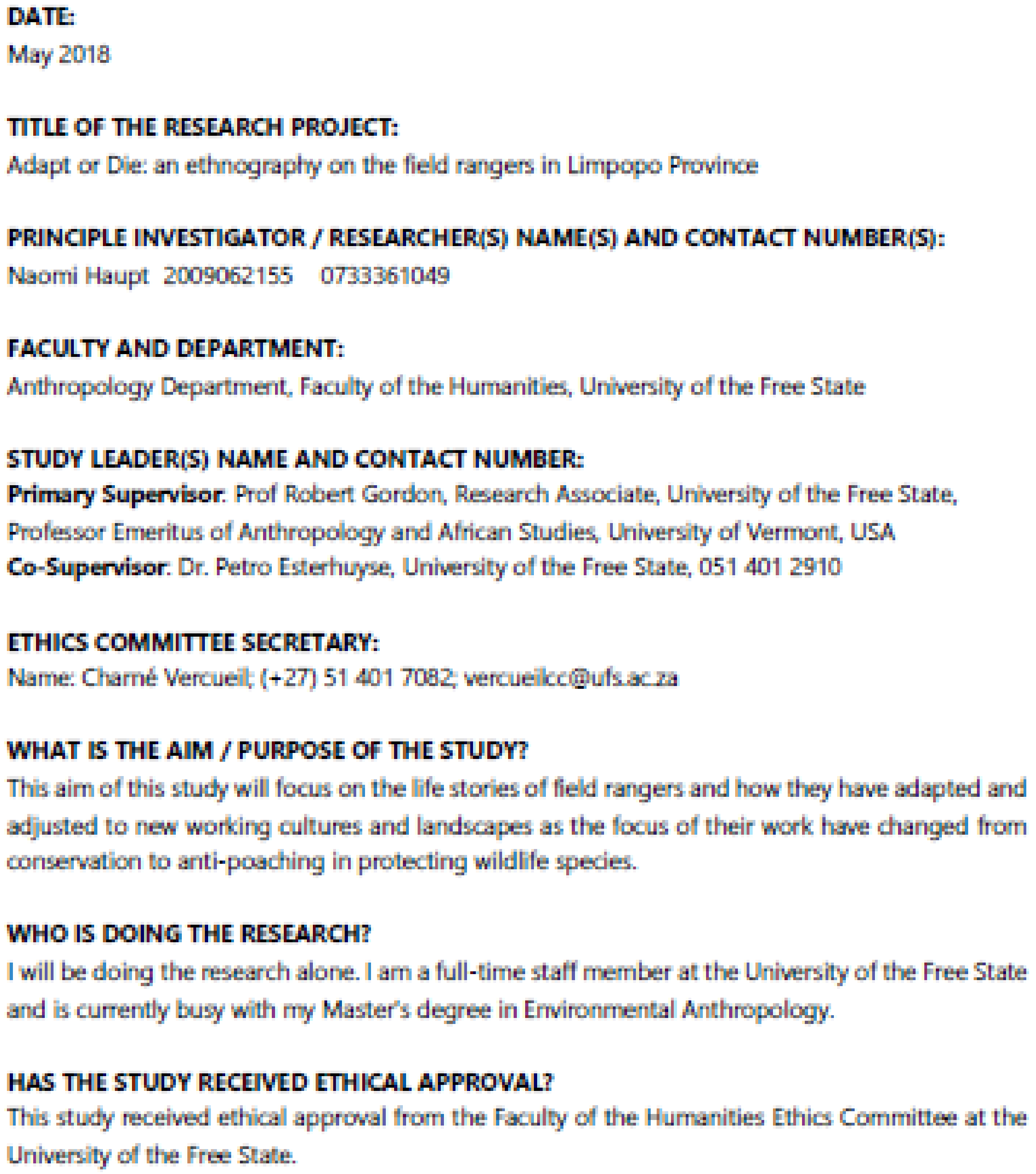
Date: ____________________

Full Name(s) of Researcher(s): ____________________

Signature of Researcher: ____________________

Date: ____________________

Addendum F: Research Information Leaflet



DATE:
May 2018

TITLE OF THE RESEARCH PROJECT:
Adapt or Die: an ethnography on the field rangers in Limpopo Province

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):
Naomi Haupt 2009062155 0733361049

FACULTY AND DEPARTMENT:
Anthropology Department, Faculty of the Humanities, University of the Free State

STUDY LEADER(S) NAME AND CONTACT NUMBER:
Primary Supervisor: Prof Robert Gordon, Research Associate, University of the Free State, Professor Emeritus of Anthropology and African Studies, University of Vermont, USA
Co-Supervisor: Dr. Petro Esterhuyse, University of the Free State, 051 401 2910

ETHICS COMMITTEE SECRETARY:
Name: Charmé Vercueil; (+27) 51 401 7082; vercueilcc@ufs.ac.za

WHAT IS THE AIM / PURPOSE OF THE STUDY?
This aim of this study will focus on the life stories of field rangers and how they have adapted and adjusted to new working cultures and landscapes as the focus of their work have changed from conservation to anti-poaching in protecting wildlife species.

WHO IS DOING THE RESEARCH?
I will be doing the research alone. I am a full-time staff member at the University of the Free State and is currently busy with my Master's degree in Environmental Anthropology.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?
This study received ethical approval from the Faculty of the Humanities Ethics Committee at the University of the Free State.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study aims to document the life stories and experiences of the field rangers as not much research is available on them. Topics such as your life history, your training, the work that you do, the challenges that you face, how you cope facing danger and fear on a daily basis, the influence of your job on your family and community will be looked at. The invitation to participate will come from your Head of Security/Warden who would have approached you first to see whether you'd be willing to participate in this voluntary study. The researcher will not approach the research participants herself. You will be asked to sign a consent form of which you keep a signed copy for yourself.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participant's role in this study will be through a semi-structured/open-ended ethnographic interview, which is conversational. It will take approximately one and a half hours. All interviews will be treated as utterly confidential, and it will be recorded digitally. Participants will be informed beforehand that it will be recorded. As the security and safety of the field rangers are vital, neither the names of the field rangers nor the reserve where they are employed will be used in the study. All data will be anonymized at the point of transcription. Please note that all conversations and interviews are voluntary. You can withdraw at any time as you are no obligation to participate. The research will be conversational where I will be asking you a few questions (interview) and will document your answers. There are no right or wrong answers as I want to hear your story. Questions to be asked during the interviews: 1. Tell me more about yourself. 2. How did you decide to become a field ranger and how long have you been one? 3. What training did you receive? 4. Do you have any specific rituals/traditions/customs before going on patrol? 5. What is the best part of your job? 6. What is the worst part of your job? 7. How do you deal with danger and fear? 8. If you are married/have a family, how does your family feel about your involvement with conservation? 9. Explain a day in the life of a ranger? 10. How do you feel about/how do you see conservation? 11. How do you feel about protecting of wildlife? 12. If there is anything you can change about your job or working conditions, what would it be? 13. How does your community feel about you being involved with anti-poaching? 14. How do you feel about the poachers? 15. How do you think we can solve this poaching problem? 16. What is your most memorable experience/memory of being a field ranger? 17. What was the worst experience/memory of being a field ranger? 18. Should your children want to become involved in conservation, would you encourage them? 19. How has your job changed over the past years as a field ranger?

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Yes, you can withdraw from the interview and this study at any time and without giving a reason. Participation in this research is voluntary. You are under no obligation to participate. There will be no penalty for withdrawing from this research or for non-participation.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Research on the field rangers in South Africa is scant and outdated. This research will fill a gap in the knowledge that currently exists in academic research on the rangers. The aim is to portray and understand the role of the South African field ranger as the first and last line of defense against poachers and the illegal wildlife trade and their role in protecting fauna and flora. Their life stories and experiences will be documented such as the work that they do, the challenges they face and how they cope with fear and danger on a daily basis. An integrated generic report without information that can have a security risk for the reserve and rangers will be shared with the Wardens and the Heads of Security of the various reserves where fieldwork was conducted, as well as non-governmental organisations such as the Game Ranger Association of South Africa and the International Ranger Federation.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

There will be no inconvenience/discomfort to the participants as this is a voluntary study and participants can withdraw at any stage. There are no harm or side-effects to potential participants as our interaction will be based on a conversation which will not be longer than one and a half hours.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Everything said and shared by the participant will be kept confidential. Should a ranger participate in this study, they are required to sign a confidentiality agreement. The confidentiality of this research and protection of the identity of the participants and reserve where they work is of the utmost importance and will be maintained at all times. Participants names and reserves will be anonymized at the point of transcription. No one will be able to connect a name to a place of employment. I am very aware of the rangers' safety and well-being during this research. No one but myself will have access to the data as I will do the coding/transcription myself. Data/information will not be shared with anyone. Should further research in the form of a journal article/conference presentation/research report be forthcoming from this dissertation, all the data that will be anonymized. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. This study will not be making use of focus groups for participation observation but only with individuals as this research is focused on writing life stories.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of the research data will be stored by the researcher for five years in a locked safe in her office at the UFS that she shares with no one else. Electronic information will be stored on her personal laptop which has additional security features and which does not back up to any cloud-based applications as backups. Data/electronic information for future research or academic purposes will be stored on a password protected computer. Future use of the stored data will be subject to a further Research Ethics Review and ethics approval if applicable. All research data in hardcopy will be put through a shredder before being discarded. Electronic files/back-up files and data will be deleted electronically which will be done by myself.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?
There will be no payment, nor reward (financial or otherwise) offered to participants to be part of this study as they will partake in this research on a voluntary basis.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?
If you would like to be informed of the final research findings, please contact the researcher at work on 051 401 9432 or email devaldone@ufs.ac.za. An integrated generic report without information that can have a security risk for the reserve and rangers will be shared with the Wardens and the Heads of Security of the various reserves where fieldwork was conducted. The findings will be accessible for one year after the completion of the study. Should you require any further information or want to contact the researcher about any aspect of this study, please contact me on the details above. Should you have concerns about the way in which the research was conducted, you may contact Dr. Petro Esterhuyse esterhp@ufs.ac.za or phone nr 051 401 2910.

Thank you for taking the time to read this information sheet and for participating in this study.

Addendum G: Report on the Interviews

Confidential

Report on the interviews with the field rangers and APU's

NAOMI HAUPT
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Dear Gentlemen,

Herewith my report as promised on the interviews with some of your rangers and support staff. This report comprises of the following parts:

1. An overview and background to the study
2. Basics
3. Fieldwork with the rangers and APU's
4. My perceptions and recommendations

1. AN OVERVIEW AND BACKGROUND OF MY PROPOSED STUDY

My interest in the field rangers and APU's all started with a photograph that stopped me dead in my tracks and piqued my interest. The anti-poaching ranger photographed for National Geographic Magazine in Zakouma National Park, Chad, stands alert, wearing a camouflaged uniform flecked with browns, greens, blacks and neutrals blending into the background; semi-automatic weapon in hand. A black and brown patterned turban around his head and backpack on his back complete the picture. Blending effortlessly into the background the only contrast is the bit of blue sky framing him. His emotionless eyes stare straight at the camera, a furrowed brow indicating the seriousness of the patrol. His finger is on the trigger, ready to fire in a split second.

The more I searched, researched and read, the more I realised that the current information on rangers and APU's from an academic as well as from an African context are sparse. This motivated me to continue pursuing a Master's degree in Environmental Anthropology, focusing solely on writing an ethnography on the rangers as it is non-existent. Environmental Anthropology brings together various fields such as political ecology, sociology, biodiversity, cultural anthropology etc. in which patterns, identities, and situating people in different places and spaces are explored. I am a full time employee and registered student at the University of the Free State.

You, more than anyone else, know that rhino poaching is currently a hot and controversial topic. Research has been done from criminological and sociological perspectives in the academia focusing on investigating opportunity structures (Eloff and Lemieux, 2014; Herbig and Warchol, 2011), poverty and community anger towards conservation (Fenio 2014); corruption and transnational organized crime, rhino horn trafficking networks, wildlife crime, illegal wildlife trade and criminal networks (Van Uhm, 2016; Hubschle, 2016, 2017; Rademeyer, 2016a, 2016b; Montesh, 2013; Ayling, 2013; Milliken and Shaw, 2012). Hubschle (2016) focused on the socio-economic factors driving poaching and marginalised local communities; Massé (2016) on the political ecology of human-wildlife contact; Lunstrum (2015) focused on conservation meets militarisation; Buscher & Ramitsindela (2016) on Green Violence and t' Sas Rolfes (2012) on rhino economics. However, research on the field rangers and APU's who are the first line of defence and protection against the poachers is scant to non-existent in the academia; thus the human dimension of rangers themselves are not looked into.

Approximately one thousand rangers have been killed in the line of duty globally during the past ten years protecting nature (Willmore, 2015). Many wildlife and marine species are facing extinction, or have gone extinct through poaching enabled by porous borders, environmental destruction, cultural beliefs, increased demand, consumption as well as globalisation. As you are well aware significant financial resources are utilised for security and law enforcement purposes.

2. BASICS

Please be cognisant of the fact that this report is NOT exhaustive as a wealth of additional information can be added if I had a longer time to spend with your rangers and APU's.

Four reserves agreed to participate in this research project and for that I will always be truly grateful. After initially meeting you in October 2018, I visited your reserve in January/February 2019 interviewing some of your rangers and support staff.

No photographs were taken of your employees, neither of the reserves insignia, nor a place/landmark that could indicate the reserve as per your request for privacy. Neither was sensitive (or sensational) information requested (or fished for) such as the calibre of weapons and ammunition used, the number of live rhinos on the reserve, how many poachers have been eliminated, the number of incursions, the number of rhinos poached, your security budget, specific modus operandi employed etc. This was not the aim of the study.

The names of the participants and the reserves on which the interviews took place were anonymised during transcription which was done by myself. Anonymity and confidentiality are of the utmost importance, and the real names of rangers, the support staff and their place of employment will not be divulged to protect their identity, their wellbeing and their safety.

An embargo will be placed on my Masters degree once completed, and it will NOT be available in the public domain as many universities make completed theses and dissertations available eletronically on their databases.

3. FIELDWORK WITH THE RANGERS

The few minutes that I spent with your staff, rangers and APU's are not the ideal as one gets a split-second glimpse of a person and their working conditions. I would have liked to spend more time with them.

The interviews were voluntary and the rangers, APU's and support staff were given the opportunity to decide whether to participate. Before starting an interview, I explained to each participant where I was from, what my research was about, how the data would be used and the goal of the study. The interviews were done in English with two of the participants indicating that they were more comfortable with speaking and answering the questions in Afrikaans. With one interview, an interpreter was present. All your staff members, whether ranger, APU or support staff willingly signed a *Consent to participate in this study* form thereby giving me permission to interview them. They also received a hardcopy document, *Research Information Leaflet*, which they kept, explaining the focus of the research and purpose of the interview. Included were the contact details of the Ethics Committee of the University of the Free State as well the contact details of the co-supervisor of my study. I have attached the documents at the end of this report.

Two managers from different reserves requested permission to sit in/observe an interview which both myself and the respondents agreed to. The rest of the interviews were done in private eliminating possible discomfort to the participants.

All conversations were recorded digitally with their permission to ensure accountability, verification and truthfulness in reporting. The recordings were transcribed by myself and is kept in a locked safe in my office at the University of the Free State of which I have the only key. None of my research is backed up to any cloud based platforms.

Twenty four interviews were conducted on the reserves, and included rangers (various hierarchies), IT staff, fence repair teams, OPS room controllers, gate guards, K9 rangers and anti-poaching teams. Interview places included offices, a boardroom, ranger accommodationpickets as well sitting as on the opened tailgate of the vehicle conducting interviews. Most respondents were locals from the surrounding communities, however a few were from different provinces and one ranger from a neighbouring country.

The list of questions asked is attached at the end. Please note that not all the questions were asked all the time as it had to be adjusted at times to the person and his/her job profile being interviewed as not all the respondents were field rangers.

4. MY PERCEPTIONS AND RECOMMENDATIONS

In the recommendations that follow, please do not take them as a negative or critical. You live and work there, I don't and you know what works in which specific context and what doesn't. I have tried to be as objective as possible by writing a generic report on my perceptions and recommendations that you can measure against your own best practice standards as well as suggestions that you can implement should you see the need for it.

a. Working Conditions

Gentlemen, to put your minds at ease, not ONE of your rangers, support staff or APU's complained about working conditions or salaries (it was not mentioned at all, and neither was it requested from them, nor probed). Neither was the interview session used by them to complain.

Most rangers chose this occupation to protect wildlife and the majority of them that I spoke to showed a commitment to their reserve, to you as their employer, and their line of work. They have a passion for conservation and understand the efforts made by the reserves to protect wildlife. They want to leave a legacy for their children and a positive outcome for wildlife conservation and the future of tourism in South Africa as they realise the value thereof. Their jobs provide financial stability and an income for themselves and their families as many are financially responsible for their extended families and siblings. Many rangers see their jobs as an opportunity for personal development. A few saw it as 'just' a job. However, overall their job satisfaction was high.

There were no negative comments/sentiments towards the respective reserves they worked for, their working conditions and no negativity (whether in words, attitude or body language) were reflected even though it might exist. They informed me that they liked the training received, including equipment and food rations for patrols. They did not indicate nor suggest that more support was needed.

b. Vetting And Verification Of Personal Data

A point that I was not able to ascertain was whether the credentials of the rangers, APU's and staff are verified and a thorough background check is done every time before being employed by a new reserve/organisation, checking the reason for their departure from a previous place of employment. Who validates their training, their general attitude, whether they are a team player, their integrity, their commitment, trustworthiness, polygraphs passed or failed etc. at their previous place of employment? Or is it assumed that those rangers trained by a reputable person/organisation, or those employed by a previous reserve are in good standing and are employed on the basis of the credibility of the training institution/reserve that they worked at before? Best practice would be to pick up the phone and verify the background and history of every new employee even if they worked at a credible reserve previously.

c. Cell Phones

I am of the understanding that rangers hand in their cell phones when going on patrol. However, what I am unsure of is whether ALL OTHER staff also hand in their phones whilst working their shift.

A suggestion would be that the cell phones of ALL staff members on duty should be handed in for safekeeping for the duration of their shift, eliminating possible loopholes and leaking of sensitive information. Included should be the OPS room controllers, the fence repair teams, K9 teams, the gate guards or whichever additional different roles you employ on you reserve. After their shift, they can collect their cell phones again.

d. Religion/Faith

The rangers indicated that they are not superstitious and they do not believe in sangoma's or muti or the strength and validity that the communities place on this part of their culture, bar one field ranger. Nor do they actively participate in any ritual/sacrifice to the ancestors for keeping them safe at their traditional homestead. Their faith/religion/contact with God through Bible Study and/or prayer is absolute anchor for your men. They pray before going on patrol asking daily for protection over themselves, for them to have success in catching the poachers, to keep the wildlife safe on your reserve whilst on patrol. At night before going to bed they will offer a prayer of gratitude and thanks to God for keeping them safe.

I am aware of voluntary daily morning prayer meeting at one reserve at 07h00. Another ranger informed me that he was not used to everybody doing their 'own thing' as his previous place of employment had regular prayer meetings which he misses as it gave him strength, hope and comfort. I know that it is not always practically possible for someone to lead early morning prayers for your rangers.

A suggestion would be to get various pastors or religious leaders from the local congregations on a regular basis to pray and/or do Bible study with your men. One of the senior rangers mentioned that he even thought of getting the local ZCC pastor to pray regularly with the rangers as it will boost their morale.

Should time not allow for regular prayer meetings, I'd suggest a that a pastor/religious leader visit your reserve to pray with your rangers/staff before patrol on a full moon (poachers moon) as your men are more vulnerable then and it will boost their morale and their faith.

e. **Social media:**

Most rangers/staff indicated that they are on Facebook and Whatsapp, which they use as social media. Twitter and Instagram are not used. One reserve monitors their staff's Facebook accounts. A few of the rangers interviewed indicated that they stay on Facebook to connect with friends and to stay abreast of current matters, but do not post. However, it will be best practice to monitor Facebook accounts of ALL your staff (whether field ranger or support staff) on a regular basis to verify whether sensitive information is posted.

Another suggestion would be to check who their friends are on **Facebook** as well as who **follows them** on Facebook. (You can follow someone without befriending them, and you will not know if you do not check for it). Who watches, follows and observes your rangers/staff without them knowing on social media?

Those elements involved in poaching, kingpins, wildlife crime, transnational crime are also on Facebook and I'm sure that FB delivers a wealth of (unintended) information and positive leads for poachers and criminals.

f. **Hot-Line:**

How do community members relay sensitive information/leads to you? Through informants, or a dedicated 'hot-line' that they can phone or send a sms to?

g. **Community Projects:**

One ranger indicated that during his off-time he is involved with an old-age home, orphanages and single-parents, where he divides his time and uses his own income by taking them shopping or being a handy-man fixing their place of accommodation. Supporting or being involved in an existing community project that is run by one of your rangers will result in goodwill towards you from the community's side.

Two rangers on different reserves also suggested that you should present regular information sessions in a community hall educating the various communities around your reserve on the illegal wildlife trade, modus operandi of the poachers and how they (the community) can assist you.

It was also suggested that the community should be educated to understand animal behaviour.

h. A Concern Of Mine:

What happens to a ranger who is injured in the line of duty, or suffers from resulted stress related symptoms and cannot work further? Or a ranger who quits as his heart is not 'in the job' anymore and he leaves the reserve to do something else? Or perhaps those rangers that the poachers target as they have the know-how, knowledge and insight into the operations of the reserve. These men have only trained to be a 'semi'-soldier with no additional skills that will enable them to find outside employment. Would it be possible to organise upskilling/empowering them by providing additional skills training or something to fall back onto such as mechanic, builder, brick laying, electrician, plumber, basic business skills, how to start an own business, entrepreneurial skills, field guide, tourist guide etc.? I am referring to basic, basic practical training in another skillset, thereby empowering them.

The majority of the rangers that I interviewed indicated that during their off-time at home, they are tasked to fix their homes – teaching them basic 'handyman' skills will enable them to keep their family safe and not to be concerned about the fixing that needs to be done at home. These skills can also be used in the upkeep of their accommodation pickets.

This additional upskilling does not have to come from your budget as the private sector and SETA can be approached. Should a ranger not be able to work any longer, he has something to fall back on to enable him to earn an income.

i. Progressive training

How often does the ranger corps/gate guards/k9 handlers/reserve support staff receive progressive competency training updating their acquired skills by keeping abreast of latest technologies? This also includes ongoing training in remote area first aid.

j. **Job Security:**

A few rangers indicated that they are concerned about their full-time employment should the rhino species not survive. It was actually quite interesting to listen to and understand their perceptions on this 'war' and poaching crisis. One ranger at the end implored me to speak to our "corrupt government that they can speak to the Chinese people not to poach our animals". Perhaps have an open discussion with them on how they see this poaching crisis and allay their fears that they might lose their jobs.

A suggestion made by them was that you (warden, head of security, reserve manager etc) should adjust their patrol times to either starting earlier or later from time to time. Upon enquiring why, they mentioned that the poachers are aware of their patrol times, and the element of surprise might be useful.

k. **Morale:**

- Even though there was no indication of low staff morale, implement a new 'tradition' such as a "*Staff member of the month*" (for example, someone that went beyond the call of duty) or "*Ranger of the month*" (for example, someone that collected the most snares etc) that will boost morale as well as give them a feeling of appreciation that their hard work is noticed.
- Or perhaps implement an annual 'awards ceremony' on your reserve where the rangers are honoured. Your own criteria can be implemented.
- I understand that funding and budgets are more than likely sensitive issues as you also have to be good stewards and make wise decisions regarding expenses. Therefore, let's look at alternative ways to motivate your rangers and staff – by recognising their hard work, effort and performance, or by 'positively reinforcing their motivation based on knowledge of the core motivations that made them choose this profession'
- Celebrate *World Ranger Day* with the rest of the world's rangers on 31 July, and make it a memorable occasion for them. They are part of an international band of brothers who is keeping nature safe.
- Does your reserve have a newsletter or publication? Celebrate the rangers/staff's successes in it too.

I. Possible Training Sessions

i. Resilience and how to handle stress and trauma

Resilience is defined as the capacity to recover quickly from difficulties and toughness. You and your rangers are under constant and immense pressure 24/7. A workshop presented on resilience, at least once a year, will assist them to be competent under stress, dealing with trauma and fear, and how to have a good outcome regardless of their high-risk profession.

A question I asked the rangers was whether they had seen a rhino carcass and how it made them feel. Their initial responses expressed horror, shock and sadness. And yes, I know it is part of what they signed up for. One ranger requested not to answer the question as it was too emotionally difficult for him to answer.

This suggestion of a workshop on resilience, trauma and stress, addressing ways to deal with stress, peer pressure and how to stay motivated and positive will not replace the debriefing sessions with yourselves after patrol. A psychologist can be approached to present this session to your rangers and staff.

ii. Basic budgeting/financial planning

Some of the rangers that do get into debt will be a more vulnerable target for poachers as they will have difficulty making payments and the severe stress of being in financial debt will make them desperate. Perhaps have a workshop on basic financial principles, how to draw up a budget, how to be financially savvy and on how not to get into debt? Don't take for granted that they should have insight into financial matters as many of your rangers are young and this is their first form of employment. It is a good life skill to have.

iii. Modus Operandi of the poachers/kingpins

Another suggestion would be to have a talk with your men on the *modus operandi* that the poachers/kingpins use to get intel from the rangers such as money being deposited into the rangers bank accounts and then to blackmail them for information; or using nubile females cosying up to one of your rangers to impress him, and then extract information from him. Even if it is general knowledge among your rangers, reinforce their vigilance to be safe.

iv. The dangers of social media

- This goes without saying. Teach your staff to be wise and have discernment what they post or what information they might (innocently) share. Refer to the section on Social Media above.
- Show them how to regularly check their own Facebook pages to determine who is **following them** (not referring to their friends). Should they perceive anything untoward or are uncertain, they should report it to you straightaway.
- Other suggestion would be that they turn off the "Location" setting on Facebook as well as the Location history indicator.
- They should also not be 'tagged' in posts that their friends might share.
- They need to adjust the privacy settings on Facebook to determine who can see their posts.

j. STROOP movie

One ranger informed me that he was taken to watch the newly released movie *STROOP* produced by Bonne de Bod and Susan Scott on the rhino poaching crisis, tracking poached rhino horn from South Africa to the end users in Vietnam and China. He commented that it served as inspiration and motivation for him to end this war as he watched the movie. It is available as a digital download. Perhaps have "movie night" (or a few) and screen it to your rangers and support staff as this is what they are putting their lives on the line for. It will also serve as motivation to carrying in this battle for the soul of our wildlife.

Should your reserve have an outreach project in your surrounding community, I'd even suggest screening it to the community and school children.

k. Game Rangers Association of Africa (GRAA)

It is not compulsory for rangers to belong to the GRAA, although some of the managers/wardens do belong to the association and some prefer not to. However, the focus areas of GRAA are as follows:

> *a. **Provide supportive networks for rangers across Africa** by providing a collective identity for African rangers from all countries thereby enhancing their sense of community and belonging. The establishment of networks for Africa's rangers to share their experiences, specialised knowledge and best practices, and form emotional bonds, is essential in maintaining rangers' morale and ensuring an effective community of practice.*

***b. Enhance ranger support and capability by ensuring that** rangers are adequately supported, trained and equipped to carry out their primary responsibility of maintaining the integrity of wilderness, protected and natural areas in which they work. The GRAA is well placed to assess ranger needs, facilitate training, distribute equipment and provide advice to rangers and those wishing to support them. Improved ranger wellbeing and support is essential to a motivated and effective ranger corps which will have positive outcomes for conservation.*

c. Promote the interests of rangers in Africa
The GRAA accepts the responsibility of highlighting the day to day challenges that Africa's rangers face. We are able to provide thought leadership in terms of ranger related issues through its extensive and experienced ranger membership base who operate across the continent.

There is a current annual cost of R450 for a game ranger and R90 for a field ranger. GRAA are currently looking into obtaining very affordable life insurance for their members. A suggestion would be to discuss becoming a member with your rangers and have them decide whether they want to be part of the African ranger fraternity. Perhaps the reserve/sponsors can pay the GRAA membership fees should they wish to become a member?

Allow me to be wistful - I wish there was an organisation, similar to the SANParks Honorary Rangers, willing to take up the cause, assistance and fund raising for the private reserve's rangers and APU's.

A note to the wardens/managers/heads of security: One of your rangers requested that I pass his message on to you, which is quoted verbatim:
"Do not give up on this war. Do not lose focus. Also change your strategies to catch the poacher. If they come during the day, change your strategy and play their game. You must stay positive."

5. IN CLOSING

In closing, gentlemen, it was an absolute honour to speak to your rangers. Thank you again for your time, trust and willingness to accommodate me. Please be assured that my heart, passion and commitment are to your rangers and their wellbeing. If there is any other research that I can assist with or areas to focus on, please be in touch. My involvement with the rangers will not end once my studies are finished. I hope to be part of the rangers' lives through research for the extended future in whichever way.

***

ADDENDUM A

QUESTIONS FOR THE RANGERS:

YOURSELF, YOUR TRAINING AND YOUR JOB:

1. Tell me more about yourself
2. How did you became a ranger and how long you have been one?
3. Where did you receive your training?
4. What did you do before becoming a ranger?
5. What is your definition of a ranger?
6. What does a day in the life of a ranger looks like? What is the best part of your job? What is the worst part of your job?
7. What do you pack in your backpack?
8. For females: how has the male rangers accepted/not accepted you as a female in a mostly "man's job"? What is the most difficult aspect of this job for you?
9. For males: What is your opinion about having female rangers on the team? Do you think that they can "do the job"?
10. What do you do to relax?
11. What do you do during your time off?
12. Gym, playing cards, smoking
13. Can you smoke whilst being on patrol?
14. If you stay overnight in the veld, are you allowed to make a fire?
15. Tell me about your family
16. Can you talk to your family about what you are doing?
17. How often do you communicate with your family?
18. If you have children, who helps your wife look after the children?
19. Do you participate in animal slaughter/sacrifices at home to say thank you to the ancestors for protecting you? Are there any rituals with slaughtering an animal, or drinking traditional beer when you are at home?
20. Can you go home when there is a family emergency – someone is sick, or there is a funeral you have to attend? How often can you leave?
21. When there is a problem at home, can you speak to the warden or Chief Ranger?
22. What family responsibilities do you have when you are off, when you are at home?
23. Tell me about your upbringing?
24. Are any of your family members involved in conservation/a ranger? (Generational knowledge imparted)
25. What is your favourite animal? Why?
26. Which animal has symbolic value to you/which animal do you revere? For example, if you see a snake, do you think that something bad is going to happen?
27. What do you do when an animal storms you?
28. Tell me more about animal behaviour that you have learned, for example, an elephant flaps its ears before it is going to storm.
29. Are you on social media?
30. Illegal economies?
31. How do you survive in the veld? Do you know what plants are edible?
32. How do you know that danger (wildlife/poachers) are approaching?
33. Will you retire as a ranger? Is there anything else that you want to do with your life?
34. Would you like to have other training such as becoming a mechanic, or a plumber etc?

MOTIVATION:

35. How do you stay motivated patrolling in full combat gear, armed with weapons and provisions in 45+ degrees, walking up to 25km plus on patrol?

36. Would you allow your children to become a field ranger? Explain
37. What gives you hope, how do you stay positive?
38. How do you deal with boredom?
39. Do you see the veld as your home? Are you at ease in the veld? If not, how do you cope?

COMMUNITY:

40. How does your community feel about your involvement as a ranger in protecting the rhino, and other animals? And your family? Do you have their support?

CONSERVATION:

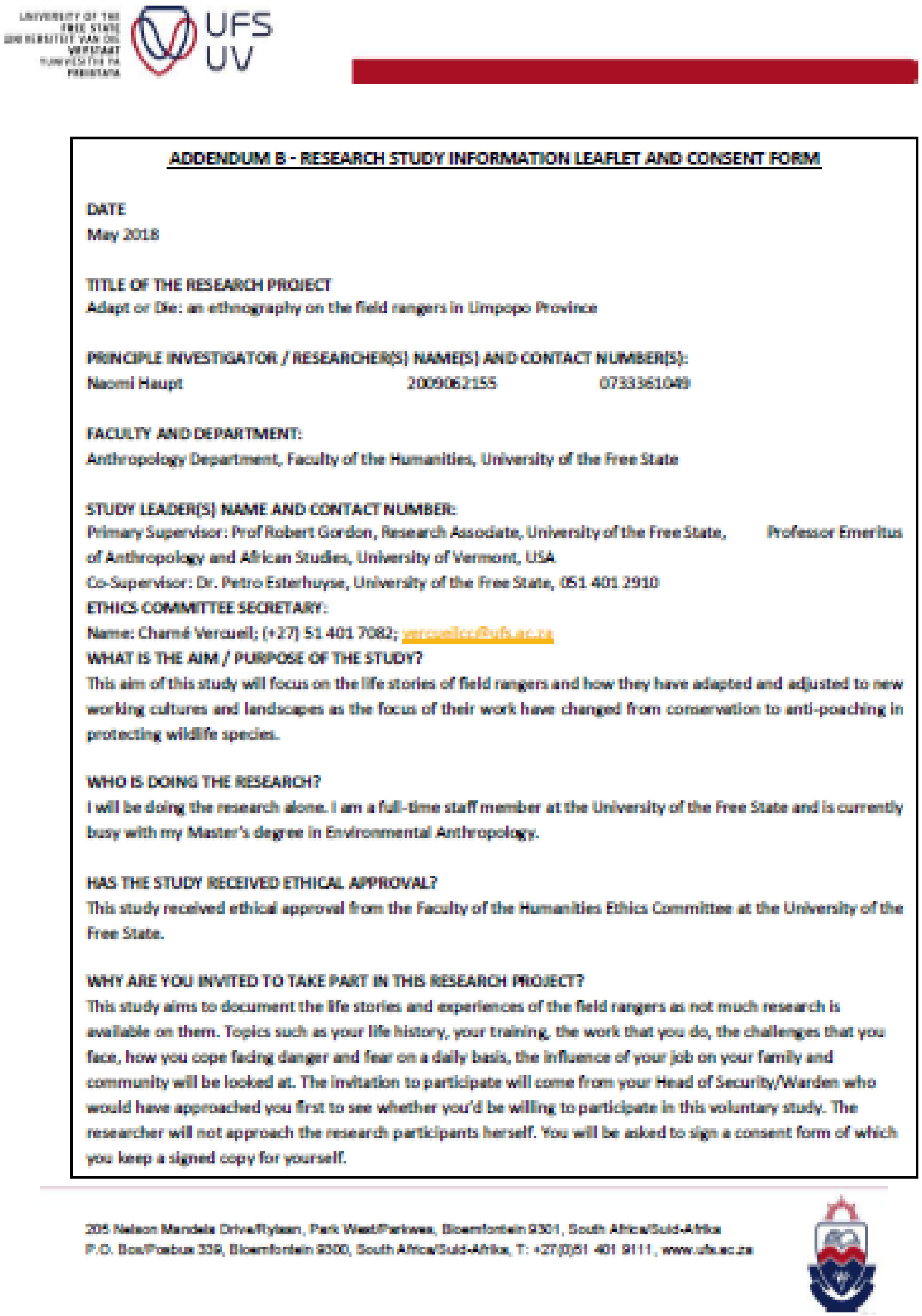
41. How can the communities assist in keeping our wildlife safe as their current focus is economic survival and not conservation?

POACHERS AND POACHING, FEAR, EMOTIONS:

42. What do you think of the poachers and them poaching our wildlife?
43. How to you feel about this war on wildlife?
44. How much of your time is spent on anti-poaching operations; How much of your time is spent on conservation matters – checking fences, looking for injured animals etc?
45. How do you feel when you see a carcass?
46. Your fellow rangers and yourself are surrounded by fear and danger on a daily basis. How do you deal with it?
47. Do you trust your fellow rangers when you are out on patrol? How do the ranger group build trust among each other?
48. How do you feel when you see a group of poachers?

RITUALS / TRADITIONS:

49. Are there any traditions, or rituals that you do or practice before going out on patrol?
50. Do you pray, go to the traditional healer/pastor, carry a talisman/good luck charm with you etc.



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ADDENDUM B - RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE
May 2018

TITLE OF THE RESEARCH PROJECT
Adapt or Die: an ethnography on the field rangers in Limpopo Province

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):
Naomi Haupt 2009062155 0733361049

FACULTY AND DEPARTMENT:
Anthropology Department, Faculty of the Humanities, University of the Free State

STUDY LEADER(S) NAME AND CONTACT NUMBER:
Primary Supervisor: Prof Robert Gordon, Research Associate, University of the Free State, Professor Emeritus of Anthropology and African Studies, University of Vermont, USA
Co-Supervisor: Dr. Petro Esterhuyse, University of the Free State, 051 401 2910
ETHICS COMMITTEE SECRETARY:
Name: Charmé Vercuell; (+27) 51 401 7082; vercuellcc@ufs.ac.za
WHAT IS THE AIM / PURPOSE OF THE STUDY?
This aim of this study will focus on the life stories of field rangers and how they have adapted and adjusted to new working cultures and landscapes as the focus of their work have changed from conservation to anti-poaching in protecting wildlife species.

WHO IS DOING THE RESEARCH?
I will be doing the research alone. I am a full-time staff member at the University of the Free State and is currently busy with my Master's degree in Environmental Anthropology.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?
This study received ethical approval from the Faculty of the Humanities Ethics Committee at the University of the Free State.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?
This study aims to document the life stories and experiences of the field rangers as not much research is available on them. Topics such as your life history, your training, the work that you do, the challenges that you face, how you cope facing danger and fear on a daily basis, the influence of your job on your family and community will be looked at. The invitation to participate will come from your Head of Security/Warden who would have approached you first to see whether you'd be willing to participate in this voluntary study. The researcher will not approach the research participants herself. You will be asked to sign a consent form of which you keep a signed copy for yourself.

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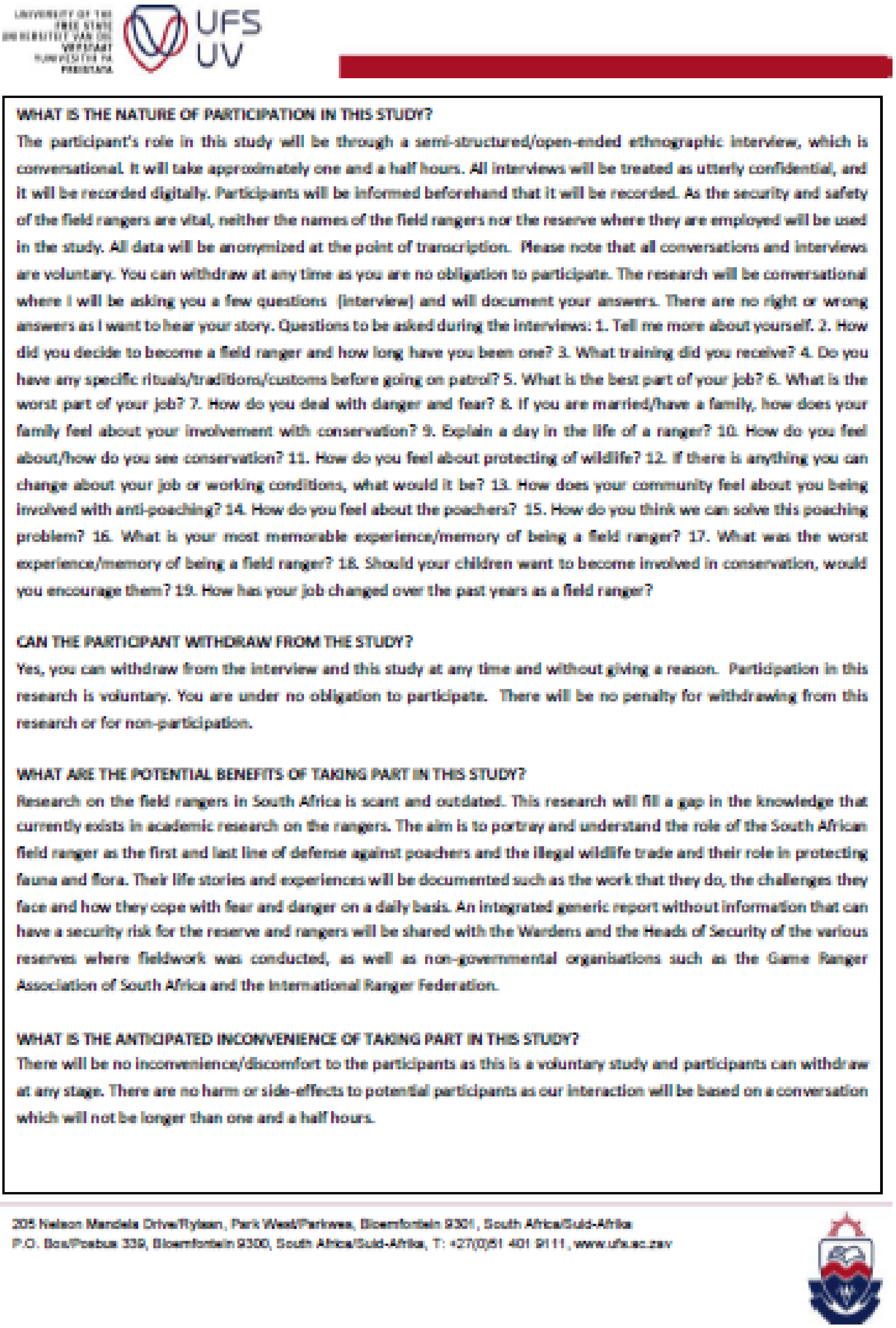

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WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participant's role in this study will be through a semi-structured/open-ended ethnographic interview, which is conversational. It will take approximately one and a half hours. All interviews will be treated as utterly confidential, and it will be recorded digitally. Participants will be informed beforehand that it will be recorded. As the security and safety of the field rangers are vital, neither the names of the field rangers nor the reserve where they are employed will be used in the study. All data will be anonymized at the point of transcription. Please note that all conversations and interviews are voluntary. You can withdraw at any time as you are no obligation to participate. The research will be conversational where I will be asking you a few questions (interview) and will document your answers. There are no right or wrong answers as I want to hear your story. Questions to be asked during the interviews: 1. Tell me more about yourself. 2. How did you decide to become a field ranger and how long have you been one? 3. What training did you receive? 4. Do you have any specific rituals/traditions/customs before going on patrol? 5. What is the best part of your job? 6. What is the worst part of your job? 7. How do you deal with danger and fear? 8. If you are married/have a family, how does your family feel about your involvement with conservation? 9. Explain a day in the life of a ranger? 10. How do you feel about/how do you see conservation? 11. How do you feel about protecting of wildlife? 12. If there is anything you can change about your job or working conditions, what would it be? 13. How does your community feel about you being involved with anti-poaching? 14. How do you feel about the poachers? 15. How do you think we can solve this poaching problem? 16. What is your most memorable experience/memory of being a field ranger? 17. What was the worst experience/memory of being a field ranger? 18. Should your children want to become involved in conservation, would you encourage them? 19. How has your job changed over the past years as a field ranger?

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Yes, you can withdraw from the interview and this study at any time and without giving a reason. Participation in this research is voluntary. You are under no obligation to participate. There will be no penalty for withdrawing from this research or for non-participation.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Research on the field rangers in South Africa is scant and outdated. This research will fill a gap in the knowledge that currently exists in academic research on the rangers. The aim is to portray and understand the role of the South African field ranger as the first and last line of defense against poachers and the illegal wildlife trade and their role in protecting fauna and flora. Their life stories and experiences will be documented such as the work that they do, the challenges they face and how they cope with fear and danger on a daily basis. An integrated generic report without information that can have a security risk for the reserve and rangers will be shared with the Wardens and the Heads of Security of the various reserves where fieldwork was conducted, as well as non-governmental organisations such as the Game Ranger Association of South Africa and the International Ranger Federation.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

There will be no inconvenience/discomfort to the participants as this is a voluntary study and participants can withdraw at any stage. There are no harm or side-effects to potential participants as our interaction will be based on a conversation which will not be longer than one and a half hours.

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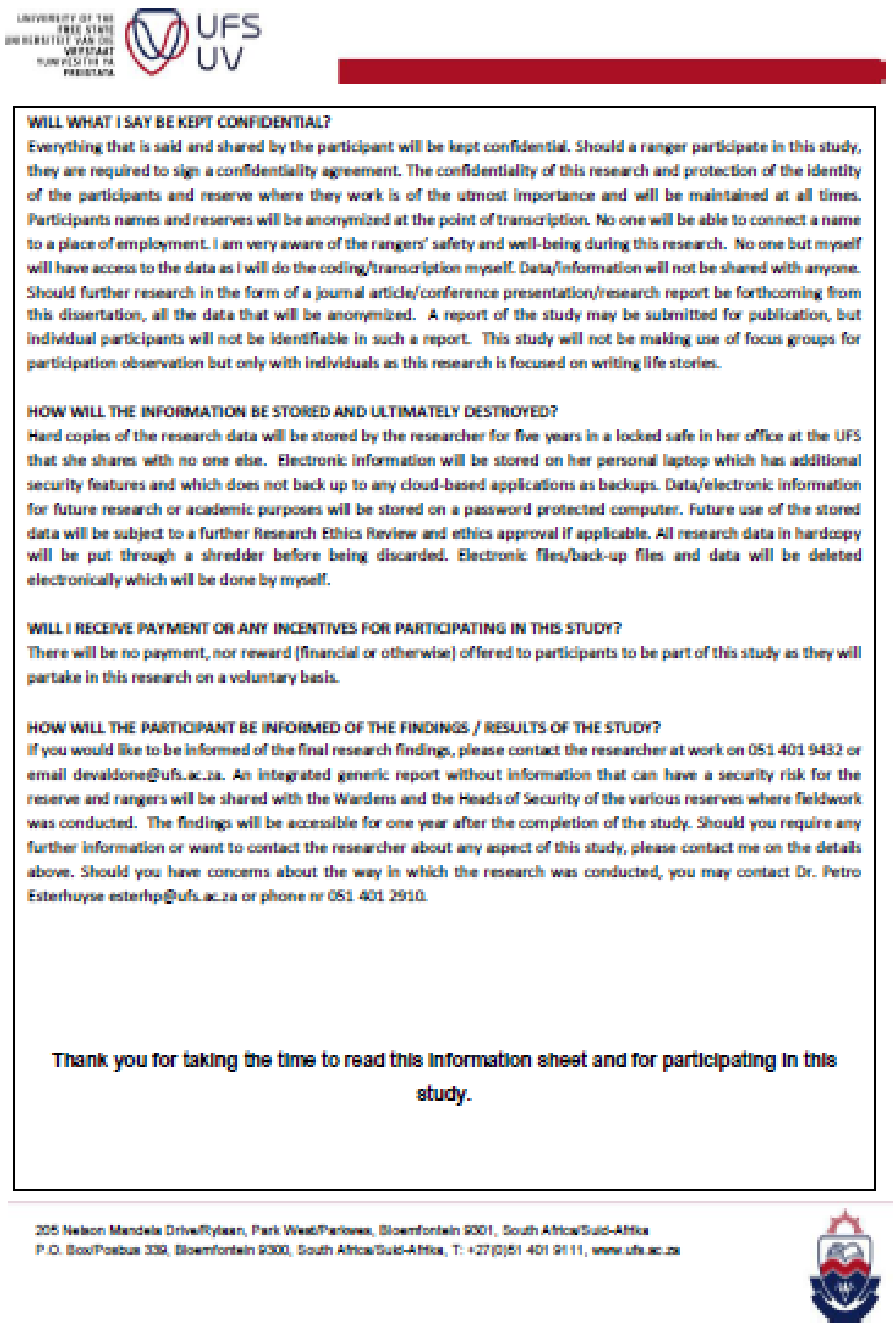


WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Everything that is said and shared by the participant will be kept confidential. Should a ranger participate in this study, they are required to sign a confidentiality agreement. The confidentiality of this research and protection of the identity of the participants and reserve where they work is of the utmost importance and will be maintained at all times. Participants names and reserves will be anonymized at the point of transcription. No one will be able to connect a name to a place of employment. I am very aware of the rangers' safety and well-being during this research. No one but myself will have access to the data as i will do the coding/transcription myself. Data/information will not be shared with anyone. Should further research in the form of a journal article/conference presentation/research report be forthcoming from this dissertation, all the data that will be anonymized. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. This study will not be making use of focus groups for participation observation but only with individuals as this research is focused on writing life stories.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of the research data will be stored by the researcher for five years in a locked safe in her office at the UFS that she shares with no one else. Electronic information will be stored on her personal laptop which has additional security features and which does not back up to any cloud-based applications as backups. Data/electronic information for future research or academic purposes will be stored on a password protected computer. Future use of the stored data will be subject to a further Research Ethics Review and ethics approval if applicable. All research data in hardcopy will be put through a shredder before being discarded. Electronic files/back-up files and data will be deleted electronically which will be done by myself.

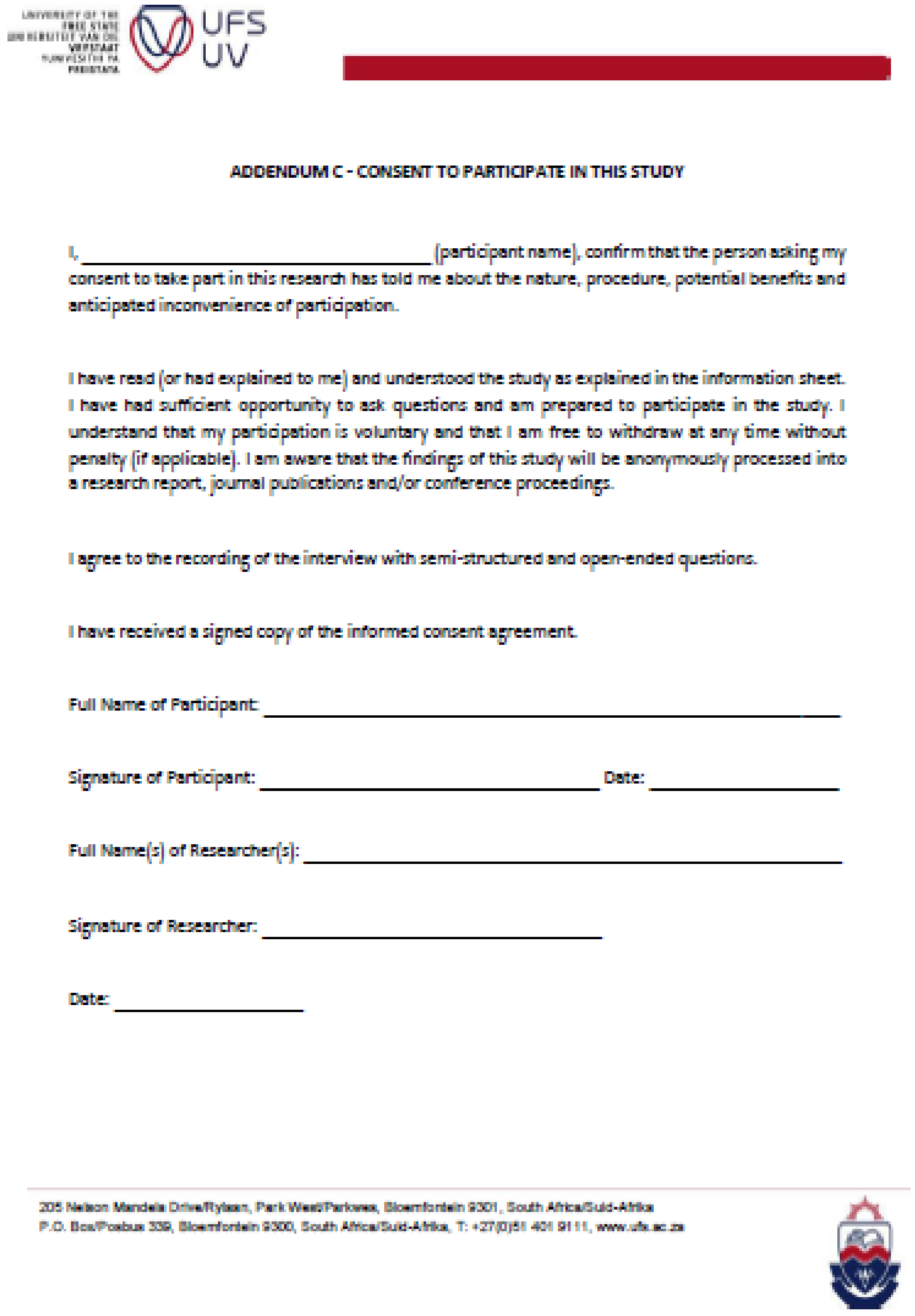
WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There will be no payment, nor reward (financial or otherwise) offered to participants to be part of this study as they will partake in this research on a voluntary basis.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact the researcher at work on 051 401 9432 or email devaldone@ufs.ac.za. An integrated generic report without information that can have a security risk for the reserve and rangers will be shared with the Wardens and the Heads of Security of the various reserves where fieldwork was conducted. The findings will be accessible for one year after the completion of the study. Should you require any further information or want to contact the researcher about any aspect of this study, please contact me on the details above. Should you have concerns about the way in which the research was conducted, you may contact Dr. Petro Esterhuyse esterhp@ufs.ac.za or phone nr 051 401 2910.

Thank you for taking the time to read this information sheet and for participating in this study.



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ADDENDUM C - CONSENT TO PARTICIPATE IN THIS STUDY

I, ________________________________ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable). I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the interview with semi-structured and open-ended questions.

I have received a signed copy of the informed consent agreement.

Full Name of Participant: ____

Signature of Participant: ______________________________ Date: ________________

Full Name(s) of Researcher(s): ____

Signature of Researcher: ______________________________

Date: ________________

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