Securing Conservation: The Politics of Anti-Poaching and Conservation Law Enforcement in Mozambique

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Abstract

This study examines how state and non-state actors are responding to the escalation of commercial rhino and elephant poaching happening within and across Mozambique’s borders. Increasingly framed as a combined ecological and security threat, we see the rise in poaching being met with a parallel intensification in security-based efforts to address the problem. Drawing on my ethnographic fieldwork with anti-poaching groups, this study investigates how these efforts are ushering in an unprecedented era of securitized conservation and an expanding roster of more-than-conservation actors, interests, and practices. I argue the shifting realities and concerns of commercial poaching are (re-)shaping the logics and practices of anti-poaching, security, conservation, and the processes through which certain species, spaces, and movements are secured. In developing this argument, this study offers three core contributions. First, I develop an approach to studying conservation security and securitisation more broadly through a combined political-ecological, political-geographical, and micropolitical framework. Uncovering and making sense of the everyday practices and lived realities of anti-poaching personnel enables an understanding of the interplay between changing human-environment relations, attempts to intervene in and control these, and broader political-geographic processes and concerns related to territory, sovereignty, and security. Second, this study analyzes how state and non-state actors deploy various modes of discursive and material power to secure spaces of conservation and the nonhuman. In doing so, it pushes debates on the logics, operations, spatialities, and interconnections between various modes of power in new directions. Third, this dissertation contributes to how we understand the state and its relationship to conservation and wildlife by focusing on the ways in which this relationship is productive of and relates to broader state-making processes concerning territory, security, and development. These insights help further our understanding of how changing geographies of power, conservation, and security articulate with broader and novel political-ecological and political-geographical dynamics of wildlife crime to produce and perpetuate violent and exclusionary nature-society relations.
Acknowledgements

There are too many people to thank who supported me along the way and made this dissertation possible, but I will try.

I am grateful to all of the reserves and those who work in them for granting me access and supporting my research, even though we did not necessarily agree on all things. I also extend this to the various organisations working in these reserves. For the sake of anonymity I will not name each reserve, organisation, nor the people involved but I trust you know who you are. I set out to conduct participant observation with an anti-poaching unit and succeeded in doing so because of your openness even though the issue and context is contentious. On this note, I must also acknowledge and thank all of the rangers, law enforcement officials, and managers with whom I spent countless hours and days living and researching. Thank you for opening your doors and yourselves. To all of these actors who made my research possible and allowed me to gain insight into the day-to-day realities of anti-poaching, a very sincere thank you for allowing me to conduct my research and to get an inside and on-the-ground look into conservation security, law enforcement and anti-poaching. Your generosity and openness to allowing research is invaluable and I hope my work, even when critical, contributes to the improvement of conservation and highlights the difficulties and challenges you face as well. Thank you to the staff at the reserve.

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<td>Historical Archives of Mozambique</td>
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<td>ANAC</td>
<td>Mozambique's National Administration for Conservation Areas</td>
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<td>APE</td>
<td>Anti-Poaching Engine</td>
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<tr>
<td>APU</td>
<td>Anti-poaching Unit</td>
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<tr>
<td>CA Law</td>
<td>Conservation Areas Law (Mozambique)</td>
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<tr>
<td>CAPTURE</td>
<td>Comprehensive Anti-Poaching tool with Temporal and observation Uncertainty Reasoning</td>
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<tr>
<td>CBNRM</td>
<td>Community-Based Natural Resource Management</td>
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<tr>
<td>CEA</td>
<td>Centre for African Studies</td>
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<tr>
<td>CITIES</td>
<td>Convention on the International Trade in Endangered Species</td>
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<tr>
<td>CMS</td>
<td>Critical Military Studies</td>
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<tr>
<td>COIN</td>
<td>Counter-insurgency</td>
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<tr>
<td>CSIR</td>
<td>Council for Scientific and Industrial Research</td>
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<tr>
<td>DEA</td>
<td>South African Department of Environmental Affairs</td>
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<tr>
<td>DNAC</td>
<td>National Directorate for Conservation Areas (Mozambique)</td>
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<tr>
<td>DRC</td>
<td>Democratic Republic of the Congo</td>
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<tr>
<td>FRELIMO</td>
<td>Mozambican Liberation Front</td>
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<tr>
<td>GEC</td>
<td>Great Elephant Census</td>
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<tr>
<td>GKG-TFCA</td>
<td>Gaza-Kruger Gonarezhou Transfrontier Conservation Area</td>
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<tr>
<td>GLC</td>
<td>Greater Lebombo Conservancy</td>
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<tr>
<td>GLTFCA</td>
<td>Greater Limpopo Transfrontier Conservation Area</td>
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<tr>
<td>GLTP</td>
<td>Great Limpopo Transfrontier Park</td>
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<tr>
<td>GoM</td>
<td>Government of Mozambique</td>
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<td>GRAA</td>
<td>Game Rangers Association of Africa</td>
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<tr>
<td>IAPF</td>
<td>International Anti-poaching Foundation</td>
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<tr>
<td>IDF</td>
<td>Israeli Defense Forces</td>
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<tr>
<td>IPZ</td>
<td>Intensive Protection Zone</td>
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<tr>
<td>KNP</td>
<td>Kruger National Park</td>
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<td>KZN</td>
<td>Kwazulu-Natal</td>
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<tr>
<td>LNP</td>
<td>Limpopo National Park</td>
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<tr>
<td>M2W</td>
<td>Military to Wildlife</td>
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<tr>
<td>MICOA</td>
<td>Ministry for the Coordination of Environmental Affairs (Mozambique)</td>
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<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
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<tr>
<td>MOZAIC</td>
<td>Mozambique Assistance and Investment Corporation</td>
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<tr>
<td>Mozbio</td>
<td>Mozambique Conservation Areas for Biodiversity and Development (World Bank project)</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organisation</td>
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<tr>
<td>NIRAP</td>
<td>National Ivory and Rhino Horn Action Plan</td>
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<td>NPB</td>
<td>South African National Parks Board</td>
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<tr>
<td>PPF</td>
<td>Peace Parks Foundation</td>
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<tr>
<td>PRNMA</td>
<td>Policia da Protecção das Recursos Naturais e o Meioambiente (Mozambique's Environmental Police)</td>
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<td>PROA</td>
<td>Private Rhino Owners Association, South Africa</td>
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<td>RENAMO</td>
<td>Mozambican National Resistance</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>RNN</td>
<td>Niassa National Reserve</td>
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<td>SADF</td>
<td>South African Defense Force</td>
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<tr>
<td>SANDF</td>
<td>South African National Defense Force</td>
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<tr>
<td>SANParks</td>
<td>South African National Parks</td>
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<td>SAPS</td>
<td>South African Police Services</td>
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<td>SAWC</td>
<td>Southern African Wildlife College</td>
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<td>SGP</td>
<td>Sabie Game Park</td>
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<tr>
<td>SMART</td>
<td>Spatial Monitoring and Reporting Tool</td>
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<tr>
<td>SRN</td>
<td>Sociedade da Reserva do Niassa</td>
</tr>
<tr>
<td>TFCA</td>
<td>Transfrontier Conservation Area</td>
</tr>
<tr>
<td>UAV</td>
<td>Unmanned Aerial Vehicle</td>
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<tr>
<td>UBGL</td>
<td>under-barrel grenade launcher</td>
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<tr>
<td>UEM</td>
<td>University of Eduardo Mondlane</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VETPAWS</td>
<td>Veterans Empowered to Protect African Wildlife</td>
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<tr>
<td>WCS</td>
<td>Wildlife Conservation Society</td>
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<td>WWF</td>
<td>World Wildlife Fund</td>
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Introduction – Securing Conservation

We sat on folding camping chairs, two elephant tusks on the ground beside us. We had just finished weighing them and documenting their size so management could send them to the Criminal Investigation Police and then to the headquarters of Mozambique's National Administration of Conservation Areas for safe keeping. The tusks had been recovered the previous day during a joint operation between South Africa's Kruger National Park and the adjacent Sabie Game Park (SGP), a private reserve in the Mozambican borderlands, where I sat. The operation included assault rifle-wielding paramilitarised rangers from both protected areas,¹ personnel from Mozambique's newly formed Environmental Police, the country's military border

¹ Why do I describe these rangers as paramilitarised? The answer lies not only in the assault rifles they wield. While they are not military actors, they are increasingly receiving military-like training and employ related tactics and logics to secure spaces of conservation.
patrol, and a helicopter. Supporting them in the background were high-tech mapping and surveillance technologies, and a network of informants and intelligence gathering. This is what contemporary conservation looks like in the Mozambican borderlands adjacent to South Africa.

This was exactly one month after I arrived at SGP where I lived and conducted participant observation with an anti-poaching unit as part of an ethnographic approach to studying conservation security. The tusks were a surprise because the anti-poaching operation was focused on catching suspected rhino poachers. Indeed, this took place in the epicentre of the rhino poaching crisis and efforts to combat it. In 2007, poachers killed 13 rhinos in South Africa which is home to 75% of the world’s remaining rhinos. In 2013, just six years later, the number had risen to 1,004 and has remained over 1,000 every year since (DEA, 2017; Save the Rhino, 2017). Poaching rates are outstripping the birth rate, imperiling the future of the rhino population (Ferreira et al., 2015). As animal deaths rise, so too do the arrests, shootings, and deaths of suspected poachers. Despite this, the number of poachers entering key protected areas in South Africa, such as its Kruger National Park, has also increased year over year. There were 2,466 known poaching incursions in 2016 alone (Martin, 2017). Most of the poachers come from Mozambique (also see Hübschle & Jooste, 2017; Massé & Lunstrum, 2016).

That particular day, sitting with tusks at my feet, was a day for reflection. While this was the hardest hit area of rhino poaching, it was the first evidence of a poached elephant that any of the anti-poaching personnel at the reserve had seen. Dead rhinos were now a common sight, but the disembodied tusks and evidence of elephant poaching was also a first for me. Eight months

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2 I use the term ethnographic approach rather than ethnography for two reasons. While I feel I gained the required insight to understand the social world of anti-poaching (see Chapter 2), my methodology and time frame might not fit the criteria of what some anthropologists claim is necessary for ethnography. Second, even with this approach, I have not written this dissertation as an ethnography.
3 An incursion refers to the entry of poachers into a protected area regardless of whether or not they kill an animal.
later this would change as I travelled to northern Mozambique and the Niassa National Reserve, one of the most intense areas of elephant poaching in the world. With the tusks in the background and the somber reality of poaching and the work of those trying to protect threatened rhinos and elephants looming large, I sat with an anti-poaching manager and discussed the nature of conservation and what it entails. However, he made it clear that he does not see the two as necessarily interlinked: "I don't work in conservation, I work in anti-poaching," he said (Interview, 12/10/2015). In the conversation that followed he was adamant that “anti-poaching is not conservation.”

Most of the anti-poaching and conservation personnel I interacted with over the course of five years of researching conservation security disagree with him. Anti-poaching, commonly referred to as conservation law enforcement, is a conservation-oriented goal and has long been part of mainstream conservation practice and the management of protected areas. But, reflecting the sentiment behind the manager's response, poaching has become more than an ecological and conservation problem. It is increasingly framed and treated as a criminal and security issue with wide-ranging implications far beyond the ecological integrity of protected areas and the well-being of specific species.

The notion that in the context of today’s commercial poaching crisis there is something different about the current framing, practice, and organisation of anti-poaching was a recurring theme throughout my research. It is also a theme that I examine in this dissertation. Indeed, this anti-poaching manager did not come to work in a protected area with conservation training. Instead, and following an increasing trend, he has a background in the military special forces, which was the same for his boss and the founder of the anti-poaching organisation that employs him. The rangers whom he supervises and the newly formed Mozambican Environmental Police
that he works side-by-side with are also not trained in conservation ecology or monitoring. Rather, they are trained in and focus almost exclusively on anti-poaching or conservation law enforcement. In Mozambique, the laws that govern conservation have also changed. The Conservation Areas Law (CA Law) passed in 2014 criminalised illegal hunting. It moves illegal hunting from a conservation transgression, subject to a fine, to a crime with harsh prison sentences. The CA Law also tasks existing and new authorities with the responsibility to combat poaching and secure protected areas.

These actors are the frontline personnel of conservation security whose practices and the logics supporting them were the subject of my research. In this dissertation, I examine their everyday realities, practices, and deployment of various modes and technologies of power in the name of securing wildlife and spaces of conservation. In doing so, I draw attention to the micropolitics of conservation security and how they are changing given the current poaching crisis. Briefly, micropolitics is concerned with reading processes of power – including political-ecological and political-geographical dynamics related to territory, the state, policing, and enclosure – through everyday practices, lived realities, and events (Coleman, 2009; Doty, 2007; Dwyer, 2014; Pain, 2009). I develop the notion of micropolitics in more depth in the next section. Drawing on this approach, I provide an understanding of conservation security from the ground and examine how related processes of power articulate with and across different scales, spaces, and interests.

The ways in which state and non-state actors respond to poaching, and the objects of concern of these responses, do not necessarily reflect what we might think of as biodiversity conservation. Rather, reflecting a constellation of modes and technologies of power, responses are more akin to the securing of specific species and spaces through and for conservation, but
also ‘more-than-conservation’ means and objectives. By more-than-conservation, I refer to actors, interests, and objectives that do not necessarily have ecological integrity as a primary concern. More-than-conservation concerns include capital accumulation, social and territorial control, the consolidation of state (and non-state) sovereignty, and national and regional security, among others. These concerns are not necessarily antithetical to the nature-focused objectives of conservation, but in some cases, they might stand in tension with or diminish conservation’s ecological and social aims. I illustrate that because of the way in which the poaching crisis is framed, the role and influence of these more-than-conservation concerns, interests, and actors are becoming increasingly important in shaping conservation practice and outcomes. This is particularly the case for security concerns, which are producing a turn towards a more militaristic and policing-based conservation practice.

I examine how these shifting practices and micropolitics of conservation security emerge from and contribute to changing political ecological and political geographical dynamics of conservation and broader security dynamics. I provide detailed insight into what this looks like on-the-ground and what the implications are. More specifically, this dissertation answers the following questions:

- How are state and non-state actors responding to commercial poaching within and across Mozambique’s borders?
- In what ways do wildlife crime and efforts to combat it articulate with broader political-ecological and geographic dynamics of security, territory, and state power?
- Given these articulations, what are the implications of intensifying conservation-security for conservation practice, territorial relations, and the relationship between them?

Central to my analysis are the practices used by a web of networked actors working to secure protected areas and wildlife. Like my field research, this dissertation primarily takes place in conservation areas, and is about conservation. I spent most of my time with rangers and other
frontline conservation law enforcement personnel. But, I also travel between what are ostensibly conservation and non-conservation spaces, interests, institutions, and practices, and their empirical and conceptual points of convergence and contestation. Indeed, it is not only the actors that are changing but the very spaces and practices in and through which conservation, security, and conservation-security happen as well. As one ranger, who is also an anti-poaching special operations leader and informant organiser, explained: "In the past, poachers were caught in the bush, now they are caught in villages and towns" (Interview, Alex, 31/05/2016).

Studying conservation-security thus necessitated turning the analytical lens beyond spaces of conservation and the headquarters of anti-poaching and law enforcement within them to look at what was happening in villages and towns, but also the legislature and judiciary, rural police camps, dirt roads and national highways, and the meeting rooms and hallways of state and non-state institutions. I also engaged with existing and newly created law enforcement bodies and authorities, private security companies, intelligence operatives, military and state security institutions, the US State Department, USAID, and other diplomatic and development actors, as well as judges, prosecutors and those working to strengthen legal and judicial systems and processes. Put simply, the illegal hunting of wildlife has become of increasing concern to states and an ever-expanding roster of actors and interests.

Securing protected areas against poaching is thus subject to a changing variety of logics from the local to the global scale. Given this, the arguments in this dissertation coalesce around a main point: Commercial poaching and efforts to respond to it are not new, but we are in an unprecedented era of securing conservation. The shifting realities and concerns of commercial poaching are (re-)shaping the logics and practices of anti-poaching, conservation, security, and the processes through which wildlife and spaces of conservation are secured.
My research on efforts to combat commercial poaching in Mozambique provides a window through which to understand how this era of securing conservation manifests on-the-ground, across scale, and with what implications. Analysing the shifting practices, logics, and foci of conservation security provides rich insight into the changing nature of conservation amid a poaching crisis and concerns over the burgeoning illegal wildlife trade. This is a trade valued upwards of $20 billion annually behind drugs, guns, and human trafficking (Smith, 2015; UNDP, 2015). From a more conceptual standpoint, the dynamics of securing conservation also provide insight into the operation of power in and through (non-)conservation spaces, institutions, and agendas and in the name of protecting the nonhuman. Furthermore, I interrogate how these dynamics articulate with or permeate broader political geographical processes related to territory, biopolitics, authority, and the state. I thus make conceptual contributions to these debates and literatures.

In developing my arguments and trying to understand the dynamics sketched above, I use this dissertation to make three key contributions. First, I develop an approach to studying conservation security, and securitisation more broadly, through a combined political-ecological, political-geographical, and micropolitical framework. By this, I mean I use grounded empirical observations of the everyday practices and lived realities of anti-poaching to understand the interplay between changing human-environment relations, the need to control them, and broader political geographic processes and concerns related to territory, sovereignty, security, and the state. Second, through my analysis of conservation-security, I highlight connections between various modes and technologies of power and interrogate how they come together to complement each other and achieve both common and distinct objectives. A focus on conservation-security helps push related debates on the objectives, operations, spatialities, and
interconnections between various modes of power in new directions, particularly since one objective is to secure the non-human, often at the expense of the human. Third, I contribute to broad debates about how we understand the state and its relationship to conservation and wildlife by focusing on the ways in which this relationship is productive of and articulates with broader state-making agendas and processes concerning territory, security, and development.

To answer my questions and develop my arguments and contributions I engage extensively with literatures and conceptual insights in political ecology, political geography, and micropolitics as a research and analytical approach. These literatures also shaped how I approached and conducted my research and analysis. All the chapters, except the Introduction, Chapter 3, and the Conclusion, are written as standalone articles for publication in critical geography and social science journals. The chapters will, however, require some modification as they may contain extra details and explicit connections to other chapters as required by the demands of a dissertation and to highlight the linkages between the chapters and the broader project. Within the framework of the dissertation, each chapter has a central and discrete argument, framing, and body of literature. This explains the multiple threads and literatures the weave through this introduction and that I outline below.

**Conceptual Approach: Intersecting Political Ecologies, Geographies, and Micropolitics of Securing Conservation**

Given the standalone nature of each chapter, I develop the necessary conceptual framing in each. In this section I provide a broad overview of the literatures and concepts that inform my approach and analysis. I draw on insights from political ecology, political geography, and

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4 Chapter 2 on methods will require substantial re-writing for publication as I will eliminate much of the details on data gathering that are necessary for the dissertation.
micropolitics, the latter being an approach that emerges from debates in feminist and critical geopolitics, to understand the processes of discursive and material power that inform the changing practices and objectives of conservation. I focus particularly on the increasing deployment and normalisation of “militaristic violence and spatial policing” (McClanahan and Wall 2016, p. 141) in the name of protecting species of wildlife and spaces of conservation. While drawing on each of these literatures, and subsets within them, I pay attention to how they interact both at a conceptual level and in the ways theory is reflected and manifested on-the-ground in daily practice and policy circles to address and ultimately combat commercial poaching. At the same time, I use conservation security as a lens through which to advance our understanding of political-ecological and political-geographical dynamics by bringing novel insights to existing debates within each. I aim to move our conceptual understanding of key issues, concepts, and processes related to territory, biopower, the cultural politics of conservation, and the ultimately the state forward and in new directions, especially as they relate to the spaces and lives of the nonhuman.

Drawing on the empirical traditions of political ecology (Blaikie & Brookfield, 1987; Rocheleau, 2008; Rocheleau & Roth, 2007) and recent work in critical geopolitics, feminist political geography, and specifically their attention to micropolitics (Coleman, 2009; Doty, 2007; Hyndman, 2001, 2004; Katz, 2001; Pain, 2009; Toal & O'Tuathail, 2000), I take a grounded approach to theory and the development of new conceptual directions and insights. I adopt principles of a radical empiricism, or a practice of observation focused on the relations between things and from different perspectives to inform theory and my understanding of multifaceted and interwoven processes (Katz, 2001; Rocheleau, 2008; Rocheleau & Roth, 2007). My analyses are thus primarily data-driven and informed by my fieldwork observations of how conservation
security in its various guises manifests on-the-ground and across and at different scales. I then analyse how what I observed reflects, speaks to, and contributes to long-standing and more recent conceptual and theoretical insights offered by others.

**Political Ecology - Power over, through, and in the name of human-environment relations**

Political ecology is an approach concerned with understanding how processes of power operate over, through, and in the name of human-environment relations thereby reshaping these relations in various ways. Moreover, early political-ecological analyses are rooted in political-economic analysis of ethnographic empirical detail (Blaikie & Brookfield, 1987; Neumann, 1998; Peluso, 1992; Schmink & Wood, 1992; Schroeder, 1999). It is thus a natural entry point for my analyses and the arguments that follow.

While there are debates on what exactly constitutes political ecology (Blaikie, 2008; Peet et al., 2010; Vayda & Walters, 1999; Zimmerer & Bassett, 2003), there is consensus that political-ecological analyses take into consideration the political, economic, cultural, social, and ecological aspects of ‘nature’ and human-environment relations and their cross-scalar dimensions (Blaikie & Brookfield, 1987; Neumann, 2009; Peet, et al., 2010; Rocheleau & Roth, 2007; Rocheleau et al., 1996). Each of these is constitutive of and influences the processes of power that help shape, frame, and govern nature, people, and the relationships between the two. Anti-poaching and conservation security are one such set of processes.

I draw heavily from political-ecological debates concerned with controlling access to land and resources (Peluso & Lund, 2011; Ribot & Peluso, 2003; Sikor & Lund, 2009;  

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5 Following in the tradition of political ecology, I put nature is scare quotes as it is a widely contested term with different meanings. There is no one ‘nature’ or way of understanding ‘nature’. For ease of readability, I refrain from the use of scare quotes in the remainder of the dissertation.
Spierenburg et al., 2008), especially in the context of conservation (Benjaminsen & Bryceson, 2012; Cavanagh & Himmelfarb, 2014; Fairhead et al., 2012; Lunstrum, 2013; Neumann, 1998, 2001; Peluso, 1993; Peluso & Vandergeest, 2011; Vandergeest & Peluso, 1995). Weaving through all chapters, for example, is a focus on anti-poaching as a practice of spatial policing to exert control over the space of protected areas, and the flows of people and nature within and through them. I find particular inspiration in the work of those who interrogate the relationship between conservation and territoriality (Bluwstein & Lund, 2016; Corson, 2011; Vandergeest & Peluso, 1995), and the violent and dispossessory tactics used to create protected areas and maintain the separation between certain natures and certain peoples (Agrawal & Redford, 2009; Brockington, 2002; Daniel Brockington & Igoe, 2006; Cavanagh et al., 2015; Corson & MacDonald, 2012; Fairhead, et al., 2012; Kelly, 2011; Lunstrum, 2015b; Peluso, 1993; Roth, 2008; Ybarra, 2012).

Focusing on security-conservation connections, I draw on work beginning in the 1990s that interrogates this nexus and the practices and logics behind it, including those that pertain to more-than-conservation objectives of social and territorial control, national security, and accumulation (Neumann, 1992, 2001; Peluso, 1992, 1993; Vandergeest & Peluso, 1995). These debates have been revitalised in the past five years with much attention being paid to the non-conservation logics and objectives of securing spaces of conservation (Cárdenas, 2012; Cavanagh, et al., 2015; Devine, 2014; Dunlap & Fairhead, 2014; Kelly, 2011; Lombard, forthcoming; Massé & Lunstrum, 2016; Ojeda, 2012; Peluso & Vandergeest, 2011; Ybarra, 2012). Of specific importance to my analyses are the more recent debates on green militarisation and green violence (Annecke & Masubele, 2016; Büscher, 2016; Büscher & Ramutsindela, 2015; Duffy, 2014, 2016; Humphreys & Smith, 2014; Lunstrum, 2014, 2015a; Marijnen &
Verweijen, 2016; McClanahan & Wall, 2016; Shaw & Rademeyer, 2016; Verweijen & Marijnen, 2016). Defined as “the use of military and paramilitary (military-like) actors, techniques, technologies, and partnerships in the pursuit of conservation” (Lunstrum, 2014, p. 817), analyses of conservation practice’s increasing militarisation are central to current debates and understandings of changing state-conservation relations and the discursive and material practices through which conservation operates.

I build on and extend these debates and insights illustrating how green militarisation is very much alive, but is itself incorporating a gentler approach more akin to soft approaches to counterinsurgency that is supplementing a more outright and kinetic military approach. My co-authors and I capture this dynamic with the concept of the conservation-security-development nexus (see Chapter 8). In making this argument we draw on insight from critical military studies (Basham et al., 2015; Rech et al., 2015) and the militarisation of other ostensibly non-military spaces and issues, namely humanitarianism and development as manifested in the development-security nexus (Bryan, 2015; Duffield, 2010; Fassin, 2010; Orford, 2015; Stern & Öjendal, 2010; Weizman, 2011). But, at points this dissertation steps away from militarisation *per se* to analyse anti-poaching and conservation security from a policing and law enforcement angle (detailed in the next section). This serves to highlight different, and perhaps more mundane, aspects of conservation’s securitisation while also contributing to the broader debates mentioned here.

The literature on green militarisation not only helps us understand the empirical process of conservation's militarisation but how militarisation and militarisms are an increasingly important variable in (re-)shaping human-environment relations. Scholars highlight the emerging logics driving the militarisation and securitisation of conservation and the ways in which such processes and related militarisms articulate with broader concerns and narratives of security
(Duffy, 2014, 2016; Lunstrum, 2014, 2015a; Marijnen & Verweijen, 2016; Massé & Lunstrum, 2016; Verweijen & Marijnen, 2016). The physical environment and ecologies are also important in shaping conservation and broader security practice and outcomes (Lunstrum, 2014, 2015a; Sundberg, 2011). I examine the interplay between ecologies and conservation security’s multiple dimensions of space and power in Chapter 7. Moreover, while wide-ranging political and security concerns form part of the logics of conservation's securitisation and militarisation, conservation and protecting the lives of threatened species is still very much an ecological objective that authorises green militarisation and green violence, even forming a biopolitical motive for green security interventions as discussed in Chapters 6 and 8. The changing shape of conservation-security is also informed by how it and nature are framed.

The Discursive Production of ‘Natures’ and People

Equally important in shaping my analyses are debates concerning the discursive production of ‘nature’ and human-environmental relations (Demeritt, 2002; Emel, 1995; Goldman et al., 2011). Debates in political ecology have long been concerned with the discursive framing and production of various natures and practices of conservation and the resulting material implications that manifest themselves on the ground in conservation policy and practice (Adams, 1992; Brooks, 2005; Brooks et al., 2011; Marijnen & Verweijen, 2016; Massé, 2016; Neumann, 1995, 1998). Of particular importance are ideas of nature as "wilderness" and as something separate from the human or social world (Cronon, 1996; Neumann, 1998).

I build on these debates and how such representations support, produce, and normalise particular types of conservation practice. But, I argue that something new is afoot. Specifically, I examine how in the current era of commercial poaching and conservation (in)security, a
discursive framing of nature as ‘wilderness’ and conservation as a practice to uphold this is increasingly supplemented with, if not replaced by, representations of a violently decimated nature that is under threat. Chapter 5 examines how this discursive maneuver works to normalise a securitised if not militarised conservation practice as the solution to the poaching problem. Moreover, and as highlighted explicitly in Chapters 5 and 8, the poacher is no longer merely portrayed as a barbaric killer of innocent wildlife but as a criminal and insurgent (Duffy, 2014, 2016; Lunstrum, 2014; Marijnen & Verweijen, 2016). These discursive framings weave themselves through the various chapters as they influence the ways in which poaching is responded to and how protected areas and the wildlife within them are secured.

It is in analysing the discursive framing of illegal hunting and he who hunts illegally that I complement political ecology with insights from critical security studies and critical geopolitics. Reflecting the core tenants of political ecology’s attention to the discursive, critical geopolitics and security studies challenge taken-for-granted framings and understandings of security and related politics to understand how such politics, much like nature, are discursively produced (Dalby & Tuathail, 1996). The Copenhagen school of thought in security studies, for example, offers insight into how matters become known or framed as security issues (Buzan et al., 1998; Ciuta, 2009; Waever, 1995; Williams, 2003). One way in which this occurs is through speech acts whereby something becomes a security issue by "successfully representing" it as one (Williams, 2003, p. 513; Buzan, et al., 1998). The speech act involves the identification of a threat and an object under threat with an ensuing sense of urgency. Security studies can thus productively complement political-ecological analyses of how nature is framed and discursively produced not only as wilderness or pristine nature, but as under threat and as a matter of national,  

6 Outside of Southern Africa we also see poachers labelled as terrorists (Ibid.).
regional, and global security. This emerging discursive representation underpins a shift in the cultural politics of conservation that normalises heavy-handed and militarised conservation practice (Chapter 5) and brings wildlife crime directly into the assemblage of global security politics (Chapter 8).

While it is easy to get caught up in these security narratives, framings, and logics, I do not lose sight of the reality that the poaching of rhino and elephants remains a genuine and pressing conservation issue. This real material concern also permeates responses and the extension of state power. I elaborate on this throughout the dissertation. The ecological as a material object and process may not always enter forcefully into all my analyses. However, the ecological, namely specific species of rhino and elephant and the landscapes in which they exist, largely provide the canvas upon which I develop my analyses of the processes of power related to conservation-security and their deployment. Relatedly, part of the basis of my critique of current approaches to conservation security is precisely that such approaches draw attention and resources away from the broader ecological dimensions of conservation and biodiversity management. This critique also serves as an entry point through which my arguments are a sympathetic critique meant to engage not only with academic debates but those working in conservation. Indeed, it is this political-ecological concern and what it means for people, conservation, and human-environment relations that informed my field research and provide the scaffolding upon which the dissertation is built. My focal point is the ways in which political-ecological processes and conceptual insights related to conservation, wildlife crime, and the desire to protect threatened wildlife and secure conservation articulate with and help make sense of political geographical debates on territory, state power, policing, and securitisation.
**Political Geography - State, Territory, Power**

While political ecology offers a broad conceptual backdrop concerned with how processes of power shape and are shaped by the need to protect threatened wildlife and combat poaching, I turn to core theoretical strands in political geography to make sense of the deployment of specific modes and technologies of power in the name of conservation security. Moreover, I use conservation-security as a springboard to contribute to understanding power, its spatialities, and how it operates in what are hopefully novel and productive ways.

There are three modes or technologies of power that I use throughout the dissertation singularly and in conversation with each other, to understand the practice of conservation security and how it speaks back to them. These are territorial, sovereign, and biopolitical modes of power. These various modes of power overlap in time, space, and in their ultimate objective, which in this dissertation is to secure spaces of conservation and wildlife.

**Territory**

Territory and the processes of territoriality are central to understanding the exercise of power and control over people and resources, and this includes practices of conservation. I use Sack’s notion of territoriality as "a spatial strategy to affect, influence, or control resources and people, by controlling area" as a foundation for my understanding of territory and its related processes (Sack, 1986, p. 1). I also engage with interdisciplinary work that conceptualises territoriality and territory as a crucial source and instrument of power involving an assemblage of many actors, practices, interests, and objectives (Agnew, 2005; Appadurai, 2003; Blomley, 2003; Corson, 2011; Elden, 2009; 2013a; Lunstrum, 2013; Mountz, 2013; Painter, 2010).

Territory has long been used to understand processes of conservation, with conservation being equally important for pushing our understanding of processes of territorialisation in new
directions (Corson, 2011; Fairhead, et al., 2012; Lunstrum, 2013; Peluso & Vandergeest, 2011; Vandergeest & Peluso, 1995). The protected area model that dominates mainstream conservation is inherently territorial, often being described as fortress conservation, or a model of conservation “based on the belief that biodiversity protection is best achieved by creating protected areas where ecosystems can function in isolation from human disturbance” (Doolittle, 2007, pp. 705-706; also see Brockington, 2002). Following Vandergeest and Peluso (1995), I understand protected areas as a form of internal territorialisation. I interrogate the practices used by both state and non-state actors to strengthen this process in the name of conservation security and how this is changing given the current poaching crisis.

As I am concerned with conservation law enforcement and the frontline personnel responsible for this, this dissertation complements debates on conservation-territoriality with those concerning territoriality and law enforcement. My analyses benefit from existing work that demonstrates how police are territorial agents whose practices of enforcing law seek to secure space and flows through it (Herbert, 1997a, 1997b; Paasche, 2013; Paasche et al., 2014). I draw explicitly on Herbert’s (1997a) influential Policing Space, and what he calls the “tactics of control” of policing to develop the notion of policing spaces of conservation (See Chapter 6). Paralleling other conservation contexts and efforts to exert control over access to resources more generally (Scott, 1998; Vandergeest & Peluso, 1995), many of these tactics reflect a practice of power over territory to control the movement of people within and through space as a method of policing (Fyfe, 1991; Herbert, 1996b, 1997a, 1997b; Paasche, 2013; Paasche, et al., 2014; Yarwood, 2007).

Equally important are more recent understandings of territory as volumetric and three-dimensional (Braun, 2000; Bridge, 2013; Elden, 2013b; Graham, 2004; Grundy-Warr et al.,
This body of work helps to make sense of how the multiple dimensions, especially the vertical, of territory are mobilised to protect and pacify bodies, flows, and spaces. These understandings of territory necessitate re-thinking how security technologies and practices interact with the horizontal and vertical dimension of territory and its environmental characteristics. This prompts me to think topographically about conservation security (Katz, 2001; Murdoch & Pratt, 1997). Thinking topographically entails interrogating the connections between multiple spaces, processes, environments, and power relations to highlight the interplay or connectedness between them (Katz, 2001). Rocheleau and Roth (2007) use the related idea of networked territoriality to understand political-ecological relations in conservation. While also paying attention to the ecological, what topography offers is a specific focus on the connections between vertical and horizontal dimensions of space and power as used to control and produce conservation territory. I use this approach to understand the changing and multiple spatialities of conservation, the interplay between them, and how they articulate with political-ecological dynamics that shape and are shaped by the poaching crisis and conservation security practices and technologies. In doing so, I highlight the multiple and changing spatialities of conservation as ushered in by the poaching crisis (Chapter 7).

_Sovereign Power and Biopower_

While a primary objective of conservation security is a problematic one of strengthening protected areas as exclusionary territories, the territorial is complemented and supported by sovereign and biopolitical modes of power to secure wildlife and spaces of conservation.

I use Foucault’s work on sovereign power to locate conservation-related power on the individual poacher and his/her body, and in the actions of rangers as law enforcement personnel.
I understand sovereign power as a mode of power focused on using punishment, surveillance, and tactics to make each knowable and visible to deter people from doing ‘wrong’ and having people act in accordance with how the state and other authorities (or sovereign) want (Foucault, 2003a, 2007, 2012). While surveillance is often associated with disciplinary power, Foucault wrote that the disciplinary and biopolitical do not replace or displace sovereign power. Rather, sovereign power is re-worked through disciplinary and biopolitical modes of control. Chapter 6 interrogates how these three modes of control coalesce and are translated into everyday practices of conservation law enforcement that produce protected areas as exclusionary territories in familiar and novel ways.

The sovereign, as defined by Foucault, is that which has “a direct hold of government over things and people” (Foucault, 2008, p. 45). Moreover, sovereign power specifically works through the law as laws create “homo penalis, the man who can be legally punished” (Foucault, 2008, p. 249). Policing practices of surveillance, visual policing, physical violence, and arrest are techniques of law enforcement used to detect and punish people to deter them and others from transgressing laws and from entering spaces where they do not belong (Foucault, 2008; Herbert, 1996a, 1996b, 1997a, 1997b). Embodied in the state and sanctioned non-state authorities, sovereign power weaves itself throughout the multiple practices of conservation law enforcement even becoming extended, expanded, and emboldened to combat wildlife crime and promote conservation. Building on notions of “sovereign environmentality” (Fletcher, 2010, p. 176), Chapter 6 details how conservation law is a technology of sovereign power that informs the everyday practices of rangers as frontline conservation law enforcement personnel as they seek to punish poachers and deter them and others from poaching and/or entering protected areas.

Working in tandem or articulating with sovereign power is biopower. Biopower turns the
focus of power from the body and punishment to populations and their well-being (Foucault, 2003b, 2007, 2008). Biopower focuses on securing populations of living beings by controlling, eliminating and, pacifying (internal) threats and the environments in which they exist (Adey, 2010; Adey et al., 2011; Coleman & Grove, 2009; Dillon & Lobo-Guerrero, 2008; Gregory, 2011; Shaw, 2016). Scholars have used a biopolitical framing to examine human-environment relations and conservation-related violence (Cavanagh & Himmelfarb, 2014; Collard, 2012; Dunlap & Fairhead, 2014; Eckersley, 2004; Fletcher, 2010). Commercial poachers do pose a genuine biological danger to wildlife. Just as security interventions seek to optimise a state of life for a segment of the population, conservation-security interventions have the objective of optimising the state of life for a segment of the non-human population. As such, with anti-poaching we see an orientation of biopower’s focus to the lives of the non-human, specifically populations of rhinos, elephants or other threatened wildlife. In Chapter 6, for example, I argue conservation law enforcement is in part shaped by the imperative of protecting threatened populations of nonhuman animals. In conjunction with territorial and sovereign modes of control, this works to produce protected areas not only as exclusionary territories, but exclusionary biopolitical enclosures.

Moreover, with the framing and understanding of poaching through a security lens, some make the argument that poaching also imperils human populations and well-being as it could lead to broader economic and political insecurities (see Chapter 8). Within this framework, we see the valued bodies and lives of rhinos and elephants secured for their biological well-being, but also as part of maintaining national and regional security and the health of conservation-related capitalist and neoliberal economies. My co-authors and I subsequently demonstrate how this dynamic brings conservation squarely into the development-security nexus. In a multitude of
ways, biopower provides a productive framing for understanding efforts to protect wildlife while simultaneously offering insights into how biopower is not only concerned with human populations but the non-human and how the two intersect and with what consequences.

*Intersecting Modes of Power*

In the chapters that follow, I interrogate how these multiple modes of power operate through and constitute the organising logic of anti-poaching, conservation law enforcement, and conservation security. Anti-poaching and conservation security are productive lenses through which to analyse changing and novel configurations of power over and through territory and human and nonhuman bodies. This allows an understanding of how multiple modes of territorial, sovereign, and biopolitical power intersect and come together in general, and in the name of conservation and the non-human more broadly. This contributes to valuable insights concerning these and related debates, as well as long-standing and continuously evolving discussions concerning the state, its relationship to conservation and wildlife, and the evolution of state power more generally.

*Grounding Political Geography Through Micropolitics*

This dissertation grounds abstract political geographical concepts, processes, and debates in the everyday practices and lived realities of those on the frontline of conservation security, and in the policy circles above them. Here I draw inspiration from critical approaches to geopolitics and political geography that emerged as a response to critiques that these disciplines remain largely in the realm of the theoretical disconnected from lived realities (Coleman, 2009; O'Tuathail, 2000; Staeheli, 2001). The analyses presented in this dissertation are particularly influenced by
critiques that there is too much focus on the state and statecraft as abstract processes and entities at the expense of the everyday and on-the-ground localities and practices in and through which power operates (Dowler & Sharp, 2001; Hyndman, 2001, 2004, 2007; Kofman, 1996).

Moreover, these scholars argue that what counts as security tends to remain close to the "big P" politics, such as war, and subsequently abstract spaces such as the battlefield (Agnew, 2001; Coleman, 2009; Dowler & Sharp, 2001; Hyndman, 2007). What might be understood as non-traditional spaces and issues relevant to security, the state, and broader political questions get ignored.

Mindful of this, and the evolving relationship between conservation, security politics, and political geography, I use a critical and specifically micropolitical approach to researching and analysing the securing of conservation and wildlife. Emerging from critical and feminist scholars in geopolitics and political geography (Coleman, 2009; Doevespeck, 2011; Doty, 2007; Dwyer, 2014; Pain, 2009), micropolitics is as much about how one approaches research as it is about the analytical process. Micropolitics seeks to re-scale political geography, geopolitics, and related power relations by locating them in the everyday, affective, and lived experiences through which they work and are embodied. This helps to connect “the global and the intimate” (Pratt & Rosner, 2006, p. 13). Using a micropolitical approach, I thus read processes of power related to conservation security through its everyday practices, lived realities, as well as specific events. This allows for an understanding of conservation security from the ground and how the micro and everyday articulates with and across different scales.

Motivating my ethnographic and micro approach to political geographical questions is a desire to contribute to scholarship that grounds many of the common conceptual debates and categories central to political geography in events, sites, spaces, practices, everyday occurrences,
and even individuals (Billo & Mountz, 2015; Coleman, 2009, 2016; Dwyer, 2014; Mountz, 2010). Such a grounding or rescaling allows for an understanding of how multiple modes of power are deployed and operationalised by, in, and through individuals and specific spaces. This method also enables me to move away from "big P" politics and their spaces to understanding conservation and protected areas, and even the roads and villages adjacent and around them, as important political geographical and security issues and spaces. Like various technologies and modes of power, the micro and macro of political geography and geopolitics do not erase each other or stand in contradiction. Rather, they complement each other. They work in tandem to provide a more holistic understanding of processes across scale that form the core of political geography. A grounded approach also helps to bring back, or at minimum, keep people in our analyses of political geographical dynamics (Doevenspeck, 2011; Johnson et al., 2011). I extend this to keep natures such as wildlife in as well (Hobson, 2007; Sundberg, 2011). I thus move away from asking what is anti-poaching or conservation security and instead ask the questions of who does it, what they do, and what are the implications. In doing so, this dissertation understands and locates the manifestation of power related to conservation-security on the ground, in quotidian practices and technologies, and through individuals and groups of people.

The Copenhagen school of thought in critical security studies becomes useful here once again. Beyond analysing the discursive representations of issues as security issues, the second aspect of interrogating securitisation relates to security practice. Here, the researcher analyses what becomes securitised and what threats need to be neutralised by examining the practices put in place to address them (Ciuta, 2009). It is through examining the doing of conservation security on a daily basis that I locate and make sense of power relations and broader political geographical processes concerning territory, the state, and various modes of discursive and
material power that underpin them. The result is an understanding of how power works through and in the name of conservation security and its multiple objectives and practices.

**Organisation of Dissertation**

I organise this dissertation in four sections. The first is the **Introductory** section consisting of this first chapter where I have set the scene empirically, conceptually, and provide insight on how the two come together. In **Chapter Two**, I build on the approach outlined in this Introduction to further explain my research design and methodology. Beyond a mere description, I argue there is value in getting close to those of whom we are critical and delve into the negotiations, challenges, and value of doing so in the context of researching anti-poaching.

In the second section, I provide more detailed background needed to situate my analyses. In **Chapter Three**, I describe my specific field sites in Mozambique and provide a more in-depth overview of the poaching crisis and the illegal wildlife trade focusing intently on rhino and elephant poaching as they are the case species I use in this dissertation. **Chapter Four** provides a historical background of efforts to control illegal and unwanted hunting and promote certain types of conservation in the Mozambique-South Africa borderlands where most of this dissertation focuses. The chapter traces how interventions to control hunting and promote conservation in the area have always articulated with more-than-conservation objectives and interests tied to sovereignty, territorial control, security, and (post)colonial state power.

In Section Three, **Securing Conservation**, I present my main arguments in four separate chapters. It is in this section where I examine contemporary efforts to secure wildlife and spaces of conservation. As each chapter is written to be a standalone article, each has its own conceptual
framework and contributions that exist independently, but that also relate to the other chapters and the dissertation as a whole. I will make modifications for publication as required.

In **Chapter Five, Anti-Poaching’s Practices of Visibility**, I engage with the long-standing notions and practices of visibility in conservation. I argue the poaching crisis is re-shaping the discursive and material practices of visibility through which conservation happens. Of particular concern is the production of nature as under threat through practices of what I call “anti-poaching tourism” and “poaching porn” that serves to authorise and normalise a securitised, if not outright militarised, conservation practice. This works to obscure important ecological and social realities of conservation and shuts down possibilities for different solutions to the poaching problem.

**Chapter Six, Policing Protected Areas**, interrogates the multiple modes of power that inform and shape conservation law to make sense of the everyday anti-poaching practices of rangers. I examine rangers’ everyday practices of law enforcement are enabled and constrained by a constellation of territorial, sovereign, and biopolitical modes of power that come together to reify and strengthen protected areas as exclusionary spaces.

**Chapter Seven, The Multiple Dimensions of Space and Power in Anti-Poaching**, continues with the examination of how spaces of conservation are secured but begins by looking skywards to examine how conservation security actors increasingly mobilise the vertical as a dimension of space and power in the name of conservation security. However, rather than looking at the vertical on its own, I develop a topographical approach to studying conservation-security by examining how aerial space, technologies, and practices intersect with horizontal dimensions of space and power and the surrounding environment. The chapter thus highlights
new configurations of conservation spatiality, power, and related processes of territorialisation that re-shape human-environment interactions.

In Chapter Eight, The Conservation-Security-Development Nexus: Linking Green Militarisation and Critical Military Studies, I, along with co-authors, engage specifically with debates on green militarisation and the ways in which commercial poaching articulates with a broader politics of national and global security concerned with transnational organised crime, terrorism, and the economic security. We contribute to these debates by illustrating how recent shifts towards softer militarised approaches amounting to poaching-related soft-counterinsurgency are beginning to supplement outright militarised responses. We capture this dynamic in the concept of the conservation-security-development nexus. Here, communities become the object of development interventions to “win hearts and minds” and prevent their involvement in poaching, thereby neutralising the security threats poaching might pose.

In Chapter Nine, I present my Conclusions and reflect on the arguments and analyses made throughout the dissertation and begin to look forward and beyond the pages written here.

Motivations

Inherent to political ecology is a concern with social and environmental justice (Blaikie, 2008). Building on this tradition, some of the arguments and interventions in this dissertation are normative. While this dissertation is not a piece of academic-activist writing, I join a chorus of other scholars and practitioners in putting forward critiques and advocating for alternatives that I

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7 This chapter is a co-authored piece written by myself, Elizabeth Lunstrum and Devin Holterman that has already undergone multiple rounds of peer-review for submission to a special issue on Militarization and Humanitarianism in the journal Critical Military Studies. I have permission from my co-authors each to use the manuscript in the dissertation. While I feel it is problematic to define my contributions to this article in a quantitative sense, I contributed approximately 60% of the article with much of the empirical material emerging from my fieldwork.
believe ought to be taken seriously for a more ecologically and socially just approach to protecting wildlife (Annecke & Masubele, 2016; Booker & Roe, 2016; Büscher & Ramutsindela, 2015; Challender & MacMillan, 2014; Duffy et al., 2015; Hübschle, 2016b; Lunstrum, 2014; Mabele, 2016; Massé & Lunstrum, 2016; Moreto et al., 2016; Roe et al., 2015).

Indeed, beyond the personal intellectual stimulation of scholarly research and writing, what motivates me is a desire to contribute to debates and conversations that can bring us in the direction of a more ecologically and socially just conservation practice. This includes contributing to conceptual and theoretical discussions that have already enabled many, including myself, to understand the world in productive ways and that extend themselves beyond any one empirical issue.

On a more personal note, while as a white, Canadian male who has only been to Mozambique and South Africa for research purposes, I arguably have no personal stake in the areas where I conduct my research or even on the issue of conservation security and poaching. I constantly grapple with the questions of whether I should make my voice heard and whether I have authority to speak on these matters. Yet, over the past five years I have made connections, both friendly and not so friendly, in this conservation world. We have tried to help each other to productively contribute to conservation, even if we come from very different backgrounds, worldviews, political leanings, and disagree with each other. The issues touched on in this dissertation are very real, and there are real human and nonhuman consequences and lives at stake. People I have spent long and short amounts of time with are no longer with us as they have been killed in Mozambique or Kruger. I have seen rangers come and go, either caught up in the corruption and call of the illegal wildlife trade itself, or stepping away because of the physical, psychological, and ethical challenges that working in anti-poaching, however one defines it,
entails. Indeed, while never easy, the material carcasses of rhinos and elephants, the violence acted upon the bodies of poachers and rangers, the shadows of those people who once were, and the kin left behind whom I encountered during my field research were and continue to be constant reminders of why we cannot be complacent with regards to the current state of conservation and its evolution.

I hope to contribute to a discussion that precedes me, that has provided me with much inspiration, and that will continue as long as we collectively struggle to find ways of living with wildlife in productive ways. Moreover, my critique is meant to be a sympathetic critique to engage, not ostracise, those who feel they may be the target or recipient of such critiques. I will not pretend to know better or know more than those people working in the field or have any specific answers. I have likely learned more from those I engaged with than what I can give back. I encourage feedback, pushback and debate. This extends to the more theoretical and conceptual contributions as well. Indeed, I approach the ‘practical’ and ‘conceptual’ less as a binary and more as intertwined and productive of each other. I hope I contribute to these goals in a small but meaningful way through my research, writing, and other outputs and the engagements it has entailed thus far.
Chapter 2
Methods - In/On/With the Frontline of Anti-Poaching: Research Proximity and Participant Observation in Oppositional Contexts

Introduction

On the afternoon of August 12th, 2015, I arrived at Sabie Game Park (SGP), a reserve located in the epicentre of what many call the ‘war’ on rhinos and its counterpart, the ‘war’ on poaching. I sat in the operations tent in the heart of efforts in the Mozambican borderlands to combat rhino poaching. While being welcomed by Alpha Bravo, the man in charge of anti-poaching and security operations for SGP and some of the neighbouring private reserves, we were interrupted by the crackle of the radio:

▪ Alpha Bravo, Alpha Bravo come in for Delta One.
▪ Alpha Bravo, send.
▪ Shots fired near Mpitsine Dam. Two shots fired by Mpitsine Dam. Over.

The ensuing conversation confirmed that two more shots had been fired. As we would soon find out, the shots were from a .375 hunting rifle, the preferred tool for killing a rhino by the new generation of poachers. With dusk quickly approaching and confirmation that four shots were fired less than a kilometre away from a member of the anti-poaching unit (APU), crisis response mode was engaged.

After shouting orders into the radio for the various ranger teams on the ground to set up stopper groups along the fence line, and for others to proceed to the areas where rangers had heard the shots in the hopes of encountering the .375, and likely rhino horn wielding culprits, Alpha Bravo cursed, “Fuck! I don’t even have a vehicle.” Having just arrived a couple of hours
earlier, my Mitsubishi Pajero was parked outside of the OPs Tent, staring at us through the open flap. “Mate, I hate to ask this, but can we use your vehicle?”

The decision that followed would set the trajectory for the next year, for my research, and likely far beyond that. I tossed Alpha Bravo my keys. Along with another APU member, I jumped into the Pajero as Alpha Bravo spun the tires out. We raced along the fence line to about twenty kilometres north where, in a desperate attempt to flush out and intercept the poachers still likely within the boundaries of the reserve, different groups of rangers were setting up blocks and getting dropped off by other anti-poaching managers. In between barking commands and getting updates from his rangers on the ground, Alpha Bravo turned to me and said, “Welcome to Sabie Game Park.”

How and why do researchers conduct participant observation with those of whom they are critical? In what ways did I negotiate my participant observation and proximity to research subjects and participants who are perpetrators of conservation-related violence and injustice? This chapter answers these questions by analysing my field research and participant observation with an anti-poaching unit in Mozambique. The chapter and discussion is as much about explaining the approach I took to data gathering and research into the securitisation of conservation as it is about reflecting on and dissecting this approach and the decisions I made. In doing so, I contribute to discussions concerning participatory research in oppositional contexts and the value of researching inside of powerful and even oppressive institutions.

While undertaking ethnographic research, the researcher cannot always be a passive observer. At times, they must become an active participant, engaging in the well-known methodology of participant observation. Doing so raises important questions about the practicalities, ethics, and negotiations of the insider-outsider dynamic of conducting
ethnographic research (Li, 2008; Murray, 2003; Smyth, 2005). Pushing these debates even further, Mosse (2006) argues that researchers and ethnography have become increasingly more immersive, with researchers getting much closer than ever before. Some examples include research with institutions like the police, immigration enforcement, border security, and development institutions (Bacon, 2016; Coleman, 2009; Diphoorn, 2013; Doty, 2007; Fassin, 2013; Goldstein, 2010; Moreto, 2013, 2016; Mountz, 2010). Driving such research is a desire to pull the veil off institutions and organisations to make sense of how actors within them understand and view the world and the issues they deal with. Getting inside or close to these types of institutions and related social worlds can also facilitate a deeper understanding of their practices, discourses, internal logics, and even contradictions. But, getting inside and indeed participant observation in general, let alone with institutions that may be oppressive, is fraught with negotiations and dilemmas including those related to the emotionality of field research, levels of engagement and participation between researcher and researched, and the necessity and challenges of getting close, but not too close. These challenges are arguably magnified when conducting oppositional research, or research with and alongside those of whom the researcher might be critical. It is within these debates that I situate this chapter and its contributions.

The primary contribution of this chapter is to capture and make sense of the negotiations involved with conducting oppositional participant observation, or participant observation with actors whose practices the researcher is critical of. I do so by developing the concept of research proximity, or the level of access, openness, trust, and the intellectual, affective, and participatory distance between researcher and researched. This chapter explores the praxis of managing, negotiating, and being critically aware of researcher proximity, especially in difficult, uneasy, and oppositional research settings. While not unproblematic, I argue participant observation as a
way of getting close or attaining a certain degree of proximity with actors of whom the researcher might be critical can be important for gaining a comprehensive understanding of the micropolitics and intimate and quotidian dynamics of an issue or institution. This is needed to understand less-visible but no-less important nuances, processes, and relations that are productive from a conceptual and empirical standpoint, but might also help facilitate productive dialogue.

**Researching Conservation Security: An Overview of My Approach and Methods**

During the period from 2013 to 2016, I conducted just over 16 months of field research in Mozambique and South Africa. My first contact with the Greater Lebombo Conservancy (GLC) in southern Mozambique, which would become the main site of my fieldwork, was in August of 2012. I spent two days with the security manager of Garingani Reserve during my Master’s research. The following year I conducted preliminary field research for a period of four months from May to August. I focused on the GLC, including a second visit to Garingani, and developments in the LNP related to security and anti-poaching in the Massingir region of Gaza province. But I also spent time in the section of the GLC in Maputo province, including a first visit to Sabie Game Park (SGP). During this time, I also spent ten days in South Africa at the Southern African Wildlife College (SAWC) where I attended a workshop on community-based conservation work happening in the SGP area in Mozambique. After this workshop and the initial visit to SGP, I remained in contact with reserve management and owners and suggested I might like to return for more in-depth research using SGP as a field site.

In 2014, I returned to the region for two months. During this trip, I accompanied a Garingani partner for three days, travelling through the reserve and observing development,
security, and community-related work first hand. I also spent a month in South Africa where I focused on anti-poaching and security in private reserves along Kruger’s western boundary. This allowed me to better understand the regional and cross-border dynamics of conservation security with a focus on private actors.

In July of 2015, I began a year of dissertation field research. That year can be broken up into two periods of five months with a break in between. The first period of five months, from mid-July to mid-December 2015, was the core of my field research where I lived at SGP and conducted participant observation with its anti-poaching unit to understand the on-the-ground realities of anti-poaching and conservation security. At SGP I was directly housed by the International Anti-Poaching Foundation (IAPF), an NGO that has a Memorandum of Understanding (MoU) with SGP, some of the neighbouring reserves, and the Mozambican government to aid and assist anti-poaching in the area. SGP is the centre of IAPF’s operations and the location of its headquarters in the region. I had previously been in touch with the founder of IAPF on and off for a couple of years to inquire about the organisation’s work in Mozambique. When I suggested that I was in discussions with SGP to conduct research on anti-poaching, he explained it was the IAPF who managed the APU and related operations there. After a few meetings and input from SGP’s owners, I was given permission to move to SGP for an indeterminate amount of time to research what was happening on-the-ground to combat the poaching of rhino in the region.\footnote{I also had formal research permission from Mozambique’s National Administration for Conservation Areas (ANAC) to conduct my research and the University of Eduardo Mondlane (UEM) in Maputo granted me affiliation as a researcher, both of which facilitated access to SGP and other sites and participants. In addition, I had research permission for Kruger National Park in South Africa as a research assistant on my supervisor’s research project in the park.} I was upfront about my objections to militarised anti-poaching and violent conservation tactics. I do not have a definitive answer as to why they granted me

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access. Part of it may lie in my research being able to highlight their work and the challenges they face. The latter of which I suggested I might be able to do (see for example Massé, 2017 and Massé et al, 2017). But, I speculate that it may also have been instrumentalist on their part. I return to this point when discussing my participant observation.

Photo 2: Research home. This was the headquarters of the APU before it was re-located a couple of months later to a renovated house (Photo Credit: F. Massé)

In early December 2015, I left SGP for Maputo, Mozambique’s capital and took a six-week break starting mid-December. I returned to Mozambique for another five months from February to July 2016. During this time, I made shorter follow-up visits to SGP. I also spent three weeks in the Niassa National Reserve (RNN) in northern Mozambique along the border with Tanzania. I spent two of these weeks at the reserve’s headquarters at Mbatamila hosted by the Wildlife Conservation Society (WCS), and one week at a private concession. Like in SGP, in the RNN I
observed rangers while spending time on patrol with and spending multiple days at a ranger camp along the Tanzanian border. I also observed the work of anti-poaching and conservation managers, and interviewed many of the rangers and managers along with local administrators, law enforcement, and legal officials.

I conducted 132 interviews as part of my field research. These interviews, ranging from unstructured to structured and informal to formal, were with a variety of participants including residents of rural villages in the Mozambican borderlands, field rangers of national parks and private reserves, conservation managers, conservation security and anti-poaching managers, and military and police personnel. I also conducted five group interviews with key stakeholders including rangers from the Limpopo National Park (LNP), rangers from the Mbatamila headquarters of the Niassa National Reserve (RNN), the Environmental Police (PRNMA) stationed outside of SGP, and two group interviews with community rangers that work with SGP.9

In addition to research carried out in and around protected areas, I conducted interviews with officials and personnel from various Mozambican state institutions like the National Administration for Conservation Areas (ANAC),10 the Ministry for the Coordination of Environmental Affairs (MICOA), the Environmental Police, the Prosecutor’s Office, as well as judges, prosecutors, journalists, and district level government officials, among others. I also interviewed personnel from NGOs and development agencies, both national and international, including the World Bank and the US State Department and its affiliates. Given that rhino

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9 See Massé et al. (2017) for the results of research with the community rangers.
10 During my field research the Mozambican Government re-structured its conservation apparatus. When I began research in 2013, the institution responsible for conservation and conservation areas was the National Directorate for Conservation Areas (DNAC) housed under the Ministry of Tourism. When I returned in 2015, this had changed as DNAC was phased out and ANAC was created to govern conservation areas as a parastatal.
poaching is transnational, I interviewed officials from South African National Parks (SANParks)\textsuperscript{11} with a focus on those working in Kruger National Park. Beyond individual interviews, I participated in several workshops related to conservation security including a World Wildlife Fund (WWF)-led workshop on Conservation Law Enforcement in Mozambique, a series of workshops on the development of a joint management plan for the GLC, and the workshop mentioned above at the SAWC on community-based conservation in the GLC.

To complement my primary research, I spent time in the Historical Archives of Mozambique in Maputo and the Kruger National Park archives in Skukuza to understand the historical context of the Mozambican borderlands and their connections to conservation, security, the wildlife trade, and territorial transformations. I also consulted news media as well as grey literature, policy, and legislative documents related to conservation security, poaching, and anti-poaching in Mozambique and beyond.

In designing and carrying out my research, I chose to sacrifice some depth for breadth by researching in more than one protected area. I did this to try and illuminate the connections between the local or specific and the more general. As Fassin argues with regards to his ethnography of policing in France, and for ethnography more generally, “it is by entering the details of a specific social world in a particular moment that one can access processes and logics that have a wider meaning” (2013, p. xvii). Participant observation was a way for me to enter the social world of conservation security. I try to find the broader meaning and significance of the specific and particulars of my case, and each reserve, and how it resonates or articulates with others and broader processes of conservation security and the workings of political-ecological and political-geographic power. This is in part why I travelled to different areas in Mozambique.

\textsuperscript{11}SANParks is a South African parastatal in charge of national parks in the country.
and South Africa. I do not develop a comparison or have equal insight into each. Rather, I see how the daily realities of one site may have wider meaning and might reflect or speak to what is happening in other areas and more broadly.

Situating My Research in the Conservation Literature

Much of the literature on conservation security tends to focus on the spectacular forms of green militarisation and its often notable forms of violence, offering insightful analyses and understandings of these processes (Büscher & Ramutsindela, 2015; Duffy, 2014; Lunstrum, 2014, 2016; Ybarra, 2012). In designing my research, I sought to complement this work and my broader qualitative approach using interviews and document-based research, by focusing on questions pertaining to the banal, quotidian, and lived realities that shape space, interactions, and conservation security and law enforcement and vice-versa. In particular, I use a micropolitical approach to read processes of power related to the political geography and political ecology of conservation security through the everyday, affective, and lived experiences and practices of anti-poaching (c.f. Coleman, 2009; Døevespeck, 2011; Dwyer, 2014; Pain, 2009; Pratt & Rosner, 2006). To understand these micropolitics – or what anti-poaching personnel do, where they do it, why they do it, and with what negotiations and contradictions – I drew on research that takes a participatory, ethnographic, and grounded research approach to policing, law enforcement, and security practices (Bacon, 2016; Coleman, 2009; Diphoorn, 2013; Doty, 2007; Fassin, 2013; Goldstein, 2010; Moreto, 2013, 2016; Mountz, 2010). This body of work demonstrates how participant observation in the routine, daily, and mundane offers important insights into what goes on between events to highlight practices, rationales, negotiations, and
interactions that may otherwise remain obscured. These insights formed the basis for my approach to researching conservation security using participant observation as a primary method.

To achieve this, I lived with conservation security personnel, specifically an elite anti-poaching unit for five months, and for shorter periods on either side of this. During my time at the multiple reserves I visited for fieldwork, I participated in the day-to-day activities of rangers and the APU. Most importantly were their meetings, patrols, and responses to poaching and other incidents. We also ate together and spent our down-time together. This was in part by design, but also by virtue of being in a reserve in the remote Mozambican bush. Immersion in conservation security helped me gain an understanding of, and insight into, the day-to-day and lived realities of conservation security, its institutions, actors, logics, practices, and discourses beyond that which I would have achieved by looking in from the outside or through interviews alone.

Achieving this immersion, however, required a certain level of engagement, participation, and closeness: research proximity. To achieve this proximity, I relied heavily on participant observation. Defined as “a method in which a researcher takes part in the daily activities, rituals, interactions, and events of a group of people as one of the means of learning the explicit and tacit aspects of their life routines and their culture” (DeWalt & DeWalt, 2011, p. 1), participation is never straightforward nor unproblematic, especially in oppositional research contexts. Before detailing my participation with anti-poaching forces and critically analysing the negotiations this entailed and why it engaging in participation was necessary, I develop the concept of research proximity and examine the literature in which I position it and my analysis.
Participation, Emotionality, and Getting Close: Research Proximity

I use the term research proximity to speak to the shifting closeness or proximity that researchers experience during fieldwork with those they are researching. It accounts for the reality that conducting field research is a relational exercise between researcher and researched, a relationship characterised by varying levels of proximity. By proximity I mean the degree of access, trust, openness, and dialogue but also the emotional, affective, and participatory engagement and ties between researcher and researched. These different aspects of proximity overlap and interact with each other and are never constant. I had a higher degree of research proximity with certain people and at certain times. Sometimes proximity was strategically sought. At other times, it was an unplanned by-product of the decisions I made in the field, or it might have been the result of something outside of my control, such as positionality or even personality (Emerson et al., 2011; Moser, 2008). Research proximity is never static; it continuously shifts along a spectrum from being too close to not close enough.

The importance of being aware and examining one’s positioning along this spectrum, negotiating where one is and where one needs to be, and with varying consequences, is well-documented in scholarly literature. Writing specifically about emotions and participation in ethnographic fieldwork, Hage (2009, p. 75) posits the idea of “ethnographic vacillation” to capture the emotional realities of participatory fieldwork and how researchers are simultaneously brought closer to their participants, yet must distance themselves from these emotions and even the participants. Han (2010, p. 14) similarly highlights how, in ethnographic research, the researcher is constantly negotiating the “fluctuations of distance and proximity.” Others look specifically at the insider-outsider continuum (Breen, 2007; DeLyser, 2001; Mosse, 2006; Smith et al., 2009). The concept of research proximity draws on all of these. However, I deepen what is
meant by proximity to include and combine modes of participation, ways of interviewing, levels of access and dialogue, but also the affective and/or emotional proximity between researcher and researched.

Participation can be an emotive experience, and the types and intensities of emotions may differ with the type and degree of one’s participation. Drawing on her experience of participatory research with private security in South Africa, Diphoorn (2013, p. 203) uses the term “emotionality of participation” to understand this relationship and how different modes of participation bring about different emotive experiences and methodological challenges. Even withdrawing oneself from participation, or being a reluctant participant, as Diphoorn (2013) puts it, can itself be an emotionally difficult decision.

A common critique of emotions is that they interfere with the researcher’s ability to be objective and self-critical (Brackenridge, 1999; Douglas & Carless, 2012; Hochschild, 1979). Scholars have, however, demonstrated the value in sharing emotions and empathising with one’s research subjects and participants (Diphoorn, 2013; Hage, 2009; Kitchin & Hubbard, 1999; Owton & Allen-Collinson, 2013; Tillmann-Healy, 2003). It does not necessarily hinder a researcher’s ability to be critically reflective of their milieu, research subjects/participants, nor of themselves. Drawing on these insights, I approach the emotions and emotionality I experienced during fieldwork as an important resource, even forming a valuable part of my dataset that can provide important insight into the setting and milieu of my research.

The ethical, moral, and emotional dilemmas I confronted and negotiated during fieldwork form part of the “essential building blocks of [my] analysis of the research setting” (Diphoorn, 2013, p. 202). The emotional turbulence I experienced during fieldwork helped me understand the setting of anti-poaching and those I was researching in a deeper and affective way needed to
understand conservation security’s micropolitics (Jellis & Gerlach, 2017; Pain, 2009). Indeed, Hage (2009, p. 75) goes as far to argue that as an ethnographer “you have not achieved good participation if you cannot participate in the collective emotional ups and downs of the culture you are studying.” Moreover, in trying to make sense of my emotions and those of my participants, I was forced to re-direct my analytical lens and ask different questions that I had not originally thought of. As becomes evident throughout the dissertation, for example, the affective yields important insights into some of the actions of rangers. After all, rangers, anti-poaching managers, and the poachers themselves are all people with their own emotions and affective struggles and contradictions. In my case, as in others, the emotional and analytical are not necessarily dichotomous or even obstructive, but are productive of each other and might help humanise anti-poaching personnel. Participant observation thus meant going beyond taking part in activities and events to include participating in the affective terrain of conservation security and anti-poaching, whether or not I necessarily wanted to. This was not without consequences.

Getting (too) close

Emotionality influenced the affective ties I had with my research participants. Indeed, emotions can be harnessed to bring one closer to their participants/subjects or create more distance as is needed, although this is not necessarily a straightforward or easy task (Diphoorn, 2013; Hage, 2009). Empathising with my research subjects helped to productively build rapport with APU personnel and gain a deeper understanding of them, their situation, and lived realities. Two brief excerpts from my field notes illustrate this. In late October, as I stood and watched the rangers and anti-poaching management cut open a rhino carcass to dig the bullet casings out for investigation purposes, one of the managers folded up his knife and said, “Its depressing when
all your knife gets used for is cutting up dead rhinos” (Field notes, Oct. 20th, 2015). After the failure to catch poachers who just shot a female rhino and her calf and needing to put the mother down as she was badly wounded but not dead, another APU member simply said this was the “worst day of [his] life.” Many rangers and law enforcement personnel also routinely expressed their frustration with the continuous poaching incursions, the stress of confronting armed poachers, and the anger that poachers, even when caught, were often released only to hunt again. For example, one Commander of the Environmental Police explained with sadness that what bothers him the most, is that the poachers simply do not stop. “They do not let up.” “Why” he asked while throwing a stone at a tree in frustration. “Why must they keep coming back until they get killed or arrested. Why can they not just stop after one or two trips. No. They keep coming back again and again” (Interview, Oct. 26th, 2015). Each of these occasions were opportunities to probe the tensions, nuances, and realities of anti-poaching on the ground and try to understand them from those living it every day. I believe this contributed to richer data than otherwise might have been available.

Empathy does have its limits and drawbacks. One such drawback is “empathetic projection” whereby the researcher assumes to know how the other feels (Smith, et al., 2009, p. 352). Another challenge with empathetic proximity is that the researcher merges with the researched (Frank, 2005; Owton & Allen-Collinson, 2013). Rubin and Rubin describe merging as follows: “You may find that the borderline between showing empathy for another person, listening with concern and belief, and over rapport, identifying so much with those you study that you forget who you are, is easily crossed” (Rubin & Rubin, 2011, p. 119). At certain points, I had to confront this. As my wife routinely reminded me, “You are not a ranger, you are researching rangers.” However, the research encounter did change me as any research does.
Getting too close, or merging, closes off the possibilities of dialogical research as dialogue requires difference. Dialogical research means that one’s research and research outputs are not final statements about the subject matter or of those the researcher studied and/or continues to study (Clark & Homquist, 1984; Frank, 2005; Smith, et al., 2009). Rather, research and our finished written products are part of a “continuing dialogue through which those participants will continue to form themselves, as they continue to become who they may yet be” (Frank, 2005, p. 967). It is the opposite of a researcher claiming to know everything about their participants or subjects, which one can fall into if they become one with them. As Han reminds us, researchers often gain the most profound insights not necessarily through proximity, but through the “tension in-between” closeness and distance (2010, p. 14). I believe it is here where being a participant observer, but not a member of the APU or colleague, became productive. I was not one of them, but I had insight into their social world and day-to-day lives. This, I believe, opened up a unique space for dialogue and discussion.

Becoming or claiming to become one may lead to monological research where the researcher has the last word about who their research subjects and participants are, what they are capable of, and how they understand the world. It is to finalise one’s research subjects or participants, leaving no room for change. This can be problematic for (critical) social science as the aim of such research and critique is often to effect some change. This is especially the case with political-ecological research in which I situate myself and this study. As I expand on in section 5, dialogical research and being open to who our participants are and their contradictions and negotiations can be of particular importance when conducting participatory research among those who hold and wield the reins of oppressive power and even violence. Using my experience of field research into and with frontline anti-poaching personnel I want to parse through the
negotiations, undulations, and interactions of emotionality, participation, critical objectivity, access, and closeness between myself as a researcher and those I researched. This provides insight into the operationalisation of research proximity in the field and as a heuristic device, especially in the context of conducting oppositional ethnographic and participatory field research. The latter is an aspect of the expansive body of literature explored above that is relatively less developed (Thiem & Robertson, 2010), and that has yet to be discussed in relation to conservation-violence despite a long history of productive research into conservation as a dispossessory, oppressive, and even violent practice.

Scholars engaged in oppositional research demonstrate the importance of getting on the inside of institutions we, as researchers, may be critical of including development institutions (Bebbington et al., 2004; Gardner & Lewis, 1996; Gould, 2010; Mosse, 2006), civil society groups (Han, 2010; Jansson, 2010), and security law enforcement organisations (Coleman, 2009; Doty, 2007; Fassin, 2013; Mountz, 2010). Researching inside institutions can help understand discourses, policies, practices, and how they operate. Moreover, “ethnography and analysis” can help influence change and undermine these institutions and their unjust practices (Gardner and Lewis, 1996, p. 75). Writing on critical military studies, for example, Rech et al. (2015, p. 56) talk about the need for “co-inquiry and collaboration” with one’s research subjects. Acknowledging that militaries and military-like institutions are powerful actors perpetrating injustices that researchers must not only be critical of but seek to change, they argue that any such research “should be guided by the possibility of engagement with the forces and institutions responsible, and should not be bashful about doing so” (Rech et al., 2015, p. 56). Research with such institutions must begin with an understanding of them “as potentially open to collaboration and knowledge exchange, even where this idea may initially appear ridiculous” (Ibid., p. 56).
Underlying their argument is the idea that researchers might be critical, but they must also be open to dialogue. Researchers cannot be dismissive. Being dismissive of institutions like the military, law enforcement, conservation agencies, or anti-poaching forces, risks missing an opening for meaningful engagement and dialogue with those actors and institutions that could open a space for change. Social scientists need to conduct research with the marginalised, oppressed, victims of violence, and agents of much-needed resistance. But, studying the institutions, organisations, practices, and people on the other side, even if this means getting uncomfortable, is equally important. I drew on these ideas about oppositional research and getting inside to understand conservation-security and the “war” on poaching. To gain as comprehensive and nuanced understanding of conservation security as possible, I felt I needed to get inside and achieve a high degree of research proximity. Doing so required an active, but not unproblematic, use of participant observation with conservation security forces.

**Participant Observation on the Front Lines of Anti-Poaching**

When I arrived at Sabie Game Park, the first thing I said was I will not get in the way, I will observe and not be an obstruction. I was immediately told that this would not work. I was not allowed to be a “fly on the wall,” as I was reminded more than once. If I was going to be there, then I was going to contribute and participate. In this sense, I speculate that granting me access was likely instrumental on the part of IAPF and SGP as I effectively volunteered some of my time in exchange for access, and in the process of research.

Conducting participant observation on the front-lines of combating rhino poaching meant participating with the broader reserve team, including conservation management and community relations. This included helping to corral rhinos who escaped back into the reserve, helping
repair a buffalo fence when the dam water receded, and daily activities like filling water tanks, interpretation between English and Portuguese, and some administrative work. For example, I worked as the pilot’s assistant for the annual game count and wrote the subsequent report. I also attended meetings, such as the community celebration meeting where the District Administrator for Sabié District handed over 20% of SGP’s annual trophy fees to the community, where I took photos and wrote a summary report for stakeholders. At the request of the SAWC and SGP, I conducted research on and wrote an evaluation of a joint WWF-South Africa/SAWC/SGP community ranger programme. The above examples are not exhaustive, but are illustrative of the various ways in which I increased my proximity through participation or collaboration without involving myself in anti-poaching per se, but that aligned more closely with conservation management and community development. However, I did have to actively participate with the APU as it was they who were directly hosting me, and who were my primary research subjects.

Anti-Poaching Related Participant Observation

Ride Alongs and Foot Patrols

While at SGP and other reserves, including the RNN, my primary research activity was accompanying APU managers and rangers during their daily patrols. This included simply riding along in the truck as they did fence patrol or dropped rangers off in posts, drives that sometimes took 4-5 hours, or longer. ‘Riding’ along also meant accompanying rangers on foot patrols, which I did almost every day while at SGP. These patrols lasted anywhere from 4 to 12 hours and allowed for substantial time with rangers and APU managers. Most of my observational data

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12 See Massé et al. (2017) for an article based on this assessment.
and many conversations with rangers and APU managers emerges from these patrols, ride alongs, and similar activities. Moreover, so much time spent in a truck, on patrol, or sitting in the bush, enabled me to build rapport with APU personnel. It was only after building rapport during these outings that I conducted more formal interviews with the field rangers and managers. I also accompanied rangers as they responded to various incidents, such as incursions, carcass findings, meetings with communities and their counterparts in Kruger, and escaped rhinos or other wildlife.

Photo 3: Learning with a ranger on patrol (Photo Credit: Anonymous APU member)

**Interpretation, Training, Meetings**

Given that I speak Portuguese and English, English-speaking APU and reserve management also used me as an interpreter between them and field rangers, police, and community scouts in meetings. During a 3-week period, I acted as an interpreter for the recruitment and training of
new field rangers giving me first-hand insight into the ranger recruitment and training process. I also conducted a training session for rangers on how to use hand-held GPS units for navigation and for data collection in the bush.

Management also allowed me to attend APU meetings. This included the daily briefing and planning meetings. Access to these meetings gave me inside access into the mundane, day-to-day of the APU and its various actors, partners, and decision-making process. Such access included having my own hand-held radio so I was privy to all communication on the reserve. Indeed, daily meetings and being in constant communication was especially important for gaining insight into how anti-poaching managers and rangers think, and why they do what they do.

In addition, managers would sometimes ask for my input on issues from mapping and data collection to human-wildlife conflict and developing community hunting quotas. The managers allowed me to voice my opinion which created space for dialogue. For example, I wrote critical reports and notes to management and superiors detailing my perspectives on issues or dynamics that I saw as problematic. This was also instrumental in my part to ensure that everyone understood my research, my research process, and my role so that they did not and do not feel deceived.

*Mapping*

When I arrived at SGP, there were donors who were there at the same time looking to implement a mapping system in the reserve to map and record the movements of rhinos, rangers, and

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13 Given that there is no cell-phone reception on the reserve I was given a radio for my own safety and so I could be a functioning participant on the reserve. Given the sensitive nature of the area and anti-poaching, much of the strategy and day-to-day communications about this and internal matters is treated as confidential and not used in this dissertation.
poaching entries and exits. They asked if I could help establish this mapping system. To be sure, the APU already used a mapping system, but it was Kruger National Park’s (Cmore) system and they had access as part of cross-border planning. The APU wanted their own as well. After meetings and being clear that I would not be involved in catching poachers, I agreed to help. This was by far the most active type of participation I had and (as a result) was the most ethically ambiguous and problematic. I viewed it as a way to understand the inner-workings of conservation-security. Perhaps naively, I thought I might be able to bring a different voice to the conversation through the process of fieldwork. My first task was to create a digital map of the reserve. Second, I replicated parts of other mapping systems to gather and input data on rhinos, rangers, and poaching incursions. The process also consisted of training the APU personnel on how to use the system.

Involving myself was not a decision I took lightly, and it caused me much emotional turmoil. As I began to better understand the dynamics of anti-poaching I became wary of the implications of this type of mapping system, and had to reflect strongly on continuing this line of participation which created problems between myself and my research subjects, namely APU personnel. For example, I focused much more on mapping wildlife and would not participate in analysing the data. When it became apparent that the APU wanted me to have a more active role in mapping and analysing poacher movements I declined and explained I needed to step away from the mapping system to focus more intently on my research, which I did. With that said, my decision to participate with an anti-poaching unit in these various ways was an important part of

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14 The system paralleled the SMART, Cmore, and APE systems (see Chapters 6 and 7) but was created from scratch and simplified so that it could work with simple hand-held GPS units and flight data as opposed to more complex smart-phone systems.
my methodology and was done to increase my research proximity and understanding into the social world of conservation security.

**Shifting along the spectrum of research proximity: Between too far and too close on the front lines of anti-poaching**

I use the framework of research proximity to bring together the participatory with the affective and ethical challenges of oppositional research, how I negotiated them, and why.

*Too Far*

I failed at achieving an adequate degree of proximity with those operating in the poaching economy, namely poachers and those in the supply chain, and their families. Despite having good friends from Massingir and in the surrounding area, I have been unable to increase the degree of proximity needed to have a focus on the social world of poaching. Access to this world was blocked enough that I could not pursue it as a primary focus. This in part explains my choice to study the security side more in-depth.

What explains my inability to reach a certain proximity? For one, commercial poaching is an illegal activity that is attracting more and more attention and the stakes of getting caught are high. Poachers are routinely arrested, if not killed, in South Africa and Mozambique. Moreover, the Mozambican borderlands are crawling with informant and intelligence networks. People do not trust a white foreigner poking around asking questions about poaching, and for good reason. Being white, many people believed I worked for the “Park,” no matter how hard I, my research assistants, and local friends tried to demonstrate otherwise and that we wanted to understand

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15 I have spent over twelve months in the villages and towns of the Mozambican borderlands. I did, however, study different things with different groups in different locations.
their perspective on conservation security. While my positionality did afford me benefits in accessing reserves (more on this below), it was an obstacle here. Moreover, access to communities in the area of SGP was almost entirely closed because of my lack of history there, and my known engagement with its anti-poaching unit.

A choice to focus on the security actors was indeed informed by my positionality. Apart from the field rangers who are predominantly black, the world of conservation and anti-poaching in Mozambique and South Africa is very much a domain of white men. While this is problematic, and is beginning to change (slowly), white men hold the vast majority of management and authority in conservation circles. Without exception, every reserve owner or manager I met was a white male. The managers of the anti-poaching units I spent time with were young white men. While the prevalence of black Africans in management positions is higher in state-run protected areas, white South Africans, including in Mozambique, still hold many management, director, and executive positions. Moreover, while the prevalence of white people involved in the illegal wildlife trade is largely overlooked (Hübschle, 2016), the reality is that most of those doing the hunting are poor black men.

Given these racial and gender dynamics, my positionality as a young white male facilitated gaining access to APUs, such as at SGP and with the IAPF. I feel I was perceived as non-threatening and someone who would ostensibly understand them, even if I disagreed with certain practices. They knew I disagreed on certain issues and they still granted me access. I have no doubts that if I were of a different racial background access may have been more difficult given the mistrust of black Mozambicans among many conservation personnel. For example, knowing the perception of black Mozambicans among many anti-poaching managers in the country, I travelled to the reserves on my own, without my Mozambican research assistant even though I
was uncomfortable travelling deep into unfamiliar remote rural areas alone. While I disagree with the sentiment, I felt that I would be trusted more readily if I was on my own and not accompanied by a Mozambican.

Gender also mattered. The anti-poaching managers with whom I lived with were young white men. For lack of a better phrasing, I could be ‘one of the boys’ and bond over trucks, sports, fishing, and the women in our lives that we missed while spending extended periods of time in the bush. This dynamic extended to black field rangers as well and was a regular way to break the ice and find a level of comfort with the rangers. As a male, I also felt an added layer of comfort travelling in some areas by myself. As I have often discussed with my supervisor and other female colleagues, they do not feel comfortable travelling alone in some of these remote areas of Mozambique. I fully understand why.

For my own safety reasons, I made conscious decisions to keep a low level of proximity in certain areas. Here, I delve into the uneven geographies of my fieldwork. By making the conscious decision to get close with SGP and the APU, I knew I was foregoing the opportunity to do the same with communities in the Sabié and Mangalane area. As a white male going in and out of the reserve and spending time with rangers (and staff seeing me and bringing this information back to villages), I was unable to conduct independent research in neighbouring communities. It was not possible to build the trust necessary and was simply unsafe. This became most clear when I was driving on the dirt track that went through the villages of Mangalane to SGP in the fall of 2015. A pickup truck with five men in the back swerved in front of me, blocked my way, and proceeded to jump out of the truck and threaten me. They accused me of working with the anti-poaching unit. After a tense stand-off and confrontation, we came to
a monetary agreement so I could pass unharmed. After this incident, I only left or drove to the reserve in the early morning hours when people were still asleep.\footnote{Colleagues of mine researching poaching in Mozambique and South Africa experienced similar hostilities during field research. There were a couple of weeks in November of 2015 when an armed police escort was required to come and go from the reserve along a particular stretch of 40 km road after a series of arrests of high-profile poachers led to community backlash and attacks on APU managers and rangers on that road.}

Getting Close (Too Close?) and Retreating

The language I use in my field notes shifts as time progresses and I move forward with my field research. Near the beginning of my field notes and research, I talk about “their” frustrations, stresses, and emotions, with “their” referring to my research subjects in the APU. As time progresses “their” frustrations and emotions begin to morph into “mine.” This shift in language represents a shift in proximity as I start to empathise with APU members. On September 11\textsuperscript{th}, 2015, a month after arriving, I write: “Their stresses become my stresses.” At this point I was steadily increasing my research proximity but could maintain a clear separation between us. I was not merging. Less than two weeks later I write,

I am also stressed, frustrated, and want to speak up about things and point things out that I see as problematic and that could be improved. But, what is my place here as a researcher and as someone ostensibly ‘helping out’? Especially someone with no APU experience or background? I feel like I am getting sucked into the world of the APU, as a full-fledged member of the team, but I am NOT, nor do I want to be. How do I get out while at the same time keeping my independence when I am so reliant on these people? (Field notes, 19/09/2015).

I would get frustrated when a rhino was killed. If I am honest, I would also get upset when poachers would get away. I empathised with the rangers, with whom I was spending so much time. This arguably brought me \textit{too close} to my research subjects and participants. This was a problematic position because if a poacher does get caught, he is likely to be beaten (or worse)
and perhaps even shot. These are all tactics that I find counter-productive and ethically problematic.

I did two things to adjust and decrease my proximity. The first is that I spoke with SGP and APU management to remind them of my objective of being at the reserves. We clarified my role and how I could contribute and focus much more intently on my research without ‘participating’ on a daily basis. This included bringing my help with the mapping system to an end. Second, I took a break by leaving SGP for ten days to rest and reflect.

At other points, and because of new developments, I found myself at points that were more distant than I would have liked. On November 10th, 2015, I write: ‘I am back at SGP after a bit of a break. ‘John’ is gone, ‘Michelle’ is still here, [the Colonel] is here. It does feel like I am getting pushed out a little bit now that the Colonel is here. I feel out of communication and a little bit on the outside.’ This excerpt and the context around it require some explanation.

Near the end of 2015, the APU brought in a well-known retired Colonel who worked with the special forces in the Rhodesian military and then in the Zimbabwean military after independence. He also has a history of mercenary work in Southern Africa. The Colonel was tasked with re-vamping the APU and would eventually be hired to oversee security operations there.¹⁷ The Colonel did not understand my role as a research and participant observer. He wanted me to be a part of the team and answer to him as if I was one of his foot soldiers. As I already had authorisation from the reserve owner and IAPF to be present and conduct my research, I respectfully refused and explained my role as a researcher. I felt this led him to not appreciate my presence. More importantly, this is a man whom I find morally objectionable. This

¹⁷ The Colonel, through his company, is now in charge of anti-poaching operations at Sabie. This was a transition that happened after I left Mozambique in July 2016. I find it a regrettable transition that is likely to take away from much of the positive work the SGP has done and is committed to developing with its neighbouring communities.
extends to his philosophy on anti-poaching. Apart from openly bragging about and telling stories of killing people, the Colonel is infamous for being a soldier-for-hire and an apologist for the Matabeleland Massacre in Zimbabwe. This philosophy also shapes his approach to anti-poaching. He brings a clear friend or enemy approach with an explicit idea of anti-poaching as counter-insurgency and the poacher as a terrorist. He wants the APU run like a military operation, and in his mind, human rights are off the table as poachers are “terrorists” (a phrase he was fond of using). I began to reach a point where the value in researching and being consistently present at the reserve while maintaining my personal and professional ethics could no longer be sustained. My decision was made easier as my need for continuing research at SGP was coming to an end.

With the Colonel in charge, I thus started to gradually reduce my proximity. I did not want to suddenly pull out and risk damaging productive relationships and the future potential of myself or other researchers returning. Moreover, the Colonel was not representative of everyone there. Some people working at SGP were similarly critical of him and his military-style approach. This allowed me to increase my proximity with these actors. I stopped the mapping duties and spent less time with the APU. When the APU moved to a new headquarters I did not move my tent and instead remained with reserve management. Indeed, I started spending more time with SGP’s conservation management personnel and trying to better understand conservation security from

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18 The Matabeleland massacre started with the deployment of Zimbabwe’s infamous Fifth Brigade in Matabeleland in January 1983. Reports range from over 1,400 confirmed murders to figures of 20,000 killed (CCJP, 1997; Simpson, 2008). A truth and reconciliation report documents over 7,200 cases of human rights abuses including rape, torture, and murder. This is in addition to mass detentions of civilians and a food embargo on the region that starved the population into submission (CCJP, 1997). Some refer to the atrocity as a genocide (Simpson, 2008). The Colonel’s widely quoted views on what is now referred to as a massacre are as follows: "You often have to be cruel to be kind. Had an operation like the Fifth Brigade not taken place that battle could have gone on for years as a festering sore. ... the fact is that when Fifth Brigade went in, they did brutally deal with the problem. If you were a dissident sympathiser you died. And it brought peace very, very quickly" (Hope, 2004, pg. 137).
that perspective, as well as the work being done with communities. This proved to be quite productive and offered different insights into the dynamics of conservation-security.

**Why Research Proximity Matters in Oppositional Research**

Despite the difficulty and arguably problematic nature of conducting participant observation in an oppositional research setting, there is a case to be made for it. It is here where I come back to directly answer the question of why I handed over my keys and engaged in participant observation. I posit three integral reasons why gaining and maintaining a certain level of research proximity, even with and among those of whom the researcher might be critical, is valuable, and how this can inform ethnographic research and related debates in other contexts.

*Utilitarian*

At the point of my arrival and handing over my keys, access had ostensibly already been granted to me. But, for that access to remain open, and to gain a deeper access, simply being at the reserve was not enough; I had to move beyond a mere observer to a participant. While in part fueled by adrenaline in the moment, handing over my keys was a strategic move to be able to conduct research in the setting and on the topic I was interested in. It also provided me with insight into the response of an APU to shots heard, a fundamental aspect of anti-poaching. A similar logic informed my decisions to take on certain tasks like setting up a mapping system. Each of these moves, in combination with dynamics outside of my control such as positionality, among others, was meant to increase my proximity so that I could conduct research and enter the day-to-day of conservation security.
Seeing like they do - deeper insight and understanding

Drawing on ethnographic theory, I sought to understand conservation security, how those involved do what they do, why they do what they do, and with what challenges and negotiations through their eyes as much as is possible. I tried to understand the world they occupy as they understand it, whether I agree with such a worldview or not. Mapping and being part of discussions increased my level of understanding to an almost auto ethnographic level. I participated in the day-to-day and mundane activities and discussions of the APU. At the risk of using an already overused phrasing, I tried to see like an APU member to render conservation security, its practices, and its logics and contradictions intelligible to myself and hopefully to others. As Fassin argues with regards to ethnography and policing, ethnography is not about producing otherness […] but, on the contrary it is about bringing closeness, discovering that those who seemed so different, irrational or incomprehensible resemble us more than we thought, act more coherently than we conceive, and, in any case, think and behave in a manner that can be rendered intelligible to everyone (Fassin, 2013, p. x).

Making intelligible does not, however, mean being uncritical. Indeed, trying to understand conservation security forms the basis of informed critique, including the critiques and arguments I make in this dissertation.

It is through intimate and daily insights and being able to ask questions that I come to understand anti-poaching and its logics to the extent that this is possible. Indeed, getting close allowed to answer questions related to who does conservation security on a daily basis, how do they do it, using what practices, why, with what challenges? The answers to these questions are not necessarily or always what one might expect. This is precisely where and how this dissertation contributes to an understanding of conservation security and debates concerning the operationalisation of power, state-wildlife relations, and the related use of violence.
I thus follow Thiem and Robertson (Thiem & Robertson, 2010, p. 5) who argue that “intimate encounters can generate deep and textured accounts of the structure and logics of ostensibly exploitative, oppressive, and anti-democratic institutions.” Such insights and accounts include the emotional. For example, on October 20th, 2015 I wrote in my field notes for SGP:

I broke today. I feel broken. One too many dead rhino with its face chopped off. A very long day. I feel the heaviness of this place and what is happening…I need a break away from here. I write this because I am supposed to, because I know it is ‘good’ for ‘methods’ and reflection. […] It is all data, everything is data, even my emotions.

Such field notes, but more importantly the emotions behind them, are part of my data and insight into the on-the-ground realities of conservation-security. While not claiming to know the emotional states of rangers and APU managers, I feel I am closer to understanding their emotionality as we shared these affective experiences together. I gained insight into their frustrations and emotional challenges and, importantly, why and how this matters for anti-poaching and conservation practice more generally. While not excusing certain actions, such emotional insight provides important context for some actions, including violence, a topic I explore in all chapters. Such context may also open space to discuss possibilities to address such violence and oppressive conservation practice in ways that all sides might understand (see for example Chapters 5 & 6). I turn to this point in the final section of the chapter.

**Empowering research subjects and hope for change**

What underlies the call for co-inquiry, collaboration, participation, and increasing proximity with those of whom the researcher is critical – oppositional research – is a belief that such institutions and their practices and discourses are not unchangeable. Informing such insights is the notion that social scientists might be able to influence change by opening themselves up to this possibility, and to the possibility of collaboration and participation. It is only through the recognition of the capacity for change of the actors and institutions involved that meaningful
dialogue with them can occur. A failure to do so carries the risk that “those who are finalized come to expect to be spoken of in this way” and continue acting in that way (Frank, 2005, p. 967). In both my interaction with people working in conservation security and in my writing about them, I wish to avoid finalising who they are, what they are capable of, and the closing off of any possibility that they (or I) might change.¹⁹ Even if critical of them and some of their practices, I hope to embrace the possibilities for a different conservation-security.

Proximity helped open a space to begin to understand conservation, anti-poaching, the militarised approach, related violence, and even park-community relations from the perspective of frontline anti-poaching personnel. There is no excusing of violent and oppressive tactics. But, this space helped me understand that there is not one “ranger,” and that many on the frontlines are also critical or ambiguous about what is happening (see Chapter 6). There are, however, some limitations and even exceptions to dialogical research. Here I return to the Colonel.

I saw no opening to engage or dialogue with the Colonel. Being ethically, personally, and professionally uncomfortable with him, I decreased my proximity with him and the APU while he was around. I found the compromises I would have had to make to come close to dialoging with him would be unacceptable from a personal as well as a research ethics standpoint, and likely would not have yielded much if anything at all. With this said, I provide an example of how the level of proximity I reached through my participation allowed for dialogue during the research process.

¹⁹ And I have indeed changed.
Influencing anti-poaching? Rhino vs. Poacher focused anti-poaching

Peppered my field notes are constant reminders of conversations I and the APU had about the nature of conservation-security or anti-poaching. Many conversations focused on whether the primary objective shaping the anti-poaching strategy should be protecting rhino or catching poachers. While these are not necessarily mutually exclusive, given the reality of vast landscapes, difficult terrain, and limited resources available, it is difficult to achieve both. Hence, by deciding what the starting point is, it changes how one does anti-poaching.

When I began research at SGP, the APU was taking a poacher-focused approach. This did not mean that they ignored the rhinos. But, the starting point of operations was the poacher. As I write on November 14th, 2015 in a note about ongoing conversations about rhino or poacher focused strategy, one APU member said: “No, I am a soldier, I am here to catch poachers.” In my field notes, I continue: “This is true, it is a poacher-focused approach, wanting to kill or catch poachers first and protect rhino later…it is reactive” (Field notes, 14/11/2015).

As I established the mapping system and began understanding how the APU operated, I collected and mapped both rhino and poacher data. During operations meetings, APU managers also routinely asked if I had anything to say. One of the first things that I started asking about was what was the objective of the APU? Was it protecting rhino or catching poachers? I also asked them about the possible merits of moving towards a more rhino-focused approach. This was not activism. These were genuine research questions meant to understand the logic of what they were doing and how they approached the poaching problematic. These questions and inquiries turned into more of a discussion about the direction of anti-poaching strategy at the reserve. On Oct 5th, I wrote:

A discussion of how to protect rhino has occurred over many days, especially with ‘Mike’. ‘Mike’ and I agree that there needs to be a rethink in the strategy of the APU. The APU
should focus on the assets, on the rhinos themselves, and use the information on rhino to guide the APU strategy and operations. It should be rhino protection first…rhino protection centric. Let the poachers come in but don’t let them near the rhino.

When a new member joined the APU who had a conservation biology background, this idea gained support. We attempted to get funding for cameras to study rhinos and their behaviour in SGP from an ecological monitoring perspective. In collaboration with APU managers, I also trained field rangers on collecting rhino-focused data like middens and watering holes to better understand rhino movements and their territories. Eventually, the daily strategy changed. Each day the pilot flew, located the rhinos, and the operations were based on where rhinos were, not poachers. Rangers were deployed to spend the day with rhinos. On Nov 15th, I write: “First day of rhino focused patrol. I might have witnessed the implosion of the poacher-focused, insurgency-focused approach to anti-poaching here.” Nov 16th, I simply wrote, “This is day two of the rhino focused program.” The focus was less on hunting the poachers as the limited rangers were primarily deployed to monitor rhinos, rather than track poachers and set up ambushes. These were decisions made by APU and reserve management over time, and I have no illusions about influencing this shift, but was merely part of the dialogue around it and it was something I supported at the time. Not only do I think this proactive approach was more effective as evidenced by the poaching trends in the reserve (others may disagree), it is a conservation or species focused approach to anti-poaching focused on making live, not a poacher focused approach focused on punishing or making ‘die.’ Unfortunately, this strategy was somewhat derailed for multiple reasons, one being the arrival of the Colonel. The second is the political-ecology related power dynamics of conservation and anti-poaching in a contiguous cross-border

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20 Given that the rhinos in SGP were the only viable rhino population in Mozambique, I and others, thought this was an especially important issue to study.
space involving multiple actors, institutions and interests (see Massé & Lunstrum, 2016 for an extensive discussion of this dynamic).

Not all actors within the institutions or organisations they work for agree with the oppressive and sometimes violent tactics they are implicated in. Thiem and Roberston (2010, p. 6) rightfully ask, what happens “when ‘the enemy’ is not so monolithic as the dedicated critic – and his or her intended audiences – might hope.” Within conservation organisations, institutions, and even anti-poaching units, there are individuals and groups of people who do not agree with the militarised approach to conservation-security, with the violent anti-poaching tactics, continuing dispossession and marginalisation of local communities, or with the lack of meaningful community engagement and development (Annecke & Masubele, 2016; Booker & Roe, 2016; Massé, et al., 2017; Roe et al., 2015). These actors exist and they too need to be empowered to fight against the dynamics and changes they are seeing within conservation and the institutions they are a part of. It is they who have a seat at the proverbial table when decisions are made and actions taken. In small ways, participant observation in the context of oppositional research might serve to empower dissenting voices from within organisations, conservation or otherwise.

**Conclusion**

At the core of ethnographic research is participant observation. Questions of participation and emotionality may become increasingly ambiguous and problematic when one is researching with the oppressors and perpetrators of violence and injustice. This is, however, not a one-way problematic of getting too close. Being too far can be inhibiting or even damaging, especially if when seeking informed understanding and critique. This is how I approached the study of conservation security in one of the most tense conservation settings in the world. To make sense
of my emotionality, participation, and internal and even external tensions in this highly-charged research milieu, I developed the concept of researcher proximity. While much has been written on the topic of participant observation and questions of emotionality, participation, access, and getting (too) close, the concept of research proximity brings these all together.

Moreover, I position the discussion of research proximity within the specific context of conducting oppositional ethnographic and participatory research, or research with those of whom the researcher is critical. While careful to not cross ethical and moral lines, and contribute to unjust and even violent practices, I found it necessary to get close to, or reach a certain level of proximity with powerful and even oppressive institutions and actors. In my case, this entailed ethnographic and participant observation-based research with a paramilitarised anti-poaching unit in Mozambique. Drawing on my experience I argued that while being aware of its limitations and dangers, there is value in being open to participant observation with such institutions and actors.

While this participant observation created many challenges and ambivalences, the proximity I gained as a result allowed me to achieve deeper and more nuanced understandings of conservation security that is at the core of this dissertation’s contributions. Moreover, it enabled me to engage in dialogue, a dialogue I hope to continue with this dissertation. Concerning this latter point, I find motivation in the hope and possibility for change within institutions of power, violence, and injustice, including those of conservation and conservation-security. Indeed, this is the reason why insightful critiques provided by others on green militarisation and green violence have already gained traction (Annecke & Masubele, 2016; Büscher & Ramutsindela, 2015; Devine, 2014; Duffy, 2014, 2016; Hübschle, 2016; Humphreys & Smith, 2014; Lunstrum, 2014; Shaw & Rademeyer, 2016). Much of this research is conducted with a belief that there are people
who are open to listening, and there are. After interviewing conservation personnel, it is clear that there are those on the inside who are critical and frustrated with certain conservation security strategies and approaches, and they are starting to speak out and perhaps in some small way critiques are empowering them to do so.²¹

²¹ See, for example, Annecke & Masubele, 2016.
Chapter 3
Research Sites and the Poaching Crisis Within, Across, and Beyond Mozambique's Borders

Introduction

The Mozambican government has engaged in a concerted effort to develop the country's wildlife and conservation sector since the mid to late 1990s. This is an effort that sees the commodification and economic valuation of wildlife, and the subsequent hunting and tourism that results from it, as an important driver of poverty alleviation and local and national economic development (All Africa, 2014; MICOA, 2003; Soto, 2009; World Bank, 2014a). Of particular importance is a $US46 million World Bank Project titled Mozambique Conservation Areas for Biodiversity and Development (Mozbio) approved in 2014 (All Africa, 2014; World Bank, 2014a, 2014b). Punctuating the optimism surrounding Mozbio and similar developments, however, is the reality that "despite their potential to contribute to national growth and poverty reduction, Mozambique's [conservation areas] still face various threats [with] wildlife poaching [being] a particularly challenging threat" (World Bank, 2014a). Indeed, Mozambique and its conservation sector are gaining increasing attention in conservation and security circles given the unprecedented increase in commercial poaching occurring within and across the country's borders.

Poaching is not relegated to merely an ecological or conservation issue. Given the wildlife trade’s connection to international organised crime, and putative but unsubstantiated links to terrorist financing22 (Duffy, 2016; Maguire & Haenlein, 2015), a roster of actors frames

22 The terrorism discourse does not apply so much in Mozambique and South Africa, but to Eastern and Central Africa. I include it here to draw attention to how poaching is framed not only in Mozambique, but globally.
poaching as threatening national and regional security by undermining national borders, territorial integrity, and economic security (Duffy, 2014, 2016; Mkhize, 2015; SANParks, 2012; U.S. Department of State, 2014; UNDP, 2015). Part of a broader increase in poaching across sub-Saharan Africa, Mozambique has become one of several "ground-zeros" in the "war on wildlife" that is fueling the illicit wildlife trade valued at upwards of $20 billion a year (Smith, 2014, 2015; UNDP, 2015). Of specific importance are elephant and rhino poaching.

**Elephant Poaching**

Elephants are being poached for their tusks to supply the global ivory market where it is sold for $1,000-$2,000 per kilogram (UNDP, 2015). Covering 18 countries and released in 2016, the Great Elephant Census (GEC) is the most comprehensive elephant survey and census ever conducted in Africa (Chase et al., 2016). Combining new and historical data, it paints a detailed picture of the state of African savannah elephant populations (*Loxodonta africana*), and the elephant poaching situation. Following a poaching wave in the 1970s and 1980s, elephant populations rebounded seeing substantial increases from the early to mid-1990s into the 2000s (Chase, et al., 2016). The promising future for elephants was short lived with a new poaching crisis hitting the continent beginning in 2005 with 30,000 elephants killed per year. This was the start of the contemporary poaching crisis. From 2007 to 2014 there was a continent-wide decline of the savannah elephant (species) by 30% or approximately 144,000 elephants. While habitat loss and human-wildlife conflict are important, the report confirms that the 8% yearly decrease in the elephant population is "primarily due to poaching" (Chase, et al., 2016, p. 2354).

What is particularly important about the GEC is the use of the carcass ratio to measure

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the impact of poaching. The carcass ratio refers to “the number of dead elephants divided by the sum of live + dead elephants” (Chase, et al., 2016, p. 5). The general carcass ratio across Africa for the savannah elephant is 12-13%, painting a particularly dire picture of elephant poaching. A ratio above 8% indicates a declining population (Chase, et al., 2016). Savannah elephant populations are in danger, especially if the rate of poaching does not slow down (Wittemyer et al., 2014).

There are several key areas where elephant populations and therefore elephant poaching are concentrated. The Niassa National Reserve (RNN) in northern Mozambique is one such area. Countrywide, Mozambique's carcass ratio is the second highest in Africa at 31.6%. This is behind Cameroon at 83.4% but a direct comparison does not tell the whole story. Cameroon is estimated to have 148 savannah elephants, while Mozambique has a population of 9,605. The RNN's carcass ratio is "notably high" at 42%, second behind Kenya's Tsavo East National Park at 52% (Chase, et al., 2016, p. 16).

The RNN joins Tanzania’s Selous Game Reserve in an informal transfrontier conservation area known as the Selous-Niassa transfrontier conservation area [See Map 3 below]. Genetic analyses of ivory confirm that Tanzania and Mozambique are the primary sources for Savannah elephant ivory globally (Wasser et al., 2015). The national and international community has labelled the situation in Mozambique (and the broader Selous-Niassa system) a crisis. An advisor for Wildlife Conservation Society (WCS), an organisation that manages the RNN jointly with the Government of Mozambique, explained "the killing of elephants in [the North of Mozambique] is reaching proportions never seen before. The killing of elephants is being industrialized" (Smith, 2014).

The GEC differentiates between populations within and outside of protected areas. For
example, 84% or approximately 352, 270 elephants exist within protected areas. There is no significant difference between carcass ratios in protected areas or outside of them. Hence, while protected areas are ostensibly an important and primary space for elephant conservation and protection, the report concludes that "many reserves are failing to adequately shield elephants from poaching and human-wildlife conflict" (Chase, et al., 2016, p. 16). They specifically argue that more anti-poaching and law enforcement needs to be done in key protected areas so they "do not become paper parks" for elephants (Ibid.). How protected areas like those that occupy principal areas of elephant poaching are being strengthened forms much of the empirical basis of this dissertation. Much more central to my research and this dissertation, however, is the plight of the rhino.

**Rhino Poaching**

Threatening rhinos worldwide is the rapid escalation in commercial poaching that has occurred over the past decade. Driving this poaching crisis is the skyrocketing demand for their horns, which are currently valued at approximately $45,000-$70,000 a kilogram. Nowhere has rhino poaching been more intense than in Southern Africa, and especially South Africa. Home to approximately 75% of the world's remaining rhino population, South Africa is the epicentre of rhino conservation and rhino poaching (Bale, 2016; DEA, 2017; Save the Rhino, 2017b). Approximately 9,000 rhinos or 40% of the country's population exists in a single protected area, the famed Kruger National Park (Bale, 2016; DEA, 2017; Save the Rhino, 2017b). This has had profound and wide-ranging implications for conservation in the country and across its borders (Annecke & Masubele, 2016; Lunstrum, 2014; Massé & Lunstrum, 2016; Shaw & Rademeyer, 2016).
The unprecedented increase in the price of rhino horn has led to a dramatic increase in poaching from 7 rhinos poached in South Africa in 2007 to over 1,000 in 2013 and every year since [see Figure 1]. While all species of rhino are under threat, given the relatively large population, it is primarily the Southern White Rhino (*Ceratotherium simum*) that is targeted in southern Africa and South Africa, followed by the Black Rhino (*Diceros Bicornis*), also present in South Africa and elsewhere, notably Zimbabwe and Kenya. Worryingly, the poaching rate is higher than the birth rate, putting the future of the rhino in jeopardy (Ferreira et al., 2015).

![Rhino Poaching Numbers in Kruger National Park and South Africa](image)

**Figure 1. Rhino Poaching Numbers in Kruger National Park and South Africa**
(Source: Bale, 2016; DEA, 2017; Save the Rhino, 2017b)

This trend is particularly tragic given the successes of rhino conservation in Southern Africa and South Africa in particular over the past fifty years. Perhaps the most famous conservation success story is that of the Southern White Rhino and Operation Rhino led by Ian Player in KwaZulu-Natal (Player, 1972). In the early 1900s, there were fewer than 100 individuals in the
"wild." With an ambitious translocation and breeding program in the 1960s and 1970s, numbers began to recover, and the Southern White Rhino is now the most populous of all rhino species numbering approximately 20,000. The story of the black rhino is not so positive, but there was a sense of optimism beginning in the 1990s. In 1970, the black rhino numbered approximately 70,000 and was down to 2,410 in 1995. However, with conservation efforts, largely led by the private sector, the numbers have increased to over 5,000 since (Save the Rhino, 2017b).

The most recent rhino poaching numbers show a decrease in rhinos poached in South Africa and Kruger. Behind the figures, however, a more complicated story emerges. While poaching is down in Kruger, it is up in other parts of South Africa, particularly in the second rhino stronghold of KwaZulu-Natal (Bale, 2016; Somerville, 2016). Moreover, the slight decreases in South Africa are paralleled by increases in other countries (notably Zimbabwe and Namibia) and Africa as a whole. For example, while South Africa celebrated a decrease in the number of rhinos poached by 40 in 2015 compared to 2014, rhino poaching numbers for the continent were the highest in over two decades (Bale, 2016; DEA, 2017; Save the Rhino, 2017a). The data suggests that rhino poaching is not necessarily slowing down, but being displaced beyond Kruger and even South Africa (Somerville, 2016). Rhino poaching gangs are altering their modus operandi and geographical scope.

The poaching syndicates and the poachers they employ are indeed an important part of the story. Despite Kruger being the site of the majority of rhinos and rhino poaching, most rhino poachers come from across the border in Mozambique. It is the population centres of Kaboc, Magude, Mapulanguene, and Massingir in the Mozambican borderlands that are the organising points of rhino poaching syndicates [see Map 1]. Poachers either cross into Kruger on foot or, as is becoming more common, cross formally through South Africa’s ports of entry and enter
Kruger from its western boundary (Hübschle & Jooste, 2017). I return to the poaching dynamics and their geography in more detail below.

Figure 2. The Greater Lebombo Conservancy and Sabie Game Park (SGP) (Cartography credits: Carolyn King and Francis Massé)
While the rhino population has been devastated by the poaching crisis, so have the borderlands of Mozambique, but in a different way. Some estimates posit the deaths of suspected Mozambican poachers in Kruger from 2010-2015 at approximately 500 (Reuters, 2015).24 Others, like a District Administrator from one of the areas above, simply say there have been a lot and point to the need to clear new land as existing cemeteries are full (Interview, 19/11/2015; SGP Rangers, 13/11/2016). I have seen first-hand how the numbers of widows and fatherless households has increased since 2012 in the villages in and around Massingir and Kaboc. For those poachers who have not died, many have been arrested in Kruger and Mozambique.

However, as Table 1 illustrates, the number of poachers is not decreasing.

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<td>Poacher Incursions</td>
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<td>1487</td>
<td>2290</td>
<td>2466</td>
<td>2883</td>
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<tr>
<td>Poachers Arrested</td>
<td>73</td>
<td>123</td>
<td>174</td>
<td>202</td>
<td>281</td>
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<tr>
<td>Firearms Seized</td>
<td>42</td>
<td>69</td>
<td>110</td>
<td>125</td>
<td>148</td>
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Table 1: Rhino Poaching Related Stats from Kruger National Park (Martin, 2017).

While the number of rhinos poached in Kruger may be on a slight downward trend and the number of arrests and firearms seized has steadily increased, the number of poaching incursions into the park is growing at a relentless pace (Martin, 2017). This latter point forms an important thread and normative argument throughout this dissertation. Many of the tactics, technologies, and accompanying expansion and extension of violence by state and non-state actors against suspected poachers is justified on the grounds that it is needed to make poaching so risky that it deters people from doing it (Interview, Ranger B, 25/10/2015ABC News 24 Australia, 2015;

24 This number of 500 poachers killed has been disputed by SANParks (Torchia, 2015). The organisation, however, has not released an alternative or official number. Interviews from 2016 suggest that hundreds of poachers have been killed.
Lemieux, 2014; Mogomotsi & Madigele, 2017). The increasing number of poaching incursions into Kruger, however, calls this logic into question. Moreover, the “gains” that are being made are reliant on a high level of investment and may not be sustainable, as discussed in more depth in Chapter 5. More importantly, these trends highlight how the causes of poaching are not being addressed and alternatives are sorely needed.

**Framing Poaching and the Illegal Wildlife Trade**

Both rhino and elephant populations are in danger, especially if the rate of poaching does not slow down. However, concerns about the poaching crisis, the illegal trade in wildlife, and the subsequent moves to secure species and spaces under threat in Mozambique and elsewhere stem from more than the ecological threat commercial poaching poses. The transnational nature of commercial poaching and its connection to international organised crime sees poaching increasingly framed as threatening national and regional security by undermining national borders and territorial integrity (Duffy, 2014, 2016; Mkhize, 2015; SANParks, 2012; U.S. Department of State, 2014; UNDP, 2015). Moreover, poaching is argued to putatively fund militia and terror groups throughout the world (McNeish, 2014; U.S. Department of State, 2014; Vira & Ewing, 2014). This is despite the lack of evidence to support these claims (Duffy, 2016; Kelley et al., Forthcoming; Maguire & Haenlein, 2015). Governments and other actors also frame commercial poaching as a threat to economic security as it threatens neoliberal conservation and wildlife economies that are vital drivers of local, national, and regional economic growth and development (Konopo et al., 2016; PPF, 2014; U.S. Department of State, 2014). How these framings influence the securing of conservation and with what implications

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25 See Chapter 9 for a more detailed overview of this framing with specific excerpts.
is a core focus of my analyses that follow in the subsequent chapters.

Research Sites

Mozambique enters the story of commercial poaching and securing conservation in various ways. As mentioned, it is one of the hotspots of elephant poaching. Mozambique is also central to the dynamics of rhino poaching given that it shares a border with South Africa and the Kruger National Park. While South Africa is home to the majority of the world’s rhino, the majority of rhino poachers active in Kruger National Park come from Mozambique (a dynamic I explore in more depth below). Mozambique is also a key transit route for both rhino horn and ivory, among other wildlife and timber products (MICOA, 2015). Indeed, Mozambique is the only country with a National Ivory and Rhino Horn Action Plan (NIRAP). All other countries in the category of concern only have a National Ivory Action Plan. As such, Mozambique is an important case. My research focused on two areas in the country.

The Greater Lebombo Conservancy and Sabie Game Park

Located between the Incomati and Olifants Rivers and bordered by South Africa to the west, the Greater Lebombo Conservancy (GLC) is a 220,000-hectare conservancy consisting of nine private wildlife and conservation concessions [see Map 2]. These are conservation and wildlife reserves operated that are privately owned, managed, and policed with a mix of trophy hunting and non-consumptive tourism as a business model.26 The conservancy stretches across the Maputo and Gaza provinces of Mozambique. Its 150 km western boundary is the border with

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26 There is no legal private land or ownership of land in Mozambique. The reserves are actually private concessions that are leased to private operators and investors. But, I use the language of ownership as this is effectively how the concessions operate and is familiar for the reader.
South Africa and Kruger National Park. North of it across the Olifants river is Mozambique's Limpopo National Park. The GLC is now formally part of the GLTFCA.

I explore the intricacies and dynamics surrounding their status as private reserves elsewhere (Massé & Lunstrum, 2016). What is important for the purposes of this dissertation is that each private reserve has its own private anti-poaching unit (APU). The GLC as an entity has signed an MoU with the Mozambican government to conduct anti-poaching in the area. Indeed, part of the requirement for each entity having been granted the land concession, and what is needed to keep it, is to conduct effective conservation-security, or to secure the area against rhino poachers (Ibid.). To be sure, the Mozambican government took some land titles away from previous concession holders for failure to adequately invest in conservation-security.

There are numerous villages located outside of the GLC’s boundary, many of which were relocated for the creation of some of the reserves in the 1990s and early 2000s. Relocations continue today with concessions granted in the past five years (Massé & Lunstrum, 2016). Apart from the villages, the towns that represent the population centres closest to its boundaries are Kaboc, Mapulanguene, and Massingir (from South to North).

While most of the reserves pre-date the poaching crisis, the GLC as a consolidated territorial and legal entity was created with the specific intention of acting as a security and anti-poaching buffer zone to Kruger National Park and its rhino population (Ibid.). As such, even though it is home to no or very few rhinos, the GLC is considered by some as "the most critical piece of land on the planet for rhino conservation" (IAPF, 2015). According to the International Anti-Poaching Foundation (IAPF), the GLC is "all that stands between the world's highest concentrations of rhino and the world's highest concentration of rhino poaching syndicates" (IAPF, 2015). In the last few years, there has thus been a massive intensification of anti-
poaching, conservation law enforcement, and conservation-security build up in the area. These security measures are the topic of analysis in the subsequent chapters.

Figure 3. Location of Greater Lebombo Conservancy (Cartography credit: Carolyn King).
Sabie Game Park

Sabie Game Park (SGP), one reserve in the GLC, was my primary field site. Established in 2000, Sabie Game Park is just shy of 30,000 hectares sharing an approximately 35 kilometre section of the border with South Africa and the Kruger National Park. Given its location adjacent the southern third of Kruger, it lies directly beside the highest concentration of rhino in the park, and thus the most intensive site of rhino poaching in the world. Located in the Sabié District of the Maputo province in southern Mozambique, SGP is bordered by the lake formed by the Corumana Dam to the South, Kruger National Park to the west, the Massintonto River to the north, and the area of Mangalane, consisting of five communities, to the east [see Map 1 above]. The reserve's eastern boundary fence that runs approximately 35 kilometres before meeting the lake formed by the Corumana Dam separates SGP from the communities outside of it.

The creation of SGP entailed the removal of five villages to the east of its eastern boundary in an area known as Mangalane. The reserve compensated the affected households and continues to provide some infrastructure and services to these communities as part of the resettlement agreement, even though ownership of the reserve has changed. SGP has also partnered with the Southern African Wildlife College (SAWC) and WWF-South Africa to improve and strengthen relations with the communities of Mangalane and develop community-based initiatives (Massé et al., 2017).

The five villages of Mucacasa, Mavungwana, Baptine, Ndindiza, and Costine form the area of Mangalane with a population of approximately 900 people in 300 households. Apart from authorities related to the Corumana Dam, figureheads of the governing party the Mozambican Liberation Front (FRELIMO), and the military that was present during the years of the country’s wars, there has been little state presence or authority in the area since Mozambican independence.
in 1975 (and for many years before that) (Adam, 1996; Interview, Historian, 10/03/2016). Some villages of Mangalane, such as Mucacasa, remain strongholds of the Mozambican National Resistance (RENAMO), the former Rhodesia and South Africa supported insurgency group and current official opposition to FRELIMO, with FRELIMO authority being merely symbolic (Interviews, PRNMA, 26/10/2015; Ara Sul Official, 29/10/2015; Mavungwana resident, 11/10/2015; Ndindiza resident, 17/05/2016). The FRELIMO-RENAMO dynamics are relevant as current interventionism by South Africa in the Mozambican borderlands is part of a much longer history of South African security (and conservation) interventionism in the region in support of RENAMO during Mozambique’s civil war. I examine this history in Chapter 4 and how it helped shape conservation in the area. Moreover, some of the current anti-poaching specialists and operatives who manage poaching informant networks in the Mozambican borderlands were active as Apartheid security operatives who similarly organised and managed informant and RENAMO insurgency networks in the very same area during Mozambique’s civil war. While the optics surrounding this are nothing short of shocking, this also illustrates the type of tactics and personnel being used to combat poaching in the area.

Law enforcement has also been scarce in the Mangalane area for much of its contemporary history. The first “police” or law enforcement body in Mangalane was the Policia Das Recursos Naturais e o Meioambiente (PRNMA), known colloquially as the Environmental Police. Established in 2015, the PRNMA’s primary objective is to combat poaching (Interviews, 2015; WCS, 2015). Officials in the PRNMA explained that being the first law enforcement body stationed in the area is partly responsible for the resistance they face from local residents (Interview, PRNMA Commander, 26/10/2015). People in the area are used to living largely outside the purview of the state. Infrastructure and state services are sorely lacking if existing at
all, with SGP providing most state-like services. SGP and the IAPF, a non-governmental organisation (NGO) that manages its anti-poaching, also provides basic services, infrastructure, and support to the Environmental Police stationed outside its boundaries. This includes transportation, tents, fuelwood, water, and more. There is a significant blurring of state and non-state actors and roles.

Livelihoods in the area are primarily subsistence-based focusing on livestock rearing and agriculture, although conditions are poor and the area is prone to droughts. As in much of the borderlands, the primary source of wage labour has long been migrant labour to South Africa's mines and plantations (Lunstrum, 2007). However, and again like much of the borderlands, residents indicate this is changing. While some men have stopped going to South Africa because of recent xenophobic attacks and fewer opportunities for Mozambican workers in South Africa (Interview, 2013; Smith, 2015), others have foregone the mines and plantations for the more lucrative and attractive rhino poaching economy (Interviews, Carlos, 24/04/2016; Juanita, 30/04/2016).

Mangalane and the neighbouring town of Kaboc are one of four primary nodes in the rhino poaching economy along with Magude, Mapulanguene, and Massingir further north. Many rhino poachers come from the Mangalane and Kaboc area, while others come from outside and use the area as an organising and jumping off point into Kruger. Beyond the concentration of rhino in Kruger that can be as little as ten kilometres away from certain points of SGP’s and the broader GLC's fence line, SGP suffers from a particular geographic characteristic that makes it a major thoroughfare for rhino poachers. The lake created by the Corumana Dam that forms the southern limit of SGP and the northern boundary of the Incomati Reserve (also part of the GLC) is a large body of water that flows directly from Kruger.
During fishing season, people from Mangalane and Kaboc can fish in the dam's lake. The water is not part of Incomati or SGP and is not patrolled or policed. Boats are allowed all the way to the shoreline as long as they do not set foot on land, which would be considered trespassing into SGP's concession. I came to understand how poachers often disguise themselves as fishermen, staying on the lake until they are confident there are no rangers around the massive and uncontrollable shoreline (Personal communication, 29/10/2013). Poachers then go directly into Kruger or enter via SGP. Using the cover of darkness, poachers also use small row boats to quietly paddle from the shoreline by Kaboc to SGP, debark, and then proceed to hunt in SGP or Kruger. The dam is also a popular drinking spot for rhinos in SGP. As such, people who are
fishing often report sightings of rhinos near the shoreline to poaching syndicates, who then plan accordingly.

![Photo 5: Rhino returning from drinking at Corumana Dam, SGP (Source: F. Massé)](image)

Given these dynamics, SGP, like its neighbour to the north, south, and across the border to the west, has intensified anti-poaching, law enforcement, and security efforts to combat poaching within and across its boundaries. The primary objective is to stop poachers from getting to Kruger and exiting back through SGP on their way home. The state increasingly supports such efforts, namely through the stationing of Guarda Fronteira (border patrol) in the reserve who live and patrol with the reserve's private ranger force. The Environmental Police are stationed along the eastern boundary of the GLC and support anti-poaching efforts (and all throughout the country, including the RNN). Some are also stationed in the reserves like SGP and live with and patrol with the rangers. The IAPF, an anti-poaching NGO, supports SGP through funding a large part of the anti-poaching unit and training and hiring extra rangers. More importantly, the NGO

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27 For more detail on the political-economy and cross-border dynamics of this see Massé and Lunstrum (2016).
has taken an active role in managing and conducting anti-poaching. The IAPF receives the majority of its funding from donations, big and small, from private individuals, a point I elaborate on in Chapter 5.

Founded by a former special forces sniper, the organisation takes an unapologetically paramilitarised approach to anti-poaching reflecting the core elements of green militarisation as outlined by Lunstrum (2014). These include the hiring of former military special forces as anti-poaching managers, the para militarised training of rangers, and the use of paramilitary tactics and technologies to combat poachers. The IAPF is described in a fundraising campaign as “a respected global conservation charity which brings military–derived tools, technologies and techniques to the front line of the poaching war. Applying the motto “Wildlife conservation through direct action,” the campaign writes “the organisation shows that such experience and skills have a significant use beyond the human battlefield where they were conceived” (gofundme, 2016. Emphasis added).

Taking a different approach, SGP’s partnership with the Southern African Wildlife College (SAWC) and WWF-South Africa included the development and implementation of a community scout programme. The objective is to develop a model of community-supported anti-poaching. Unfortunately, and contrary to the efforts and original intentions of the programme, the community scouts have largely been co-opted by the IAPF’s para militarised anti-poaching force with worrying implications for the scouts and intra-community relations (Massé et al. 2017).
The Niassa National Reserve (RNN)

My field research in Niassa was nowhere near as intensive or for as long as in SGP, my primary field site in the GLC where I focused on rhino poaching. But it is a productive complement to the data and analysis on rhino poaching. It offers insight into how conservation-security and anti-poaching compare and contrast in different areas and with a focus on different species. Indeed, there are similar dynamics in and around the RNN as found in SGP, the GLC, Kruger, and Mozambique’s Limpopo National Park (LNP). I draw from my experience and interviews conducted there to support my arguments and analyses and thus find it worth including in this dissertation. However, the geographic differences between the two spaces and the ecological differences between rhinos and elephants also provide a productive point of contrast. It is thus worth providing some contextual detail.

Figure 4: The Niassa National Reserve, Mozambique (Cartography credit: F. Massé)
Mozambique’s Niassa National Reserve (RNN) is in the far north of the country with the Rovuma River as its northern boundary, which is also the border between Mozambique and Tanzania. Spanning the Niassa and Cabo Delgado provinces, the reserve is a massive 42,000 km$^2$. The RNN is home to one of the largest elephant populations in the world and approximately 70% of Mozambique’s elephants (Chase et al., 2016). The human population within the reserve is approximately 40,000 with the majority in the Mecula area. The reserve is also one of the most significant Miombo woodlands in the world and is home to deposits of gold and precious gems, including rubies and emeralds. Subsistence agriculture is the main livelihood activity in the reserve and is supplemented by fishing and hunting. Interviews with those working in the RNN indicate there is also a substantial amount of artisanal mining for gold and precious gems, as well as a booming trade in illegal timber (Interviews, 12/06/2016; 12/02/2016).

First established as a protected area in 1954 by the Portuguese to prohibit commercial hunting, the reserve was largely left unmanaged during the country's civil war (Interview, 11/05/2016), like many of Mozambique's protected areas (GLTP, 2002). Even though it underwent several boundary changes, including a boundary downsizing to 12,380 kms$^2$ in 1969, and expansion in 1999 to its current dimensions, it existed merely as a paper park until the early 2000s (Interview, 11/05/2016). For much of this more recent and functioning history, the reserve was divided into a 22,000 km$^2$ core area surrounded by 20,000 km$^2$ buffer zone consisting of various privately-held concessions, largely operating as hunting blocs.

In 2002, reserve management underwent an institutional change as a group of private investors formed the Sociedad da Reserve do Niassa (SRN) to manage the area under a 10-year

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agreement with the Government (Interview, 11/05/2016; 12/02/2016). Under this agreement, the RNN saw increased investment to rehabilitate the reserve. This investment came largely from trophy hunting in the private concessions and philanthropy from various organisations, notably Flora and Fauna International, among other organisations and individuals. According to a former official of the SRN, "within the period of 2002 onwards it transformed into the area with the greatest number of private sector operators, producing the largest number of revenues in Mozambique" (E-mail communication, 5/11/2014). Given the size, remoteness, and logistical difficulties of the reserve, this is nothing short of impressive.

The agreement with the SRN ended in 2012 when a co-management agreement between an NGO, namely the Wildlife Conservation Society (WCS), and the Government of Mozambique (GoM) replaced it. WCS largely acts as a technical advisor managing the reserve on the ground in areas not occupied by private operators. The new management structure dissolved the core-buffer zone spatial dynamic and divided the reserve into 16 blocs that are up for tender to private operators. Currently, 13 concessions are managed by private operators with the remainder, and the overall management of the reserve, administered by the WCS-GoM partnership.

The RNN also occupies an important regional position. Together with Tanzania’s Selous Game Reserve, it is part of an unofficial transfrontier conservation area and the focus of a Memorandum of Understanding (MoU) between the two countries (WCS, 2015). Signed in May 2015, this MoU principally focuses on cross-border collaboration to combat elephant poaching and the illegal timber trade. While there is a substantial amount of illegal logging and mining in the RNN, what has garnered the most attention is the unprecedented increase in commercial elephant poaching that has ravaged elephant populations in the area. Indeed, the Selous-Niassa
system is described as "the most significant poaching hotspot in Africa" (EIA, 2014, p. 6), suffering a 75% decline of its elephant population in ten years (Chase, et al., 2016). The RNN itself lost half of its elephants from 2010-2015, with 3-4 elephants killed per day (da Manhã, 2014; World Bank, 2014b). The current population is at approximately 4,400, down from 12,000 in 2012 (WCS, 2015). Like rhino poaching in the Mozambique-South Africa borderlands, elephant poaching in the RNN is transnational. Most elephant poaching gangs come from Tanzania. They collaborate with people from villages in the RNN who work in support roles to track and locate elephants, house poachers, and transport the tusks back to Tanzania (Interviews, Mozambican Judge, 07/06/2016; Reserve Manager, 12/06/2016; Ranger Raimundo, 06/06/2016).

The poaching numbers in the RNN have slowed down. However, it is hard to conclude that this is the result of anti-poaching and law enforcement in the reserve. As one official working in the RNN explained, it could be due to increased security and law enforcement interventions. But, he said, it is also quite likely that poaching levels and the carcass ratio are down because the numbers of elephant are down making them more difficult to find (Interview, RNN Official, 12/02/2016). With that said, efforts to combat elephant poaching at various scales and within the RNN specifically, have intensified. Indeed, the results of the GEC and other studies have arguably "motivated the governments of Mozambique and Tanzania to implement new measures to stabilise elephant populations" (Chase, et al., 2016, p. 19). It is these actions that were the focus of my time in the RNN, as well as interviews and the attending of various related workshops and meetings.
**Bringing the GLC and RNN Together**

The GLC (and broader GLTFCA) and RNN cross paths not only in that they are major areas of commercial poaching, but because of their ecological and economic potential. Given this, they are touted as flagship (transfrontier) conservation areas and sites for the development of neoliberal conservation and development initiatives. The state and various transnational agencies posit them as engines that can catalyse the growth of the country's conservation sector and contribute to local and national economic growth and poverty alleviation through the development of wildlife and conservation economies (All Africa, 2014; GoM & MITUR, 2011; Noticias, 2014; World Bank, 2014a, 2014b). Moreover, both the GLC and RNN lie adjacent to an international border with both poaching and security being transnational. Given these realities and the multiple and more-than-conservation framings of poaching, both the GLC and RNN are singled out as key sites for conservation-security, but also border, territorial and national and regional security.

**A Note on Rangers and Anti-Poaching Personnel**

The ranger, otherwise known as an anti-poaching personnel or conservation law enforcement officer, is a primary figure in this dissertation. So are anti-poaching managers and colleagues in the Environmental Police and Border Patrol. At many times on-the-ground it is difficult to distinguish between field rangers, the Environmental Police and Border Patrol. I have sketched out some of the differences above. But, on a daily basis, those who work in protected areas effectively function as conservation-security, anti-poaching, and conservation law enforcement personnel and fall under the anti-poaching unit or conservation law enforcement management of

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29 This sentiment is also supported by many interviews with ANAC and Government officials (17/07/2013, 5 29/07/2013a; 29/07/2013b; 04/11/2015).
the reserve. For this reason, I use the phrase “ranger,” “APU personnel,” and “conservation law enforcement personnel” throughout the dissertation and distinguish when and where needed.

The anti-poaching units I spent time with are organised in a military-like hierarchy with basic field rangers at the bottom followed by sergeants and corporals (or other superior rank). Above them is the anti-poaching or law enforcement management. I cannot detail the intricacies of every reserve I spent time at so I will focus on SGP and the GLC as that is where most of my research took place. As mentioned above, SGP’s anti-poaching is managed by the International Anti-Poaching Foundation, an NGO that aids and assists, or more accurately conducts, anti-poaching.

It is almost impossible to generalise who a field ranger is, and there are differences between protected areas. However, all field rangers I encountered in Mozambique were black Mozambicans. With very few exceptions (namely in the LNP) all were male. They come from a variety of backgrounds but those with military or law enforcement backgrounds are increasingly sought. In SGP, no rangers come from surrounding areas and this is the case in the reserves throughout the GLC. This is a conscious decision by management because they fear that ties with local people will make rangers more susceptible to the corruption and lure of the rhino horn trade, and thus more likely to work with poachers and poaching syndicates (Interviews 2012-2016). Of course, this only serves to reify that conservation and rangers are working against local communities, not with or for them.

At the time of my research, the conservation and APU managers at SGP were all white males. Some came from a special forces or other security-like background, while others went through the ranger training process in South Africa and had previous experience working in South African protected areas. Except for one manager who was British, the others were all
South African and they are all between the ages of 23-35. The conservation managers who are responsible for the management of the reserve are older. The founder of IAPF is a former sniper from the Australian special forces. The Colonel, who was for all intents and purposes in charge of the APU by the time I left, was born in then Rhodesia (see Chapter 2 for more on the Col.).

All personnel from the Environmental Police and Guarda Fronteira I encountered were male, black, and Mozambican. Most have a military, law enforcement, or security background. Both the Environmental Police and Guarda Fronteira fall under the command of the Ministry of the Interior as state security institutions. They do not fall under the jurisdiction of Mozambique’s National Administration for Conservation Areas (ANAC), although they work closely together. This is especially so with the PRNMA, or Environmental Police. Whether private rangers, state-rangers, the PRNMA, or Guarda Fronteira, they are all imbued with the authority to police protected areas as codified in Article 50 of Mozambique’s Conservation Law (GoM, 2014; also see Chapter 6). Before detailing the practices of these conservation-security actors in the current poaching conjuncture, I provide a history of efforts to regulate human-wildlife relations in the Mozambique-South Africa borderlands.
Chapter 4

Territory, Security, and State Power: Controlling Hunting, the Wildlife Trade, and Promoting Conservation in (Post)Colonial Mozambique

Introduction

Scholars have written much on the relationship between conservation, controlling hunting, and controlling territory and people (Cavanagh & Himmelfarb, 2014; Neumann, 1998, 2001; Peluso, 1993; Vandergeest & Peluso, 1995). The historical analysis in this chapter examines how these and related dynamics have played out in southern Mozambique. More specifically, I use archival documents and existing research to examine efforts to control hunting and promote conservation in southern Mozambique from the mid 19th century onwards. I focus specifically on the area of the Delagoa Bay (now Maputo Bay) hinterlands and former Gaza Kingdom that roughly translates to modern-day Gaza and Maputo provinces of Mozambique. I argue colonial and post-colonial state efforts to control hunting, the wildlife trade, and human-wildlife relations have long been informed by and productive of more-than-conservation aims, practices, and processes related to security, sovereignty, and territorial control in the interior borderland areas.

Highlighting the ways in which the relationship between conservation, wildlife, and the state has long articulated with and been productive of broader state-making processes, and vice-versa, the specifics of southern Mozambique contributes to debates concerning conservation and wildlife-related state interventionism. Such an analysis also provides context for the contemporary intensification of conservation security and law enforcement in the region by highlighting points of convergence and divergence between present-day interventions in response to rhino poaching and the history of wildlife trade and state-conservation relations that precedes it.
Commercial Hunting and the Wildlife Trade in the 19th century Gaza Kingdom

Anyone can be a hunter (uhloti, mu-ba), but there are men who are called phisa (dji-ma). It seems that certain individuals particularly deserve this title, having made of hunting a kind of trade. I do not know of any special ceremony of initiation being necessary in order to become a regular hunter. However, as we shall see, the phisa form a class by themselves, having their own medicines and their special way of living (Junod, 1912a, pp. 55-56).

The maphisa (phisa = singular) were professional hunters in the Gaza Kingdom located north of the Portuguese trading settlement and then capital of Lourenço Marques in what are roughly present-day Gaza and Maputo provinces of southern Mozambique. Specialising in large dangerous game like elephant, hippos, buffalo, and rhino, as well as feline predators, the maphisa were a caste apart in the society (das Neves, 1878; Dias Coelho, 2015; Harries, 1977; 1983; Junod, 1912a, 1912b). Unlike most others in southern Mozambique, they did not farm for a living or work in South African mines. Nor was their hunting for subsistence purposes. They hunted for commercial purposes, trading wildlife products like rhino horn, hippo teeth, and especially ivory for currency and imported luxury goods like gold, metals, cloth, and firearms (Breckenridge, 2004; das Neves, 1878; Dias Coelho, 2015; Harries, 1977; 1994; Junod, 1912a). They traded with the Portuguese, but also Indian Banyans30, Arabs, Chinese, other Europeans, and South Africans. As a result, the maphisa were highly regarded within their communities and were among the highest social castes below the chief, often reporting directly to him.

30 The Banyans were Indian merchants
The *maphisa* were not alone in being professional African or black hunters in the Delagoa Bay region. South of the *maphisa* and Lourenço Marques were the *amapisi*, who were a similar “specialized guild of elephant hunters” (Breckenridge, 2004, p. 37) or “professional hunters” for commercial gain (Harries, 1994, p. 9). They were distinguished from the *bahloti* or subsistence hunters. It is unclear where the precise differences and lines between the *amapisi* and *maphisa* lie. But, it seems it fall along geographic and linguistic lines with the *maphisa* working in and belonging primarily to the Shangaan speaking Gaza Kingdom, and the *amapisi* operating
south of Lourenço Marques associated with Swazi, Maputo, and Zulu dominated areas. While their histories intertwine and overlap, I focus more specifically on the *maphisa* as much as is possible given that their hunting territories overlap with the present-day sites of the Limpopo National Park and Greater Lebombo Conservancy that lie adjacent to South Africa’s Kruger National Park. Moreover, it is the Gaza Kingdom that was one of the last lucrative elephant hunting territories that the Portuguese sought to control in the mid to late 19th century.

The ivory trade was by no means limited to the Delagoa Bay hinterlands. Indeed, it had long been occurring in northern Mozambique for centuries, an area that was arguably one of the most important elephant hunting grounds and sources of ivory in the world, and subsequently a great source of wealth for Portuguese and banyan traders (Alpers, 1974; Newitt, 1995). I focus on southern Mozambique because of its overlap with my primary research sites, as mentioned above, and the long history of conservation and wildlife-related interventionism there. Similarly, while the ivory trade in the region pre-dates the mid-18th century, I begin my analysis in that time period because it is around then that the trade in Delagoa Bay region began to peak, and the Portuguese began aggressively intervening to control it.

To be sure, the *maphisa* and *amapisi* existed before Portuguese contact. But, they truly rose to prominence when the Europeans and the *Banyan* traders began hiring them to supply the international ivory market (Harries, 1977; Junod, 1912b). In 1825, the Portuguese Commercial Company established a trading settlement at Lourenço Marques, present-day Maputo, Mozambique’s capital. The Portuguese government granted it monopoly rights over the purchase of slaves and ivory in the Delagoa Bay region (Harries, 1994). But, it was not until 1852 that Lourenço Marques was fully opened to foreign trade and modern firearms became increasingly prominent in the region (Ibid.) Portuguese and *Banyan* traders set up trading posts and networks
in the interior and along major rivers such as the Nkomati. Ivory was the primary commodity. This is when both the *maphisa* and the *amapisi* reached their peak with ivory exports from the region doubling between 1846-1859 (Harries, 1994, p. 13).

Facilitated by access to modern, high-calibre firearms, the *Maphisa* adapted their hunting tactics to "satisfy the demands for ivory" and to a lesser extent rhino horn (Dias Coelho, 2015, p. 56; also see Junod, 1912a; Harries, 1994). Das Neves writes that "the blacks around Lourenço Marques are indisputably the finest shooters and best hunters of elephants in all of Eastern Africa" (das Neves, 1878, p. 11). Traders paid the *maphisa* per quantity of ivory, buying up the valuable resource all along the borderland areas including Moamba, Sabié, and Mapulanguene all the way north to Chicualacualala (an area that directly overlaps with the GLC and LNP and the primary area of my research). By the 1860s the primary ivory hunting areas in the Delagoa Bay Region moved north, from south of the Nkomati to the Olifant-Nkomati, further into the Olifants-Limpopo basin, and then to the area of the Save River, squarely within the Gaza Kingdom and *maphisa* territory (Harries 1997, 1994).

The Gaza Kingdom was considered a wealthy area because of the substantial territory and elephant populations. Indeed, Junod writes that "Portuguese natives from Delagoa Bay began to send natives to Gaza with guns and powder to hunt elephants, and paid them in hoes; twenty, fifty, one hundred hoes for a tusk, according to its size" (Junod, 1912b, p. 250). Many *maphisa* or "regular hunters" worked on contract for particular traders who furnished them with firearms, ammunition, and gun powder (das Neves, 1878; Dias Coelho, 2015; Harries, 1977; 1994; Junod, 1912b). A source of luxury and immense wealth, the ivory and *maphisa*-led economy led to a concentration of the regional economy around the valuable resource and its export (Breckenridge, 2004; Harries, 1977; 1994; Lopes, 2016). From the 1850s until the end of
the 19th century, the “raison d’être” for Lourenço Marques [was] the ivory trade, supplemented by hippo ivory and animal skins” (Harries, 1977, p. 69). However, while ivory was abundant, the Portuguese colonial authority did not exert the control over hunting, the ivory trade, or the subsequent accumulation of wealth that it desired.

Given this, a famous Portuguese hunter and trader, Diocleciano Fernandes das Neves, went to southern Mozambique in 1860 to examine and find solutions to the "deplorable state" of the ivory trade in the area as it had slowed down significantly for the Portuguese (das Neves, 1878, p. 24). While not infallible, Neves’ writings are one of the most important primary sources and accounts of the maphisa and the ivory trade at the time. There were several reasons for why the trade slowed down. There were, for example, concerns surrounding the dwindling elephant numbers because of the efficiency of the maphisa with their new high-powered rifles (Harries, 1994). Arguably more importantly, the Portuguese colonial authorities did not exert authority over the territories in which ivory was sourced, nor over the maphisa or the non-Portuguese traders, especially the Banyan, who often worked directly with the hunters. The problem was less the number of elephant and more that many local chiefs in the Gaza empire were restricting Portuguese access to elephant hunting and ivory in the interior (das Neves, 1878; Junod, 1912a; Harries, 1994). In the words of the Governor of Lourenço Marques in 1875 speaking about the Portuguese and the interior, especially as it concerned hunting and the ivory trade: “We do not really rule” (quoted in Harries, 1994, p. 13).

The African Gaza authorities, rulers (hosi), and Kings (inkosi) had a system of taxation whereby any products of the soil and hunting had to be shared with the Chief, with spoils making their way up the hierarchy (das Neves, 1878; Junod, 1912a; Harries 1994). In certain areas where there was no agreement between the Portuguese and the chiefs, the Chief “reserved the
monopoly of elephant hunting to himself and his warriors” (Junod, 1912a, p. 378). Chiefs and other local authorities taxed each tusk. Meanwhile, Harries (1977) argues that even as late as 1892, the Portuguese only had sufficient control to demand taxes of any sort within a 20-mile area surrounding Lourenço Marques, never mind the interior where the majority of elephant hunting and ivory trading occurred.

Because of this system and subsequent lack of control over the territory and ivory trade by the Portuguese, each ivory transaction had become increasingly challenging and dangerous because of what Neves calls extortionist Kings. Particularly problematic was Mawewe, who controlled the interior from Lourenço Marques in the south to Zambezia in central Mozambique (das Neves, 1878; Lopes, 2017). The area of the Incomati river around Moamba, near the southern portion of the GLC and adjacent the southern third of current day Kruger, was also problematic. Neves describes Modai, the ruler of Moamba, for example, as an enemy of the whites and that the Moamba area was always hostile to outsiders (1878, p. 26). Harries (1994) similarly noted the degree to which the Portuguese were extorted in the area north of Lourenço Marques. The Portuguese authorities wanted this to change.

**Connecting Authority and Control Over Hunting and Territory with Colonial Sovereignty Adjacent South Africa**

With access to elephant hunting restricted in some areas by local chiefs and the subsequent trade in ivory increasingly controlled by *banyan* traders, the Portuguese sought to increase their control over the interior to secure their ability to profit from hunting and the ivory trade. They did this by asserting control and authority over the territory in which the *maphisa*, and others, hunted. The Portuguese wanted to rid the Chiefs and *maphisa* of their authority and impose
Portuguese colonial sovereignty in the area. Control over hunting and wildlife and control and authority over territory were thus intimately connected. At the end of the 19th century, the Portuguese thus began to take control of key areas, regulate hunting, and re-organise the territories and authorities of southern Mozambique. This lead to the decline of the maphisa class and an increase in Portuguese control over elephant hunting and the ivory trade in the area.

*Ousting Gaza Kings Mawewe and Gungunhana*

In 1895, Mouzinho de Albuquerque captured Gungunhana, the last inkosi or King of the Gaza Kingdom (1821-1895). Gungunhana and his kingdom occupied a vast territory and exerted authority over a massive area rich in ivory and elephant hunting. His ousting was the last and final blow in a string of Portuguese military and non-military interventions to control the area, its wildlife resources, and their trade.

All throughout southern Mozambique, key Portuguese hunters and traders entered into agreements and alliances with local chiefs for hunting or ivory rights. Such alliances were also used to oust non-cooperative rulers and authorities to gain control over the territories where elephant hunting similarly occurred. Most famously, the ruler Muzila (and father of Gungunhana) in what is now southern Mozambique sought the support of the Portuguese hunters Neves and Albasini to defeat his rival and brother Mawewe who governed Gaza from 1858-1864. In exchange for military support and firearms, Muzila promised them elephant hunting rights in the territory (Harries, 1977; Liesegang, 1986; Lopes, 2017). Signed on May 27th, 1862, this was known as the Tratado de Vassalagem (Liesegang, 1986). The Muzila-Portuguese military alliance ousted Mawewe in 1864.

The Portuguese signed similar accords such as the Tratado de Vassalagem, Amizade de
Comercio 25 July 1885 and Tratado de Vassalagem 12 Oct 1885, with Gungunhana who replaced his father, Muzila, in 1884. However, Gungunhana was much less cooperative than Muzila was with Europeans and maintained authority and control over hunting and the ivory trade. Indeed, he enjoyed a monopoly over elephant hunting and ivory in the massive and lucrative Gaza territory. This was a problem for the Portuguese as other rulers were emboldened by him and followed suit (Dias Coelho, 2015). Gungunhana thus posed an unacceptable challenge to the ivory trade, but also to Portuguese authority and sovereignty in and over the area of the Gaza empire in southern Mozambique.

Led by Albuquerque, in 1895 the Portuguese mounted a military campaign against Gungunhana and captured him, effectively ending his authority and control and replacing it with their own. But, as Dias Coelho (2015) describes, it took eight years for the Portuguese to effectively establish control over hunting in the area. This was achieved through a combination of newly created laws, territories, and the enforcement of each.

Controlling Hunting to Control Territory

The strategy of imposing sovereignty by the Portuguese colonial authorities was known as “effective occupation” (Vail, 1976, p. 390). Effective occupation meant “First, the rule of law should penetrate areas claimed [and] Second, that there should be concrete economic development of the colonial territories” (Ibid.). The Portuguese ‘effectively occupied’ the Gaza Kingdom through military occupation. In most of the rest of the country, they concessioned massive areas and outsourced effective occupation to “Companies” who acted on the Portuguese’s behalf and used their own security forces. In return, the companies could exploit the labour and resources in the concessions they had rights over, including ivory and rhino horn.
(do Nascimento Thomaz, 2013; Neil-Tomlinson, 1977a, 1977b; Vail, 1976). This was the dynamic that characterised the area that now encompasses the Niassa National Reserve.

After Gungunhana was ousted, the Portuguese kept a constant military presence in the region to maintain control over the area and its residents. One of these outposts was on the Nkomati, in the heart of the interior and ivory trading routes (Harries, 1977). In addition, the Portuguese established the circumscription system and a series of military bases throughout the area to reorganise land, people, and authorities (de Albuquerque, 1934; Newitt, 1995). One of the Circumscriptions was the Sabié Circumscription, which is now Sabié District (Governo do Distrito LM, 1899; Adam, 1996). 31 Both Sabié and the Nkomati area are at the heart of the current rhino trade and efforts to combat it.

The circumscription system was a strategy to divide territory and populations into manageable segments each with their own administrator, authority, and military presence (Adam, 1996; de Albuquerque, 1934; Dias Coelho, 2014; Newitt, 1995). This was effective occupation and control over land, resources, and people through the re-organisation of territory and authority. Each circumscription was under authority of a colonial administrator operating in the name of the Crown and colonial authorities. These administrators worked to turn local political authorities (hosi) into "auxiliaries" of the colonial administration (Dias Coelho, 2015, p. 98). Moreover, it was the administrators of these circumscriptions who were responsible for enforcing new hunting regulations implemented by the Portuguese (de Albuquerque, 1934; Dias Coelho, 2014; 2015).

Portuguese desires to expand its sovereignty over southern Mozambique and increase its control over the territory, resources, and people through the in the area dovetailed with new

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31 I also consulted the Historical Archives of Mozambique for information on the history of Sabié and its circumscription which many of the primary documents in this section are from.
international pressures, norms, and regulations surrounding wildlife protection. Specifically, during the same time as the re-organisation of territory under the circumscription system, international pressure by colonial powers to curb elephant hunting for conservation purposes began to increase. Most important was the London Conference on the Protection of Wildlife in Africa in May of 1900 (more on this below). The Conference and related pressures, for example, influenced the creation of colonial hunting legislation including the first Regulamento de Caça (Regulation on Hunting) in 1903 and many others that followed (Dias Coelho, 2014; 2015). The Portuguese mobilised this new turn to conservation for its more-than-conservation agenda.

The Portuguese had expressed concern over the staggering number of modern firearms and the efficiency with which the *maphisa* used them to kill elephants in huge numbers (Harries, 1994). But, like so many colonial hunting policies, the Regulamento de Caça privileged European sport hunters and attempted to outlaw Africans from hunting. It specifically forbade the *maphisa* from hunting and prohibited Africans from using firearms (Director Circular Aduaneiro, 1901). This sounded the death knell for the *maphisa* class.

A suite of hunting and wildlife related laws followed the Regulamento. A license was needed to hunt with a firearm which was only valid in defined areas. New fines for hunting and those found to be selling or in possession of animal parts were put in place (Secretaria do LM, 1901). Those who could not pay had to perform free labour for the colonial authorities. Moreover, an informant structure was established to incentivise people to report on transgressors of these hunting and ‘conservation’ regulations. A third of the fine would go to the informant who made the conservation crime knowable (Secretaria do LM, 1901). If there were no informants then the authorities, either the police, customs agents, or officers of Camara Municipal (a type of municipal governing body), would receive that portion. The rest of the fines
would go to the Governor of the District and the Administration of the Circumscription (Governador de Moçambique, 1902). These legislative maneuvers were not driven not primarily by ecological concerns *per se*, but by the need to sustain a supply of ivory and control over territory and resources. Working under the framework of new international norms, control over elephant hunting in Mozambique by the Portuguese was thus given a sense of legitimacy based on international ideals of wildlife protection, even if that was not the primary intent.

Once again, it was the authorities of each circumscription, with the support of military forces, who were responsible for enforcing these new laws on hunting and wildlife use. What we see with the circumscription system is thus the territorialisation of hunting laws and their enforcement to specific territories as a broader method of territorial control and sovereignty.\(^{32}\)

**Controlling People and Movement**

Territorial control consists of more than simply exerting authority over space and resources, it is intimately connected to control of movement and flows of people and goods. Ivory was one such good and the *maphisa* and other hunters were one group of people. To be sure, the ivory trade encouraged the movement and migration of people. According to Breckenridge (2004, p. 37), the ivory trade “placed a premium on long-distance travel as a means of subsistence” for both hunters and porters and encouraged the movement of people within and across Portuguese East Africa (also see Harries 1977; 1994). This mobility made taxation and the levy of passport fees difficult. Arguably more important, it reduced the ability of the Portuguese to recruit and tax migrant labour for the Transvaal which was becoming an increasingly important source of revenue for the colony (op cit; Lopes, 2017; Lunstrum, 2007; Newitt, 2005). Indeed, Dias (2015)

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\(^{32}\) This is an argument I develop further in Chapter 6 and 7 focusing on the contemporary context.
argues that hunting laws and regulations were primarily put in place in the early 20th century not only to control hunting, but to control movement of people and improve Portuguese control over its territory, especially in the borderlands.

However, it was not only the maphisa or black Africans that the Portuguese sought to control. While the Portuguese succeeded in all but eliminating the maphisa caste, there were hunting incursions into Portuguese territory by white hunters from Southern Rhodesia and South Africa. Here too the Portuguese utilised hunting legislation to control the movement of people and exert authority over its territory. The Portuguese were especially concerned with preventing the movement of white hunters from these neighbouring colonies (especially the area of what is now Kruger) into Mozambican territory. For example, the Secretary General wrote in August of 1901 about the difficulty of controlling hunting and protecting species no matter what laws existed because of clandestine hunting and people coming from neighbouring states (Director Circular Aduaneiro, 1901). Hence, the momentum to implement hunting laws and regulations was, according to Dias (2015, p. 152) “just as much about consolidating Portuguese colonial sovereignty and stopping the incursions of hunters coming from neighbouring colonies as it was about impeding the actions of the maphisa.” Many of the regulations that the Portuguese implemented were a means of knowing who was in the area by making unwanted hunters visible, and thus controllable (MacKenzie, 1997). The regulations mirrored the ways in which protected areas prohibit the free movement of people in and out of them and of broader state-making practices of making bodies, resources, and their circulations within a specific territory visible (see for example, Scott, 1998; Vandergeest & Peluso, 1995).

The Portuguese could now respond to incursions into their territory by sending military

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33 This is translated from Dias (2015, 152) “tanto para consolidar o domínio colonial Portuguese e evitar a incursão de caçadores vindos das colônias vizinhas quanto para impedir a ação dos maphisa.”
forces after unsanctioned hunters, black and white. A letter to the District Governor in November of 1899, for example, describes how over 200 “blacks” armed with spears were on their way from the Transvaal (South Africa) and attacked a group of “Boer” hunters who had themselves made an encampment (Governo do Distrito LM, 1899). The Portuguese sent an infantry force of 30 soldiers, 4 artillery soldiers and 10 cavalry (Anon., 1900). The Portuguese also deployed troops, artillery soldiers, and cavalry as reinforcements in certain areas along the border. One such area was the Sabié Circumscription and the Incomati area where the Portuguese sent a force of 30 soldiers and 6 cavalry lines under the auspices of controlling the movement of hunters across the border and into Portuguese territory.

The initial desire to control hunting by the Portuguese was clearly not about protecting or conserving wildlife. However, by the turn of the 20th century, conservation objectives, or at the very minimum conservation logics, began to emerge as more important and influential. Growing international pressure to more effectively conserve wildlife and regulate hunting for conservation purposes could not help but influence Portuguese colonial hunting policies. Correspondence available in the Historical Archives of Mozambique demonstrates that Portuguese colonial authorities were in regular communication with other colonising powers, especially the British, about the development of new conservation laws and areas in those colonial territories (Governador do Zambezia, 1902; Secretaria Geral, 1901, 1905). Wildlife exports had to comply with regulations set out in the London convention of 1900, for example. Letters show how there was a push to have the Portuguese implement the regulations with force in their African territories (Secretaria Geral, 1901). However, the authorities realised the difficulty of controlling all territory and the “impossibility” of creating hunting reserves given the lack of law enforcement authorities in the interior (Governador do Zambezia, 1902; Secretaria do LM,
1901). One suggestion from the Governor of Zambezia was to focus on the exporters of wildlife products, namely ivory, and increase penalties to them as this “would prevent the deaths of young elephants” (Governador do Zambezia, 1902). It is not clear whether this suggestion was followed. The Portuguese did establish a system of Coutadas, or hunting reserves, throughout the country. But, these largely existed as ‘paper parks’ and hunting grounds for European and white South African trophy hunters (Lopes José, 2017). One such reserve was Coutada 16 adjacent to South Africa's Kruger National Park, which became the Limpopo National Park in 2001.

Efforts to control hunting in the borderlands largely disappeared in the mid 20th century with political tension, the decline of the ivory trade, the war of independence (1964-1975), and the onset of the ‘civil’ war (1977-1992). However, interventions in the Mozambican borderlands to use conservation and concerns over hunting and the wildlife trade for security, military, and territorial purposes re-emerged during the latter period of the Rhodesian and South-African-instigated ‘civil’ war in Mozambique.


[T]he South African conservationist lobby, one of the most influential and sophisticated in the continent, has been used by some of the specialist counterinsurgency or covert action units of the South African Defence Force (SADF) (Ellis, 1994b, p. 53).

Two years after Mozambique’s war of independence saw the beginning of the Rhodesian and South African backed ‘civil’ war in Mozambique. Lasting from 1977-1992 the war resulted in the deaths of approximately 1 million people and displaced over 5 million more (Lunstrum, 2009). The other casualty was wildlife as it was all but decimated because of uncontrolled hunting, the killing of wildlife for food and parts by armed groups and militaries, and as
collateral damage from armed conflict (Lunstrum, 2009; Vines, 1991). Even with this backdrop, the late 1980s and early 1990s was a productive period for conservation-related discussions in the South Africa-Mozambique borderlands. This is a conservation effort, and effort to control the ivory and rhino horn trade that cannot be disentangled from security and military objectives at the time and the reality that the borderlands were a hotspot of the conflict. Indeed, South Africa’s Kruger National Park that borders Mozambique was an important staging ground for the South African military and RENAMO insurgents in Mozambique (EIA, 1992; Ellis, 1994a; Koch, 1993; Lunstrum, 2015b; Reeve & Ellis, 1995)

Controlling the ivory (and lesser extent rhino horn) trade in southern Africa was intimately connected to South Africa’s de-stabilisation of neighbouring countries, including Mozambique, known as the Total Strategy (Ellis, 1994b). Ivory and other natural resources flowed out of Mozambique to South Africa and this helped fund South African Defence Forces (SADF) and the groups it supported such as RENAMO in Mozambique (EIA, 1992; Ellis, 1994a; Koch, 1993; Reeve & Ellis, 1995). Elephants were hunted in Mozambique, ivory was moved out to South Africa and elsewhere, and then weapons and resources flowed back in to support RENAMO and the destabilisation campaign (EIA, 1992; Ellis, 1994a;b; Koch, 1993; Reeve & Ellis, 1995). Components within the South African government wanted to open the ivory trade up even further. When asked about this, Dr. G. A. Robinson, the Chief Executive Director of the National Parks Board (NPB) at the time, said the entire issue “revolves around Kruger National Park” (EIA, 1992, p. 30). The report he is quoted in goes on to say

Kruger is held up as an example of conservation to the rest of Africa. But there is a side to Kruger few people know about. A side which makes it a focus for the military, Renamo and even, some believe, activities of the “Third Force” (Ibid.).

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34 Resources and arms were also funnelled to South Africa’s other ‘wars’ and destabilisation campaign such as in Namibia.
The “third force” refers to parts of the South African Defense Force (SADF) and police – Apartheid South Africa’s security institutions – who were largely operating on their own, sometimes being referred to as a “government within a government” (EIA, 1992, p. 30; Ellis, 1994a, 1998; Reeve & Ellis, 1995). Indeed, Col. Gert Otto, SADF Special Forces and head of the military unit in Kruger, was the first to propose a cross-border conservation agreement (more on this below), and was removed from Kruger because of his alleged implication in elephant hunting and the ivory trade (Ellis, 1994a; Koch, 1993). Connections, real or putative, between ivory trade and funding military or insurgent activity are thus not new.

The Mozambican government was not innocent either. It also wanted to control and use the ivory trade to fund its defence efforts (Koch, 1993). In 1988, the Mozambican government even applied to the Convention on the International Trade in Endangered Species (CITES) for an increase its elephant hunting quota to allow an export quota of “legally culled tusks” from 2,000 tusks to 18,045 tusks in 1988, and 17,961 tusks in 1989, equivalent to about 60 tons of ivory (Koch, 1993, p. 24).

Elephant and rhino poaching did become the focus of cross-border security and law enforcement efforts in the early 1990s. Archival material from Kruger illustrates how in 1990, authorities in South Africa and Mozambique established the Working Group for Wildlife Law Enforcement as part of the Sub-Committee for Natural Resources. It included conservation and security actors from both South Africa and Mozambique as part of “bilateral international law enforcement co-ordination initiatives,” as stated in a letter from a consultant company to Col. Otto (Farule Consultants, 1991). This letter forms part of a series of communications and documents about this working group in 1990 and 1991 between key officials in SADF, South Africa’s National Parks Board (NPB), Kruger, and Mozambique’s Directorate of Forests and

Objectives of the working group highlight the beginnings of transnational law enforcement and security to address “across border elephant poaching in the Kruger National Park” (n/a, 1990). Minutes from a Working Group meeting cite specific incidents of elephant poaching in the north of Kruger by people from Makandezezula in the present-day Limpopo National Park, and of rhino and elephant poaching in the south of Kruger west of Corumana dam (present-day Sabie Game Park and Incomati Reserve) (Law Enforcement Working Group, 1990). Some of the measures suggested to address the problem of Mozambicans going to Kruger to hunt elephant and rhino included standardised training for rangers, law enforcement training on the “nature conservation laws of neighbouring countries,” “international prosecution,” “joint investigative teams,” cross-border investigations, and “decentralized law enforcement with local law enforcement as points of cross-border contact (Ibid.). Such measures are remarkably familiar to those we see today and which characterise security in the same borderland areas under the auspices of the Great Limpopo Transfrontier Conservation Area (GLTFCA) and the need to combat rhino poaching.

The Working Group for Wildlife Law Enforcement included non-conservation actors and interests and had more-than-conservation objectives and practices. Minutes from a Working Group meeting state that the SADF under Col. Otto would act as “border liaison exploited to establish local contacts” (Law Enforcement Working Group, 1990). The SADF, working under the direction of the special forces Colonel Gert Otto, was thus the main point of contact between local law enforcement on either side of the border for the Wildlife Law Enforcement Working Group. The minutes also highlight the use of the Working Group and local law enforcement to
combat non-wildlife related smuggling (Law Enforcement Working Group, 1990). The minutes indicate that “Joint operations could result in the arrest of a total network or chain, across borders and facilitate prosecution of criminals” (Ibid.). It is unclear what is meant by criminal and network, and if it is only specific to poaching. But, there are repeated mentions of cross-border smuggling, and we know that the illicit cross-border movement of people, firearms, vehicles, and drugs was a problem at the time and a concern for South African security forces involved in the Working Group (Koch, 1993; Law Enforcement Working Group, 1990). Law enforcement under the Wildlife Law Enforcement Working Group was not merely relegated to poaching or wildlife. Indeed, this becomes apparent as we examine interventions to not only promote cross-border law enforcement, but cross-border conservation more broadly.

The coming together of military and security actors, interests, and logics with conservation in the early 1990s was not new but began to crystallise at this point, beginning to resemble what we see today. In the first draft of a study on the feasibility of a transfrontier park spanning South Africa, Mozambique, and Zimbabwe (the effective seeds of the GLTFCA and GLTP) there is a section titled “Hit Squads and Covert Operations: The Militarisation of Conservation in Southern Africa” (Koch, 1993). Others have written on the history of militarised activity and militarised conservation in the region and Kruger specifically (Ellis, 1994a; Lunstrum, 2015b). This report sheds new light on some of the dynamics, how they articulate with the current context and practices of securing conservation.

Much like the Portuguese authorities had done, the South African military entered the conservation arena to control the flow of people across the border. For South Africa, this meant controlling the flow of Mozambican refugees fleeing across the border to South Africa (Joubert, 1992). For example, an SADF unit called the Kruger Commando was stationed in Skukuza, the
main camp and operational headquarters of Kruger, and “was used to track down the illegal refugees fleeing from Mozambique” (Koch, 1993, p. 24). The rationale for stopping refugees was about much more than their safety or that of the ecology they passed through. Writing on SADF’s Operation Pebbles that began in Kruger in 1985, Lunstrum argues the arrest of refugees “and the military build-up put in place to stop them had more to do with state security concerns—i.e., stopping cross-border anti-apartheid activism” (2015b, p. 361). Indeed, the Kruger Commando, led by Col. Otto, was also used the prevent to movement of anti-apartheid activists (Lunstrum, 2015b).

Conservation, and particularly cross-border conservation, was indeed used as a cover for covert insurgency and paramilitary activities in the Mozambican borderlands. The history of the use of Kruger as a staging and support ground for RENAMO and SADF operation is well-documented (Carruthers, 1995; Ellis, 1994a; Lunstrum, 2015b). One report cites “the scandalous use of Kruger National Park as a military base for supporting RENAMO and the hidden agenda that appears to be behind its extension into Mozambique” (EIA, 1992, p. 5). The idea that South Africa sought an “extension of Kruger into Mozambique” and that the military was behind this is well-documented (EIA, 1992, p. 30; also see Ellis, 1994). The language of extending Kruger into Mozambique is common in reports and correspondence by KNP officials, including Dr. Joubert, the Executive Director of the KNP in the early 1990s (Joubert, 1993; Rosinha, 1993). This hidden or covert agenda was to allow South Africa to gain control of the borderlands by allowing SADF to gather intelligence, support RENAMO, and stabilise or de-stabilise the area as they saw fit (EIA, 1992; Koch, 1993; Law Enforcement Working Group, 1990).

While ideas about transfrontier conservation had arguably been floated as early as 1927 (Lopes José, 2017), Col. Otto, the SADF Special Forces Commander and head of the military in
Kruger, was the first to seriously propose the extension and was the one who put the wheels in motion to make it happen (EIA, 1992; Koch, 1993). According to the preliminary study for a transborder conservation area in the region, Col. Otto was “responsible for the first attempt to promote a cross-border park between the Kruger Park and Mozambique, and hopes to make use of his contacts with RENAMO officers of Coutada 16 [now the Limpopo National Park] to secure support for the scheme” (Koch, 1993, p. 25). One way to accomplish this was through establishing MOZAIC, or the Mozambique Assistance and Investment Corporation. Col. Otto and the SADF envisioned MOZAIC as a way to “privatise the ventures established on the eastern boundary of the Kruger National Park (KNP) aimed at containing the influx of refugees from Mozambique” (n/a, 1993). The ventures referred to were bartering with local villages in the Mozambican borderlands “to assist them in obtaining food, clothes, etc” which the SADF was carrying out (Ibid.). The objective of MOZAIC was to not only to curb the flow of refugees through Kruger, but to secure and stabilise the Mozambican borderlands by providing security and intelligence to South African security forces and help generate revenue for South African military activities (EIA, 1992; Koch, 1993). MOZAIC is even cited in a letter about “clandestine uses of the park.” These clandestine activities refer to the now well-understood use of Kruger as a supporting and training ground for RENAMO insurgents and as a staging ground for South African special forces operations in the Mozambican borderlands including security and intelligence operations (Ellis, 1994a). There was no Mozambican on the board of MOZAIC. It is unclear whether MOZAIC was operationalised or if it remained at the conceptual stages as there are letters by South African authorities that deny its existence or claim it was a venture of Col. Otto that never materialised (Joubert, 1992; n/a, 1993; Robinson, 1993). Regardless, the seeds

35 See Lopes José (2016) for a detailed historical overview of conservation practice in what is now the Limpopo National Park.
for contemporary cross-border conservation in the region were sowed in the context of war by non-conservation actors and interests.

**The Post-war Era**

The war decimated the vast majority of Mozambique’s wildlife, especially in the borderlands adjacent to South Africa. Poaching went unchecked, but more importantly, the hunting of game was rampant by military forces to fund their activities, feed themselves, and starve out the enemy (Lunstrum, 2009; Vines, 1991). At the start of the war in 1974, for example, the elephant population of Mozambique was around 50,000 – 65,000 and by the war’s end in 1992 the population was estimated to be 13,000 (Koch, 1993). Almost all of these elephants were in the north of the country in Tete, Niassa, and Cabo Delgado provinces with the exception of about 100 in the far south in the Maputo Elephant Reserve. Given the lack of any effective conservation in the borderlands (and rest of the country) poaching or illicit hunting was common and a major problem for both South African and Mozambican authorities. This devastating wildlife reality, and the almost complete breakdown of conservation in Mozambique, paved the way for the resuscitation of many of its conservation areas and former wildlife areas in the post-war era, including the Limpopo National Park and Great Limpopo Transfrontier Park, the seeds of which were in MOZAIC, as described above.

MOZAIC also intended to bring together state and non-state actors in a sort of soft counter-insurgency approach that resembles what I, along with co-authors, refer to the conservation-security-development nexus in Chapter 8. Dr. Joubert, then Executive Director of KNP, wrote in November of 1992 that the bartering with Mozambican villages was already being “undertaken by SADF and from what I can gather, MOZAIC was intended to assume this
responsibility” (Joubert, 1992). Beyond MOZAIC and the SADF, sources of support and funding for the cross-border Park were alleged to come from Anton Rupert, who now funds the GLTP through the Peace Parks Foundation (PPF), and the World Bank (EIA, 1992; Ellis, 1994b). Both institutions, and especially the PPF are also involved in strengthening conservation in the borderland areas in the post-war era continuing until today with their support for the GTLP, GLC, and cross-border conservation security interventions.\footnote{See Buscher and Ramutsindela (2015) for a current take on the irony and contradictions of Peace Parks and conservation-related violence, what they term “green violence.”}

After the war, conservation, development, and humanitarian activities were carried out by Kruger National Park and the section rangers responsible for the parks sections located along the border with Mozambique. H. Braack, the Kruger Park Warden at the time, writes in November of 1994 that section rangers from Nwanetsi and Tshokwane visit Mozambique “in their official capacity from time to time” to supervise the building of a borehole for Mozambican villages (Braack, 1994a). He writes “both this project and continued contact and good relations with our neighbours could be of inestimable value to the future of this park.” In a separate letter to the Administrator of Mapulanguene in the Mozambican borderlands, he writes about “development aid to [the] Mapulaguene community” (Braack, 1994b). In 1995, officials in Maputo ordered the project to stop, effectively putting an end to Kruger-assisted development in Mapulanguene (Greef, 1995).

In and of itself this “development assistance” would have been a conservation-development relationship and not a conservation-security-development one. However, alongside this development assistance, which included building a shop, trading in firewood, providing wells, and training medical staff, was “selection, training and supervising the deployment of game guards in cooperation with private or international concerns” by the very same Kruger
section rangers (Braack, 1994b). This dynamic is especially pertinent because conservation and wildlife-based tourism were seen as “an effective form of land-use to reconstruct some rural areas in the post-war phase” (Koch, 1993, p. 8). Given the previous and troubling actions of South Africa in the borderlands, a draft feasibility report about the transfrontier park stated that conservation in the area would be a challenge. It reinforced the need “to ensure that rural people benefit in a tangible way from ecotourism – and to ensure that the cross-border park is not seen as a new extension of South African hegemony into Mozambique (Koch, 1993, p. 8). Indeed, one concern was that refugees who were dislocated during the war would return home to find their land lost and under control of conservationists (Koch, 1993; Rodgers, 2009). Ensuring people benefited from conservation and having properly trained conservation-related law enforcement was deemed necessary to prevent poaching in the borderlands and in Kruger because Mozambique “does not have sufficient trained personnel to monitor and deal with the poaching problem” (Koch, 1993, p. 8). Development, humanitarian, and security assistance were thus a strategy to help prevent poaching.

A concern with law enforcement and security operations as part of the transfrontier park for more-than-conservation purposes was explicitly noted. The feasibility report stated that “a “peace park” that provides legitimate cover for clandestine military activities, designed to fuel South Africa’s already astronomical levels of internecine violence, would be the ultimate in environmental contradictions” (Koch, 1993, p. 26; also see Ellis, 1994). Indeed, the same report notes the use of soldiers as game rangers in South Africa, Mozambique and Angola – and is envisaged in some plans for peace parks. This policy seems to be causing problems in the Kruger Park and in Kawazulu Reserve, where the use of former soldiers as game wardens provokes hostility to the notion of conservation (Ibid).
The use of soldiers as rangers in the borderlands on both sides and the problems associated with it from a conservation perspective have become a reality in the current poaching conjuncture.

Mozambique, through Abdul Adamo, Director of the National Directorate for Forests and Wildlife, expressed concern about the cross-border conservation project as Mozambicans indeed perceived it as an extension of Kruger, and were weary of South Africa taking control over the Mozambican borderlands (EIA, 1992; Koch, 1993). A media release from October 1995 cites Adamo’s concerns over issues of “sovereignty” regarding conservation and “wildlife utilisation” (GGCA, 1995). These concerns stemmed from Mozambique’s lack of capacity to undertake such a massive conservation initiative and that would therefore leave the country too dependent on South Africa and Kruger. This fear was exacerbated by feelings of being pushed by the World Bank, international NGOs like the Peace Parks Foundation, and South Africa to agree to a cross-border park (Ibid.). These sentiments concerning South African, and specifically PPF, overreach remain today and exist among Mozambican officials, villagers, and even South African reserve operators in the Mozambican borderlands (Interviews, 17/07/2013; 18/07/2013; 13/11/2015).

**Formalising Transfrontier Protected Areas for Conservation and More**

In October of 1999, officials from Mozambique, South Africa, and Zimbabwe signed a Memorandum of Understanding in Maputo for a tri-partite transfrontier conservation area (TFCA) known as the Gaza-Kruger Gonarezhou TFCA (GKC-TFCA) (SANDF, 2001). The GKG-TFCA laid the groundwork for the present day Great Limpopo Transfrontier Conservation Area including the Limpopo, Kruger, and Gonarezhou national parks. It also included the area between Corumana Dam and the Limpopo National Park on Mozambique’s side of the border. In effect, it sought to transform the entirety of the 350km section of Mozambican borderlands
adjacent to Kruger into a series of protected areas and then integrate those into a cross-border conservation space. Put another way, and harkening back to previous visions of conservation in the Mozambican borderlands (Ellis, 1994a; GGCA, 1995; Koch, 1993), one could say it laid the plan for the extension of Kruger into Mozambique.

While the GKC-TFCA did indeed have conservation objectives, and was likely premised on these, non-conservation related security was also, and again, central to the plan. The “Gaza-Kruger-Gonarezhou Transfrontier Park Security Plan” put together by the South African National Defense Force (SANDF) (not by a conservation or even law enforcement body) highlights various transnational security issues that the park can help address, but that it may also exacerbate. The report cites the primary concerns as the smuggling of people, vehicles, weapons, and drugs with approximately 100 Mozambicans caught each month by SANDF and South Africa Police Services (SAPS) patrols in Kruger (SANDF, 2001). There is curiously no mention of South Africans being caught or involved in illicit cross-border activity. Also noted is a worry about the illegal movement of vehicles through the protected areas. Documents reference the area south of the proposed TFCA (Ressano Garcia to Swaziland) and the 150-300 vehicles smuggled across that portion of the border. It adds a note of caution saying “bear in mind that many of these vehicles were obtained by the killing or injuring of the vehicle owners” (GLTP, 2002a; SANDF, 2001, p. 3). It notes that syndicates “have begun to probe the park for best possible routes through into Mozambique” (SANDF, 2001, p. 3).

The transfrontier park would help to combat these non-conservation security issues by providing an increase and intensification of security, law enforcement, and related patrols on both sides and across the border. There are repeated references to the increase in rangers, funding, and training the TFCA would entail. The plan also envisioned an increase in the
“presence of security patrols on both sides of the border” (SANDF, 2001, p. 3). These patrols were not necessarily to be conducted by rangers or conservation law enforcement officials, but SANDF “who will continue to carry out its normal patrolling function and tie in as closely as possible with the other role players involved in the GKG environment” (SANDF, 2001, p. 7). SAPS will also “be constantly busy in the area, along with colleagues from other intelligence agencies” including the National Intelligence Agency and National Intelligence Coordinating Committee, which were part of the TCFA security committee (SANDF, 2001, p. 7). Once again, informant and intelligence networks under the auspices of conservation (and perhaps in its service) emerge.

We also see the seeds sown for community relocation as a security measure, not necessarily a conservation measure. Under the issue of “populations in Coutada 16 [now the LNP] and Gonarezhou [in Zimbabwe],” the “control measures” to be put in place for these populations included moving them out and having them “controlled by a system?”, the latter of which remains unclear. The removal of communities from the LNP and further south in the GLC has occurred. Some of these relocations are recent, within the last five years, and were carried out with the explicit objective of anti-poaching security as it is easier to police a space that is free from people (Lunstrum, 2015a, 2015c; Massé & Lunstrum, 2016).

In 2001, Mozambique officially transformed Coutada 16 into the Limpopo National Park. A year later, it was integrated into the Great Limpopo Transfrontier Park (GLTP) that was formally established in 2002, and had its roots in the GKG and the imagination of Col. Gert Otto and his SADF special forces. To be sure, one of the primary motivations for establishing transfrontier conservation areas is that they act as “Peace Parks” by facilitating cooperation, peace, and security among member countries (Van Amerom & Büscher, 2005; Ramutsindela,
2007; Wolmer, 2003). At the top of the “Security” section of the GLTP Management Plan the following is written: “It is envisaged that with the creation of the GLTP, there will be an improvement in internal security both within the park itself and along the border between the LNP and KNP” (GLTP, 2002b, p. 117). Given the legacy of the war and lack of effective conservation and law enforcement, there was a significant level of poaching in the LNP, Mozambique’s portion of the transfrontier park. Poaching is a focus of the security strategy. The GLTP is intimately connected to security – wildlife related or otherwise.

The GLTP management plan also draws attention to the disparity between security in Mozambique and South Africa. After detailing the problem of unchecked poaching, for both subsistence and commercial purposes, the plan highlights how “at present [2002], the level of poaching in the KNP is so low that is has no measurable impact on any wildlife populations” (GLTP, 2002b, p. 119). Hence, a mere ten years before the rhino poaching crisis would hit, Kruger had no apparent poaching threat.

The stated reason for the lack of poaching in Kruger was that its security was supported by the military who was tasked with border control, and who thus helped secure the border and movement across it. In addition, credit is given to the KNP Corporate Investigative Services, a “pro-active intelligence investigation unit working with law enforcement agencies in both South Africa and neighbouring states” (GLTP, 2002b, p. 119). The perceived value of this cross-border intelligence for controlling poaching in Kruger is clearly highlighted in the management plan. It claims that it “is largely due to the success of this unit that the KNP security functions can be competently carried out with such a low ranger density” (Ibid.). Even in a post-war era, the military and cross-border intelligence gathering and sharing under the auspices of conservation or anti-poaching were alive and strong, effectively continuing or putting into effect the logics of
MOZAIC and Col. Gert Otto’s much earlier push for cross-border conservation initiatives through and for military and intelligence units. Security-based intelligence to combat poaching is thus not new with the contemporary poaching crisis.

GLTP security plans did seek to broaden this intelligence beyond the space and scope of wildlife conservation. As written in the management plan, “the establishment of intelligence networks beyond the boundaries of the GLTP is a priority” and will include “the creation of a joint pro-active intelligence investigative unit. This should build on the Corporate Investigative services of the KNP, a unit that already cooperates across borders” (GLTP, 2002b, p. 121). One focus of this intelligence and the security committee (of the transfrontier park) is the criminal syndicates “that have targeted the South Africa/Mozambique border for vehicle and weapon smuggling operations” (GLTP, 2002b, p. 122). Moreover, there are also concerns with illegal cross-border migration through Kruger. The management plan states that increased patrolling and increase in the number of dangerous wildlife could help prevent illegal cross-border migration through Kruger (GLTP, 2002b). A pro-active cross-border intelligence operation to combat rhino poaching, dubbed Operation Lebombo, was also created in 2015. Operation Lebombo includes conservation, military, police, and intelligence actors and institutions from Mozambique and South Africa (Emslie et al., 2015; PPF, 2015). In a curious and troubling connection to the days of Apartheid South Africa’s operations in Kruger and the Mozambican borderlands, some South African intelligence operatives who managed RENAMO informant networks in the area during that time now run poaching-related informant networks as part of Operation Lebombo.

Securing the transfrontier park as a spatial and territorial entity is positioned as a strategic method of securing of the GLTP and its boundaries as a conservation territory intimately
connected to more-than-conservation goals. As written in the management plan, “border control security concerns can only be effectively addressed if the entire periphery of the GLTP is secured” (GLTP, 2002b, p. 124). According to the plan, and reflecting long-standing methods of territorial control, securing the periphery includes fencing along the GLTP boundary, increasing rangers and other security personnel, intensifying patrolling within the area, and of course broadening and intensifying law enforcement and security-related intelligence networks.

The Rhino, the Poacher, and the Mozambican Borderlands in the 21st Century

The GLTP is part of a broader transfrontier conservation area, the Great Limpopo Transfrontier Conservation Area (GLTFCA) that includes the GLTP as well as Banhine and Zinave national parks in Mozambique. The GLTFCA plan also proposed the integration of the area south of the Limpopo National Park adjacent to the southern half of Kruger. This was also recommended in the GKG-TFCA plan and is the same area where Col. Otto was particularly active and sought to implement MOZAIC. As the development of the LNP and GLTP ebbed and flowed in the decade after 2002 and eventually gained momentum, very little happened with this southern area that was meant to be home to a series of private wildlife concessions. However, plans to revitalise the area and integrate it into the formal structure of the GLTFCA – finally completing what may be perceived as an extension of Kruger into Mozambique – re-emerged with the rhino poaching crisis (Massé & Lunstrum, 2016). It is during this period that the rhino, not the elephant, becomes an increasingly important figure in plans for the area.

Mozambique has played a role in regional rhino conservation efforts, including in the well-known Operation Rhino in South Africa that brought the white rhino back from the brink of extinction. In 1969, and as part of Operation Rhino, South Africa translocated 71 white rhinos
from the Umfolozi Game Reserve to Maputo Special Reserve and an additional 12 to Gorongoza National Park (Brett, 2000). All the translocated rhinos died during the civil war with the white rhino declared nationally extinct by the mid-1970s (MINAG, 2008). Various personnel from protected areas in Mozambique reported signs of both white rhino (in the south) and black rhino (in the north), but by 2000 it was concluded that there were no viable breeding populations of either in Mozambique (Brett, 2000).

A national wildlife census conducted in 2008 found one black rhino and 20 white rhino (MINAG, 2008). All the white rhino were found in the Limpopo National Park (LNP) (established 2001) and are the result of efforts tied to the development of the Great Limpopo Transfrontier Park (established 2002). These efforts included the translocation of over 4,000 animals from South Africa to Mozambique, including 12 white rhinos (2 in 2002 and 10 in 2004) (Whyte & Swanepoel, 2006). South Africa also removed approximately 60kms of the border fence between Kruger and the LNP allowing wildlife to move freely across the border (SANParks, n/a; Whyte & Swanepoel, 2006). While translocations of wildlife to the LNP continue, that of rhinos has stopped given the poaching threat. However, the increasingly porous border (for animals) still allows for the migration of rhino and other wildlife from Kruger to the LNP (Massé, 2016). Indeed, a specific goal of the GLTP Security Plan is that “security can be improved to the extent that rhino can again be introduced to the GNP and LNP with the assurance that their numbers will increase” (GLTP, 2002b, p. 120).

We also see rhinos migrating from their area of concentration in the southern half of Kruger National Park east into the private reserves adjacent it in Mozambique, like SGP. These reserves make up the Greater Lebombo Conservancy (GLC), which is now formally part of the Great Limpopo Transfrontier Conservation Areas (GLTFCA).
The area south of the Olifants River and north of the Incomati River that borders South Africa's Kruger National Park and that is now the GLC has long been discussed as a potential site for the re-introduction of white rhino and its subsequent conservation. Speaking about the Mapulanguene area adjacent Kruger and in the middle of the GLC, an SADC Rhino Programme Report states: "future zoning of these areas for community and private sector involvement will have major implications for the opportunities for rhino conservation, particularly with regard to the requirement for fencing in areas of Mozambique adjoining Kruger NP" (Brett, 2000, p. 91). Another study points to the potential of the borderland area adjacent Kruger, including part of what is now the LNP for rhino conservation. It outlines "potential zoning, wildlife stocking and ecotourism development within and around a core area of ca. 8,500 km², presently inhabited by an estimated 20,000 people. Estimates for eventual wildlife stocking include 931 black rhinos and 1,150 white rhinos" (Ibid, p. 91). Apart from the area of what is now the LNP, Mapulanguene, located halfway between the northern and southern boundaries of the GLC, was singled out as providing "considerable potential" for the development of rhino conservation areas in Mozambique (Ibid., p. 92).

The theme of finding potential for the re-establishment of rhino populations in the area persisted and included a role for the private sector. In 2004, a Southern African Development Community report on the "principles for rhino reintroduction and conservation in Mozambique" argues for "allocations of wildlife areas for development by the private sector (where the awarding of long-term concessions could stimulate commercial investment in rhino re-introductions)" (SADC, 2004). The establishment of long-term concession to stimulate conservation in the area adjacent Kruger is the precursor to what is now the GLC. Indeed, SGP
has a relatively stable rhino population between 10-25 depending on the day.\textsuperscript{37} This is arguably the only viable rhino population in the country, and there are discussions about using it as a jumping off point to re-create an Operation Rhino-like translocation program to other protected areas in Mozambique (Personal Communication, 23/11/2015).

However, Mozambique and the borderlands adjacent to South Africa, including the GLC and LNP, do not fully enter the current rhino poaching and conservation story because of the numbers of rhino there. Rather, they enter the story because of the numbers of rhino poachers that come from and pass through the area.\textsuperscript{38} The vast majority of rhino poachers in Kruger National Park come from the Mozambican borderlands with the areas of Massingir, Mapulanguene, Magude, and Kaboc being the most important source and transit areas for rhino poachers and rhino horn. They are the home bases for poaching syndicates who organise rhino poaching.\textsuperscript{39} Poachers are native to the areas, or increasingly they come from elsewhere and use these towns and their satellite villages as jumping off points with support from local people.

Poachers go to Kruger on foot, either walking from the villages or getting dropped off by a truck close to a reserve boundary fence and then finish the journey to Kruger which can be as little as 10 kms. They may hunt in the Mozambican reserves or the LNP if they come across tracks or receive intel, but most make their way across the border to Kruger. Once a rhino is killed and rhino horn in hand, or if they are unsuccessful and need to return, they make their way back across the border the way they came. The border becomes important because as poachers

\textsuperscript{37} The number of rhino varies because the fence between SGP and Kruger has largely been removed or not maintained. As a result, rhino move back and forth across the border.

\textsuperscript{38} Since completing my field research, this dynamic has changed. While most poachers are still Mozambican, they are entering Kruger from its Western boundary.

\textsuperscript{39} Interestingly, some of the principal rhino poaching syndicate leaders were also the head of vehicle smuggling syndicates operating across the border that South Africa was pre-occupied about in the late 1990s and early 2000s. The most infamous of the poaching syndicate leaders, ‘Navarra,’ gets his nickname for his preference for stealing Nissan Navarra pick-up trucks. He is also wanted for murder in South Africa in connection with his killing of a veterinarian during the theft of his truck.
and rhino move freely across it, national jurisdiction and norms of sovereignty dictate that anti-poaching and security forces cannot (Massé & Lunstrum, 2016). Joint operations and communication between law enforcement personnel in South Africa and Mozambique do happen, but there is no hot pursuit of poachers across the border.

Hence, despite the grim reality that there are almost no rhinos in Mozambique, the rhino poaching crisis and its geographical dynamics have forcefully re-vitalised plans for conservation and related security measures in these borderland areas. While South Africa and Kruger National Park receive the lion's share of attention, and for good reason, the borderlands to the east and across the border in Mozambique have undergone an unprecedented amount of activity that continues with the trajectory of interventions to control illegal hunting and illegal hunters. Such responses include territorial re-organisation and consolidation such as the creation of new conservation concessions and the consolidation of them and previously existing ones into the GLC. Mozambique also introduced new conservation legislation with the Conservation Areas Law in 2014 and similarly updated the Penal Code to include prison sentences for illegal hunting. We also see the deployment of newly formed Environmental Police, and a general intensification of anti-poaching and conservation law enforcement primarily in the name of preventing rhino poachers from gaining access to Kruger and killing its rhinos, as well as returning and going free. These are all measures I focus on in this dissertation.

Again, though, we are brought back to a common theme: combatting rhino poaching and rhino poachers is about much more than conservation and the protection of a species. As mentioned in the previous chapters and as discussed in Chapter 3, and more in depth in Chapter 8, poaching and poachers are increasingly framed as not only threats to conservation, but as

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40 In various meetings with conservation officials and NGOs, they were unaware that SGP had rhinos, and the national narrative is still that there are no rhinos in Mozambique.
national, regional, and even global security threats. While conservation and protecting the rhino is a motivating factor, conservation security is emboldened and intensified given this framing. Indeed, it has resulted in a host of non-conservation actors and interests becoming increasingly involved in conservation and anti-poaching which finds us in an unprecedented era of securing conservation.

**Conclusion**

While I do not provide an exhaustive history of hunting and human-environment relations in southern Mozambique, this chapter examines the intersections between efforts to control hunting, broader conservation-security interventions, and efforts of (post)colonial state control over territory, people, and human-wildlife relations from the mid to late 19th century to today in what are present-day borderlands of Maputo and Gaza provinces in Mozambique. I argue that one of the recurring themes throughout this period and in this area, is that efforts to secure wildlife and their spaces articulate with more-than-conservation objectives, concerns, and practices and include the important influence and participation of non-conservation security actors and interests. These more-than-conservation objectives include controlling wildlife economies, the unwanted movement of people and goods in the borderlands and across the border, and the ability of state authorities to exert control over the area. Driving conservation security interventions from the mid-19th century onwards is thus an underlying desire of both (post)colonial Mozambican and South African state authorities to control the territory of the Mozambican borderlands and the people, wildlife, and wildlife products that flow through them.

This history provides important context for current anti-poaching efforts and broader political-ecological dynamics that shoot through and facilitate state-making, security, and
territorial control in remote borderland areas. However, while historical parallels with current efforts to combat poaching and secure species and spaces of conservation exist, there is also something qualitatively different about securing conservation in the current conjuncture. The securing of conservation in the Mozambican borderlands and beyond is intensifying in part because of the framing of poaching as integrated into a multi-faceted global security politics. Moreover, and despite its more-than-conservation objectives, practices, and actors, securing conservation is arguably more about conservation than it ever has been as the poaching crisis does indeed threaten the existence of species like elephant and rhino and the broader ecological integrity of protected areas. This is perhaps paradoxical, but it shows the intimate and deepening relationship between conservation and other sectors and interests, namely those concerned with security at and across different scales.
Chapter 5
The Poaching Crisis and Conservation’s Practices and Politics of Visibility

Introduction

While conducting participant observation with personnel from a conservation and anti-poaching organisation in Mozambique, I quickly came to understand the multiple practices of visibility that are central to its operations. Focused on making the killing of wildlife by poachers and the efforts of those to stop them visible, these practices of visibility fall into two categories. Reflecting scholarship on the cultural politics of conservation, the first set of practices is discursive and works to produce a consumable nature and conservation. These practices focus on making violently decimated wildlife, the poachers responsible, and the heroic work of those trying to combat them visible to the public to garner support and raise funds for anti-poaching. The second set of practices reflects broader insights on state efforts to control space, nature, and people (Scott, 1998; Vandergeest & Peluso, 1995) and are concerned with the material practices of anti-poaching. Here, rangers employ a variety of methods and technologies to detect and surveil poachers and wildlife to make their activities and movements knowable and controllable. Rangers also conduct visual policing to make themselves and their authority visible to would-be poachers as a method of deterrence.

41 The reader may think it is curious that I have a chapter that relies largely on discourse and content analysis, despite the claim of using an ethnographic approach. However, my insights into the practices of surveillance and visual policing are a direct result of my observation of rangers and their daily work. Moreover, I saw first-hand how founders of anti-poaching and conservation NGOs communicate with their anti-poaching managers after a poaching event or successful anti-poaching operation for photos, videos, and descriptions that are then put online, often within the very same day that the event occurred. It is witnessing these relationships on the ground and in practice that allows me to form the insights in this chapter. Moreover, I largely use online and public sources to detail events using information available to the public.
This chapter examines the use of these discursive and material, or the consumptive and security-related, practices of visibility in a reserve in Mozambique that is at the centre of efforts to address the rhino poaching crisis. While seemingly disparate, the two sets of practices come together in productive, but also problematic ways. Happening both online and offline, the objective of the discursive practices is to generate much-needed support and funds to pay for the rangers and technologies that make surveillance, visual policing, and security-related practices of visibility possible. These latter practices have always existed behind the scenes, but are increasingly supported and intensifying as state and non-state actors seek to secure nature and conservation territories from the increasing threat of commercial poaching. The poaching crisis and the need to make (anti-)poaching visible to make it viable are thus changing the practices of visibility through which conservation happens. I argue this moves the cultural politics of conservation and related accumulation-strategies away from discursive and material practices primarily concerned with ‘wilderness’ and conservation as a practice upholding this, to a focus on an increasingly decimated and vulnerable nature that requires aggressive and hostile spatial policing, if not outright militarisation. This serves to authorise and normalise a securitised, if not militarised, conservation practice that obscures other ecological and social realities of conservation and shuts down possibilities for different solutions to the poaching problem.

I begin by providing an overview of the literature that traces the interconnections between practices of visibility and efforts to control human-environment relations, the creation of protected areas, and conservation practice, inclusive of its cultural politics. I position anti-poaching’s practices of visibility within this framework. I then turn to my empirical research with a conservation NGO that conducts anti-poaching in a private reserve to examine two broad categories of anti-poaching visibility. The first are discursive practices that make poaching and
anti-poaching visible to the public for consumptive purposes through what I call “anti-poaching tourism” and “poaching porn.” The second is concerned with the practices of surveillance and visual policing used by anti-poaching personnel. In the fourth section, I examine how these practices of visibility come together to produce a simplified representation of a nature under threat and the poaching problem that authorises and normalises a conservation practice that perpetuates violent and exclusionary tactics while closing off possibilities for alternative conservation futures. I conclude by suggesting ways in which practices of visibility may be used to pursue a more socially and ecologically just form of conservation and anti-poaching.

**From Legibility and Simplification to Cultural Politics: Conservation’s Practices of Visibility**

Examining the difference between modern and pre-modern states, Scott (Scott, 1998, p. 2) writes, “the pre-modern state was, in many crucial aspects, partially blind.” By this, Scott means that the space, natures, and people that state authorities sought control over were not visible or legible to them. They did not understand their movements or activities. To better control them, and the relations between each, the state and related authorities developed practices and technologies to make them legible, visible, and understandable.

Making space, nature, and people visible is one of the originary enabling factors of conservation and the establishment of protected areas as a form of state-led territorialisation. Writing on state-nature relations, Whitehead et al. (2007, p. 16) define territorialisation as “the use of space to control and regulate nature.” Alternative definitions of territorialisation aside, territorialisation always entails controlling nature, space, and people by making each, and the relationships between them, visible to the state and other authorities (Bluwstein & Lund, 2016;
Corson, 2011; Elden, 2013; Fairhead et al., 2012; Neumann, 2001a; Peluso & Vandergeest, 2011; Scott, 1998). The creation of protected areas as a process of internal territorialisation is one example of this practice, and has long been a motivating factor behind creating discrete spaces for the protection and conservation of forests and wildlife (Vandergeest & Peluso, 1995). Indeed, the physical and discursive separation of nature and society into discrete, simplified spaces through the re-organisation of territory makes each more knowable, surveillable, and controllable.

What can be referred to as making legible is facilitated by a variety of practices. Mapping, for example, produces a discursive and visual representation of protected areas, their space, that which is in it, and its relation to that around it (Hughes, 2005; Peluso & Vandergeest, 2011; Spierenburg & Wels, 2006; Vandergeest & Peluso, 1995). Practices of mapping also define the boundaries of protected areas or other territories which, along with laws governing natural resources use and human-environment relations, are to be communicated externally and defended by force if necessary (Brockington, 2002; Neumann, 1998, 2001b). Layers of authority and enforcement from security actors and the military to local authorities and forest or wildlife rangers are deployed to establish and enforce these boundaries and rules (GRAA., n/a; Moreto, 2013; Moreto & Matusiak, 2016; Warchol & Kapla, 2012). This enforcement includes rangers who not only carry out ecological and landscape monitoring, but who increasingly focus on anti-poaching (Annecke & Masubele, 2016; Warchol & Kapla, 2012). What contemporary anti-poaching does, however, is set out upon a new type of conservation-related visibility, or more accurately an intensification of surveillance and policing-related visibility that was always present but behind the scenes.
Part of the value of maps and other visual representations of space, resources, and human-environment relations lies precisely in how they abstract and simplify more complex socio-ecological and political-ecological dynamics and relationships (Scott, 1998; Spierenburg & Wels, 2006; Vandegeest & Peluso, 1995). The full social realities of nature, land, and people present too complicated a picture to communicate and manage. Representing these complexities would undo the very work of trying to make nature, society, and the relations between the two legible. As a result, maps, discursive representations, and the lens of the state often ignore, obscure, or render invisible more complex social, political, and ecological realities and relations in what amounts to a type of fetishisation of nature-society and human-environment interactions.

To be sure, practices of visibility are not only meant for authorities who seek to control and manage territory and its various relations. Abstraction, simplification, and the discursive representations of territory and nature-society relations also seek to make land, resources, and activities visible and understandable to outsiders. The cadastral map, argues Scott (1998, p. 45), is “designed to make the local situation legible to an outsider” so that an investor, scientist, donor, or military/policing force will more readily support state land and resource management efforts. The result is a simple narrative that normalises a specific type of nature separated from (certain) people and the interventions needed to uphold this. Anything that disrupts this is rendered invisible to the outsiders being courted.

Conservation practice has long involved making nature and conservation practice visible not only for purposes of surveillance and control, but also for consumptive purposes directed at outsiders. It is here where the cultural politics of conservation and the accumulation needed to make conservation practice a reality come to the fore. Whether through film, tourism, or donations, among other practices, people have long consumed nature in the name of conservation.
Neumann (1998) outlines this politics of visibility and its relationship to African conservation landscapes. Centred on “ways of seeing” nature and landscapes of conservation that are firmly rooted in Anglo-American/European aesthetic ideals of untouched wilderness free from (certain) people, this politics of visibility is informed by a wilderness ideal. This discursive maneuver serves to produce nature and spaces of conservation as abstract entities free from people and divorced from broader socio-/political-ecological surroundings (Brooks, 2005; Brooks et al., 2011; Cronon, 1996; Neumann, 1995). The consumption of these conservation landscapes and practices by donors and tourists helps re-produce a conservation practice based on the familiar and exclusionary protected area model (Brockington, 2002; Brockington & Igoe, 2006; Neumann, 1998). I complement this literature by examining how, with the poaching crisis, the wilderness and abstract nature made visible to the public is increasingly supplemented with the production of a nature under threat. Much like the wilderness ideal, this discursive nature influences the material practices of conservation on-the-ground.

Ways of seeing conservation landscapes, however, have always been about more than non-human natures, with representations of people and their livelihoods being equally important. Ideals of wilderness landscapes as either free from people or under threat by them demands that certain people and their activities are envisioned as separate from such landscapes or threatening to them, if not both (Brooks, et al., 2011; Massé, 2016; Spierenburg & Wels, 2006). Here, it is worth reflecting briefly on the concept of “the poacher” as the poacher symbolises a threat to wildlife, and is fundamental to representations of poaching and decimated natures.

The category of the poacher in Africa as we know it flowed from the creation of legislation and the territorialised conservation model implemented by colonial powers that
outlawed certain types of hunting and resource use practices (Brockington, 2002; Carruthers, 1995; Neumann, 1998, 2001b). Standing in contrast to sanctioned, largely white sport hunters, the poacher in Africa was understood as necessarily a “black” or “native” African acting in contravention to instituted colonial and post-colonial hunting and conservation mandates (Carruthers, 1995; Neumann, 2004). Beyond being portrayed as entering where they do not belong and taking what is not theirs, the poacher was and continues to be represented as a morally reprehensible, dehumanised, and barbaric killer of innocent wildlife (Lunstrum, 2017; Neumann, 2004).

Images and discourses of threatened natures and those deemed responsible have ebbed and flowed with various poaching crises (Neumann, 2004), but they are intensifying with the most recent increase in commercial poaching as well as with the ubiquity of social media (Büscher, 2016b; Lunstrum, 2017). The latter makes nature, conservation, and the poaching crisis increasingly visible to a broad, global audience. Moreover, as poaching becomes increasingly framed as an issue linked to a global politics of crime, security, and even terrorism, negative portrayals of extra-legal hunters are exacerbated (Duffy, 2014, 2016; Lunstrum, 2014; also see Chapter 8). Recent representations posit poachers and the communities they belong to not only as heartless enemies of wildlife and conservation but as violent criminals and threats to national and global security. The result is an intensification in militarised and antagonistic conservation practice focused on spatial policing and the surveilling of communities and local people, often using violent and even counter-insurgency-like tactics such as community removal and the use of (deadly) force to neutralise suspected poachers (Bücher Forthcoming; Duffy, 2014; Duffy et al., 2015; Lunstrum, 2014; Lunstrum, 2015; Masé & Lunstrum, 2016; McClanahan & Wall, 2016; Verweijen & Marijnen, 2016). Many state authorities and large
segments of the general public in Southern and Eastern Africa increasingly support such measures (Büscher, 2016b; Lunstrum, 2017; McCann, 2017; Mogomotsi & Madigele, 2017).

Critiques of green militarisation and the lack of evidence in support of the poaching-terrorism link aside (Duffy, 2016; Maguire & Haenlein, 2015), another problem with framing poachers, nature, and conservation along the above lines is that it obscures the extent to which people involved in extra-legal hunting may have legitimate critiques of conservation and related violent tactics. These are critiques that turn on the conservation-induced dispossession and curtailing of use and access to land and resources that contribute to their ongoing impoverishment. Moreover, if not represented as threats or enemies, mediated imagery of conservation often renders local people invisible, and/or obscures the social relations, realities and histories through which risking one’s life to poach emerges (Hübschle, 2016b; Peterson et al., 2017). In fact, if local people only show up as a threat, the park-people distinction and divide is intensified. Poaching and the poacher are fetishised.

Permeating the relationship between the discursive and material practices of visibility is the broader shift towards a model of neoliberal conservation. Put simply, conservation and anti-poaching must pay for themselves (Brockington & Duffy, 2010; Igoe & Brockington, 2007; McClanahan & Wall, 2016). Like the scientific forests described by Scott (1998) or the discursive representations of wilderness safari landscapes (Igoe, 2017), a repetitive and simple narrative about poaching and anti-poaching travels well and is easily consumed by outsiders, even if inaccurate. This is a process increasingly facilitated by new media and telecommunications technologies that assist conservation organisations and protected areas in effectively connecting with the public (Büscher, 2016a, 2017; Büscher & Igoe, 2013). These methods help make nature and conservation visible to potential conservation donors in what
Verma et al. term “spectacular visual accumulation” (Verma, et al., 2015, p. 659; Verma et al., 2016). With competition for limited donor funds and no slowdown in poaching, this accumulation strategy becomes important to support anti-poaching interventions that are increasingly capital-intensive (also see Marijnen & Verweijen, 2016; McClanahan & Wall, 2016). However, much like the cartographic map meant to provide “objective information to outsiders” (Scott 1998, 44), the public is given a simplified, abstracted, and even fetishised version of nature, poaching, and anti-poaching that in reality is a much more messy and complicated set of dynamics.

Recent research is beginning to reveal how the discursive representations of poaching, the poacher, and threatened nature might shape conservation and anti-poaching practice. Lunstrum (2017), for example, demonstrates how public participation on social media with regards to poaching updates in the Kruger National Park advocates, and may even authorise, violent, heavy-handed, and even lethal anti-poaching practices. Anti-poaching work is similarly made visible. Marijnen and Verweijen (2016) use the term "militarization by consumption" to explain how the discursive production of militarised conservation represents armed park guards in the Virunga National Park as heroes. Moreover, they illustrate how such images transform the war on poaching into a “prepackaged consumer experience” that invites "individual supporters to directly fund militarized conservation practices” (Marijnen & Verweijen, 2016, p. 275). This helps sell and reify practices of green militarisation or what McClanahan and Wall (2016, p. 122) call “warrior conservation.” I expand on these insights and the debates concerning the multiple practices of visibility related to state-nature relations and those on making conservation a visibly consumptive experience to understand the shifting practices of visibility as ushered in by the
poaching crisis. I pay attention to how they come together to give life to antagonistic and violent conservation practice.

**Discursive Practices of Visibility: Making Poaching/Anti-Poaching Visible to the Public**

The Head of Conservation Law Enforcement for the Limpopo National Park in southern Mozambique explained “the big challenge [we face] is [we] need financial support. [We] need to be able to create the conditions necessary to be effective” (Interview, 28/06/2016). Looking specifically at the rhino poaching crisis, anti-poaching costs are now so prohibitive that many private reserves in South Africa are opting to get rid of their rhinos (Interviews, 2013-2014). They either cannot afford the costs of protecting them or the money going toward rhino protection takes away from other conservation efforts. A survey conducted by the Private Rhino Owners Association (PROA) in South Africa claims that over 50% of private rhino owners “have already sold all their rhino or they have been poached, or are in the process of selling their rhino because of poaching incidences, or if the nonsense continues have no option but to sell” (Ibid; also see Toon & Toon, 2017).

According to PROA, in South Africa alone, “poaching has cost private reserves more than $78 million in the past eight years, due to a combination of additional security costs of more than $50 million, and the loss of animals worth $28 million” (Toon & Toon, 2017). As the Director of PROA explained, “It is not sustainable economically, our costs of protection, our costs of loss, our costs of asset depreciation are such that economically it is no longer sustainable” (Interview, 02/07/2014).

It is here where discursive or consumptive visibility of poaching and anti-poaching in the form of “anti-poaching tourism” and “poaching porn” emerges. The former reflects the practices
whereby individuals can pay to observe and even participate in anti-poaching activities on-the-ground, while the latter refers to the production of a simple and spectacular narrative of poaching and anti-poaching. Both are used to raise attention and money for anti-poaching interventions which in turn normalise a conservation practice based on surveillance and other hostile practices of visual and spatial security tactics.

Anti-Poaching Tourism: Nature Under Protection

In South Africa and Mozambique, major safari tourism operators such as Singita offer tourists the opportunity to see anti-poaching work first-hand. For example, as part of a 5 night/6-day safari trip in the Great Limpopo Transfrontier Conservation Area (GLTFCA), tourists head to Balule Lodge in Garingani Game Reserve.42 Located in Mozambique, adjacent to the KNP, Garingani is at the heart of cross-border efforts to combat the increase in commercial rhino poaching occurring in Kruger. Specifically, Garingani is part of Mozambique’s Greater Lebombo Conservancy (GLC), a consolidated conservancy of private reserves adjacent to Kruger. Some refer to the GLC as “the most critical piece of land on the planet for rhino conservation” as it is the “stretch of land they [poachers] must cross to reach the killing fields of KNP” (IAPF, 2017a; also see Massé & Lunstrum, 2016).

Garingani, through one of its lodges, Balule, offers a unique conservation tourist experience that differs from traditional safari tourism. The main attraction is not wildlife, but anti-poaching initiatives. As the tourism promotion explains, “Whilst you are at Balule Lodge you will be introduced to the Anti-poaching team who will show you first-hand the work they are doing to preserve the wildlife of this area” (S.A.F.E., 2017). The anti-poaching team “will

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42 The GLTFCA consists of South Africa’s Kruger, Mozambique’s Limpopo, and Zimbabwe’s Gonarezhou national parks, and a series of private reserves on both sides of the border.
accompany the guests on an excursion to understand the challenges and the progress being made” (Ibid). Outlining the activities at Balule Lodge, Singita describes what is included in the price. One activity is “exploratory and educational drives, focused on the anti-poaching programme” (S.A.F.E., 2017).

While safari tourism usually focuses on wildlife, here the focus is on the anti-poaching team, and their practices of tracking, surveillance, and visual policing that affords protection to a threatened nature, the rhino. This is an innovative way to fund anti-poaching. According to Singita, “Due to the lack of lodges in the area, there is no tourism to help support the anti-poaching efforts in the area” (S.A.F.E., 2017). There is also a relative lack of wildlife in the area due to Mozambique’s past civil war, making non-consumptive wildlife tourism difficult (Interview, Reserve Manager, 04/06/2014). According to the promotional website, the cross-border trip costs US$5,100 per person, with 10% going directly to Garingani Game Reserve’s Anti-Poaching project (S.A.F.E., 2017). After Balule, guests head to Raptor’s lodge in Hoedspruit, South Africa, where they can continue their immersion in anti-poaching by taking a guided tour of the “Protrack Anti-Poaching Unit Training Camp,” the largest private anti-poaching security provider in South Africa (Protrack, 2015). Through anti-poaching tourism, and other visible markers of anti-poaching like outposts and signs that ranger units are active, the work and challenges of anti-poaching are celebrated and made visible first-hand to paying visitors.

Other tourism experiences, however, take anti-poaching tourism to another level with paying tourists becoming active anti-poaching participants on-the-ground. The IAPF’s Green Army, for example, is a program where people pay to join anti-poaching rangers in their front-

43 I encourage the reader to visit ProTrack’s website and Facebook page to understand first-hand the militarised anti-poaching it promotes and uses.
line, day-to-day work in an area of rhino poaching in Zimbabwe. According to The Green Army webpage:

By signing up for the IAPF’s Green Army, you’ll be joining us here on the frontline of conservation. Members will be integrated into the lifestyle of an anti-poaching ranger. This means heading out on patrols with our rangers, checking for snares and ensuring the integrity of the property is kept. [...] Members are required to pull their own weight with daily duties and tasks. It’s hard work, but you’ll be able to say that you have helped us conserve some of Africa’s most pristine wilderness and wildlife (IAPF, 2017b).

The opportunity to see and experience anti-poaching first-hand will cost you. Indeed, the Green Army is a fundraising tool for the IAPF. As per the organisation, “The Green Army initiative is an important means of funding for the IAPF, meaning we do charge for the experience but the cost is treated 100% as a donation towards the cause” (IAPF, 2017b). The cost is US$650 for the first week, and US$650 for every additional week, with a general “minimum stay of two weeks,” flights not included.

The IAPF is vocal and unapologetic about its militarised approach to conservation (also see McClanahan & Wall, 2016). During months of ethnographic research with IAPF rangers, I saw first-hand how they work on the ground in the borderlands of Mozambique concentrating on practices of surveillance and visual policing. They are also increasingly turning to surveillance technologies including algorithmic computer software, helicopters, camera traps, among other devices, as well as the hiring and paramilitary training of rangers patrol and protected areas. The needed technologies, equipment, hiring and paramilitary training of rangers, along with hiring of former military personnel as managers, are made possible through the money raised by IAPF’s Green Army and other donations received via by the organisation’s social media and its founder’s almost non-stop speaking and media engagements. All of this is done with the intention to hunt, neutralise, and deter poachers (more on this below).
What we see with Garingani and The Green Army is anti-poaching becoming part of a commodified conservation and tourism landscape, itself becoming commodified and rendered a consumable experience where paying tourists can see poaching and anti-poaching first-hand. The anti-poaching tourism experience extends Marijnen and Verweijen’s (2016) notion of “militarization by consumption” to anti-poaching by consumption. It presents the opportunity to not only directly fund certain conservation activities, namely militarised anti-poaching, but to pay to observe, and even participate in anti-poaching first-hand and on-the-ground. Instead of bringing rangers and anti-poaching into the homes of would-be ‘consumers’ or donors, the consumer or donor is brought to the landscape of anti-poaching with a radically different, and more visceral, pre-packaged conservation-related consumer experience that expands a type of wildlife and/or volunteer tourism. Anti-poaching tourism thus intensifies consumer complicity in anti-poaching activities, one that is arguably more involved than online money transfers to organisations.

What is on offer with anti-poaching tourism, and broader efforts of making anti-poaching visible, however, is not only anti-poaching but a new type of observable and consumable nature. This isn’t a pristine, wild nature, but is a nature under threat.

Poaching Porn: Nature and Rangers Under Threat

The discursive production of a nature under threat entails making poaching and its horrors visible. What I call “poaching porn,” or spectacular images of rhinos and elephants with their faces hacked off, regularly show up on social media, television, and news media.44 While it is a

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44 I purposefully do not use images as examples as I do not want to use images of dead rhinos for my own benefit. I encourage readers to search for them online or visit the social media pages of IAPF and other conservation and anti-poaching organizations to understand the ubiquity of such images.
way in which to draw attention to real problems and an important cause, it is also reminiscent of the familiar strategies of “disaster” or “famine” pornography where simple narratives and graphic images are used to provoke an emotional response, and ultimately donations (De Vos, 2011; Omaar & de Waal, 2007). Similar strategies are increasingly used by conservation and anti-poaching organisations to generate funds and support for anti-poaching. I turn to several empirical cases I witnessed to develop this point.

On November 14th, 2015, poachers shot a female rhino and her calf at a reserve where I was conducting research. This incident was particularly wrenching as the mother had her horn removed, was significantly injured in the process, but was not dead. To put an end to her suffering, one of the anti-poaching managers had no choice but to shoot her. The anti-poaching NGO whom he worked for posted the story along with a photo of the dead rhino and her dead calf on social media describing the incident and making it available for public consumption. Below is a screenshot of the story as posted on Facebook45 [Figure 2]. A post talking about the “savage” killing of a baby rhino on Twitter also links to the Facebook story about “Ranger X,” the manager in question and a “former special forces operative with multiple tours of Afghanistan” (IAPF, 2015). Both the Facebook and Twitter posts highlight how nature is simultaneously under threat and protection, and end with a request for donations.

The story also describes how this was the “hardest day of his life” as after shooting the rhino once, his colleague had to take his AK-47 and fire two additional shots into the rhino to end its misery. The post continues: “Please never forget their sacrifice and continue to support the first and last line of defence for nature.” It ends by asking for donations stating, “all donations up to $50k will be matched, so double your efforts for conservation” (emphasis

45 I have chosen not to include the accompanying photo of the dead rhino.
The latter points to the commodification of the death and suffering of the rhino and her calf, and that of the emotional suffering of “Ranger X” and his colleague to raise funds for anti-poaching efforts that are touted as the first and last line of defence solution for rhinos and nature more broadly. By donating to an NGO that uses a military-first approach to conservation, you can save the rhino.

Figure 6. Screenshot of IAPF Facebook post on December 1st, 2015 (IAPF, 2015).
The IAPF used a similar tactic in another example. Here, however, it was not violence against the rhino or nature that was used to garner support, but violence against rangers. In October of 2016, rangers and an APU manager were reportedly attacked and “left for dead” (IAPF, 2016). This news, along with graphic pictures of the bloodied men were posted on social media for the public to see [see Figure 3 (accompanying photos) and Figure 4 (text)]. Once again, a plea for funds and donations followed the description and accompanying images of the situation:

A lone, off-duty police officer from the town came and stood over the rangers with his weapon in the middle of the mob to protect the rangers from further injury. Our helicopter landed soon after and evacuated our injured men to HQ where all were stabilized and airlifted to hospital. The actions of this police officer, along with immediate first aid and rapid evacuation by helicopter, almost certainly saved the lives of these men. This is only possible because of you, our dedicated donors and I thank you emphatically (IAPF, 2016).

According to this post, donations produced the conditions through which these rangers were saved. The post then explains the need for more donations to purchase 4x4 trucks, and how fundraising is continuing “with urgency.”

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46 It is not possible to keep the organisation anonymous given my need to support the points I make. As an ethical consideration, I am careful to use publicly available sources, such as the organisation’s Twitter and Facebook feeds, where available instead of relying on my first-hand knowledge. The arguments and points I make are by no means intended as an attack on the specific organisation or people who work for it. Also, not everyone in the organisation agrees with the practices used. I merely use it is a case to develop a broader point.
Figure 7. Accompanying images of IAPF Facebook post from Oct. 17th, 2016 (IAPF, 2016).
A similar event occurred in May 2016 in which poachers allegedly attacked community scouts in their homes. Again, there were posts on social media about the incident along with pleas for donations. This incident was used to launch a gofundme.com campaign under the banner of an “Urgent Appeal” (gofundme, 2016). The web page describes the incident and includes a direct
appeal for funds with a wish list of anti-poaching items that facilitate the practices of anti-poaching outlined above. Examples include boots for rangers, communications and navigation equipment, ten rangers’ annual wages and a helicopter, among other items.

Much like the wildlife they are tasked with protecting, your donations can also help protect rangers. The web page tells people that by donating they directly participate in saving those affected and prevent future attacks on rangers who are positioned as heroes. Indeed, a video starring famed Hollywood actor Joaquin Phoenix ends with the following message on screen, before asking for donations and providing a link to the urgent appeal webpage: “The only things standing between these amazing creatures and extinction…are our rangers…and your donation” (gofundme, 2016). The campaign has raised over $US67,000 to date.

In these examples, social media and the making visible of poaching’s horrors directly implicates the public and individual donors as active participants in saving the lives of rhinos and rangers. Moreover, as donors, the public is directly involved in and called on to (re-)produce paramilitarised anti-poaching for the safety of both wildlife and rangers (also see Marijnen & Verweijen, 2016). Web 2.0 applications like Facebook and crowdsource funding like gofundme.com facilitate this by allowing people to fundraise for the conservation or anti-poaching organisation of their choice (Büscher, 2017). The gofundme campaign was even set up in partnership with IAPF and a private individual who created the campaign on behalf of the organisation (gofundme, 2016).

Together, poaching porn and anti-poaching tourism tap into the expanding “geographies of compassion” and “neoliberal moral economies” that traditionally focus on poverty and humanitarianism (Mostafanezhad, 2013, p. 319; 2016). Conservation, anti-poaching, threatened species and the rangers working to protect them provide one more geography of compassion and
one more moral economy in which people can contribute to offline and online. In the face of a mounting poaching crisis, this is anti-poaching that is increasingly militarised and looks to expand and intensify another type of anti-poaching visibility. This is not about enabling or enhancing the vision of the tourist, donor, or public, but is far more about practices of legibility, surveillance and visual policing by anti-poaching rangers.


Anti-poaching rangers use tactics of visual policing to make themselves, their practices, and control over the area visible to potential transgressors. As sanctioned law enforcement authorities, visual policing by rangers broadcasts their presence and legitimate use of force to outside communities and would-be poachers. Visual policing is a tactic to deter people from entering the protected area in the first place by reminding them that this is an exclusionary space that rangers will defend with force and even violence. One anti-poaching commander in Mozambique insisted that rangers need to maintain their authority and have it known to villages to deter them from poaching (Interview, 24/06/2016). This was a common and repetitive narrative encountered during my fieldwork. Communicating the ability and readiness to use force to defend a protected area builds on other conceptual insights whereby violence is broadcast and made visible within and beyond specific territories to deter people from entering and making use of them (Lunstrum, 2009).

The most obvious visual sign of a conservation territory is the fence, long a symbol of fortress conservation meant to demarcate and communicate the boundaries of a protected area and deter people from entering (Brandt & Spierenburg, 2014; Lunstrum, 2015; Spierenburg &

47 See Herbert (1997a, 1997b) for a discussion of visual policing tactics among urban police.
Wels, 2006). Fences often have signs with the specific intent to make it known that beyond the boundary is an area patrolled by security forces, with often deadly consequences. The space, its security, and the potential use of violence are rendered visible to outsiders.

![Photo 6: Sign for private anti-poaching company on a reserve fence, Hoedspruit, South Africa (Source: F. Massé)](image6)

![Photo 7: Billboard illustrating “poachers will be poached” by state-private sector anti-poaching partnership, Hoedspruit, South Africa (Source: F. Massé)](image7)

Rangers themselves also make the boundaries of protected areas visible on their patrols. I routinely joined rangers on fence line patrols that were explicitly about maintaining a visual presence of rangers on the boundary. When planning patrol routes in the interior, managers ensured that each area of the reserve would be patrolled on a regular basis so that poachers would see the tracks, and thereby the presence, of active anti-poaching rangers. The hope is that if the presence of rangers and potential violence is made visible, poachers see it as too risky to enter (Interview, 26/11/2015; Ranger Paulo, 06/06/2016). As one anti-poaching commander explained referring to the use of boundary patrols in his fenceless reserve to communicate its boundary, “my fence is a human fence” (Interview, 04/10/2015).

Perhaps the strongest tool in the visual policing toolkit is to get airborne. This increases the distance at which the APU is itself visible. A plane flying over the reserve is a sign of active anti-poaching that can be seen and heard from many kilometres away. In the five months that I
lived at one reserve, for example, poachers did not kill a single rhino on days where the pilot did a fly over. The making visible of rangers and their work to outsiders and potential poachers is one practice of visibility central to anti-poaching practice. The second centres on making poachers visible to rangers through practices of detection.

![Photo 8: APU patrolling interior roads (Source: F. Massé)](image)

Rangers cannot govern and secure protected areas and neutralise suspected poachers if they cannot see them and their activities. Hence, poaching and poachers must be made visible and legible to rangers and other security personnel. In combination with visual policing, anti-poaching rangers thus spend the vast majority of their time patrolling protected areas to detect poaching activity and incursions. For example, one of the first rangers in Kruger National Park (then Sabie Reserve), Hary Wolhunter, writes about how the first days of the reserve focused on patrolling to know and understand the space, its various natures, and threats to it (Wolhuter, 1971). This practice continues. The patrol remains the foundation of anti-poaching practice. Each day at Sabie Game Park and neighbouring reserves, for example, begins with a fence line patrol.
to physically see if there were any entries or exits by poachers. This is a way of literally seeing the movements of suspected poachers to understand what happened in the reserve during the darkness of the night.

While this type of surveillance has always existed, it is intensifying with the poaching crisis. In protected areas like SGP, its neighbours in the GLC, the Limpopo National Park, Kruger National Park and the Niassa National Reserve (all areas where I have conducted research) rangers now focus almost exclusively on anti-poaching surveillance at the expense of other ecological monitoring responsibilities. Others have similarly described this trend (Lunstrum, 2014; Annecke & Masubele, 2016; Warchol & Kaple, 2012).

Apart from the intensification of surveillance, what separates current or new practices of rendering poaching visible from the old is the turn to new technologies. As a pillar of anti-poaching practice, the detection capabilities of rangers are increasingly augmented with the use of new surveillance and monitoring technologies, making both poachers and the animals under threat more visible to them. Camera traps and a range of sensors from movement, seismic, to acoustic detect the movement of poachers and animals are increasingly used (Marvin et al., 2016; Reuters, 2014). APUs are using military technologies like drones and helicopters to assist in monitoring the expansive spaces of protected areas while providing overhead or aerial views (also see Lunstrum, 2014; Mulero-Pázmány et al., 2014; Olivares-Mendez et al., 2015). In many protected areas, APUs are turning to applications that visualise animal locations, past and present poaching activity, and related incursions. This data is collected via traditional methods of rangers recording information while on patrol. Increasingly, APUs are combining this data with that gained from more high-tech surveillance technologies such as drones, helicopters, sensors, and even satellites to create a fuller picture and understanding of the poaching situation. Some
visualisation software even has predictive capabilities to foresee potential poaching incursions and activity.

Photo 9: Operators using Cmore technology to visualise and monitor poaching (Source: CSIR, 2015)

One example is Cmore, used in Kruger and some Mozambican reserves (CSIR, 2015). SMART (Spatial Monitoring and Reporting Tool) is another similar application used in over fifty sites worldwide (SMART, 2017), among others like the Comprehensive Anti-Poaching tool with Temporal and observation Uncertainty Reasoning (CAPTURE) (Nguyen et al., 2016), and the Anti-Poaching Engine (APE) (Park et al., 2015; Snitch, 2014, 2015). These platforms integrate data collection, mapping and visualisation to provide a visual picture of past, present, and even future poaching activity and the location of animals and poachers in a protected area. As the users of Cmore in Kruger National Park explain, the observation system ensures rangers “can see whatever threats are in KNP” thereby assisting in the effective deployment and response of paramilitarised rangers (CSIR, 2015). Through the use of technologies, threatened nature and the threats to them are increasingly made visible to APUs to enhance their effectiveness. What is at stake with the changing and intensifying practices of visibility?
Fetishising Threatened Nature, the Poacher, and Securitised Conservation Practice

Poaching porn and anti-poaching tourism tell a simplified and spectacular version of a threatened nature in need of a particular type of conservation practice. This is a strategy that is highly effective in provoking an emotional response and the raising of much-needed funds in conservation and other sectors. More importantly, these discursive maneuvers authorise and normalise a conservation practice that is increasingly technical, militarised, and presented as a rather straightforward solution based on surveilling, deterring, and neutralising poachers. If not explicitly militarised, this approach to anti-poaching focuses on protecting wildlife through an enforcement-first approach to maintain a separation between spaces of conservation and local people using armed rangers and often violent practices of surveillance and deterrence. Like the tourist or donor who demands a specific type of wilderness conservation landscape, these are the conservation practices promoted to and supported by a public that is largely uninformed about the realities and socio-historical contexts of poaching landscapes. Nature is threatened, rangers are heroes, poachers are the enemy, and there is little room for a more nuanced or holistic narrative.

I return to the IAPF Urgent Appeal to examine how this plays out in more detail. The IAPF Appeal clearly uses the violence against rangers and rhinos to directly engage and call on the public to support paramilitarised conservation already underway in the area through their donations. According to the IAPF, the effective and needed response to poaching and attacks on rangers is to scale up and intensify already existing paramilitarised anti-poaching that focuses on surveillance and increasing the visibility of rangers. IAPF’s founder, quoted on the urgent appeal campaign site, explains
To scale up our operations we need more resources: more rangers, better equipment, more canine units, more vehicles, more helicopter hours. Through the support of our donors we are helping to give both animals and the communities which surround them a chance to live their lives in peace (gofundme, 2016).

Lauding the intentions of the IAPF in the area, Paul Wilkie, who initiated the gofundme campaign explains:

[The] IAPF has grown into a respected global conservation charity which brings military-derived tools, technologies and techniques to the front line of the poaching war. Applying the motto “Wildlife conservation through direct action”, the organisation shows that such experience and skills have a significant use beyond the human battlefield where they were conceived (gofundme, 2016. Emphasis added).

Others similarly illustrate how the fundraising campaigns of organisations including IAPF and VETPAWS (Veterans Empowered to Protect African Wildlife), among others, discursively produce the need for a conservation based on “militaristic violence and spatial policing” (McClanahan & Wall, 2016, 141; also see Marijnen & Verweijen, 2016). Donors are told this militarised approach to conservation and anti-poaching is what is needed to keep rhinos, rangers, and even communities safe (the latter being a logic I fail to understand). Indeed, the campaign claims that just as IAPF rangers engage in direct action to combat poaching, “YOUR DONATIONS = DIRECT ACTION” (gofundme, 2016 caps lock in original). Front and centre is the ability of the international public to actively and directly participate in protecting rhinos by making paramilitarised conservation practice a reality through their donations.

The problem, however, is that the increasing visibility and normalisation of a nature under threat and a militarised response not only serves to reproduce itself, but risks hi-jacking and undermining broader ecological and social conservation mandates and priorities required for conservation’s effectiveness. A focus on spectacular representations of poaching and decimated

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48 I do acknowledge the efforts and good intentions of the IAPF and its staff and that they are trying to address poaching in a difficult area where very few are and where support is greatly needed.
wildlife render non-charismatic and non-threatened species invisible. Moreover, if not made invisible, these representations marginalise or push other conservation priorities and concerns to the side. This was made evidently clear by many conversations I had with managers of protected areas (Interview APU Manager, 22/06/2016; KNP APU Manager, 22/06/2016; also see Annecke & Masubele, 2016). Conservation efforts become increasingly focused on protecting a singular species from a particular brand of poacher using specific tactics rather than focusing on broader ecosystem health, functioning, and management.

A consistent theme in these conversations was that they need funding for conservation activities that are not related to anti-poaching. Conservation managers desperately described how they are not doing the mundane yet essential monitoring and maintenance work required to sustain the functional and ecological integrity of protected areas because the funding they receive is earmarked for anti-poaching. Many rangers and managers of rangers confirmed how a focus on militarised anti-poaching is proving to be concerning when it comes to ecological monitoring and assessments (Interview APU Manager, 22/06/2016; KNP APU Manager, 22/06/2016). As one official in charge of rangers in Kruger National Park explained, now booking a helicopter to conduct what he calls “conservation” work such as “landscape assessments” and “vegetation condition assessment” is difficult as the helicopter has been largely monopolised for anti-poaching surveillance and the deployment of reaction teams. He explained, “someone had resources, they have control over the helicopters, and we ended up not doing [vegetation assessments]” (Ibid.). Another conservation official and ecologist explained how Kruger now has four helicopters but that “It’s very hard for me to get a helicopter to go catch a rhino [for biological studies]” (Interview, KNP Ecologist, 22/06/2016). As securitised conservation for anti-poaching is made visible and brings in much-needed resources, other practices and priorities
are made invisible and neglected with problematic consequences for the overall ecological integrity and management of protected areas.

The move away from conservation and ecology towards a more narrowly focused anti-poaching and policing extends to the training and specific work of rangers as well. The same official quoted above explained how rangers “think their job is to wake up and look for poachers” (Interview, 22/06/2016). When asked if rangers are trained in “conservation,” he answered: “It’s not an emphasis from the organisation that you must report biological observation out there. I mean, I said to them map up your water, because there’s a relationship between water and the rhino concentration. Very few came up with that” (Ibid.). I also witnessed how the IAPF, among others, funds the increasingly paramilitary training of rangers focused on counter-poaching and the tracking, detecting, and neutralisation of poachers, not broad conservation management mandates. Effectively, rangers are now tasked with hunting poachers.

Frustrated by the lack of attention and resources for non-anti-poaching conservation activities, one conservation manager from a reserve in Mozambique is trying to address this problem by creating a foundation to counteract the trend. The foundation would help private reserves in Mozambique pay for the boring and mundane maintenance and conservation activities that are overlooked with the focus on the spectacular aspects of poaching and anti-poaching, yet are paramount to the health of conservation landscapes.

There is thus competition for funds between conservation causes and species, but also within the subsets of conservation-related activities in the same protected area. Given the spectacular, and frankly sexy, nature and visibility of poaching and anti-poaching, there is agreement that it has a near monopoly on fundraising in many areas (Interview, Reserve Manager, 12/06/2016; also see Annecke & Masubele, 2016; Duffy & Humphreys, 2014). This is
what the donor, either an individual or corporation, consumes, contributes to, and supports. Consequently, this is what gets funded and happens on-the-ground. The result: resources available for equipping and arming rangers, related infrastructure and technologies and for hunting and capturing poachers, but relatively little for other activities. While there might be an overlap in certain cases, it is not a given. In the process, a conservation practice characterised by making protected areas and the bodies within them increasingly legible and visible to security actors to further consolidate them as exclusionary territories to be defended with force if needed is not only authorised and supported, but normalised.

Apart from the ecological, the discursive representation of poaching and poachers renders the local social relations and lived realities where commercial poaching exists and the history of dispossession related to protected invisible. Hence, poaching and threatened natures are not only simplified and spectacularised, but become fetishised. One Kruger official hinted at this fetishisation of the poaching/anti-poaching problematic when talking about the narrow focus of donor funding. He said

Part of it [the problem] comes from the language used in the media. You go to a press conference and all the talk is about rhinos killed and how many rhinos are still there and convictions stats and all this sort of thing. They paint it as a rhino problem. Nothing about the people. And I think the people…in fact quite often our language is that the people are the enemy (Interview, KNP Ecologist, 22/06/2016).

Indeed, what is left out of the many stories and campaigns described above are the untidy complexities of the socio- and political-ecological dynamics of human-environment relations where poaching is occurring. A complicated story is replaced with a simple one, offering a simple solution, even if it is not wholly accurate. Local politics, social relations behind conservation, other conservation priorities, and indeed other conservation possibilities are left out of the conversation or otherwise obscured.
I return to the incident of the abduction and assault of community rangers as outlined in the gofundme campaign to see how a simple narrative obscures the messy realities of what happened, and thus distorts what might be needed to prevent poaching and prevent violence against rangers. The campaign tells us, for example, “We may never know exactly by who or why these rangers were targeted last week” (gofundme.com, 2016). But, the campaign does provide a solution: “more rangers, better equipment, more canine units, more vehicles, more helicopter hours” (Ibid), all of which go towards intensifying surveillance, visual policing, and heavy handed anti-poaching. However, as someone involved in the matter explained, the beating of the community scouts and rangers was part of a much broader and more complicated story whereby corrupt rangers, police, and border patrol tasked with anti-poaching in the area were active in organising poaching and extorting protection money from poachers (Personal Communication, 20/6/2017). The abduction of the scout and violent backlash emerged when these law enforcement officials used reserve anti-poaching personnel to execute arrest warrants against the very poachers they were working with and extorting for protection money. So, we do know who attacked them and at least part of the reason why. The poaching group responsible for the attack admitted the details above and APU managers reported and submitted these facts to the local prosecutor. None of the above was made visible or communicated on social media or the urgent appeal. For obvious reasons, no one wants to highlight the details of rangers using violence on suspected poachers or of their rangers possibly being involved in corruption and poaching themselves. Moreover, tackling issues of corruption, legal systems, park-people relations, and decades of conservation-related injustices are likely too complicated to resonate with a wide audience. It is not a consumable narrative or image and is therefore not presented to the public.
Indeed, approaches that try to address the local socio-economic realities of poaching, corruption, and legal system, for example, are given relatively little attention and resources, if not completely ignored (Booker & Roe, 2016; Duffy, et al., 2015; Roe et al., 2015). Several conservation managers explained how if they ask for money for community development programs, they hear nothing, but money for boots and guns for rangers is abundant (Interviews, 23/11/2015, 12/06/2016). One manager explained: “Before no one would go near equipping rangers, especially in terms of providing funding for firearms and ammunition. Now that is the easiest thing to support” (Interview, 12/06/2016).

Funding for rangers is very much needed and their working and living conditions need to be improved, especially in Mozambique. But, the normalisation of a threatened nature whose primary, if not only, salvation is a security-focused conservation practice is especially concerning as there is mounting evidence and agreement that much more energy and resources need to be directed towards addressing corruption, legal systems, and developing interventions that have communities as a focus if we want to systematically address the poaching problem (Booker & Roe, 2016; Massé, et al., 2017; Moreto et al., 2016; van Uhm & Moreto, 2017). This sentiment was reflected in many interviews with judges (07/06/2016), prosecutors (07/06/2016), NGO officials (30/06/2016), and those working with the Attorney General’s office in Mozambique (24/02/2016; 11/02/2016). What informs these sentiments is that while anti-poaching in the form of boots-on-the-ground is needed, it does not address the root causes of poaching.

Organisations like the IAPF themselves admit this and they do provide needed services by supporting rangers and protected areas, especially in countries like Mozambique that are

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49 This sentiment was also widely confirmed and supported by all types of conservation practitioners and managers in Mozambique and South Africa.
woefully under-resourced and lacking in capacity. For this, they must be given credit. Yet they still, and problematically, promote militarised anti-poaching as a primary and even responsible approach. Moreover, violent, paramilitarised conservation may aggravate the poaching situation even further (Annecke & Masubele, 2016; Hübschle, 2016b; Massé, et al., 2017). Indeed, this is why many people working in conservation in Mozambique and Kruger, including those who rely on external organisations and funding, are pushing back against militarised approaches to anti-poaching. Many rangers with whom I spoke believe that the more heavy-handed they are the more communities push back (Interviews, 13/11/2015; 6/06/2016). I witnessed community-relations managers get frustrated at anti-poaching units, arguing the militarised, community-as-enemy approach is undoing the long-term work and investment in building positive park-people relations. As one conservation manager explained, some aspects of a paramilitary approach are needed and useful to a certain extent, but we must be careful to not alienate communities by being too heavy-handed and hostile (Interview, 12/06/2016). Many others agree with him. But again, this is not a dynamic made visible by those promoting paramilitarised conservation practice.

There are also questions regarding the effectiveness of technical, and often violent, paramilitarised anti-poaching as a primary approach, especially in the long-term (Annecke & Masubele, 2016; Barichievy et al., 2017; Duffy, et al., 2015). The 2016 figures for Kruger highlight that while there was a slight decrease in the numbers of rhinos killed from 2015, there was an almost 28% increase in the number of poaching incursions in the first eight months of 2016 (Somerville, 2016). Indeed, incursions have only been increasing year after year since the crisis began, despite an increasing number of arrests and deaths of poachers (Martin, 2017).

50 General Johan Jooste of SANParks has, for example, recently been using the phrase “responsible green militarisation” (http://peaceparks-rgs.bpt.me/). Also see Mogomotsi and Madigele (2017) and McCann (2017)
Militarised conservation based on detecting poachers and making heavy-handed security visible is thus not slowing the ranks of poachers from swelling, despite its normalisation and the amount of funding allocated to it. Recent research similarly concludes that the presence of armed rangers does not deter rhino poachers (Barichievy, et al., 2017). And again, such an approach may instead aggravate the poaching problems they try to combat, imperiling conservation efforts in the long-term and as we have seen, puts rangers safety in jeopardy (Massé, et al., 2017).

Indeed, rangers themselves are among the forgotten victims of the poaching crisis, often fetishised by the façade of heroism that renders their vulnerabilities and internal contradictions invisible. But, to effectively address the violence against them, in addition to poaching, we must accurately understand and represent the origins of such violence and why it persists, not obscure it with a more crowd-pleasing, money generating narrative. These realities, and the other, less sexy, but no less important conservation activities, both social and ecological, need more visibility. Anti-poaching related visibility is not inherently negative or problematic. Indeed, it might be harnessed to produce a more socially and ecologically just anti-poaching and conservation practice by making the complexities of poaching and anti-poaching knowable, broadening the vision of rangers beyond the narrow gaze of surveilling and hunting the poacher, and thus opening alternative possibilities for addressing wildlife crime.

**Conclusion**

In this chapter, I examined the practices of visibility as they relate to anti-poaching and how they help shape conservation practice. The relations between visibility and anti-poaching take two forms. The first entails discursive practices to make poaching and anti-poaching visible to the public as consumers and donors. This is a way for conservation and anti-poaching organisations,
and protected areas, to raise much-needed awareness and funds for anti-poaching work. The second aspect of anti-poaching and visibility is concerned with anti-poaching practice. This revolves around making protected areas and the poachers moving within and through them visible to anti-poaching rangers so that they may detect and neutralise them. Anti-poaching units also employ tactics of visual policing to make themselves and potential violence visible to would-be poachers and transgressors to deter them from entering protected areas and poaching in the first place. While important on their own, I have argued the two come together to normalise the discourse of a threatened nature whose saving requires militaristic conservation practices. This marks a shift in the cultural politics of conservation and subsequent shaping of conservation practice.

Much like nature and spaces of its protection, poaching and the poacher are abstracted and simplified in support of anti-poaching interventions. This represents a spectacularisation and fetishisation of “poached” nature and the poacher that represents communities as enemies, rangers as heroes, and renders the social relations that lie behind poaching, conservation, violence, and the production of each invisible. Accompanying these spectacular representations of poaching and nature is the positing of a security-focused if not outright militarised approached to conservation as the only and most viable solution to the illegal hunting of wildlife. Here, the same fetishisation and discursive practices sideline and even conceal the violence of anti-poaching. Together, these framings of nature, poaching, and anti-poaching authorise, normalise, and invigorate an antagonistic conservation practice characterised by militaristic tactics. In addition, they leave local communities largely out of the picture unless as violent enemies of conservation and rangers, which in and of itself is an act of discursive violence.
While not a novel conclusion, it bears repeating that local people are needed as allies if conservation is to succeed. The importance of communities as allies in the fight against poaching needs more visibility, as do the dynamics of demand driving the illegal wildlife trade, and the corruption and broader socio-economic and historical contexts that give rise to poaching and violence against nature and rangers in the first place. Making visible any injustices and abuses that are not only problematic in and of themselves, but that may very well take away from the noble objectives rangers and conservation organisations are trying to achieve, might also help keep conservation and anti-poaching actors accountable. It is with these latter points that a practice of visibility can shift to become a positive force shaping a more sustainable and just approach to anti-poaching that is part of a comprehensive socio-ecological approach to conservation. The consumer, the donor, and those working to protect threatened species and support them all have a part to play in making this happen.
Chapter 6

Policing Protected Areas: Intersecting Modes of Power and Everyday Practices of Conservation Law Enforcement

Introduction

In early September 2015, I sat in a meeting held by a Mozambican Government Advisor on conservation law enforcement. He was speaking to the anti-poaching managers of a private reserve and outlined their rights and responsibilities, and those of the rangers they supervise, as frontline conservation law enforcement. After the meeting, I asked him what the main approach was for combatting the commercial poaching happening within and across Mozambique’s borders. He replied, “The first step is law enforcement. We need to establish the boundaries of conservation areas, delimit them physically and show people that this is the boundary. [We must have] rangers and police patrolling up and down the boundaries” (Interview, Cristiano, 06/10/2015). He then raised his hands to demonstrate a ranger pointing a rifle at someone while telling that hypothetical person not to enter. The law to be enforced that the Official is referring to is Mozambique’s new Conservation Areas (CA) Law. Passed in 2014 in response to the increase in commercial poaching within and across its borders, rangers and other conservation law enforcement personnel are responsible for enforcing the law to secure the spaces and lives of nonhuman animals.

In this chapter, I examine Mozambique’s CA Law and the quotidian practices that rangers use to enforce it. My aim is to understand the modes of power that inform conservation law enforcement and how such power manifests on the ground and influences everyday anti-
poaching tactics and the related violence carried out by rangers.\textsuperscript{51} Conservation law is a technology that embodies and reflects a constellation of various modes of power that serves to reify and strengthen protected areas as exclusionary spaces. As highlighted by the above vignette, conservation law and the practices rangers use to enforce it are territorial in that they seek to secure spaces of conservation and the resources and flows within it. Through the wielding of a rifle, the law, and the authority to use both, we also see sovereign power at work as rangers and the law punish those who illegally enter protected areas to deter them and others from doing the same. In addition, the law is motivated by the objective of protecting and optimising the lives of a certain population, in this case, wildlife. Conservation law and the tactics of its enforcement are thus biopolitical. I argue these modes of power come together to condition anti-poaching personnel’s everyday practices and use of violence. That is, the anti-poaching practices of rangers and their use of violence are governmentalised by the dictates of securing conservation space, punishing transgressors, and protecting nonhuman life within which they operate.

In making the above argument, this chapter offers two contributions. First, I contribute to broader debates concerning the complementary nature of differing modes of power. Using the case of conservation law enforcement, this chapter demonstrates how the practices of territorial, sovereign, and biopolitical power, the ways in which they materialise on-the-ground and in individual’s actions, and their ultimate objectives coalesce to secure the spaces and lives of the nonhuman from ostensible human threats.

Second, while violent and oppressive tactics of anti-poaching units and individual rangers are critiqued, and in many cases rightfully so, examining the modes of power that inform

\textsuperscript{51} Southern Africa, conservation law enforcement and anti-poaching are often used synonymously. See for example (Hübschle & Jooste, 2017).
conservation law helps illuminate the broader structures of power within which rangers operate. I interrogate how rangers translate and negotiate the dictates of securing conservation space, punishing poachers, and protecting nonhuman life on-the-ground and in everyday anti-poaching practice. What emerges is an understanding of how their agency to commit or resist committing acts of violence in the name of conservation is conditioned by these broader modes of power.

Indeed, what became clear during over six months of participant observation with rangers is how many of them, and even anti-poaching and conservation managers, are at times critical and uneasy of heavy-handed policing tactics, even as they conduct their duties. Many rangers revealed an internal contradiction whereby they want to protect wildlife, stop poachers, and have them held accountable, yet they are uncomfortable with the violence used against suspected poachers who may be compatriots or even neighbours. Focusing on the broader processes of power within which rangers operate does not render rangers immune from criticism. Rather, it helps humanise rangers, their actions, and understand them not as heroes or villains, but as actors operating within a power structure that authorises and demands that they act in a certain way, even if out of self-preservation. This is fundamental to understanding the violence enacted by rangers in the pursuit of conservation, and how we should orient our critiques of such violence not at individual rangers, but the broader structures within which they operate.

I begin by briefly outlining what I mean by conservation law enforcement. I then provide an overview of territorial, sovereign, and biopolitical modes of power and their connections with conservation, law, and policing to conceptualise conservation law enforcement as a form of policing protected areas underpinned by these intersecting modes of power. Using this framework, I then provide an in-depth examination of how these multiple and overlapping logics of power come together to shape rangers’ everyday anti-poaching practices. Before concluding, I
reflect on how the legal and normative manifestations of these modes of power authorise and even demand violence in the pursuit of conservation law enforcement and how rangers negotiate this.

**Conservation Law Enforcement**

While there is an increasing focus on conservation’s militarisation and securitisation, the term law enforcement is rarely used to talk about anti-poaching in political ecology and political geography. This is despite the fact that conservation law enforcement is a common term for anti-poaching in conservation circles (also see GRAA., n/a; Greef, n/a; Hilborn et al., 2006; Moreto & Matusiak, 2016; Norgrove & Hulme, 2006; Warchol & Kapla, 2012). Moreover, a focus on law enforcement and policing as opposed to outright militarisation can help explain the subtler and less visible dynamics of everyday anti-poaching practice and how conservation law enforcement personnel understand their roles and responsibilities. I define conservation law enforcement as the organised practices and authorities used to enforce laws and norms related to the use of biodiversity and the regulation of activities within spaces of conservation.

Law No 16/2016 of the 20th of June 2014, popularly known as the Conservation Areas Law (CA Law), is part of a broad reform of conservation in Mozambique. These reforms include, but are not limited to, a $46 million World Bank project titled Mozambique Conservation Areas for Biodiversity and Development (World Bank, 2014b), and the National Ivory and Rhino Horn Action Plan (NIRAP) (GoM, 2014; MICOA, 2015). The law was a response to both national and international pressure and the real need to address poaching in Mozambique. Before the CA Law, the national law governing the use of biodiversity was the 10/99 Law on Flora and Fauna Bravia (GoM, 1999). A shift from the 10/99 Law to the CA Law
represents a change in focus from flora and fauna to *spaces* of conservation. The most talked about aspect of the law was the updating of the penalty for illegal hunting from a fine to an 8-12 year prison sentence.

While the enforcement of conservation laws spans many scales from the local to the international, in this chapter I focus on formal spaces of conservation, commonly referred to as protected areas. These are the spaces where rangers and others work as frontline conservation law enforcement personnel. Rangers have multiple responsibilities integral to the management of protected areas including ecological and biological monitoring and maintenance. In addition, rangers, also known as wildlife or conservation law enforcement officials, are the frontline enforcers of conservation law and are the first line of protection for wildlife and conservation territory (also see Eliason, 2011; GRAA., n/a; Hilborn, et al., 2006; Moreto & Matusiak, 2016; Norgrove & Hulme, 2006). Put another way: rangers are the foot soldiers who police and defend the fortress of conservation and the resources within it. Moreover, as poaching increases, the responsibilities of rangers are shifting to focus increasingly on law enforcement and anti-poaching, even becoming more militarised (Interviews, 06/06/2014; 22/06/2016; also see Annecke & Masubele, 2016; Lunstrum, 2014; McClanahan & Wall, 2016; Warchol & Kapla, 2012).

Who, however, is the ranger or conservation law enforcement official in Mozambique? At the risk of generalising, the ranger is likely male, between the ages of 18 and 45, and probably has a family. He is a black Mozambican. In some reserves, he is from the local area, while in others he is explicitly recruited from a different part of the country so he has no social or family ties with local communities. Beyond the demographics, many rangers and other conservation law enforcement personnel may not be comfortable with and may even be critical of the use of
violence in pursuit of conservation law enforcement. Simply quitting, however, is not necessarily an option. In Mozambique, like in many other African countries, rangers are paid very little and are themselves impoverished and vulnerable, even without near-daily interactions with armed poachers and threats from poaching syndicates. Many rangers, for example, expressed how in a country with very few employment opportunities, they are thankful to have a job. Relatedly, rangers cannot simply resist using practices that are violent, oppressive, and that they may object to. As I demonstrate in the last section, rangers who fail to shoot a poacher in an ambush, or otherwise allow a poacher to get away by not using violent tactics, are subject to formal reprimands by their employers and chastised by their colleagues. One too many reprimands and a ranger risks losing his job, which for most is a thin line between being able to support his family and not. Some rangers, like police, however, exercise discretion and use the structures of power within which they operate to “render justice as they wish” (Herbert, 1996, p. 572). Indeed, it is understanding the broader structures within which rangers operate and how this conditions and governs their day-to-day practices and their agency to use or resist conservation violence – or the use of violence in pursuit of conservation goals – that this chapter is concerned with. Before describing these practices, I provide an overview of the modes of power that inform them.

**Modalities of Power and Intersections with Conservation and Law Enforcement**

*Territorial Power and Conservation*

Many of the texts that arguably form the foundation of how we understand the creation and securing of conservation areas draw on Sack's (1986) influential notion of territoriality as the basis of their interventions and analyses (Corson, 2011; Lunstrum, 2013; Peluso & Vandergeest,
Territoriality, here, is defined as “a spatial strategy to affect, influence, or control resources and people, by controlling area” (Sack, 1986, p. 1), and is reflective of the intimate connection between power and control over resources, bodies, and their movement through space. Moreover, while processes of territoriality have long informed understandings of conservation and the establishment of protected areas, scholarship on conservation has simultaneously furthered notions of territory and related practices (Brockington, 2002; Corson, 2011; Fairhead et al., 2012; Neumann, 2001a; Vandergeest & Peluso, 1995). Bluwstein and Lund (2016), for example, use the term “territoriality by conservation” to refer to the multiple, top-down processes and practices of conservation-induced (de-/re-)territorialisation. Building on Sack, others cite protected areas as examples of “internal territorialization,” defined as “excluding or including people within particular geographic boundaries and about controlling what people do and their access to natural resources within those boundaries” (Vandergeest & Peluso, 1995, p. 387). Protected areas thus reflect a process or dynamic of state power over territory, but one that occurs internally to states, as opposed to being concerned with external boundaries.

As internal territories, protected areas are brought into existence and maintained through various processes of mapping, demarcating, and legislating accompanied by the use of force and violence where deemed necessary. All of these practices seek to establish and enforce protected area boundaries and the control over activities within them. This includes the creation and enforcement of laws on conservation and natural resource use (Brockington, 2002; Carruthers, 1995; Peluso, 1993). Legislating accepted and unaccepted activities is also a way to separate certain human and nonhuman natures and activities into discrete spaces (Peluso, 1993; Scott, 1998). Laws that criminalise and outlaw activities deemed inconsistent with the objective of
conservation and protected areas help further this separation (Fairhead, et al., 2012; Neumann, 2001b; Roth, 2008; Spierenburg & Wels, 2006). Indeed, while laws on conservation are meant to create and uphold specific territories, they do so in part by creating criminals or “homo penalis, the man who can be legally punished” (Foucault, 2008, p. 249). The creation of certain (black) hunters as homo penalis continues today and is intensifying as states respond to internal and external pressures to combat commercial poaching.

Sovereign Power and Conservation

Homo penalis and the ability to punish those who hunt when, where, and what they are not supposed to points to conservation law as a mode of sovereign power. I use a specifically Foucauldian notion of sovereign power understood as form of power rooted in “a direct hold of government over things and people” (Foucault, 2008, p. 45). Indeed, territorial and sovereign modes of power and ways of governing are intimately connected. It is in the creation of homo penalis and the use of punishment to protect territory and resources that we locate the origins of sovereign power. One such example or manifestation of sovereign power is the criminalisation of hunting and the punishment of those who hunt as a means to secure wildlife, land, and control people-environment relations. Mozambique’s new Conservation Areas Law passed in 2014 and the updating of its penal code is one such example.

The sovereign, embodied in the state and sanctioned non-state actors, enforces and defends its rules, laws, and territory against transgressors through agents, such as police, that have the authority (formal or informal) to use force, corporeal violence, and other forms of punishment, such as death or imprisonment (Foucault, 1979, 2003a, 2008, 2012). Writing on conservation, Fletcher (2010, p. 172) explains how this sovereign power is “aimed at the rational
governance of a territory through compelling subjects’ obedience to sovereign will by direct threat of punishment.” In this sense, the sovereign governs in part through fear and threat of punishment. The threat and even use of punishment materialises in conservation law enforcement personnel like rangers. Rangers are the frontline personnel whose everyday practices are the arm of the sovereign in conservation territories. Fletcher captures this process of a conservation-specific form of sovereign power where conservation “rules are enforced and borders are patrolled” with the concept of “sovereign environmentality” (2010, p. 178). He argues this sovereign environmentality constitutes the fortress conservation or protected area model that territorialises conservation in discrete spaces through a fines and fences strategy. Fences represent the territorial demarcations and boundaries of protected areas to be defended and patrolled by rangers and other authorities. Rangers, and related conservation law enforcement authorities, are thus the embodiment of sovereign environmentality. Moreover, fines are not just fines, but symbolise punishment for those who illicitly enter protected areas.

Sovereign power is indeed a juridical system with laws being the “foundation of sovereignty” (Foucault, 2008, p. 39), “acts of sovereignty” and an “expression of sovereignty” (Ibid., p. 169). Sovereign power is “always deployed within the pre-existing element of the law,” even if punishment itself takes on extra-legal means (Foucault, 2003a, p. 44). Moreover, Foucault defines law enforcement as a “set of instruments” that makes the prohibitions established by law, and hence by the state, a reality (Foucault, 2008, p. 254). This set of instruments includes the punishment for each offence, and the apparatus to detect and investigate crimes, convict criminals, and hand out punitive judgements. The objective of punishment as made possible by these instruments is to deter individuals from breaking the law by increasing the cost-benefit ratio of committing a crime. This is the “organizing principle of the penal
calculation” (Foucault, 2008, p. 255). There are two aspects central to the functioning of sovereign power in this regard. The first has to do with punishing the individual transgressor. The second is concerned with making punishment and violence on the body visible to others to demonstrate the power and authority of the sovereign. Both act as a method of deterrence.

We can thus begin to understand conservation law enforcement as being concerned with the punishment, detection, investigation, and conviction of those who contravene conservation-related laws with the objective of deterring people from committing conservation-crimes such as illegal hunting. Sovereign environmentality imbues rangers with the formal and tacit authority, and even responsibility, to carry out these activities in the name of protecting the spaces and lives of the nonhuman.

**Biopower and Protecting Nonhuman Life**

Laws and power in the case of conservation are not only punitive. While the logic of punishment or “make die and let live” may guide sovereign power, in the context of conservation law enforcement, punishment also works in the service of making live, in this case the nonhuman, and is thus biopolitical. Summarised by the oft-cited line as “the power to ‘make’ live and ‘let’ die,” the biopolitical focuses on the biological existence and well-being of a population (Foucault, 2003a, p. 241). However, while making live and protecting life is the principle organising logic of biopower, biopower also works through life’s counterpart: death. As Murray (2008, p. 204) reminds us, “death becomes a consequence – a necessary part – of living.” This is the “death function” of biopower (Foucault, 2003, p. 256), or “the principle that the death of others makes one biologically stronger” (2003, p. 258). Biopower thus seeks to secure populations of living beings by controlling, eliminating, and pacifying threats to these
populations and the environments in which they exist. One way in which biopower does this is by arming the law and law enforcers with the power of death (and violence or force more broadly) to those who transgress it as a means of making others live (Foucault, 1979, 2003a, 2008). Biopower thus organises itself on the principle that threats or enemies “have to be done away with” (Foucault, 2003, p. 256). How this biopolitical logic extends to the protection of the nonhuman under the rubric of conservation is of increasing interest (Biermann & Mansfield, 2014; Braverman, 2015; Hodgetts, 2017; Srinivasan, 2017).

The death of the poacher thus simultaneously acts as a form of sovereign and biopolitical power: it aims to punish and deter some humans while protecting certain animal populations. I follow others and move beyond death and the termination of biological life to include other forms of doing away with. These other practices include those like imprisonment and extraordinary rendition that also work to do away with those whom authorities perceive as threatening circulations to a given population (Lamble, 2013; Murray, 2008). Indeed, a Foucauldian biopolitics offers room for this nuance as the biopolitical must not necessarily eliminate the threat, but “maximize the good circulations by diminishing the bad” (Foucault 2007, p. 18, emphasis added).

This broader understanding of doing away with threats becomes important when thinking through practices of law enforcement that seek to diminish threats to valued populations, like wildlife, but do not explicitly include biological death. Shoot-to-kill policies such as those in Botswana do seek to protect the existence of certain species through the biological death of the poacher (Mogomotsi & Madigele, 2017). Imprisoning a poacher, however, diminishes the threat to wildlife and protected areas ostensibly embodied in that particular individual. To be sure, rangers and even police may not necessarily have the right to kill, but they do have the authority
to remove people who transgress certain spaces and the law through powers and practices of arrest. While this may or may not lead to their imprisonment, the power to remove people from specific spaces is fundamental to territorial practices of policing that seek to secure certain spaces from certain people (Herbert, 1996b, 1997a; Paasche, 2013; Paasche et al., 2014).

One method of removing transgressors is known in policing terms as “contain and capture.” Herbert draws a vivid picture of what this strategy entails:

One set of officers establishes and maintains the perimeter. Another assists the dogs and their handlers to penetrate the space delineated by the perimeter. And those in the helicopter monitor the situation from afar, using their various technological gadgets to observe and detect across a wide swath (Herbert, 1997b, p. 88).

While clearly a form of territorial control, a variety of scholars point to the biopolitical nature of strategies that seek to contain and control threats. Sloterdijk (2013, p. 170), for example, argues “biopolitics begins as enclosure-building.” Looking at the context of war and counter-insurgency, Shaw (2016, p. 690) similarly argues that security practices and technologies that aim to “enclose the hostile circulations of life” and prevent them from moving through certain spaces are biopolitical, or amount to a biopolitical enclosure. Protected areas are one of the most iconic enclosures. As I describe in detail in the next section, rangers, as the embodiment of sovereign environmentality, use tactics of contain and capture to neutralise those who enter protected areas and protect wildlife. Protected areas are biopolitical enclosures with non-human life as the object of protection.

Biopower has been used to understand conservation as a mode of controlling, managing, and regulating both human (Cavanagh & Himmelfarb, 2014; Dunlap & Fairhead, 2014; Eckersley, 2004) and nonhuman populations (Biermann & Mansfield, 2014; Braverman, 2015; Collard, 2012; Srinivasan, 2017). Others draw on Agambenian notions of biopolitics to describe how the public calls for a thanatopolitical response to poaching (Büscher, 2016; Büscher &
Thanatopolitics is a “politics of death” (Murray 2006, p. 195) whereby death is used to achieve political objectives. An anti-poaching informed by thanatopolitics would thus see the killing of the poacher not as an unfortunate by-product of protecting wildlife, but as a primary objective of anti-poaching. Little work, however, has interrogated conservation law and the practices of anti-poaching through a biopolitical lens, let alone how the biopolitical intersects and overlaps with the territorial and sovereign in rangers’ everyday practices.

Recent work brings us in this direction by focusing on the intensifying processes and practices of militarisation and securitisation occurring within conservation territories (Annecke & Masubele, 2016; Duffy, 2014; Duffy, et al., 2015; Kelly & Ybarra, 2016; Lunstrum, 2014; Massé & Lunstrum, 2016; Shaw & Rademeyer, 2016; Verweijen & Marijnen, 2016). While remaining cognizant of the conceptual and tactical overlaps between militarisation, securitisation, and policing, I move beyond explicitly militarised practices and language to examine the day-to-day work of rangers as frontline conservation law enforcement personnel who police spaces of conservation and enforce related laws. What becomes apparent in analysing the everyday practices of anti-poaching rangers is how the enforcement of conservation territory and conservation law are co-constituted through a constellation of modalities of territorial, sovereign, and biopolitical power that combine to create and maintain protected areas as exclusionary biopolitical enclosures.

To be sure, Mozambique’s CA Law is simultaneously a technology of territorial, sovereign, and biopolitical power. The primary objective of the law is to secure spaces of conservation. There is significant consensus among judges and law enforcement officials working in the attorney general’s office that the law is a territorial piece of legislation applying only to various
types of conservation areas as defined by the law (see Chapter III of CA Law) (Interviews, 07/06/2016; 24/02/2016). Moreover, Article 2 of the CA Law states that the law’s objective is to establish the basic norms and principals for the protection, conservation, restoration, and sustainable use of biological diversity “in conservation areas.” This spirit of the law makes sense. Its creation is part of a broader process of strengthening and developing Mozambique’s conservation areas (MICOA, 2015; World Bank, 2014a, 2014b).

The part of the law receiving most attention, however, is the updating of the penalty for illegal hunting from a fine to an 8-12 year prison sentence. The Government also updated the country’s Penal Code to reflect this change. He who hunts where and when he is not supposed to is rendered homo penalis. In what is a clear technique of sovereign power, the objective of the law is to more severely punish the individual poacher and send a deterring message to others who might think of poaching. Speaking to me in 2013 about the changes proposed by the CA Law, a government official explained,

In the current law, poaching is only an administrative transgression so no one goes to jail for killing a rhino, it’s a fine. The new law introduces the concept of criminalising the killing of protected animals. It is an improvement in terms of the severity of the penalty in relation to criminal acts against nature (Interview, 29/07/2013).

After the passing of the CA Law a Mozambican prosecutor similarly argued,

We need a paradigm shift, a change in the way of thinking, and the law can help bring this about. For example, in moving from a fine to prison, from an administrative issue to a criminal issue, people will think twice, or think differently, about poaching. You are now a criminal and there is the punishment along with that (Interview, 27/11/2015).

Whether or not the transition from a fine to a prison sentence will actually lead people to think twice is questionable and has yet to be evidenced. Given its inherently spatial characteristics, the updating is simultaneously a maneuver that produces protected areas as biopolitical enclosures to optimise the life of certain nonhuman populations. Moreover, with the prison sentence, the law
enshrines the temporary doing away of the illegal hunter (human) to protect wildlife (nonhuman) in national legislation. Importantly, Article 50 of the CA Law outlines how state and sanctioned non-state rangers and other security personnel are the frontline personnel tasked with enforcing conservation areas. The remainder of this chapter focus on how rangers translate these underlying territorial, sovereign, and biopolitical modes of power on-the-ground and in their daily practices.

**Rangers, Conservation Law Enforcement, and Overlapping Modes of Power**

*Controlling Conservation Space*

Rangers are fundamentally concerned with regulating and controlling space, namely the territories of conservation in which they work. Significant time spent with rangers highlights how their effectiveness, as judged by both superiors and themselves, rests on their ability to control the boundaries of the protected area in question and movement of poachers through it. Raimundo, a ranger from the Niassa National Reserve (RNN), for example, explained “being a ranger is a big responsibility. We are all working towards the same objective, securing the area” (Interview, 06/06/2016). His colleague, Sergio, shared a similar sentiment when asked about judging the effectiveness of rangers: “We are ready and able to secure our area against poachers […] we have captured poachers and illegal miners, we are able to control our area […] This shows we are effective and our work is producing results. We are working against those violating our reserve” (Interview, 13/06/2016). He continued: “having more rangers allows us to better secure and control our area against transgressors” (Ibid).

Rangers’ perceptions of themselves as territorial agents whose duty is to police and patrol
space and boundaries is in part informed by their training. For example, the curriculum for Field Ranger Training by the Game Rangers Association of Africa (GRAA) begins with its objective: “the aim of all Field Ranger Training is to ensure the territorial integrity of protected areas” (GRAA., n/a). Another highly-regarded anti-poaching training manual explains how if executed properly, “training will ensure that all energy and resources are deliberately directed in the right direction to secure the area” (Greef, n/a, p. 1). Entering the space of the reserve without permission is synonymous with violating conservation law. Through the dictates of territorial power that informs their law and their training, rangers are conditioned and responsible to prevent this from happening to protect nonhuman lives.

Rangers achieve control over protected areas through a variety of territorial “tactics of control” (Herbert, 1997a, 1997b) that work to establish, communicate, and control space, its boundaries, and movement. Foremost here is the practice of patrolling along the borders of protected areas to
enforce the boundary and keep people out through the use of force. For example, an anti-poaching commander from a concession that has no boundary fence explained the role of patrols by his rangers to enforce the concession’s boundary saying, “my fence is a human fence” (Interview, 04/10/2015). APUs also work off of intelligence and the patterns of poaching groups to place ambushes along the fence line to catch any would-be poachers before they enter.

Securing the larger protected area may also mean reorganising space. In most protected areas, rangers do not patrol the entire space. Rather, rangers are assigned to and responsible for specific areas within it, and section rangers or managers supervise those field rangers (also see Warchol & Kapla, 2012). In addition, in some protected areas, like Kruger and the Limpopo National Park adjacent to it in Mozambique, there are intensive protection zones (IPZs). IPZs are smaller areas within spaces of conservation where policing and law enforcement efforts, most notably the patrol and surveillance technologies, are intensified because of a high density of species deemed under threat and/or a concentration of poaching. IPZs thus amount to a process of internal territorialisation internal to protected areas. Rangers, do, however, focus on the poacher’s bodies and not just the space they move through.

_Punishing and Deterring Poachers_  
An analysis of rangers’ practices reveals how sovereign power manifests on-the-ground in two ways. First, rangers work to punish the individual poachers they apprehend. Second, they make that punishment and their authority known to outsiders to deter others from poaching. The law thus punishes the individual, not the act, and this punishment is made known “to serve as an example to other possible offenders” (Foucault, 2008, pg. 249). The Commander of one anti-poaching unit in a Mozambican national park, for example, explained the importance of
maintaining the authority of rangers and having their authority and “powers” known to local people. He described how people are not even allowed to insult rangers, let alone threaten them. If they do, they will be automatically arrested and can face up to 2 months in prison (Interview, 24/06/2016). A ranger or other conservation law enforcement officer is the embodiment of sovereign environmentality on-the-ground.

Following the idea that law enforcement as a function of sovereign power is concerned with the detection of crime, the daily practices of rangers focus heavily on surveillance. Vehicle and foot patrols along the fence line and in the interior of protected areas are the core of ranger activities. While patrols help to detect and surveil the boundary and activity outside and within protected areas, they also communicate surveillance, anti-poaching activity, and potential punishment to poachers through practices of visual policing. That is, while rangers look for poaching activity, they also leave their own traces signifying to would-be poachers that there are rangers – sovereign authorities – active in the area. As explained by one ranger, visible patrolling is about “preventing actions before they happen. If a poacher comes across ranger footprints, they will assume they are active in the area and will be less likely to hunt there” (Interview, Raimundo, 06/06/2016). This practice is found in ranger training and conservation law enforcement manuals worldwide. Surveillance and the visible presence of rangers may help in deterring poachers from entering a protected area, continuing their journey, or taking a shot based on the fear of getting caught.

For this reason, APUs increasingly seek to augment everyday practices of detection and tracking during patrols with the use of surveillance and monitoring technologies to create a more panoptic surveillance reality within protected areas. The Meerkat system employed in Kruger National Park provides a useful example. As explained by South Africa’s Department of
Environmental Affairs, “with the use of new wide area surveillance technology and specialized long range optics installed in the so-called Meerkat system, poachers no longer have the luxury of relying on invisibility as they illegally enter South Africa’s primary rhino stronghold” (PPF, 2017). In another, rather extreme example, the APE (Anti-Poaching Engine) team operating in several protected areas in Southern Africa uses satellites to track the movements of animals and people (Park et al., 2015; Park, Serra, & Subrahmanian, 2015; Snitch, 2014, 2015). More commonly, camera traps are placed in strategic areas to capture movement, with fake camera traps mounted in locations where they will be seen by poachers to communicate the panoptic power and presence of rangers. Much attention is similarly given to multiple types of sensors to detect movement and sound (Marvin et al., 2016; Reuters, 2014). These multiple types of sensors help create “virtual fences” where “a series of sensors are placed all around the protected area boundary of a target area and identify an intrusion and its location, instantly communicating this to network monitors” (Marvin et al., 2016, p. 267). This allows rangers to detect an intrusion or gunshot at the moment it happens. In areas too large to control the entire perimeter, management may designate specific areas within the protected area as IPZs facilitated by these surveillance technologies. This is the case in Kruger whereby the Meerkat system is mobile, creating temporary IPZs within Kruger that have intensified surveillance, detection, and tracking. Aerial technologies like planes, helicopters, and increasingly drones, are also finding themselves at the core of anti-poaching, or at least future thinking about anti-poaching practice, to increase this capacity even further and help direct and support APU personnel (Mulero-Pázmány et al., 2014; Olivares-Mendez et al., 2013; Olivares-Mendez et al., 2015; Sandbrook, 2015). Indeed, the use of helicopters in anti-poaching reflects Herbert’s (1997b, p. 88) observations that “the observational powers of helicopters are used to structure territorial deployment of patrol units on
the ground so that, ultimately, the power of the police to control space is maximized” (also see Adey, 2010; Wall, 2016). Gen. Jooste of South African National Parks (SANParks) says optimising surveillance, early warning, detection, and tracking is the reason for adopting technologies in support of conservation law enforcement (CSIR, 2015). The increased surveillance and detection these technologies afford makes the punishment and deterrence of poachers more likely.

Indeed, the fear of being caught as brought on by surveillance and the active presence of rangers only materialises if there is punishment. Rangers thus combine surveillance and detection with punishment in the form of arrest, and more importantly, corporeal violence. Neutralisation is the standard language used in anti-poaching to refer to the arrest, apprehension, shooting, and even killing of a poacher, all of which are tactics to punish and deter poachers. Following the penal calculation, conservation law enforcement and rangers seek to increase the cost-benefit ratio of poaching so people see the risk and punishment as too significant. As Eloff and Lemieux argue, “one avenue of prevention [of poaching] is to increase the risks poachers face during the hunt” (Eloff & Lemieux, 2014, p. 35). The head of the International Anti-Poaching Foundation, who has signed a Memorandum of Understanding with the Mozambican Government to support anti-poaching in the borderlands adjacent to South Africa’s Kruger National Park, is quoted many times stating how the objective of his rangers is to make poaching “so risky they [poachers] choose not to do it” (ABC News 24 Australia, 2015; Interviews, 2015). Dozens of interviews and conversations with rangers confirm this tactic. This is sovereign power at work through the material practices of rangers.

Rangers routinely justify the use of violence, including the shooting and beating of poachers, as a method of punishment and deterrence. One conservation law enforcement officer
explained the use of corporeal violence saying “you need to torture them to make them fear you, respect you and so they don't come back. You need to send a message to them saying not to fuck with us again” (Interview, Filipe, 13/11/2015). Other rangers repeated similar sentiments about leaving visible marks of violence on the body to send a message to other would-be poachers (Interview, Paulo, 13/11/2015).

The use of corporeal violence as a sovereign tactic stems in part because rangers see arrest and the CA Law as an insufficient punitive measure. Even though Mozambique, among other countries, has criminalised poaching and increased the prison sentences, there is widespread recognition and frustration about the failure of the legislative and judicial system in prosecuting and thus punishing and deterring poachers. As one ranger explained,

We have caught a lot of poachers, a lot. It is normal we recover a firearm today, register the number and bring it to the police. A month later we recover the exact same firearm and the same poacher who we caught and who we thought was in jail, we catch him again! This has happened numerous times. It is frustrating. We have recovered the same firearm 3 times! 3 separate times and this has happened on numerous occasions. Arrest a poacher today and again next week (Interview, Arturo, 25/10/2015).

When I asked an anti-poaching manager about the shooting of poachers, he was very emotional, remorseful and conflicted about the use of violence, acknowledging that it is problematic. However, he, like many others, explained,

Tom: Look, I strongly believe it is the only way it will stop. Make them scared, drive fear into them. It is the only way they will stop. Look, when I caught those guys and they got arrested they were out two weeks later.

FM: If you knew he [the poacher] would be put away, would rangers be less keen to shoot poachers?

Tom: I think so. The frustration…tired, we are tired…yeah, what is the point of trying? First, you have to get the guy and you know how hard that is. Morale is low big time lately. It is true though, what is the point of trying because there is nothing that comes from it? It [shooting] is the only option that I see possible that will end it. Well, not end it, but stop that group let’s say, or stop those guys from coming in, those specific guys (Interview, Tom, 21/10/2015).
A Commander of Mozambique’s Environmental Police similarly explained how he is discouraged and saddened about the violence against poachers because he cares for his fellow Mozambicans. Frustratingly, in his view, he believes “the only way to stop them [poachers] is to shoot or arrest them, and even at that, if they are arrested they are often out soon. So, it really only leaves one option: to kill them” (Interview, Benjamin, 26/10/2015).

Part of the rationale motivating and authorising the killing of poachers and other uses of overt corporeal violence is indeed to punish the individual. But it also channels sovereign power’s desire to communicate this punishment to others to deter them. Responding to a question about whether youth see poachers as heroes, one ranger highlighted what he sees as the productive use of violence and punishment in Kruger National Park adjacent to where he works and with whom he cooperates:

Yes, but now less. More so in the past because now they [young men] see how many people are dying in South Africa. I think in the past it was more like that where they wanted to grow up and become a poacher. But this is happening less and less because a lot of them are dying (Interview, Arturo, 25/10/2015).

Indeed, rangers and APUs in Mozambique were quite forthcoming in explaining how they communicate the death of a poacher in Mozambique or South Africa to the villages where they come from as a way to send a message to others not to poach (Interview, 13/11/2015).

Stepping in to fill the void and achieve what the formal legal and judicial system fails to do brings me back to the ranger as embodiment of sovereign environmentality. When the law and legal process falls short, rangers, through their embodiment of the sovereign, operate and decide who should be punished and how, even if extra-legally. Like the “petty sovereign” put forward by Butler (2006, p. 65, emphasis in original), rangers in the cases set out above “perform their acts unilaterally and with enormous consequence. Their acts are clearly conditioned, but
their acts are judgements that are nevertheless unconditional in the sense they are final, not subject to review, not subject to appeal.” In effect, the ranger, and other conservation law enforcement officials, becomes a petty environmental sovereign who is conditioned by sovereign environmentality and territorial modes of power taking it upon himself to punish those who illegally enter protected areas in the name of protecting nonhuman life.

**Contain and Neutralise to Protect Wildlife Populations**

Territorial and sovereign tactics thus not only work to defend and uphold territory and punish transgressors, they are also guided by the objective of optimising the state of life for nonhuman populations by excluding that which purportedly threatens their biological existence. If punishment does not deter the poacher, the logic is that they must be done away with to protect wildlife. Here, the fortress of conservation, or conservation territoriality, is dual-sided, premised on keeping threats out, but if they do enter, to contain them and not let them escape. Paralleling policing practices of contain and capture, rangers employ the tactic of contain and neutralise to rid protected areas of poachers who succeed in entering. That is, once poachers are in, rangers, technologies, and practices of policing work to keep them there to neutralise them by arrest or death.

If poachers succeed in entering a protected area and rangers detect their tracks, rangers employ tactics of “man tracking” where they track the suspected poachers to deny them a kill and/or exit. Akin to “manhunting” in contexts of war, this is in and of itself a biopolitical tactic used to enclose hostile lifeforms (Shaw, 2016, p. 690). Rangers exercise a similar strategy when they hear gunshots or they obtain information related to the existence of poachers within a protected area.
Apart from merely tracking or hunting the suspected poachers, rangers work diligently to prevent them from escaping so they can successfully neutralise them. This includes setting up a perimeter around an area and putting stopper groups or ambushes along the fence or boundary line. Rangers also sweep the area where the suspected poacher is thought to be and, if available, fly a plane or helicopter overhead. This practice prevents poachers from moving as the poacher does not want to risk being detected. The momentary fear instilled in the poacher via surveillance and the threat of getting caught helps rangers contain and neutralise him.

As I witnessed on many occasions, rangers employ the tactics described above to pin the poachers down. Poachers are kept in and left to die in a literal sense. The rangers know that food and water supplies of poachers are limited and they can only survive so long. By controlling the space and environment in which poachers are, the strategy is to keep them contained in an area as long as possible to either find them or force them to make a risky and careless escape, thus increasing the chances for rangers to neutralise them. On some occasions, poachers even willingly surrender as they are so desperate for water in the hot and dry heat of the savannah (Personal Communication, 2015). Some APUs may even use dogs to contain poachers in an area and/or force them out of hiding lest they want to be attacked. Pinning poachers down or fixing them in harsh spaces of conservation is thus a method of using the “direct effects of the geographical, climatic, or hydrographic environment” not to make people live, but to make wildlife live by controlling and neutralising the circulating threat embodied in the poacher (Foucault, 2003, p. 245; also see Shaw 2016 and Sloterdiejk 2013). This strategy of contain and neutralise is the primary tactic used in responding to the presence of suspected poachers or a poaching incident in a protected area.
Reinforced by practices of conservation law enforcement, protected areas are thus biopolitical enclosures. This is an enclosure that is created and enforced through practices and technologies to contain and neutralise poachers who represent a threat to the biological existence of the wildlife they are hunting. Even without killing, the capture and arrest of a poacher achieves the same objective of physically eliminating or doing away with the threat of the poacher. Laws and norms arm rangers with the authority to neutralise poachers to secure the biological existence of a species under threat. In the context of conservation law enforcement, this biopolitics turns on enclosing a hostile human life, the poacher, to protect and guarantee the existence of valued and/or threatened nonhuman life.

Fixing poachers within protected areas also shores up sovereign power as it is within protected areas that rangers are most effective and can act as petty environmental sovereigns. For one, the full legal or normative authority of rangers, as with Mozambique and protected areas in South Africa, might not extend beyond protected area boundaries. Indeed, capturing this normative sentiment of rangers being able to act differently within, as opposed to outside of protected areas is a common saying among APUs: “what happens in the bush stays in the bush.” Second, the surveillance within protected areas may extend outside but it is at its strongest within. If rangers can contain suspected poachers within the protected area, they can more effectively surveil, track, punish, and neutralise them. This results in the simultaneous and effective enforcement of conservation law and protected areas as exclusionary biopolitical enclosures. Beyond informing the practices of rangers and anti-poaching personnel, the idea of the ranger as a petty sovereign who is conditioned by the structures of power within which he operates, helps understand how these intersecting modes of power enable or constrain conservation violence.
**Conditioning Conservation Violence**

I begin this section by drawing on Herbert’s (1996, p. 572) insights on how “the legal order is more a resource than a constraint” in shaping and enabling daily law enforcement practices. I would argue, however, that it is not the legal order *per se* that acts as a resource or constraint. Rather, it is the structures of power that shape the law and within which law enforcement personnel, like rangers, operate. It is the territorial, sovereign, and biopolitical modes of power that enable, authorise, and even demand the use of violence by conservation law enforcement personnel to secure and defend conservation territory, punish poachers, and contain and neutralise poachers who pose a threat to the biological existence of the wildlife they are hunting. Hence, while the law may or may not legally permit violence, APU personnel negotiate and are conditioned by its underlying logics resulting in their acting with impunity, especially where they, their superiors, and even civil society, perceive that the law and its institutions fall short of achieving the desired objectives. Hence, and returning to the petty environmental sovereign, rangers are “instrumentalized, deployed by the tactics of power they do not control, but this does not stop them from using power” (Butler, 2006, p. 65).

One ranger was particularly articulate in explaining how rangers negotiate the underlying power structures that normalise and even promote violence. He echoed other rangers quoted above about how the failure of Mozambique’s justice system with regards to poaching and wildlife crime leads rangers to want to shoot poachers (Interview, 5/10/2015). He explained how they know if they arrest poachers they will be back in the villages drinking and having a good time a couple of weeks later or even earlier. Moreover, he, and other rangers fear that these alleged poachers might seek retribution. The latter was a common
theme throughout my research. Well aware of the norms that govern rangers’ practices, he said one way to get around the lack of punishment of suspected poachers is to take matters into their own hands, especially knowing that it is accepted. The lack of a functioning justice system leads to immense frustration among the APU and rangers. This frustration builds up, especially as they negotiate near daily poaching incursions that put them at risk in already overworked and difficult conditions. In the borderlands of Mozambique and in many areas of South Africa, anti-poaching is also an increasingly hyper-militarised environment characterised by the need to combat the enemy. McClanahan and Wall (2016, pg.) capture this dynamic with what they call “warrior conservation.” Frustration, adrenaline, fear, and an increasingly antagonistic and militaristic anti-poaching culture might contribute to a ranger acting out in a violent way. But, it is the broader structures of power within which rangers and other conservation law enforcement personnel operate that enables and even authorises such actions and their ability to act with impunity.

To be sure, I am not aware of any conservation law enforcement official in Mozambique or South Africa being held accountable for acting violently in an extra-legal way. While I did not witness it first hand (by choice), I was present at the reserve and was aware when and how the APU – inclusive of non-state and state law enforcement personnel – shot, beat, and “interrogated” suspected poachers. In fact, rangers act not only with impunity, but the use of violence is even celebrated (also see Lunstrum, 2016; McClanahan & Wall, 2016). Two of the more revered anti-poaching rangers were described and praised as “pitbulls” by their colleagues given the aggressiveness with which they engage suspected poachers during anti-poaching operations, and even after they are caught.
I contrast this authorisation and enabling of violence, and the impunity with which conservation law enforcement personnel operate, with how they are constrained, and held accountable for not acting in certain ways. I use an excerpt from my field notes to illustrate how this occurs on-the-ground.

Ranger “Filipe” is given a written warning. He received a warning letter because this is the second time that while on ambush he has failed to act to stop poachers passing by. The letter explains his role and responsibilities, and how his failure to act is a dereliction of his duties and not in line with being a ranger in an elite anti-poaching unit. It explains how contact with poachers is part of his job, how it will occur, and how it requires confronting them. He cannot be afraid to pull trigger or tackle a poacher (Field Notes Oct. 5th, 2015).

Filipe is a ranger. He was formally reprimanded and given a written warning about his roles and responsibilities as a ranger and a conservation law enforcement official. On two separate occasions Filipe waited in an ambush for poachers on the perimeter of the reserve. On both those occasions the poachers walked right by him and he did not shoot them or otherwise neutralise them. We do not know whether his failure to act stemmed from fear, because he had been bribed by poaching groups to not interfere, or because he was not comfortable with acting in a violent way against someone who posed no threat to him. What we do know is that through his decision-making, the power structures that inform conservation law and law enforcement did not translate into practice on the ground on those occasions. We also know that because of this, and for his failure to neutralise these poachers, he was formally reprimanded. He was also socially admonished by his colleagues. I was present at meetings where APU management and Filipe’s colleagues rebuked him for his failure to shoot the poachers. As I wrote in my field notes, “[Filipe’s] fellow rangers are so pissed off that he did not just shoot the poacher!” (Field Notes Oct 5th, 2016). While Filipe was able to exercise his agency and not abide by the dictates of either territorial, sovereign, or biopolitical logics, his ability to do so and that of other APU personnel is constrained, lest he be formally and socially reprimanded.
Where shoot-on-sight and shoot-to-kill policies exist in law, such as in Botswana and Swaziland, conservation law enforcement personnel have the right to kill poachers. In countries like Mozambique and South Africa, where such policies do not exist, they often operate as a norm and are accepted, and in some cases are even encouraged or demanded. During months of researching anti-poaching I saw this first-hand. Many rangers in Mozambique believe they have a right, and even a duty to shoot poachers, even when the law does not provide for this, or is ambiguous at best. I sat in meetings where conservation law enforcement advisors from the Government told rangers that they can shoot poachers who are fleeing. And while he was specific in saying to shoot at the body and legs to try and avoid killing, this was not a directive to shoot in self-defense, but to neutralise a poacher who is running away even if he is unarmed. This is the acceptance and promotion of the idea that rangers can and ought to use extra-legal violence to defend conservation space, punish poachers, and protect nonhuman life. The power structures within which conservation law enforcement personnel operate conditions the use of conservation violence by rangers, even if primarily motivated by self-preservation.

Conclusion
In this chapter I have analysed the daily practices that rangers use to enforce conservation law. What becomes immediately apparent is that conservation law and its enforcement embodies, reflects, and is informed by an articulation of complementary modalities of territorial, sovereign, and biopolitical power. These modes of power come together to support one another and to create, strengthen, and perpetuate protected areas as exclusionary spaces in the name of protecting certain nonhuman animals. Working within this power structure, conservation law
enforcement personnel are conditioned to enforce and defend conservation areas as exclusionary biopolitical enclosures.

To be sure, arguably the primary, and problematic, objective of conservation law enforcement parallels the logics and tactics of a narrow vision of policing. This is a policing that does not perceive space as empty, but as “potentially emptiable” of certain unwanted things, people, and activities (Herbert, 1996b, p. 568). Emptying, here, can take on a very literal meaning. As others have examined, one of the reasons for the removal of communities from spaces of conservation is precisely that it makes such spaces easier to police (Brockington, 2002; Lunstrum, 2015; Massé & Lunstrum, 2016; Neumann, 1998; Peluso & Vandergeest, 2011). This practice is intensifying and being explicitly used to facilitate conservation policing and law enforcement by emptying spaces of conservation of certain people and activities. Keeping these spaces empty through various practices and technologies of power is the concerning objective that authorises and demands certain conservation law enforcement practices and even the use of violence that characterise the daily work of rangers. The sovereign mode of power arms rangers with the authority and responsibility to use the power of the law, violence, and surveillance to punish those who enter and communicate this future to potential poachers as a method of deterrence. Moreover, the biopolitical mode of power informs anti-poaching practices that seek to empty protected areas of those poachers who do manage to enter. By containing and then neutralising them, the poacher is left to die or is removed either through capture and arrest, or death. Taken together, these tactics and how they come together offer productive insights into how the rationales and actually-existing assemblage of power underpinning conservation law condition the practices of rangers on-the-ground.
It is here where the analysis in this chapter also illustrates how these modes of power authorise and even demand oppressive tactics and conservation violence. This analysis is not meant to be deterministic. Rather it acknowledges how the structure of power that inform conservation law and create the context within which rangers operate enables the use of violent anti-poaching practices while simultaneously constraining rangers’ agency to not act in certain ways lest they want to be reprimanded, risk losing their job, and be socially admonished. As the petty environmental sovereign, rangers are the frontline enforcers of conservation law and territory and often the wielders of territorial, sovereign, and biopolitical violence even if they do not necessarily agree with the tactics and logics used, and some are conflicted about their own actions. Many of them are also vulnerable and are being made increasingly vulnerable because of these tactics (GRAA, 2016). Many also depend on their jobs to support their families, and thus follow orders. This analysis works to humanise the ranger as a petty environmental sovereign who works within and negotiates broader structures of power. Rangers should not operate with impunity, but it is these structures of power and their rationales that should be the primary objects of critique.

Beyond these conceptual insights, studying the daily practices of rangers illustrates how rangers, as frontline enforcers of conservation law and conservation territory, as well as their counterparts in other domains, warrant more attention. Grounded empirical research focused on front-line law enforcement, and even their concerns, facilitates an understanding of how conservation law enforcement personnel, as individuals, negotiate the broad processes of power within which they work and that inform the securing of conservation space, the punishment of the poacher, and the protection of nonhuman life. The result is an uneven and messy translation of these modes of power on-the-ground and in daily practice. In some ways
this is promising as individuals can resist deploying conservation violence in pursuit of these objectives. In other ways this is problematic and concerning and as it authorises and even demands that law enforcement personnel operate in ways beyond what formal law might permit, even if they are critical and uneasy with this.

As such, it is in individuals and their quotidian practices where we locate the multiple modes of power and how they are brought to life on-the-ground and on a daily basis in uneven ways and with contradicting implications. Indeed, it is in how they uncomfortably or comfortably negotiate the law and underlying structures of power that their actually-existing operationalisation and manifestation in anti-poaching practice begin to crystallise. These insights and ways of approaching the connection between structures of power and daily practice might offer productive insights in other policing and security contexts.

A point with which I wish to end is a particularly concerning trend in conservation, namely its increasing militarisation (Annecke & Masubele, 2016; Duffy, 2014; Duffy, et al., 2015; Lunstrum, 2014). This chapter highlights how protected areas are a biopolitical enclosure. Relatedly, the analysis presented also brought light to the death function of anti-poaching. Quite problematically, the death of, and indeed violence against, a poacher may happen and be accepted in the process of protecting wildlife, even if regrettable by the very individuals who carry it out. The death of the poacher and conservation violence enter the picture not as an organising principle, but as an acceptable or necessary consequence of making the nonhuman live. Indeed, anti-poaching practice is a part of conservation, which itself seeks to secure and optimise the lives of nonhumans and the spaces in which they exist. However, what happens when conservation practice is increasingly based on militarisation, understood as the process through which society organises itself for conflict and violence (Geyer, 1989)? With the increase
and intensification in green militarisation there is a risk that green violence and conflict with poachers is not merely an acceptable consequence in the pursuit of securing protected areas, punishing poachers, and protecting nonhuman life, but becomes a primary organising principle in and of itself.

Put another way, my concern is that militarisation threatens to replace the biopolitical objectives of conservation security with the thanatopolitical, whereby the violence against and killing of the poacher becomes not a by-product of protecting wildlife, but the organising logic and end goal of anti-poaching and conservation law enforcement. They are not mutually exclusive and, as I have shown, the biopolitical is not unproblematic. But what will conservation look like and what will this mean for the nonhuman as well as the human on either side if the primary mode of power that conditions and structures conservation law enforcement is less about protecting nonhuman life than it is about entering into conflict with and even killing the poacher? I do not wish to find out.
Chapter 7

Protected Areas in 3-D: Topographies of Security and the Changing Spatialities of Conservation

Introduction

What I noticed sitting in the main camp of South Africa’s Kruger National Park was how the whirring of helicopters flying overhead increasingly punctuated the silence and sounds of the bush I had become accustomed to. Conservation practitioners have long used aerial technologies like helicopters and planes for biological and ecological management purposes including monitoring, darting, and culling wildlife. But throughout the four years of researching conservation security in South Africa and Mozambique, I noticed that their use had intensified. The increase in going aerial, or using vertical space above the terrain of conservation landscapes, is not for the conservation management purposes as mentioned above. Motivating the intensified use of helicopters and planes in conservation areas is the need to surveil poachers and deploy rangers in response to the rise in commercial poaching of rhinos and elephants.

For most my research, I focused my senses and analytical lens across the horizontal plane of expansive spaces of conservation across which poachers, wildlife, and rangers move. However, in the Mozambican borderlands adjacent to Kruger where I spent approximately six months with an anti-poaching unit, I found myself increasingly looking upwards at planes and helicopters, or down from them, to understand anti-poaching efforts. The vertical as a dimension of space and power to secure protected areas and the wildlife within them has forcefully entered the conservation landscape bringing the multiple and changing spatialities of conservation to the fore. How does one make sense of these various and overlapping horizontal and vertical
spatialities? How do they arise from and shape human-environment interactions? I use a topographical approach to analyse conservation-security and answer these questions with a view to understanding changing dimensions of power and territory more broadly.

The language of topography commonly refers to the horizontal, vertical, and environmental features of a particular landscape. The familiar lines on a topographical map, commonly referred to as contour lines, illustrate and describe intersections between the horizontal and vertical dimensions of an area. In human geography, topography similarly refers to the physical, environmental, and socio-political features of a place or landscape and the connections between them (Gregory et al., 2011, p. 396). The language of topography is also used in social sciences more broadly as a spatial metaphor to highlight the connections between spaces and processes (Ferguson, 2014; Gupta & Ferguson, 1997; Katz, 2001; Mountz, 2013; Murdoch & Pratt, 1997). Topography is a way of “theorizing the connectedness” and uncovering the interplay between them (Katz, 2001, pp. 1229-1230).

I use a topographical approach to analyse the multi-dimensionality of space and power in conservation. I examine how various practices, efforts, and technologies to secure protected areas seek to mobilise and integrate the vertical and horizontal as dimensions of space and power over nature and poachers. While I draw special attention to vertical space and aerial technologies, always accompanying the helicopters, planes, and even satellites are 4x4 trucks meandering through protected areas or racing along dirt tracks at a moment’s notice. Ever-present rangers also patrol expansive spaces of conservation on foot while horizontally-focused technologies like camera traps and motion sensors monitor the landscape and movement of poachers and animals. Shaping the landscape of conservation security is thus a deep connection between and even blurring of vertical and horizontal spaces, practices, and technologies with the
two mobilised to overcome nature’s obstacles, but also to protect it and pacify those who threaten it. I argue this is producing new configurations of conservation spatiality, power, and related processes of territorialisation that produce protected areas as three-dimensional enclosures. This exacerbates already uneven power dynamics shaping human-environment relations.

While my empirical case is conservation, I situate my analysis within the broader body of literature concerned with multiple dimensions of territory, sovereignty, and ultimately power over bodies, circulations, and space (see below). Indeed, a topographical framework can help shed light on practices that extend sovereign space and power vertically and the ways in which this verticality articulates with horizontal dimensions and political-ecological dynamics to produce novel configurations of space and territory that alter power dynamics. This contributes to our understanding of conservation territory by drawing attention to its three-dimensionality and how relevant authorities seek to harness this to alter already uneven power dynamics in the pursuit of securing the spaces and lives of the nonhuman by pacifying threatening human circulations.

To outline a framework for thinking topographically in the context of conservation security, I turn to critical social science literature that uses topography and related spatial metaphors to describe the variegated and interconnected dimensions of space, power, and socio-political and political-ecological processes. I then use observational data from my participant observation with an anti-poaching unit to examine how anti-poaching personnel mobilise the vertical as a dimension of space and power to secure protected areas and natures under threat. In the third section, I move beyond the vertical to analyse the topography, and three-dimensionality, of conservation security as constituted by the interconnectedness between the vertical and
horizontal dimensions of space and power and their articulation with political-ecological
dynamics in protected areas. I conclude by reflecting on the topography of conservation security
and what it means for our understanding of broader power dynamics and their re-shaping of
human-environmental relations.

The Interconnectedness and Multi-dimensionality of Space and Power: Thinking
Topographically (and Through Other Spatial Metaphors)

Examining a series of paintings known as *Dogs*, Foucault reflects on the horizontal and vertical
dimensions of space and power. He writes: “In the world of prisons, as in the world of dogs
(‘lying down’ and ‘upright’), the vertical is not one of the dimensions of space, it is the
dimension of power” (Foucault, 2007[1973], p. 170). Foucault goes on to talk about three
elements in the paintings: the window, the bars, and the baton as metaphors for the integrated
and interconnected embodiments of vertical and horizontal technologies of power.

Written in 1973, Foucault’s’ attention to the multiple and integrated dimensions of power
resonates strongly today. Even if not explicitly building on Foucault, we see similar analyses in
scholarship that uses the language of topography, among other spatial metaphors, to understand
not only dimensions of power, but the multiple dimensions of space and the relationship between
the two. Literally, a topographic map is a way to illustrate the connections, intersections, and
relationships between the horizontal, vertical, and physical and socio-political features of a
particular landscape (Gregory, et al., 2011). Figuratively, and as used to understand socio-
political and political-ecological processes, the contour lines of topography represent not
elevation, but the connections or relations between processes and space (Katz, 2001). It is in
these lines of connection through which we can locate the workings of power across space and scale.

The language and concept of topography has been used by social scientists to examine the multiplicity of power’s spatialities, dimensions, and the articulations between them to further our thinking on the spatialities of politics, culture, territory, security and how they operate (Ferguson, 2014; Gupta & Ferguson, 1997; Katz, 2001; Murdoch & Pratt, 1997). What binds these analyses together is a focus on the productive interplay between different social, political, economic, geographical and environmental processes and dynamics. “Topographies,” writes Katz (2001, p. 1231), “are a means to elucidate the intersection of these processes.” Thinking topographically, or doing topography, as a critical social science approach is indeed perhaps best summarized by Katz,

To do topography is to carry out a detailed examination of some part of the natural world, defined at any scale from the body to the global, in order to understand its salient features and their mutual and broader relationships. Because they routinely incorporate both “natural” and social features of a landscape, topographies embed a notion of process, of places made and natures produced (Katz, 2001, p. 1228).

Other spatial metaphors offer similar insights. Rocheleau and Roth (2007), for example, use the theory and spatial descriptor of networks to question how power works through multiple interconnections to shape the socio-ecological relations of conservation. In doing so, and paralleling the grounded empirical work of Katz and others, they call for a “radical empiricism” to understand the complexity, assemblages, and interconnections of socio-ecological landscapes, processes, and dynamics (Rocheleau & Roth, 2007, p. 433; also see Rochelau 2008). The empiricism these approaches call for is needed to “[see] multiple” and understand deeply entwined processes, spatialities, and even ecologies as part of “complex assemblages” (Rocheleau & Roth, 2007, p. 433).
Understanding the role of the ecological and biophysical is needed to account for the shape of topographies, networks, and assemblages. Attention to the material and biophysical reflects traditional notions of topography as “the detailed study and description of a place as much as to the materiality of its features or landforms more generally” (Gregory, et al., 2011, p. 762). Using their radical empiricism to understand webs of relation, Rocheleau and Roth (2007), for example, highlight how the biophysical and ecological are part of the nodes in any network, and are essential to understanding and seeing multiple, including the multiple spatialities of power dynamics in the socio-/political-ecological context of conservation. Paying attention to the ways in which the materialities of nature shape and are shaped by processes of power is also increasingly common in political geography (Bridge, 2013; Elden, 2013b; Gregory, 2016; Grundy-Warr et al., 2015; Steinberg & Peters, 2015; Sundberg, 2011).

Topography as an analytical approach has been used to examine numerous processes from resistance, immigration enforcement, borders, sovereignty, territory, and the state (Carmody, 2009; Cresswell, 1996; Massey, 2005; Mountz, 2013). Some have used the related language of assemblage to make sense of vertical security and its politics (Adey et al., 2011; Crampton, 2015). What Crampton refers to as “assemblages of the vertical” speaks to the realities that vertical technologies and the spaces in which they operate do not exist on their own. Rather, they are integrated into a broader network of security and policing practices and technologies that usher in the use of vertical (and horizontal) space (Crampton, 2015; Crampton et al., 2014; McCoy, 2012). The vertical in these security and policing contexts is mobilised in part to overcome the obstacles of the natural and built environment (Adey, 2010; Adey, et al., 2011; Gregory, 2016; Shaw, 2016). Analyses such as the above help make sense not only of the specific processes they examine and their spatialities, but broader interconnected relations of
power that they produce and reflect. Indeed, complementing topography as a heuristic device is the notion of power geometries that focuses on the connections between the production of space and the production of power. Like topography, power geometries are a metaphor to think through the multiple dimensions of space and power and how they intersect (Massey, 1993).

A topographical approach in combination with these related insights is a productive way to examine conservation security and its multiple spatialities within conservation territories. Territory has long been central to understanding the spatiality of power (Elden, 2013a; Sack, 1986). Mountz (2013, p. 835), for example, argues that all spatial metaphors from topography to power geometries and their objects of focus including enclosure, power, and sovereignty “traffic in concepts of territoriality.” Political-ecology and political-geography analyses of conservation are also rooted in understanding conservation as a territorial process (Benjaminsen & Bryceson, 2012; Brockington, 2002; Corson, 2011; Fairhead et al., 2012; Peluso & Vangereest, 2011; Spierenburg & Wels, 2006) with protected areas as enclosures and a process of “internal territorialisation” (Vangereest & Peluso, 1995).

Recent work in political geography turns our attention to the multiple horizontal and vertical dimensions of territory and its spatiality (Bridge, 2013; Elden, 2013b). Some of this work explicitly makes connections between the horizontal and vertical dimensions of territory and the biophysical resources that are found on, below, and above it (Braun, 2000; Grundy-Warr, et al., 2015). Jessop (2016, p. 10), for example, highlights the manifold geophysical and spatial dimensions of territory that “provides the variable geophysical and socially appropriated ‘raw material’ or substratum for territorialisation as one mode of organizing space.” Power across and above the land can thus be mobilised to territorialise in three-dimensions. Apart from Lunstrum’s (2014) study of conservation’s militarisation as partially arising from the spatial and
environmental contours of protected areas, the realm and practice of conservation has, however, yet to benefit from these analyses. This is despite the productive body of literature demonstrating the intimate relationship between conservation and territorial practices of control over resources and people.

Indeed, what motivates analyses that use the language of topography, networks, assemblages, and power geometries is a desire by scholars to move away from a flat ontology that fails to account for the multi-dimensionality of space and power. This is a trend we see in political geography more broadly, a trend concerned with re-thinking cartographies and spatialities of politics, power, security, sovereignty, and the state (Carmody, 2009; Graham, 2004; Graham & Hewitt, 2013; Klauser, 2010; Klauser & Pedrozo, 2015; Scott, 2008; Weizman, 2002). This analytical move emerges in part from the understandings of territory as three or multi-dimensional (Baghel & Nüsser, 2015; Braun, 2000; Bridge, 2013; Elden, 2013b; Harris, 2015; Steinberg & Peters, 2015; Usher, 2014). As Katz (2001, p. 1231) reminds us, doing topography entails examining “social processes in three-dimensional space.” Traditional notions of conservation’s cartographies are flat. They do not include the vertical as either a dimension space or power. This chapter addresses this gap by highlighting the three-dimensionality of conservation territoriality.

This is not to say that the vertical overshadows or becomes more important than the horizontal. Reflecting the productive interplay and coming together of different spatialities of power, the vertical and horizontal are interconnected and sometimes blurred. Indeed, topographical analyses are nuanced in that they bring the hybridity of spaces, scales, and socio-political processes as they occur on-the-ground to the fore. For example, in summarising the work of topographies of power and sovereignty in helping to move beyond binary thinking to
connections and overlaps, Mountz (2013, p. 833) points to the “productive blurring of onshore and offshore, internal and external, inside and outside in reconfigurations of sovereignty.” She argues that an attentiveness to this blurring and overlap is needed to understand the workings of power and the creation of exclusionary spatialities and/or topographies. Protected areas are a form of state spatiality, are often an expression of state sovereignty, and have historically been used to extend state power and further cement sovereignty through exclusionary territorial means in rural areas (Carruthers, 1995; Lunstrum, 2013; Neumann, 2001; Peluso & Vandergeest, 2011; Vandergeest & Peluso, 1995). The horizontal and vertical as dimensions of space and power in conservation security themselves overlap and become productively blurred leading to novel spatial configurations of conservation and practices of anti-poaching that reinforce the extension of conservation-related power.

Making sense of the changing spatialities and multi-dimensionality of conservation-related power is one step towards further understanding how such spatialities are themselves productive and constitutive of conservation and broader state space, power, and sovereignty in the name of controlling human-environment interactions.

**Aerial Technologies and Going Vertical in Anti-Poaching**

Much of the attention on verticality in conservation focuses on the biological monitoring capabilities of aerial technologies like drones, helicopters, and planes (Arts et al., 2015; Christensson & Flodell, 2016; Christie et al., 2016; Mulero-Pázmány, 2015). Attention is also turning to the use of aerial security and surveillance technologies to secure conservation territories and nature from poachers (Mulero-Pázmány et al., 2014; Olivares-Mendez et al., 2013; Olivares-Mendez et al., 2015; Park, et al., 2015; Snitch, 2014, 2015). Apart from a few studies
(Duffy et al., 2015; Lunstrum, 2014; Sandbrook, 2015, however, there has been little critical analyses of the use of such technologies and verticality in conservation, especially from a political-ecological or political geography lens and what it means for broader debates in each. The verticalisation of security has been analysed in other contexts such as war, urban policing, and borders (Adey, 2010; Adey, et al., 2011; Crampton, 2015; Graham, 2004; Graham & Hewitt, 2013; McCoy, 2012; Pedrozo, 2017; Shaw, 2016; Sloterdijk, 2009; Weizman, 2002). In these contexts, the vertical is a dimension of power and space that can be activated to police, protect, and pacify wanted and unwanted circulations. I argue this is what we are witnessing in anti-poaching as well.

However, conservation is unique in that it offers a specific rural spatiality and associated set of political-ecological dynamics concerned with securing nonhuman animals and the spaces in which they live that the above analyses do not account for. Explicitly incorporating the vertical into analyses of conservation-security, and vice-versa, is thus timely, if not overdue. The first step in understanding the multiple and overlapping spatialities of conservation and related processes of power is analysing how the vertical manifests itself as a dimension of space and power in response to commercial poaching. I illustrate how aerial technologies and the practices they enable help to extend sovereign space and state-sanctioned power vertically to gain the upper hand over unwanted circulations and bodies. In the context of conservation this is manifested in expanding and incorporating the vertical to facilitate the work of rangers and frontline anti-poaching personnel to surveil and pacify poachers and thereby protect threatened natures.
Aerial Surveillance and Monitoring

Surveilling the movement of poachers, wildlife, and the space of protected areas is the priority of anti-poaching and the foundation of the ranger patrol. Either on foot or in a truck, rangers can only surveil so much and cover so much distance. Being able to go skywards and fly helps with the mobility needed to surveil and monitor the large spaces that characterise most protected areas. At a reserve where I conducted ethnographic research into anti-poaching, the pilot did a flyover twice a day, morning and afternoon, in a small-fixed wing plane known as a Bantam. These flyovers located the small number of rhinos on the reserve numbering anywhere from eight to twenty-five on a given day. The pilot then communicated the rhino locations to the anti-poaching unit (APU) so they could plan their daily operations, plot the locations in a mapping system, and log them in a database. Adjacent to this reserve, another protected area owner flies his larger plane to locate charcoal camps and operations. The APU then uses this information to follow up and dismantle the charcoal operation in question.

Photo 11: A charcoal operation in a private reserve in the GLC, southern Mozambique as seen from a bantam plane (Source: F. Massé)
In the Niassa National Reserve (RNN), the monitoring team also uses a plane, a small Cessna, to monitor elephant populations and locate illegal mining and logging operations in the over 40,000 km² protected area. As the manager in charge of monitoring explained, flying is the only way to even begin covering the area and is the only way to locate mining and logging camps and then plan operations accordingly (Personal Communication, 05/06/2016). Flying to detect elephant populations is an important aspect of preventative anti-poaching. Knowing the locations of elephant groups allows the APU to deploy rangers to that area to better protect them from poachers. Effective and widespread monitoring and surveillance rests on the ability to move. Even when viable, ground-based mobility is often too slow and cannot cover the amount of terrain needed. Going vertical to rise above the obstacles on the ground helps overcome this for effective monitoring and surveillance.

Apart from facilitating mobility, going vertical also assists in surveillance and monitoring by providing an “aerial gaze” (Adey, et al., 2011, p. 175). The view from above afforded by such technologies complements and addresses the shortcomings of a horizontal gaze. While many cities may be “impossible to envision from the horizontal” (Adey, 2010, p. 54), one can say the same of expansive areas of conservation that are often dense in foliage or forests. Moreover, even when flat and relatively unobscured, many spaces are simply too big for the horizontal gaze to be effective. Even getting rangers on to a high-point such as a hill-top for an observation post, a rather innocuous form of going vertical, is a common and effective way of surveilling the landscape in front and below. Helicopter and planes make the aerial gaze a reality.

It is in achieving an aerial gaze for surveillance purposes that motivates the increasing attention given to drones for anti-poaching surveillance. APUs are experimenting with drones in conservation areas for anti-poaching worldwide (Linchant et al., 2015; Mulero-Pázmány, et al.,
2014; Olivares-Mendez, et al., 2013; Olivares-Mendez, et al., 2015). In each reserve I visited in Mozambique and South Africa, there were discussions about the use of drones with many of them having tested them, waiting for requisite legislation to allow them to further pursue their use. Kruger National Park, however, recently completed a one-year drone pilot program and decided not to continue with drone use (Martin, 2017), a point I return to below. The Anti-Poaching Engine (APE) project operating in Southern Africa uses drones to surveil the movements of rhinos, poachers, and rangers to more accurately deploy rangers and even predict future poaching incidents (Park, et al., 2015; Park, Serra, & Subrahmanian, 2015; Snitch, 2014, 2015). Going to even higher altitudes, they use “high resolution satellite imagery” to detect and monitor the same bodies (Snitch, 2015). Verticality, however, can also entail static forms of observation. In one reserve, for example, a team is developing an aerostat, a type of gas-filled balloon anchored to the ground (Personal Communication, 12/08/2015). The idea is for the aerostat to sit high above the ground and be mounted with a camera to surveil the surrounding area, including a nearby lake adjacent to the reserve.

Aerial technologies in anti-poaching are thus not concerned with securing the vertical as a dimension of space for its own purposes. Rather, they allow APUs to mobilise the vertical as a dimension of panoptic-like power thereby facilitating their control over the space of conservation and the flows through it. Aerial mobility also comes into play once poachers are detected.

**Aerial Mobility and Space-Time Compression in the Bush**

Aerial means of mobility, namely planes and helicopters, allow APU personnel to get above the obstacles of the natural environment and lack of infrastructure that characterise most protected areas resulting in efficient horizontal movement free of obstacles. This produces a space-time
compression in the bush characterised by the optimisation of horizontal movement across the landscapes of conservation areas to more effectively surveil, patrol, deploy rangers, and react to poaching activity or movement.

This optimisation enabled by technologies like helicopters reflects the “power-geometry of space-time compression” at work (Massey, 1993, p. 62). Power geometries are about power in relation to flows, mobility, and interconnections (Massey, 1993). Going vertical to compress space and time in the bush is a way for anti-poaching and security personnel to try and alter the power geometries within and across conservation space in their favour.

In the rainy season in many parts of Southern Africa ground transportation in protected areas, other than walking, is simply not possible. I have seen first-hand how once the rain comes even the best 4x4s are grounded as it may take hours to move even a kilometre or two through the mud’s relentless grasp. Getting above the water and mud is often the only viable option for deploying rangers and reacting to the incursions and activities of poachers. Even in the best of conditions, aerial technologies are necessary to compress space and time to achieve the adequate reaction times required to neutralise poachers.

In Kruger and the adjacent borderland protected areas in Mozambique, the Lebombo mountains that span the border are not only difficult obstacles for rangers, as also highlighted by Lunstrum (2014), but are nearly impossible for trucks in certain areas. As such, if rangers detect gunshots, poachers, or their tracks in these areas, trucks must drop rangers where movement by vehicle is no longer possible. This can be close or can be several kilometres away. Some areas of the relatively small reserve where I conducted most of my fieldwork take upwards of an hour to get to in a vehicle. Walking another couple of kilometres from where the truck must stop can mean it takes an hour or two before even reaching the original spot where poachers may have
been active or detected. Even if the poachers or carcass were detected in real-time, this delay means that the poachers are likely long gone, perhaps even out of the protected area and free from the authority of the rangers.

In the Niassa National Reserve, a conservation area of 42,000 km² with particularly harsh terrain, there are more trucks broken down and abandoned throughout the bush than there are in usable condition at the reserve’s headquarters (Personal Communication, Niassa Manager 2, 05/06/2015). Vehicle use here is so complicated that trucks need to be reserved well in advance as each time a truck goes out to deploy rangers, it must undergo maintenance at the reserve’s workshop for it to be in working order for the next task. I use two incidents to highlight how the use of a helicopter can radically alter the dynamics of mobility and reaction, and ultimately power geometries in the favour of APUs, by compressing space and time.

Like many days during fieldwork at a reserve in southern Mozambique, rangers detected an entry by poachers in mid-April of 2016. The rangers at the scene started tracking, and the newly acquired helicopter was dispatched to deploy a second team of rangers for re-enforcement. Within a matter of 15 minutes, the helicopter transported the new group of rangers to the area in what would take at minimum 45 minutes in the best of conditions by truck. The helicopter then rose up and dropped a group of rangers a few kilometres ahead to leapfrog and try to pick up the tracks further ahead to save time tracking. With the first tracking dog getting tired, the pilot went back to headquarters, loaded the second tracking dog into the helicopter, flew back to the scene, picked up the tired dog, and deployed the new one to continue tracking. Each of these trips back and forth in a truck would be at least 45 minutes, and then a kilometre or two on foot to reach the tracking party. In the unforgiving bush, the helicopter radically compressed space and time...
enabling more efficient deployment of rangers, canines, and therefore more effective tracking and responses.

In another incident, rangers in Kruger National Park were hot on the tracks of a group of poachers who had just killed a rhino. They communicated this to their Mozambican counterparts and a helicopter was dispatched with rangers to intercept the poachers as they attempted to flee across the border. Using locational information gathered by ranger teams tracking on the ground, the helicopter reached the scene within minutes. The chopper landed and the Mozambican rangers proceeded to jump out and tackle the poachers in the reserve on the Mozambican side of the border leading to two arrests. Without the helicopter, it is likely that the poachers would have successfully crossed the few kilometres needed to exit the reserve. The ability of helicopters to alter reaction times and response dynamics is so fundamental that, where they exist, APUs keep a reaction team on stand-by to be deployed at a moment’s notice instead of merely relying on rangers patrolling in the bush to react.

This empirical description highlights the vertical as an increasingly important spatiality in conservation, and specifically conservation security. Anti-poaching’s use of aerial security technologies and practices are not aimed at securing or pacifying the skies, but of what is on the ground. Conservation-security mobilises the vertical as a dimension of power and space to surveil, secure, police, pacify, and ultimately exert control over (un)wanted circulations of people, space, and resources of an area below. That is, aerial security technologies in anti-poaching are employed to secure the horizontal terrain of protected areas and the nonhuman bodies that moves across it by facilitating more effective surveillance, and neutralisation of poachers that move horizontally through the same space. This is one example of the productive blurring of horizontal and vertical dimensions of space and power and how conservation
authorities harness the three-dimensionality of protected areas to alter power dynamics in their favour.

**Topographies of Conservation Security: Integrating the Vertical, Horizontal, and Nature in Anti-poaching**

*Bringing the Vertical and Horizontal Together*

Proponents of technologies for anti-poaching and protected area management highlight how it is the integration of technologies that leads to effective monitoring and surveillance as it produces scalability across time and space. As Marvin et al. argue, scalable and replicable models of protected area management, including anti-poaching, come from “combining patrol and remote sensing monitoring tools” (2016, p. 2720). Put another way, the aerial technologies of security and surveillance as manifested in a drone are part of an integrated matrix of security, technologies, practices, and spatialities. It is in this integration that they become truly effective, and concerning.

Dr. Thomas Snitch, the creator of APE, explains the power and utility of aerial technologies his team uses, namely drones and satellite imagery.

The real game changer is our use of unmanned aerial vehicles (UAVs) or drones, which we have been flying in Africa since May 2013. We’ve found that drones, *combined* with other more established technology tools, can greatly reduce poaching – but only in those areas where rangers *on the ground* are at the ready to use our data (Snitch, 2015; emphasis added).

The aerial technologies of drones are only useful insofar as they are combined with technologies and personnel on the ground. We see an emphasis on the integration of multiple technologies, new and old, vertical and horizontal.
The bodies of the rangers, in combination with the monitored bodies of wildlife, reflect the “corporography” of anti-poaching. Writing on the Vietnam War, Gregory uses the term corporography as opposed to cartography to describe how even with all of the technologies – including helicopters, aerial bombing, and surveillance by planes and satellites – the battlespace of Vietnam “depended on the bodies of soldiers” (Gregory, 2016, p. 4). Corporography draws attention to the material importance of ground troops and their bodies and activities. Rangers who move horizontally across the ground are indeed the most important asset in anti-poaching and in protecting wildlife. Moreover, when they are not patrolling on foot, the majority of their movement is facilitated not by plane and helicopter but by ground transportation. It is in the integration of vertical and horizontal technologies and spaces that we begin to see the coalescing of multiple dimensions and spaces of power to protect the bodies of wildlife and the space in which they exist.

Low-tech interventions like dogs, another body in anti-poaching’s corporography, also help rangers track more quickly and effectively across the ground. Fences, a rather innocuous barrier technology, are also fundamental to anti-poaching’s monitoring efforts. By forcing poachers to go above, through, or below fences, they leave traces of their movement that are the primary signs of an incursion detected by rangers on a daily basis. Other high-tech security and surveillance solutions are being sought that are themselves horizontal. These include cameras, and motion and seismic sensors around perimeters of protected areas (Arts, et al., 2015; Hossain et al., 2016; van der Wal & Arts, 2015). Perhaps the best example of an effective and new horizontal technology comes from Kruger and is known as Meerkat. Meerkat is a mobile anti-poaching surveillance system that can be moved around Kruger and is placed on the ground. It

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52 He also focuses on how vertical and horizontal technologies and spaces were integrated.
includes a suite of surveillance technologies like radar, long-range electro-optic sensors, and night vision to detect, track, and surveil poachers within its boundaries and moving horizontally across the plane of Kruger’s space (CSIR, 2016; PPF, 2017). The only aerial aspect of Meerkat is that it is referred to as the “angel on their [rangers] shoulder” (PPF, 2017). The information gathered by Meerkat not only helps detect and surveil poachers, but is used to deploy rangers and reaction teams to neutralise them. Moreover, and representing the integration of multiple spatialities and dimensions of power to harness the three-dimensionality of conservation territoriality, once Meerkat detects poachers the reaction team is often deployed by helicopter. Why the helicopter? Once again, it helps to overcome harsh terrain and expansive spaces while helping compress space and time to alter the power-geometries in favour of anti-poaching personnel. Indeed, no topography is complete without an analysis of how the multiple horizontal and vertical dimensions of space and power articulate with the natural landscape and related political-ecological dynamics.

**Bringing Nature in**

Understanding the multiple spatialities of conservation security and the relationship between them entails paying adequate attention to their articulation with the (bio)physical characteristics of space, environments, and resources (Bakker & Bridge, 2006; Sundberg, 2011). I thus want to pay more explicit attention to the ecological as an aspect of the topographies of conservation security and how it articulates with the vertical and the interplay between the vertical and horizontal. In the process, I highlight how human-environment interactions are re-shaped as APU’s seek to more effectively secure protected areas and threatened wildlife.
There are three points of articulation I wish to highlight. The first, which I have already discussed at length throughout the chapter, is that nature is an obstacle to overcome. Going vertical is a way to exert power and control over the natural environment and its obstacles to more effectively surveil and neutralise poachers. Put simply, power over nature made possible by exploiting and integrating vertical and horizontal technologies and spaces facilitates a power over poachers. Second, where conservation security differs from other contexts such as policing and contexts of war is that nature does not only enter the picture as an obstacle to be overcome or pacified but as the object of protection. This is rather self-evident as rangers and anti-poaching personnel seek to protect wildlife and other natures. Once again, mobilising the three-dimensionality of conservation territoriality helps produce protected areas as secure spaces for wildlife. Third, non-human natures and landscapes do not passively accept power exerted over them by aerial or other means. They resist and enable resistance which contributes to the changing spatialities of conservation and the interplay between them. Harnessing the three-dimensionality of conservation territoriality has its limitations. This is the point of articulation that I elaborate here.

Nature resists and disrupts the grasp and gaze of aerial technologies. Animals from wildlife to livestock trip seismic and motion sensors. Thermal sensors on drones and aircraft mistake animals for poachers (Martin, 2017) and the thick bush distorts acoustic sensors and gunshot location systems (Reuters, 2014). Moreover, animals like rhinos and elephants that are monitored for protection purposes are also constantly on the move. They change locations and find cover under trees from the hot sun, inadvertently hiding themselves from overhead surveillance. As I witnessed, this is particularly problematic in terms of surveilling rhinos as they spend much of the sunny parts of the day hidden under trees and shrubs making them
undetectable to aerial surveillance. Rangers must then be deployed on foot to find them, as was a regular occurrence during my fieldwork patrols. In addition, many conservationists also acknowledge that most protected areas are simply too big for drones to be effective (Interviews, RNN Manager 2, 05/06/2016; RNN Manager 3, 15/06/2016). Even when planes and helicopters are available, it is not possible for them to monitor everywhere everyday nor can one pierce through the foliage or see tracks of poachers from the sky. Here too rangers and on the ground technologies are as vital as ever.

Despite the hype surrounding them, drones are particularly vulnerable to nature’s uncooperative temperament. After a year-long test phase for the use of drones in Kruger National Park, SANParks authorities decided to not use drones as part of their anti-poaching tool-kit (Martin, 2017). The reason is that in the year-long trial period, drones failed to detect a single poacher. Drones are cited as ineffective here because they do not have the requisite payload capacity needed for infra-red and thermal sensors or cameras that are necessary to pierce through the foliage to detect poachers. The testing of drones also failed in the RNN (Personal Communication, Niassa Manager 3, 15/06/2016). Even though they had managed to get off the ground, I was told the reserve is simply too big for drones to be of use because of their limited range. It is thus possible that drones lend themselves better to the more compact urban environments than expansive rural areas, drawing attention to what are perhaps the limited topographies of drone power and effectiveness. Perhaps this lesson can be used to inform a re-direction of resources away from drones in anti-poaching to more community-oriented conservation to complement existing law enforcement approaches.

Poachers also use the environment and ecology to resist being caught, a use of nature that also ushers in the use of vertical space by anti-poaching teams. Drawing connections between
militarisation and conservation, Lunstrum (2014, p. 824) begins to shed light on this relationship in describing the turn to “technologically sophisticated vertical militarization” in protected areas like South Africa’s Kruger National Park. What Lunstrum points out is how the biophysical realities of protected areas give poachers the upper hand. She describes Kruger National Park as a heavily forested landscape of mixed woodland and Mopani bushveld that is especially thick with vegetation in the rainy season. Much of the border also includes the undulating and rocky Lebombo Mountains, which makes for “ankle-breaking” patrols. These qualities together leave the park difficult to patrol, enabling rhino poaching teams to slip in and out of the park often undetected (Lunstrum, 2014, p. 824).

As I witnessed, the rocky ground of the Lebombo Mountains also makes the on-the-ground tracking of poachers nearly impossible without dogs who use their sense of smell.

Poachers are masters of the bush and know how to use the landscape and ecology to alter power-geometries to their advantage. Anti-poaching managers and rangers routinely extolled the knowledge and abilities of poachers in the bush. To avoid detection and capture poachers deploy anti-tracking and counter-tracking measures using the landscape to cover their tracks and/or confuse rangers as to their direction of movement. On several occasions, I bore witness to how poachers place rocks across dirt roads or tracks to step on them and avoid leaving a trace. Poachers might also purposefully disturb an area or walk in circles to confuse rangers and trick them into thinking they went in one direction when they actually went in the opposite. As I witnessed, this also works to confuse tracking dogs. On one occasion where this happened, the dog handler simply said, “we were outmaneuvered today” (Paul, 13/05/2016).

If poacher tracks cannot be found or followed on the ground, APUs go to the skies to take advantage of the multiple dimensions they control and can mobilise. Aerial means such as helicopters and planes are often deployed to locate and surveil poachers when ground teams fail, or to complement them. In some cases, APUs are even turning to the use of satellites. The APE
project, for example, uses a combination of satellites and drones to help stop poachers before they make a kill. Information on the movements and locations of animals, rangers, and poachers collected from satellites and drones are fed into an algorithmic software to help predict the locations of animals and poachers (Snitch, 2014; 2015). Rangers are then deployed to those areas. The same predictive anti-poaching is used in Kruger (and to a lesser extent in the borderlands of Mozambique through partnerships with private reserves) with the Cmore application (CSIR, 2015; defenceWeb, 2016).

However, just like wildlife, poachers also resist aerial surveillance and they use the environment to do so. Rhino poachers in Kruger and southern Mozambique tend to move at night and spend most of the day bunkered down under trees or shrubs to avoid detection when the plane, drone, or helicopter may be flying. As the pilot for one reserve explained on many occasions, flying the micro-lite plane is useless when it comes to detecting poachers. All the poachers must do is stay put under a tree or shrub and they remain undetected. Otch Otto, the Mission Area Manager for Special Projects in Kruger, explains "our opponents are skillful, formidable people who know how to navigate in the thick of the night, taking cover under leaves and grass. You can't win this war with helicopters and drones, the bush is too dense” (Reuters, 2014). Like rhinos hidden under shrubs, the strategy in such cases is to send rangers on foot to sweep areas of concern. Sometimes they are accompanied by canine units to improve detection and force poachers out of hiding. Technologies like Meerkat also assist in surveilling and locating poachers though a horizontal gaze.

The Kruger National Park, Sabie Game Park, and the Limpopo National Park are all at the heart of combatting rhino poaching and of my field research. They all also share a unique biophysical characteristic that offers a different spatiality and natural landscape that poachers use
and that APUs must negotiate, yet that does not feature in discussions about terrestrial conservation and anti-poaching. What I am referring to are bodies of water.

Sabie Game Park’s southern boundary is the lake created by the damming of the Sabié River that flows into Kruger National Park when the water is high. While liquid, the lake poses a serious thorn in the side of both SGP’s and Kruger’s anti-poaching efforts. The lake and its flow into Kruger acts as a major thoroughfare for poachers. Given that the body of water is not within the concession of Sabie or the jurisdiction of Kruger National Park, anti-poaching personnel cannot patrol or police it. With fishing boats allowed on the water during fishing season, poachers disguise themselves as fishermen and stay on the lake until they are confident there are no rangers on the shoreline (Personal communication, 29/10/2013). They then proceed directly to the boundary of Kruger and debark on SGP’s shore and proceed into Kruger on foot. At night, the poachers use the cover of darkness and quietly row small boats from the opposite shoreline to SGP where they debark and then proceed on foot under cover of darkness to Kruger or elsewhere in SGP. As the reservoir is also a popular drinking spot for rhinos in SGP, people who are fishing often report sightings of rhinos near the shoreline to poaching syndicates. The syndicates who pay the informers for such information then plan accordingly (Personal communication, 29/10/2013).

We see a similar dynamic in the Limpopo National Park whereby poachers similarly use the Olifants River to get as close as possible to Kruger and the LNP without being detected. No traces are left on water. Here, however, the rangers have been given authority to patrol the water. Given the strategic importance of the dam for poachers and efforts to control them, the LNP’s

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53 The Dam is undergoing rehabilitation and a new management plan is being developed. Drafts of this management plan and interviews with consultants in charge of it highlight how the future management plan will have statutes for allowing anti-poaching activities on the water.
anti-poaching unit has received a boat and is training three rangers to patrol the dam. The Environmental Police and Mozambican border patrol are also being trained on using the boat and patrolling the dam and river to stop poachers. As SGP does not have the authority to patrol on the water, one technology that was under development while I was there was an aerostat. The aerostat is a gas-filled balloon that would be anchored to the ground and equipped with long-distance video cameras that would surveil the body of water from above and send video back to the anti-poaching control room (Personal Communication, 12/08/2015). Even for terrestrial conservation, the spaces and materiality of water within, beyond, and flowing through protected areas become important and articulate with the horizontal and vertical dimensions of conservation space and power.

**Conclusion: Topographies of Anti-Poaching and the Three-Dimensional (Re-)Production of Exclusionary Conservation**

In this chapter I shed light on the multiple spatialities of conservation security. Moreover, I demonstrate that it is in the coming together of the vertical and horizontal that we can locate and make sense of the three-dimensionality of conservation-related power, spatiality, and territorialisation. Conservation security personnel harness the three-dimensionality of conservation territory to alter power dynamics in their favour and strengthen protected areas as exclusionary spaces. While poaching may not be stopped solely through the use of vertical technologies, and indeed they do have their weaknesses, they do help amplify the already uneven and oppressive power dynamics inherent in conservation by facilitating surveillance and a space-time compression within protected areas. Where the power geometries of conservation truly shift
is in the productive coming together of the vertical and horizontal, though even here, nature and poachers resist.

Thinking topographically ensures that we do not focus on one dimension or dynamic over the other, but on the ways in which they interact. In the case of conservation-security, this helps bring the multiple spatialities and three-dimensionality of conservation space and power to the fore. A suite of aerial practices and technologies activates the vertical as a dimension of space and power to both pacify and secure conservation territories and the resources and human and nonhuman populations within them. From helicopters, planes, drones, and even satellites, APUs are looking skywards to more effectively respond to and surveil poachers and their movements and activities. But, power is not located merely in the vertical. Rather, power in the form of conservation territorialisation is deployed in and through multiple dimensions with the productive interplay between the vertical, horizontal, and its articulations with the environments and political-ecological dynamics of conservation landscapes.

Indeed, as a stand-alone technology in the fight against poaching, the effectiveness and power of aerial technologies is limited. I return here to Meerkat in Kruger National Park, a non-aerial technology that is proving quite effective. Meerkat has been quite successful in detecting poachers, much more successful than the failed drone test phase (Mahlakoana, 2017). Yet, aerial technologies like helicopters are effective in other ways. For example, they allow APUs to mobilise the vertical as a very real dimension of space and power in their favour by compressing space and time. This facilitates the effective deployment of rangers needed to neutralise poachers. This is not to say that the horizontal or vertical are more or less important. While aerial technologies may be effective in certain ways, an overdetermined focus on the vertical (or the horizontal) in conservation security, or elsewhere, may partially blind us to the actually-existing
workings of power and related security practices and technologies on-the-ground and how they work to (re-)produce protected areas as exclusionary spaces and (re-)shape human-environment interactions.

Thinking topographically forces us to pay close attention to and account for the ways in which ecologies and the natural and built environment weave through these dimensions, their politics, and shape and are shaped by conservation security’s multiple spatialities. Not accounting for and understanding these two aspects of security risks losing sight of how security and surveillance technologies and practices operate on-the-ground and are used to alter power-geometries in effective, but also repressive and oppressive ways that strengthen and reify exclusionary enclosures. In short, while a focus on verticalisation may be intriguing, attention grabbing, and warranted, an overdetermined focus on verticality may miss the nuanced and important ways in which anti-poaching and conservation-power operates in productive and problematic ways. In this respect, thinking topographically to understand the multiple spatialities and dimensions through which conservation operates to secure nature and control certain people and activities is vital. This may help to uncover some of the underlying intersections of how security in conservation and other contexts operates on-the-ground and bring us closer to understanding how we may tilt the balance of power in directions that are more just and sustainable.
Chapter 8

Introduction

We have seen a recent intensification in the militarization of conservation practice and space. Captured by the concept of green militarization, or “the use of military and paramilitary personnel, training, technologies, and partnerships in the pursuit of conservation efforts” (Lunstrum, 2014, p. 814), this is largely a response to commercial poaching, particularly of charismatic megafauna like rhinos and elephants. Our research on green militarisation in Mozambique and South Africa over the last five years has hence brought us into contact with paramilitarised rangers, military officials, and what is essentially military doctrine developed to help stem commercial poaching that is undermining conservation in the region. The result of such military buildup has been deadly, with several hundred suspected poachers shot and killed in the Mozambique-South Africa borderlands over the last few years (Interviews, 2016; Reuters, 2015). Of growing interest to scholars, studies of links between protected areas and militarisation have unfolded predominantly in the field of political ecology (Büscher, 2016; Büscher & Ramutsindela, 2015; Duffy, 2016; Dunlap & Fairhead, 2014; Lunstrum, 2014; 2015a; Marijnen & Verweijen, 2016; Massé & Lunstrum, 2016; Ybarra, 2012), or the study of how

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54 This chapter is a co-authored piece with Elizabeth Lunstrum and Devin Holterman. It has undergone multiple rounds of peer-review for submission to a special issue on Militarization and Humanitarianism in the journal Critical Military Studies. I have permission from my co-authors to use the manuscript in the dissertation. While I feel it is problematic to define my contributions to this article in a quantitative sense, I contributed approximately 60% of the article with much of the empirical material emerging from my fieldwork.

55 The observations and interviews we draw on come from fieldwork conducted by two of the authors in South Africa and Mozambique from 2012-2016, including over 6 months of ethnographic research with anti-poaching units and conservation-security personnel in the Mozambican borderlands.

56 The number of poachers killed has been disputed by South Africa National Parks (SANParks), but the organisation will not release their official numbers.
politics and power shape socio-ecological relations and vice versa (Neumann, 2005; Robbins, 2012). Perhaps surprisingly, these investigations have largely not made connections with parallel debates on other practices of militarisation in the equally rich and quickly growing field of critical military studies (CMS). This paper is an early attempt to begin forging these needed connections and does so by offering two interventions.

The first is to introduce green militarization to CMS, which focuses on military power and the processes through which it operates without taking it for granted (Basham, Belkin, and Gifkins 2015; Rech et al. 2015). This allows us to show how taking the political-ecological work on the topic together with CMS offers a broader view into the vast areas of nominally civilian life that are increasingly militarised, and also expands the focus of CMS to include the natural environment and non-human nature. Equally important, CMS provides the tools to help us grasp new trends in green militarisation and hence contributes to our understanding of these processes and related political-ecological debates. This latter point leads to our second intervention. While recent forms of green militarisation have largely taken a hard or kinetic approach to addressing wildlife crime—including state orchestrated raids, arrests, and killings of suspected poachers—we see it as arguably entering a new phase in Southern Africa. This is one in which the hard approach is certainly not displaced but rather complemented by a softer approach based on counterinsurgency (COIN) doctrine that promotes community engagement and development, essentially to “win hearts and minds.” Drawing on CMS and in particular theorisations of the security-development nexus, we argue this recent trend in green militarisation amounts to a conservation-security-development nexus. Here communities become

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57 Reflecting a core insight of political ecology, “nature” is not a separate realm from society or culture but rather co-constituted by engagements between humans, non-human animals, and biophysical processes and shaped more broadly by power-laden structures and discourses.
the objects of development interventions precisely to prevent their involvement in the wildlife trade and hence neutralise the security threat poaching might pose.

We begin by offering an overview of green militarisation that draws from both the political ecology literature and our empirical work in Southern Africa as a means of introducing it to CMS. The region is significant as it is the epicenter of global rhino poaching and a core site of militarised responses to commercial poaching. It is also a type of laboratory to test the applicability of militarised approaches for other regions including those where poaching is seen as funding terrorism (SANParks 2014). The overview will also show that much of the scholarly interventions on militarised conservation and indeed much of our own data paint a picture of hard militarised responses. Using this as our second point of departure, we then provide preliminary evidence for the implementation of a softer, community-based approach. Drawing on CMS interventions into the relation between development and security as embodied in the security-development nexus, we show how this fits with, extends, and supplements existing forms of militarised conservation. We make sense of this by introducing what we see as a conservation-security-development nexus. We close by suggesting future areas of intersection between the political-ecological study of green militarisation and critical military studies to hopefully incite a much richer and long-term engagement.

**Introducing Green Militarization**

A robust literature chronicling the intersections of military activity and the environment now spans a range of disciplines. Often influenced by Westing (1975), this literature highlights the negative impacts of military activity on the environment. This includes the massive consumptive patterns of an expansive physical and social military infrastructure, the direct impacts of conflict
and military buildup on ecosystems and wildlife, and the often indirect impacts caused by the victims of warfare such as refugees (Hanson et al., 2009; Hupy, 2008; Woodward, 2004). This is joined by a growing literature on the strategic deployment of animals and the harnessing and manipulation of biophysical processes in the name of war and other military interventions and military research (Brady, 2012; Cudworth & Hobden, 2015; Gregory, 2016; Kosek, 2010).

Others point to climate change as a new military-environment encounter driven by environmental security and resource scarcity discourses (Gilbert, 2012).

Further analysis reveals an array of complexities found within military-environment encounters, especially those that involve environmental conservation. One example is the increasingly common transformation of former military sites into state protected areas, or Military to Wildlife (M2W) conversions, a phenomenon we see stretching from North America (Havlick, 2011) to Southern African (Mckenzie, 1998). “De-militarized zones”—what are in fact heavily militarised landscapes—have also emerged as important sites of biodiversity conservation, as these spaces are too dangerous for human habitation and development (Brady, 2008; Kim & Cho, 2005). The example of M2W conversions and demilitarised zones illustrate novel and arguably non-intuitive military-conservation encounters and outcomes.

Military actors also play a more concrete role in biodiversity management and spaces of conservation, highlighting a direct relationship between environmental conservation and the military, among other security forces. Indeed, this has emerged as a quickly growing area of inquiry within the field of political ecology. The establishment and management of protected areas have historically been used to exert state control over recalcitrant populations and their resources (Neumann, 2001; Peluso, 1993; Vangergeest & Peluso, 1995). Often made possible by the framing of vulnerable and marginalised populations as the enemy of conservation, the state
and its military apparatus have played a leading role in policing such populations through the use of overt and covert forms of violence (op cit; Devine, 2014; Ybarra, 2012). Such engagement is increasingly translating into green militarisation manifested in an increasing use of military and paramilitary technologies, actors, and techniques to achieve conservation goals (Lunstrum, 2014). This is a trend we see across parts of Africa (Duffy, 2014; 2016; Dunlap & Fairhead, 2014; Marijnen, 2017; Marijnen & Verweijen, 2016; Massé & Lunstrum, 2016; Verweijen & Marijnen, 2016) and Asia (Barbora, 2017), with military buildup also unfolding in protected areas in Latin America (Devine, 2014; Ojeda, 2012; Ybarra, 2012).\footnote{In Latin America, however, such military buildup is often based less on ecological than economic and more strictly security rationales (op. cit.).} Indeed, there has been a long history of military involvement in conservation (Devine, 2014; Ellis, 1994; Lunstrum, 2015a; Spence, 1999; Wels, 2015). The difference today is that such involvement is quickly intensifying and vastly expanding within a broadly framed conservation context and sense of ecological crisis.

What might be driving this current intensification of green militarisation? While the answer is complex and harkens to a broader militarisation of nominally civilian areas of life analysed by CMS scholars (see below), part of the answer rests in a concerning rise in wildlife crime, namely commercial poaching. Commercial poaching is illicit or extra-legal hunting for profit. While there has long been a global trade in wildlife, this recent expansion is tied to a larger, wealthier consumer base willing to pay handsomely for rhino horn for medicinal purposes\footnote{This is despite the lack of evidence rhino horn has curative properties given that it is made from keratin, the same material as hair and finger nails.} and for elephant tusks and rhino horn alike as trophies displayed as signs of wealth. Ivory rings in at USD $1,000-$2,000/kilogram on the black market with rhino horn reaching a staggering $40,000-$70,000/kilogram, outpacing the price of gold and cocaine. Taken together,
these are part of a broader global illicit trade in wildlife worth $5-25 billion a year,\textsuperscript{60} placing it among the ranks of the trade in guns, drugs, and people (U.S. Department of State, 2014; UNDP, 2015).

This new wave of commercial poaching is quite concerning. For instance, in South Africa, which is currently home to 75% of the world’s remaining 30,000 rhino,\textsuperscript{61} incidences of rhino poaching have risen from 13 in 2007 to over 1,000 in 2013 and have not dropped below this number since (Bale, 2016; DEA, 2017; Save the Rhino, 2017). At these rates, we could see the loss of rhino in the wild in our lifetime (Ferreira et al., 2015). Similar deadly trends have followed the African elephant where poaching along with habitat loss translate into a yearly loss of 8 percent. There are fears the population may be halved within a single decade (Chase et al., 2016).

The response of the global community and individual countries has grown in proportion to the problem. Governments of end-user countries like China and Vietnam are working to curb demand for wildlife products (TRAFFIC, 2017). National and international efforts and cooperation aimed at combatting the transit and movement of wildlife products has also increased (DEA, 2016; Obama, 2014). Another series of responses, however, have set out on a more militarised path. Located primarily within and near protected areas, this militarisation of conservation largely overshadows the other responses to the poaching crisis in both its intensity and in the attention and resources it is allocated (Duffy & Humphreys, 2014; Hübschle & Faull, 2017; Lunstrum, 2014; Roe et al., 2015).

\textsuperscript{60} The huge range is explained by the fact the economy is illicit and hence difficult to measure.

\textsuperscript{61} These numbers are estimates that are commonly cited, but the number may vary from year to year and depending on the source.
If green militarisation amounts to the growing use of military actors, logics, techniques, and technologies within the realm of conservation, what might it look like in practice? Let us turn to our work in Southern Africa. We begin with a July 2016 event in which South African officials accepted an unspecified number of under-barrel grenade launchers (UBGLs) provided by Milkor (SANParks 2016), a private South African defence corporation known for its prolific production of grenade launchers and their sale across 60 countries (Milkor, 2017). Speaking to the audience, a state representative laid out what this contribution to the state arsenal would enable: “[we] will continue to look at new and innovative ways [of] fighting the relentless incursions… We have no choice but to conquer this war” (SANParks, 2016). The “war” afoot is that of rhino poaching. While these particular UBGLs are designed to help “flush” poachers out of the bush and arrest them (rather than kill them), their contribution to South Africa National Parks (SANParks) is part of a much broader militarisation of conservation practice. Indeed, Milkor’s offering is reflective of SANParks’ and other states’ and conservation institutions’ conscious drive to develop partnerships with the defense sector to secure its goods and services. In fact, the press release celebrating the UBGL handover explained that “partnerships of this nature allow SANParks to provide the desperately needed support in terms of equipment to the counter poaching teams.” Other partnerships include well-publicised donations to SANParks of military-grade surveillance and pursuit aircraft from the Paramount Group, the continent’s largest privately-owned defense corporation (SANParks, 2012a; 2013). In neighboring Mozambique—both a site of commercial poaching and source of poachers into South Africa including Kruger—we also see partnerships between state agencies and private security firms like Quemic, Rhula, and Dyck Advisory Group as well as conservation-specific security firms.
like Conservation Outcomes and Maisha, many of which also work in South Africa. They provide services ranging from intelligence gathering to the training and even provision of paramilitarised rangers, tactics, and technologies for conservation areas and organisations. What we are seeing here is not only the expanding use of military technologies and partnerships with for-profit defense corporations but equally the expansion of the influence of non-state security/military-related actors on conservation.

This, however, is only the tip of green militarisation unfolding across the region. For instance, the field ranger corps has been undergoing a more intensive paramilitarisation than seen in the past. Fieldwork observations and interviews from 2012-2016 reveal how rangers in both countries are now dedicating the vast majority of their time to anti-poaching security at the expense of broader conservation mandates. This shift in time and duties is paralleled by a shift in training, with rangers receiving more intensive paramilitary training, including training in covert operations, tactical ambushes, counter-insurgency, and intelligence gathering.

The military proper is also increasingly involved in conservation. This begins with the inclusion of military officials, both current and retired, to head up anti-poaching operations. In South Africa, Ret. General Johan Jooste, who gained military experience during South Africa’s Apartheid border wars, oversees conservation-security and anti-poaching at the national level. In Mozambique, a former special forces sniper leads the International Anti-Poaching Foundation (IAPF), which signed a Memorandum of Understanding (MoU) with the Mozambican government to aid (more accurately conduct) anti-poaching in the borderlands adjacent to South Africa. Some of the anti-poaching managers he has hired also come from a special forces background. A former European special forces operative manages a specialised anti-poaching

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62 All of these firms are run and partially staffed by former military and special forces personnel from Apartheid South Africa and the Israeli Defence Forces among others.
unit in Mozambique’s Limpopo National Park (until recently an important entryway for poachers into Kruger) while Conservation Outcomes and Maisha are run by and hire former special forces and intelligence personnel (Interviews, 2014-2016).

These practices are complemented by the entry of the Army proper into these same spaces (also see Annecke & Masubeles 2016; Humphreys & Smiths 2014). Indeed, while the Army’s mandate in Kruger is border patrol, this translates into anti-poaching security given that rhino poaching is the main transgression along the international border between Kruger/South Africa and Mozambique. Reflecting broader political-ecological insights, the entry of the army into conservation enables military forces to reinvent themselves in times of so-called peace, thereby furthering the use of military tactics within and beyond the boundaries of protected areas (Devine, 2014; Duffy, 2014; Neumann, 2004; Ybarra, 2012). This is a dynamic we certainly see in post-Apartheid South Africa (Lunstrum, 2015a).

Photo 12: Aerial view of SANDF camp in Kruger along the border fence with Mozambique (Source: F. Massé).
Together these militarised conservation forces are deploying a range of tactics – some explicitly military, others less so – to address poaching. First, they work to “neutralise” poachers using “man-hunting,” surveillance technologies, and tactical ambushes. In addition, militarised conservation places a heavy emphasis on intelligence gathering, often involving former Apartheid and Israeli Defense Forces (IDF) intelligence operatives as we witnessed within and outside conservation areas in Mozambique.

Added to this are the all-too-common discursive tactics of referring to poaching as a “war” being fought by “insurgents.” Often focused on charismatic species under threat, these increasingly mundane citational acts legitimise the involvement of a range of actors including military actors in the drive to save biodiversity, often with rather contradictory and violent outcomes (Duffy, 2014; 2016; Dunlap & Fairheads 2014; Lunstrums 2014; Marijnen & Verweijens 2016). Beyond explicitly military approaches, the framing of the problem as a war and insurgency helps authorise the common counter-insurgency tactic of relocating communities. Indeed, we see the physical removal of Mozambican communities from protected areas thought to be involved in poaching South African rhino. The rationales for these relocations are complex and largely predate the poaching crisis. Yet interviews with Mozambican state and park officials nonetheless confirm poaching and its militarised framing have given these relocations more urgency (Interviews 2014-2016; also see DEA, 2016; Lunstrum, 2015b; Massé & Lunstrum, 2016). Importantly, many military and anti-poaching personnel are moving away from the language of “war” in acknowledgement of its potential negative consequences (Hübschle & Jooste, 2017, p. 65).

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63 “Neutralisation” is SANParks’ term for arresting or killing poachers.
Concerns with green militarisation amount not merely to military buildup largely in ostensible non-military and non-conflict zones. They also point to the ensuing violation of human rights of those suspected to be involved in poaching, including state-orchestrated killings and forced relocations, along with the (further) alienation of communities from conservation efforts. Even from a strictly conservation perspective, the latter is concerning as it is likely to harm conservation efforts in the long run given that sustainable conservation depends on strong people-park relations (Cooney et al., 2016; Lunstrum, 2014; Duffy et al., 2015; Hübschle, 2016b).

In short, as a response to the precipitous increase in commercial poaching, conservation practice and space is being militarised. This includes the interventions of the military proper to be sure but equally encompasses the use of military technologies, related partnerships with defense corporations, the increased paramilitarisation of conservation officers, and the deployment of military tactics and militarised language of war and insurgency. Taken together, the militarisation of conservation literature and our own fieldwork illustrate how the boundaries of military and civilian spaces, actors, and institutions are becoming increasingly blurred.

We offer this introduction to green militarisation, which again has largely been explored within a political ecology framework, as a first step in placing it on the proverbial radar of CMS and to initiate a larger dialogue between the two areas of investigation. At the most basic level, this widens the purview of CMS to better encompass the disturbingly vast and quickly expanding areas of nominally civilian life that are increasingly being militarised. We can now add conservation to this range of practices and spaces that includes, for example, healthcare (Loyd, 2009), humanitarianism and development (see below and the special issue this article is a part of), cities (Graham, 2011), international borders (Gregory, 2011), university campuses (Woodward et
al., 2017), and climate change (Gilbert, 2012). The addition of conservation also expands the focus of CMS to explicitly include the non-human and processes of environmental protection. While others have begun to look at how non-human nature and biophysical processes are militarised, these are largely examples of ‘nature’s’ militarisation in the name of war or security more broadly (Brady, 2012; Cudworth & Hobden, 2015; Gregory, 2016; Kosek, 2010). Where green militarisation differs, and hence widens our focus, is that non-human nature and the spaces in which it is protected are militarised at once in the name of security (a point we turn to below) and for its own sake. This both provides new logics that authorize military interventions and expands the population of “vulnerable subjects” that deserve military protection (also see Duffy, 2014; Eckersley, 2007). In short, it opens a whole new (non-human) realm available for military intervention. CMS also has much to offer analyses of green militarisation and the broader field of critical military studies. This leads to our second contribution, that of showing one concrete way in which core insights of CMS help us grasp key features of a quickly changing green militarisation.

A Soft Approach to Anti-Poaching: Conservation, Development, Security

Militarised conservation practice in Southern Africa’s poaching hot spots, as elsewhere, have largely taken a hard or kinetic approach, from arrests and killings of suspected poachers to military-style intelligence gathering and forcible evictions. Increasingly, however, we are beginning to see the emergence of softer approaches that fit more comfortably within a framework of community development. This includes development projects aimed at enhancing livelihoods and social improvement alike. For instance, a private Mozambican reserve near the epicenter of the rhino poaching economy runs its own paramilitary anti-poaching force that
works in partnership with Mozambican and South African state security forces. Importantly, the reserve also supports new economic and livelihood development activities. This includes the establishment of a women’s center in Massingir, a focal point of poaching activity, where women make handicrafts to sell for tourist and other markets. Moving beyond development to social investment, the Mozambican-South African borderlands are now home to no less than four soccer leagues that are sponsored directly by anti-poaching organisations. The goal of these livelihood and social initiatives as explained by those involved is to engage with local community members to again win hearts and minds to deter entry into the poaching economy (Interviews, 2014; 2016).

How then do we begin to make sense of these recent interventions, ones that seem to take us in an entirely different direction from a hard militarised response? Do these mark the end of green militarisation or at least a move beyond its kinetic approach? Building from the CMS literature, in fact, we see these softer development-based approaches as fitting quite comfortably within a green military framework. Indeed, we see this as likely a new phase in green militarisation at least in Southern Africa. We make the case by first drawing from CMS’s insights into the relation between development and security and then use these to frame our empirical observations. We then turn to the security logics that authorise these soft anti-poaching projects, which once more lead us back to key insights of CMS.

CMS scholars have highlighted the link between development and security and the militarisation of development assistance and practice, which they capture in the concept of the

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64 In some sense, there is little new with these initiatives. Conservation has long been mobilised as a development intervention in and of itself and as a way to strengthen park-people relations, which is beneficial to conservation outcomes (Child, 2013; McShane & Wells, 2004). Recent work has even highlighted how conservation and development interventions not only intertwine but are often conflated, even becoming one in the same (Corson, 2016).
security-development nexus (Bryan, 2015; Chandler, 2007; Duffield, 2010; Stern & Öjendal, 2010). This nexus is dual sided. It first grasps how development is directly deployed as a security strategy that is often militarised. The argument is that development reduces poverty and associated vulnerabilities and in so doing makes the world a safer place as people will be less likely to join insurgent, crime, or terrorist groups. In this respect, former UN Secretary-General Kofi Annan has argued economic insecurity and poverty can increase people’s vulnerability, thereby providing a “fertile breeding ground for other threats, including civil conflict, such as instability and even conflict” (United Nations, 2004, p. vii). Development here is a soft-counterinsurgency (COIN) strategy. Soft COIN approaches include not only economic development but also social investment in communities with a focus on infrastructure and feel-good initiatives in what amounts to militarised “public diplomacy” (Copeland & Potter, 2008; Fitzpatrick, 2009). Public diplomacy is meant to win the hearts and minds of local people and draw support away from the “bad” insurgents or other threatening groups towards the “good” military and security forces. The other side of the security-development nexus draws attention to the securing of development assistance itself to ensure or secure its success. This becomes important because if insurgents, conflict, or other nefarious forces undermine development, people’s vulnerability increases. This in turn can lead to an onset of security threats (Stern & Öjendal, 2010).

Growing from this series of articulations, development now rests squarely within the purview of global security politics. As a result, the roster of actors involved in development practice is expanding to include those related to the global security and military apparatus. This includes state and government institutions and their respective military and security forces, private sector security and military actors, and even non-governmental organisations with
military links that may or may not be concerned directly with development itself (Enloe, 2000; Holmqvist et al., 2015; Orford, 2015). With non-military actors working side-by-side with military actors or even becoming more militarised themselves, such security-development interventions are marked by a blurring of who is and is not a military actor and who is or is not supporting militarisation (Duffield, 2010; Enloe, 2000; Fassin, 2010).

These insights help us grasp the recent anti-poaching-related development interventions as soft COIN approaches aimed explicitly at countering commercial poaching as a joint ecological-security threat, rather than first-and-foremost realising development for its own sake. Others, in fact, have begun to draw links between conservation and COIN strategies. Indeed, Dunlap and Fairhead (2014, p. 951) provide an overview of COIN-like practices to gain control of forests for security purposes in what they call “conservation counterinsurgency.” Verweijen and Marijnen (2016, p. 2) similarly chart how dynamics of conflict and armed mobilisation articulate with “overlapping counterinsurgency and conservation practices” in their research on green militarisation in the conflict-torn Democratic Republic of the Congo’s (DRC) Virunga National Park. Moreover, and still focusing on Virunga, Marijnen (2017, pp. 1567-8) argues the European Commission’s related use of development assistance to “(in)directly fund” both hard and soft militarised conservation practices represents the “green militarisation of development aid.”

The soft (and hard) COIN approaches we witness in Southern Africa reflect core insights of these contributions but differ in important respects. Here these approaches are deployed in times of peace, unlike the DRC, and focus on combatting commercial poaching of wild animals. In this respect, soft counter-insurgency takes the form of development assistance to incentivise people not to poach or join criminal poaching syndicates and, as we will see, to be amenable to
providing intelligence. Drawing explicitly on the CMS literature on the security-development nexus, we posit that this translates into an explicit conservation-security-development nexus. Turning to examine what this looks like in practice, we suggest green militarisation in Southern Africa is moving into a new phase, one that embraces a softer approach but that nonetheless fits quite comfortably within a larger militarised framework.

*The Conservation-Security-Development Nexus in Southern Africa*

Throughout our fieldwork, reserve managers, state officials, and community members have explained how it is the impoverished conditions – in part exacerbated by conservation interventions – in South Africa and Mozambique that leaves young men so easily recruitable by poaching syndicates. As one village leader in Mozambique explained, “There are more [men] that go [to Kruger] now to hunt. This is motivated by hunger and lack of money” (Interview, 2015). And a director of a security firm explained that young men turn to poaching and crime syndicates because they “can’t find work” (Interview, 2014). Given this reality, alternative livelihood programmes are being developed with the explicit intention of reducing poaching.

Let us return to the women’s handicraft-based livelihood project in Massingir. The manager of the wildlife reserve organising the project explained how this initiative, which is visibly advertised in the centre of town, is specifically aimed at “winning hearts and minds” by providing alternative livelihood options to both discourage people from engaging in poaching and encourage them to support the reserve’s anti-poaching activities (Interview, 2014). Further south in Mozambique’s Sabié District, a conservation NGO’s rhino programme has set up a humanitarian-esque food-for-work program. This entails having local people in the Mangalane area, a hot bed of rhino poaching, work on community improvement projects like maintaining roads in exchange for food aid (Interviews, 2015). While emerging as a response to the 2015-
2016 drought, the program is specifically designed to provide food to sway local people away from turning to poaching to make ends meet. We also see income generating activities being promoted by development assistance organisations. USAID, or the United States Agency for International Development, funded a Conservation Alternative Livelihood Analysis in these same borderlands adjacent to Kruger National Park (USAID, 2016). The recommended income-generating opportunities include cattle raising, conservation-related tourism, and the production and harvesting of vegetables, marula, and medicinal plants. The objective here is “to provide jobs and support legal business opportunities that will disincentivize local communities from participating in poaching activities” (USAID, 2016, p. 8). The report even recommends USAID partner with the International Fund for Agricultural Development’s existing project in the area aimed at developing the beef supply chain. The reason is that “this intervention will strike at the heart of poaching areas first” and suggests “the most direct and cost-efficient strategy for USAID activities may be to work with other existing donor programs on gearing the activities of its new program toward anti-poaching areas” (USAID, 2016, p. 18). What we see here are recommendations to not only develop new interventions, but to gear, and perhaps even co-opt, existing development and livelihood interventions towards the specific objective of combating poaching (also see Massé et al., 2017).

Social investment and public diplomacy also enter the picture as explicit conservation-security strategies. Worryingly, a manager of Mozambique’s Limpopo National Park explained how they cannot focus on solving poverty because that will not happen. It is too long term a goal, and the benefits of community-based natural resources management cannot compete with the benefits of poaching. So instead they work on “being in their [communities’] good books” by building positive relations with them through practices like providing agricultural extension
support and social infrastructure (Interview, 2014). Other anti-poaching officials agree with the need to build positive relations expressing how work on “roads and infrastructure” is key to winning community support (Hübschle & Jooste, 2017, p. 67). So is providing housing. One Mozambican reserve, for example, built a dozen houses in a community that is particularly hostile to anti-poaching and conservation personnel. The reserve owner explained how this was explicitly aimed at luring young men away from the illegal rhino horn trade (Interview, 2015). The soccer leagues also have the explicit aim of drawing support away from poachers and poaching syndicates and toward conservation and rhino protection (Interviews, 2015-2016). Indeed, the IAPF, again a paramilitary anti-poaching organisation working in the area, brands its logo on the soccer jerseys of the league it funds. This enables the organisation and its personnel to be associated with this positive social initiative to gain the support of local people (Interview, 2016). This is COIN-like public diplomacy at work and is advocated by top anti-poaching officials in South Africa as well (Hübschle & Jooste, 2017).

In addition to preventing entry into the poaching economy, these forms of development are also important for intelligence gathering, another key COIN strategy. As a manager for Mozambique’s Limpopo National Park explained, anti-poaching is most effective when communities are tapped for poaching-related intelligence gathering, which requires engaging them in development activities (Interview, 2014). Indeed, intelligence-gathering is the primary tactic of the “clearing the park from the outside” that looks to supplement hard military tactics within protected areas (Interviews 2015-2016; also see Büscher, Forthcoming; Hübschle & Jooste, 2017). As an anti-poaching official in charge of managing informant networks explained, “We are using military-style intelligence where we gather intelligence and then arrest poachers in towns, very rarely in the bush” (Interview, 2016).
Intelligence work and more effective anti-poaching strategies are not merely an objective of development but are also supported (in)directly by development actors and organisations. For example, USAID – again, a development organisation – is a key actor in the US’ Global Anti-Poaching Act and is similarly open about its support for anti-poaching interventions and “wildlife enforcement networks” including intelligence-based approaches to anti-poaching (House Foreign Affairs Committee, 2015; USAID, 2017). Indeed, USAID in Mozambique (in)directly funds joint ranger-state police security operations and the work of private security and intelligence firms including Maisha Consulting and Conservation Outcomes. These are two security firms developing anti-poaching intelligence networks in the country’s Niassa National Reserve, a global hotspot of elephant poaching (Interviews, 2016). Mozambican development NGOs also hire and work with private intelligence and security firms to combat rhino poaching in southern Mozambique (Interview, 2016).

In short, the hard kinetic green militarised approach to commercial poaching in Southern Africa is being joined by softer COIN interventions. These aim to win hearts and minds to discourage entry into the poaching economy but also make community members more amenable to related intelligence gathering. Indeed, this is what the conservation-security-development nexus looks like in practice. From here we begin to ask what might be enabling this coming together of conservation, security, and development actors and the blurring of their commitments. This leads us into the explicit security rationales behind anti-poaching efforts and hence once again back to the insights of CMS and broader field of critical security studies.
Securitising Commercial Poaching and Authorizing Green Militarisation

The field of critical security studies has certainly given us a vocabulary for understanding how an issue becomes securitised, or understood as a legitimate security threat, and how this then justifies military and broader security interventions (Buzan et al., 1998; Waever, 1995). In the context of anti-poaching interventions, commercial poaching is securitised both as a more traditional issue of national/global security and increasingly as an issue of economic security. This framing has certainly authorised hard, kinetic green militarised approaches but increasingly softer COIN approaches as well. Stated differently, for there to be a conservation-security-development nexus, it is not enough for development initiatives to be aimed merely at reducing poaching. Poaching must first be understood as a security threat.

Indeed, like development assistance, wildlife and spaces of conservation have become integrated into a global security politics giving rise to a security imperative that authorises both hard and soft green militarisation (Cavanagh et al., 2015; Duffy, 2014; 2016; Dunlap & Fairhead, 2014). On its webpage, USAID explains it supports efforts to combat the illegal wildlife trade because “wildlife trafficking is an international development issue because it undermines security, rule of law, and our efforts to end extreme poverty […] Protecting wildlife from poaching and illegal trafficking helps secure our global heritage and fights against the criminal networks that exploit humans and nature and thereby threaten national security and rule of law” (USAID, 2017. emphasis in original; also see Obama, 2014). Moreover, various United Nations agencies have labelled poaching and wildlife trafficking a “serious global security concern” (UNDP, 2015). We see security threats from poaching and the wildlife trade concentrated around three pillars: connections to terrorism, insurgency, and organised crime; the related security and

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65 Others have examined in depth the moral imperatives or “just war” rationale for militarized conservation based on the vulnerability of wildlife (Eckersley, 2007; Duffy, 2014; 2016; Cochrane & Cooke, 2016).
integrity of international borders, territory and sovereignty; and economic security.

Much of the work examining the integration of poaching into global security politics has focused on the presumed links between poaching, the wildlife trade, and terrorism especially in East and Central Africa (Duffy, 2014; 2016; White, 2014). Poachers, put simply, are framed as terrorists or are represented as financing terrorist and militia groups (McNeish, 2014; Obama, 2014) despite little empirical evidence to support these claims (Duffy, 2016; Kelly et al., Forthcoming; Maguire & Haenlein, 2015). Poachers in Southern Africa are similarly routinely framed as armed “insurgents,” many of whom clandestinely cross international boundaries and threaten national territory and sovereignty. Speaking of the cross-border nature of rhino poaching and his desire for the Army to play a bigger role, former SANParks CEO and acting CEO of Ezemvelo KwaZulu-Natal Wildlife, David Mabunda, contends “this is counter insurgency” and “is no longer a conservation war, but it is a war of our sovereignty so we should look at it in terms of our national security” (Mkhize, 2015). Similar rhetoric is routinely used by high-ranking SANParks’ officials (Lunstrum, 2014; SANParks, 2012b). In the context of Kruger National Park, the focus on poaching as an attack on national security, territory, and sovereignty reflects the reality that Kruger is more than a conservation space, it is a border space (Lunstrum, 2014; 2015a; Massé & Lunstrum, 2016; SANParks, 2012b).

While claims of poachers as terrorists are not well-evidenced, the involvement of organized crime in the illegal wildlife trade is. Organised crime is indeed a poaching-related security concern both locally and globally and is one we see manifest on-the-ground in Southern

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66 We heed Shaw and Rademeyer’s (2016) cautioning to not over-determine poaching as a national security issue. However, we still see the rhetoric of war and national security, even if problematically limited to a less-than representative segment of the population, as effective in mobilising resources and military/security actors in South Africa and elsewhere.
Africa (Hübschle & Faull, 2017). This has in part, for instance, motivated South Africa to label rhino poaching “a National Priority Crime” (DEA, 2017). In this context, the founder of the IAPF, which takes an unapologetically militarised approach to anti-poaching in the Mozambican borderlands, argues “eliminating poaching helps to prevent the destructive downward spiral of the illegal wildlife trade. Poaching is the gateway for criminalization of individuals and whole communities” (gofundme, 2016). Echoing USAID (see above), other South African and Mozambican conservation and anti-poaching officials express a fear that the illegal wildlife trade could lead to a broader culture and cementing of organised crime and a subsequent erosion of the rule of law and security in areas where the poaching economy has taken hold (Interviews 2014-2016; also see Hübschle & Faull, 2017).

Our point in drawing attention to these security discourse is that they authorise militarised interventions, both hard and soft. In the latter sense, these are the discursive moves upon which the conservation-security-development nexus comes to make sense. We begin to see this link even more explicitly when we turn to a third security discourse, that of economic security. The argument here is that if commercial poaching undermines conservation, then it putatively undermines conservation-related development as well. As the Mozambican Minister of Tourism explained, poaching “is having a detrimental effect not only on [Mozambique’s] beautiful wildlife, but also on communities’ sustainable development, on tourism and on the security of economies of African nations” (PPF, 2014). Likewise, South Africa’s Department of Environmental Affairs claims rhino poaching threatens the “eco-tourism industry” of South Africa (DEA, 2010). The fear of economic consequences stemming from wildlife crime are also scaled up to the global level with claims from the U.S. State Department suggesting wildlife crime “weakens financial stability and economic growth, particularly in countries for which
tourism is a major revenue source” (U.S. Department of State, 2014).

Reflecting the logic of the security-development nexus, at least part of the economic concern with poaching is not centrally about economies and economic well-being for their own sake but comes back to more traditional national and global security anxieties. In this way, securing the development potential of conservation economies dovetails with the securitisation of development more broadly. The logic here, according to conservation, security, and development officials, is that if conservation-as-economic-development is compromised, the resulting poverty and vulnerability may provide a breeding ground for further instability and recruitment by organised crime syndicates involved in poaching or other illicit markets (Interviews 2014-2016). Echoing the words and sentiment of a director of an anti-poaching security firm in the region, rhino poaching is about “much more than the rhinos” (Interview, 2014). Extending principles of the security-development nexus to non-humans is thus not only about wildlife but the security of people, economies, and states as well.

In short, what is telling about all these security discourses – encompassing concerns for terrorism, insurgency, national borders, and economies – is that they authorise not only hard militarised conservation interventions. They increasingly authorise softer approaches as well. The latter are precisely those that constitute the conservation-security-development nexus.

We strongly support community development, community-based conservation efforts, and building stronger park-people relations. These can help protect vulnerable communities, improve livelihoods, and equally protect wildlife all over the short and long-terms. But approaches that fit within a conservation-security-development framework are arguably too instrumental and shortsighted. At the crux of our concern is how the primary objective of these projects is to reduce poaching. Within this framework, we see community development
interventions evaluated not from a community benefit standpoint but whether or not there is a measurable decrease in commercial poaching or increase in support for militarised anti-poaching. These observations further solidify what we see as an emerging conservation-security-development nexus. This is one in which, once more, these development initiatives have their primary goal not of addressing community needs but rather addressing security-cloaked conservation concerns.

This is not mere conjecture. In talking about the value of community-development initiatives, Gen. Jooste, explains, “I would really like somebody to show me one community or demand reduction project that will decrease poaching before 2020,” highlighting again the main aim of these interventions is addressing rhino poaching (Hübschle & Jooste, 2017, p. 65). We also witnessed how the continuation of rhino poaching by communities in Mozambique’s Sabié region led to calls by some neighbouring reserves and anti-poaching managers to stop investing in those communities. They argued if communities are going to continue to hunt rhino and be hostile to anti-poaching personnel, it is not worth investing in good relations and community development. Instead, they argued they should stick to a more hard-lined anti-poaching approach where communities are perceived as enemies. At a broader level, interviews with donors confirm if “development” money earmarked to reduce poaching fails to achieve this goal, there is a risk that such funding disappears and we revert to a more direct and kinetic military approach, one that never went away but exists alongside development (Interview, 2015). The point of these examples is that certain development is increasingly contingent on the realisation of anti-poaching successes and not directed first and foremost at improving community well-being. This, we see is a shortsighted response both to addressing wildlife crime, which requires old and
enduring community-conservation relations, and to ensuring the wellbeing of vulnerable communities.

**By Way of Conclusion: A Further Call to Bring Together CMS and Green Militarisation**

In this article we have taken a preliminary step in bringing together the political ecological study of green militarisation and core debates in CMS. In introducing conservation’s militarisation, we have shown how this can importantly expand the focus of CMS to include conservation, and related non-human actors, as a key arena in which militarised logics and practices take hold and transform spaces and ultimately lives. In short, green militarisation opens a whole new realm, including the non-human, to military intervention. We have also shown one concrete way in which studies of green militarisation can be deeply enriched by engagement with core CMS debates. Namely insights into the security-development nexus help us make sense of the dovetailing justifications, actors, and practices that embody what we call the conservation-security-development nexus. This is a nexus that sees development interventions targeting communities specifically to prevent their involvement in the wildlife trade and hence neutralise security threats poaching might pose. We make sense of this not as a departure from a broader militarised response but as complementary to existing hard tactics of green militarisation and see it as a potential new trend in green militarisation. We encourage further empirical research to understand if this trend is occurring elsewhere.

While we see the above as insightful intersections between political ecology/green militarisation and CMS, there is much more work to be done. We hence close by outlining additional connections and future lines of inquiry that flow from these. Both political ecology and critical military studies are concerned with power and how it operates. The former is
concerned primarily with how processes of power across scale shape human-environment interactions, and vice versa. Critical military studies, on the other hand, embraces what Enloe (2015, p. 7) calls a “sceptical curiosity,” a curiosity that resonates well with political ecology. Beyond our initial efforts in this article, how can this sceptical curiosity be applied to thinking about military power and its objectives in relation to conservation and the environment more broadly? Moreover, in what ways can an engagement by critical military studies counteract the work of less-than-critical examinations of military-environment encounters? The latter often takes on a Malthusian tone of ecological limits and resource scarcity causing economic and political instability (Bugday, 2016; Homer-Dixon, 1999) that political ecology has routinely debunked (Peluso & Watts, 2001). Others go even further and advocate for an increase of counter-terrorism, special forces operations, and even shoot-to-kill policies to combat poaching (Kalron, 2013; McCann, 2017; Miles, 2012; Mogomotsi & Madigele, 2017). Rigorous scholarship that questions these types of interventions and assumptions from a variety of perspectives is vitally important.

Second, CMS scholars are interested in the “located, situated and constitutive natures of military power and its effects” (Rech et al., 2015, p. 47), “new forms of interventionary power that forge novel spaces of military and civilian engagement” (Holmqvist et al., 2015, p. 1), and new governance institutions that take on a decidedly militaristic character (Bachmann, 2015). CMS can thus supplement the work of political ecologists who seek to understand how conservation, poaching, and the illegal wildlife trade help shape each of these processes and with what implications. These are implications that also have a human face, a point with which we would like to end.

As militarised forces and militaries themselves become increasingly involved in
conservation, the killing of subsistence hunters and (wrongly) suspected poachers, and the committing of other human rights abuses are becoming all too common (Brooks & Hopkins, 2016; Carlson et al., 2015). Put simply, we have a preliminary understanding of how militarised efforts to protect vulnerable wildlife populations and the spaces they occupy are creating other vulnerable populations. We also see these vulnerabilities extend beyond those suspected of poaching to their families. Immediately apparent in Mozambique’s poor borderland villages where many rhino poachers originate is the number of widows sitting idly outside of husbandless, fatherless homes. These women and their children are indirect victims of the “war” on poaching whose vulnerability increases dramatically with the death of the husband and father. Dozens of interviews with anti-poaching personnel and conservation rangers in South Africa and Mozambique also highlights how the increasingly militarised nature of anti-poaching and the response by armed poaching groups puts rangers directly in harm’s way (also see Lunstrum, 2014). Often perceived as murderers and human rights abusers, rangers in South Africa and Mozambique have even become vulnerable in their own communities where they are often subject to threats and physical violence, a reality witnessed by the authors and expressed in many interviews by rangers and anti-poaching personnel (Interviews 2012; 2015; 2016). These personnel also highlight how the militarisation of conservation is taking a psychological toll on rangers and conservationists (Interviews, 2012; 2015; 2016; also see Hübschle & Jooste, 2017). This is leading to a rising problem of post-traumatic and acute stress disorder among rangers who are expected to “go beyond their typical role as conservationists to become active players in guerrilla warfare, putting their lives in constant jeopardy” (GRAA, 2016). Critical military studies is well-equipped to answer questions related to the production and perception of militarised subjectivities among rangers and conservationists. We draw attention to these
unanticipated implications of green militarisation as they strike at core CMS concerns. Hence they suggest avenues for the future study of the militarisation of conservation and the broader conservation-security-development nexus.

In short, we foresee a productive dialogue between the political-ecological study of green militarisation and the field of CMS. Together they will help us make sense of the changing practices of militarised conservation, including its embrace of a softer approach embodied in the conservation-security-development nexus, and help us grasp the expanding ways in which ‘the environment’ and ‘nature’ are increasingly justified as areas of military intervention and the resulting impacts for people and non-human nature alike.
Chapter 9

Conclusion

In May 2016, I returned to Sabie Game Park after having not been there for over four months. I wanted to touch base and see how things may have changed in during that time and what, if anything, was new. I knew the reserve had acquired a helicopter and tracking dogs since I had last been there, for example. I wanted to observe them in action. One day during that visit, I was sitting in a truck accompanying rangers doing the morning fence patrol. I had done this fence patrol dozens, if not a hundred times by this point. But, it was the first time that I accompanied a patrol with a tracking dog. The rangers located relatively fresh tracks left by poachers entering the reserve before sunrise. While this was unfortunate, a part of me was excited to get to see the dogs in action and how it altered the dynamics of responding to a poaching incursion. We drove as far as we could off the road and then jumped out of the truck and let the dog handler do his work. As rangers fanned out in a search grid, I stuck behind one ranger and jogged to keep up as the dog led the way at an almost running pace. After about 6kms, the dog tired. A manager radioed the helicopter pilot who was circling above in support to come pick up the tired dog and drop off the other one to continue with the tracking. I asked if I could also get a ride to get an inside look at anti-poaching from the skies. The tired dog and I got into the helicopter and we rose up, getting a bird’s eye view of the tracking team proceeding through the bush below.

The dogs, however, were confused by the counter-tracking done by the poachers. As the dog handler commented, “we were outmaneuvered today” (Paul, 13/05/2016). Knowing the direction of the poachers, the APU had already radioed ahead to their counterparts across the border in Kruger National Park so they could try and intercept the suspected poachers on that
side. The poachers most likely made their way to Kruger and eventually back out. Indeed, knowing the patterns of poachers, the APU set up an ambush along the fence line two nights in a row hoping to encounter them as they made their way back.

The day-to-day logics guiding anti-poaching had not changed, but in a mere four months, they had intensified. The helicopter and dogs are an obvious manifestation of this. More rangers and another anti-poaching manager had also been hired. In addition, the Col. (see Chapter 2) was now in charge of the APU full time. The Head of the IAPF was now focusing almost exclusively on fundraising and awareness raising making the threatened rhinos and the need for a security-first approach increasingly visible on social media, television, and at town halls and fundraising dinners worldwide. Moreover, what was intended to be a promising community scout and conservation development initiative to move beyond an enforcement approach to anti-poaching was co-opted by the ever-intensifying and paramilitarised APU (see Massé et al., 2017).

When I wrote my proposal for this research project, I set out to do ethnographic research with an anti-poaching unit in the Mozambican borderlands adjacent South Africa. I anticipated that I would likely not gain the access needed to conduct participant observation, or even just observation, with rangers and other anti-poaching personnel on-the-ground. After having visited several protected areas in the region over multiple preliminary research trips from 2013-2014, however, I knew this is what was needed to answer my research questions. The primary question shaping my research and this dissertation concerns how state and non-state actors are responding to commercial poaching within and across Mozambique’s borders. Beyond efforts to combat poaching, I also sought to interrogate the ways in which wildlife crime and these efforts articulate with broader political-ecological and geographic dynamics of security, territory, state
power, and what the implications are for conservation practice, territorial relations, and the relationship between them.

I was fortunate in that multiple protected areas and anti-poaching units granted me access, giving me a frontline view into efforts to secure spaces of conservation and the wildlife within them. Like any study, my research was fraught with negotiations, challenges, and compromises, as discussed in Chapter 2. It is the insights gained from participant observation during my time at these protected areas, complemented by interviews, document-based research, and existing literature, that enables this dissertation to answer the above questions and develop the arguments put forward in the preceding pages.

Using my empirical data and a micropolitical approach, in combination with insights from political-ecology and political-geography, this dissertation demonstrates how we find ourselves in an unprecedented era of securing conservation. This is not to say that intersections between conservation and security are new. Indeed, Chapter 4 detailed a long history of state interventionism related to human-wildlife relations in southern Mozambique that is tightly informed and shaped by broader concerns related to strengthening state sovereignty, security, and territorial control, especially in hinterland areas. However, in examining contemporary efforts to secure wildlife and spaces of conservation, I have argued the shifting realities and concerns of contemporary commercial poaching are (re-)shaping the logics, practices, and processes of material and discursive power through which anti-poaching, conservation, and security operate. The result is a conservation practice increasingly characterised by more-than-conservation objectives, actors, and tactics that seek to pacify the poacher to secure the spaces and lives of wild animals. In the process, we see the expansion and extension of state power along with the reification and strengthening of protected areas as exclusionary biopolitical...
enclosures to be defended. While the need to promote conservation and protect threatened species is very real, these efforts are yielding troubling and even counter-productive ecological, social, and political implications. This is the overarching framing that binds together the individual analyses and arguments in each chapter.

I am by no means the first to research the intensification of anti-poaching and conservation security happening across Southern Africa and even globally. I situate the contributions of this dissertation within the burgeoning body of literature concerned with conservation’s securitisation, and especially its militarisation. I draw from and complement these debates. Where I differ, and where my contribution lies, is in my ethnographic approach and a focus on the micro-politics of conservation security that orients my analysis towards the everyday and on-the-ground practices and dynamics of anti-poaching and conservation law enforcement. It is in these everyday practices, largely conducted by anti-poaching personnel, that I read the deployment and embodiment of discursive and material power that catalyses and informs “conservation” interventionism by state and non-state actors. This interventionism is indicative of changing and intensifying state-wildlife relations as ushered in by the current conjuncture of wildlife crime. Interrogating this relationship even further is a next step in my analysis and writing.

**Going Forward**

Critiques of the trajectory of conservation practice amid its securitisation and even militarisation are now out in the open. While this debate is alive and well in academia, there is also a lively debate outside of the academy among conservation and anti-poaching practitioners, researchers, scholars, and others. Critics and proponents of a securitised, enforcement-first, and even militarised approach to conservation in the current conjuncture do not fall along practitioner-scholar lines. We find people from all groups on either side and in the middle of the debate. I see immense promise and even have a reserved sense of optimism in this, especially as those within conservation institutions raise their voices and are emboldened to do so.

Since I began writing, for example, we have seen a shift towards toning down the militarised language and rhetoric by some in acknowledgement that it is damaging and counter-productive (see for example Hübschle & Jooste, 2017). This may, however, be a method on the part of those using militarised tactics to anticipate and insulate themselves from critique. Indeed, there has also been a recent shift towards talk of a “responsible green militarisation” that deems a hard-lined, aggressive, and violent conservation practice as a necessary and responsible intervention (Jooste, 2017; McCann, 2017; Mogomotsi & Madigele, 2017). These types of claims need further interrogation supported by grounded, empirical research on the impacts of these types of socio-ecological interventions.

The idea of responsibility here is key. I believe there is consensus that we do have a responsibility to protect wildlife and other biodiversity, especially that under threat. And, a certain amount of boots-on-the-ground and practical anti-poaching and law enforcement is

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68 I also put these here for ease of readability: Duffy, 2017; Duffy et al., 2017; GRAA, 2016, 2017; Hübschle, 2017; Hübschle & Jooste, 2017; Lunstrum & Bond, 2016; Maguire & Haenlein, 2015; Massé, 2017; McCann, 2017; Moritz et al., 2017; Roe et al., 2015; Somerville, 2016; Stiles, 2017.
necessary. But, there is also a responsibility to ensure that law enforcement and the protection of wildlife is not done at the expense of people, their rights, and basic needs. This is especially true of local people who are already vulnerable, marginalised and who have often suffered through (multiple) rounds of conservation-induced dispossession that continues and possibly contributes to their susceptibility to be recruited by poaching syndicates (see for example, Hübschle, 2016b; Peterson et al., 2017). On this note, I stray cautiously into the normative. I believe there is a particular responsibility on the part of states and governments to ensure not only the protection of wildlife, but the development and upliftment of its people. This responsibility extends to those non-state actors who from benefit from conservation and biodiversity protection. Hence, in going forward I join others and advocate for a conservation practice that genuinely includes local people as stake-holders and decision-makers, and even as part of conservation-security where they benefit from protecting wildlife. Benefits, here, means contributing to sustainable, long-term, and productive development that helps people break out of the cycle of poverty, not merely a hand out in exchange for staying out of protected areas and giving up (or having lost) access to land, resources, and livelihoods. This need not be at odds with conservation law enforcement. Indeed, it may even be key to more effective conservation alternatives and futures.

While perhaps not obvious in this dissertation, I do find affinity with the idea that commercial rhino and elephant poaching is more than a conservation issue and concern. I say so with hesitation as such a claim, as has been demonstrated in this dissertation, can be dangerously mobilised to authorise violence, militarisation, and heavy-handed policing. But, it remains the case that, beyond development as argued above, effectively addressing commercial rhino poaching requires interventions that focus on the wildlife trade itself and its dynamics. Syndicates, recruiters, middle men, the corruption enabled by immense flows of money, the
strengthening of woefully inadequate judicial and legal systems, and addressing consumer demand for wildlife products need to be the objects of interventions, not just the individual who enters a protected area to hunt. How these issues are being addressed and with what success or problematic consequences is a much-needed avenue of research. Some have already begun along this path, myself included. Perhaps getting on the inside in these other domains can also yield important insights regarding their micropolitics and how such politics articulate with broader political-ecological and political-geographical dynamics to offer productive empirical and theoretical contributions.

To Summarise and Conclude

While developing inroads for new research and generating new questions such as those outlined above, this dissertation has made its own contributions. One objective of this research and the dissertation was to turn away from the spectacular aspects of conservation-security for a more nuanced analysis of its less visible dynamics and practices. At times, however, a focus on the former was still necessary in addition to and as part of understanding the latter. Indeed, the spectacular and mundane, militarised and less-militarised, are not mutually exclusive, but complementary. Looking at both, and how and where they interact, offers what I hope is a more comprehensive analysis of efforts to secure wildlife and spaces of conservation. Here, I return to the objectives of this dissertation as set out in the introduction and detail how the chapters contribute to them.

First, this dissertation contributed to thinking about the ways in which we might study the responses to wildlife crime using a combined political-ecological and political-geographical approach that focuses on their everyday manifestations and the processes of power that shape
them. More specifically, within the broad framing the political-ecology and political geography offers, I used a micropolitical approach focusing on the questions of who does conservation security on a daily basis, how do they do it, using what practices, why, with what challenges? The expected and unexpected answers to these are precisely where and how this dissertation contributes to understanding conservation security and debates concerning the operationalisation of power, state-wildlife relations, and the related use of violence. This is an approach that might be applied in other security and policing contexts.

Second, this dissertation has pushed debates on the intersections of various modes of power in new directions. More specifically, examining how the deployment and authorisation of different modes of power come together to shape and give life to interventions to protect the non-human offers new ways of thinking about power’s logics and spatialities. As detailed above, these analyses offer insights into state-wildlife relations that have long-existed but that are arguably intensifying.

These contributions and the related arguments and analyses I presented in this dissertation emerged from the insights afforded by an ethnographic approach oriented towards understanding the discursive and material micropolitics of conservation-security. Rather than studying conservation security from the outside in, I have tried to understand conservation security from the perspective of those doing it. The result is a set of arguments and analyses that bring the nuanced and even contradictory dynamics of conservation security to the fore. To be sure, my research and analyses benefit from being a PhD student with ample time for field research. This, combined with the existing work cited above, facilitated my ability to interrogate and understand the workings of familiar and more novel conservation-security efforts as manifested in and through protected areas and those who police them.
In some chapters, I also departed from the literature that is more strictly concerned with the militarisation and broader securitisation of conservation to offer insight into the arguably subtler dynamics of conservation policing and conservation law enforcement. Indeed, in Chapter 6, I developed the notion of conservation law enforcement and the modes of power that authorise and demand that rangers, as frontline conservation law enforcement personnel, act in a certain way. Conservation law enforcement personnel are, in effect, petty environmental sovereigns who police protected areas to secure them and the lives of wildlife from the threat of poaching. These insights might be applicable or offer insights into a wider variety of conservation contexts that are both militarised and not, as well as in other policing and security contexts.

Militarisation, securitisation, and policing as processes are not mutually exclusive or even binary. It is also increasingly the case that conservation (or controlling human-environment relations more broadly), policing, and security may not be separate and discrete categories, practices, or dominions of concern. Similar lines of argumentation can be seen in other contexts such as the militarisation and securitisation of climate change, for example (Barnett & Adger, 2007; Dalby, 2009; 2010; 2013; 2014; Dunlap & Fairhead, 2014; Gilbert, 2012; Parenti, 2011). This dissertation has started to interrogate what the blurring of these categories means for each and with what consequences. However, it requires further study than what this dissertation can offer.

With this said, I have engaged with and contributed specifically to debates on green militarisation throughout the dissertation. In Chapter 5, for example, I complemented literature on the discursive framings of wildlife, poaching, and those working to stop them (Lunstrum, 2017; Marijnen & Verweijen, 2016; Neumann, 1998, 2004). I demonstrated how the discursive production of a nature under threat and a simplistic representation of poaching and anti-poaching
serves to normalise a conservation practices based on militarised violence and policing tactics. This moves the cultural politics of conservation and related accumulation-strategies away from discursive and material practices primarily concerned with ‘wilderness,’ to a focus on the increasingly decimated and vulnerable nature that requires aggressive and hostile spatial policing, if not outright militarisation. Building on these insights is Chapter 6, where I highlighted the modes of power that condition and even demand the use of conservation violence, or violence in the pursuit of conservation goals. Moving in a different direction, Chapter 8 described a shift in militarised conservation practice where a softer form of green militarisation akin to soft-counterinsurgency tactics is supplementing hard and outright kinetic tactics. The chapter captures this dynamic with the concept of the conservation-security-development nexus where development interventions seek to win the hearts and minds of communities to prevent their involvement in poaching, thereby neutralising the security threats poaching might pose. We place a wider call to critical military studies scholars to engage with work on conservation and vice-versa.

Studying conservation-security was also a way to interrogate the different, yet interconnecting, processes of material and discursive power and how they help produce certain types of spatialities and practices, conservation or otherwise. The individual arguments developed in each chapter are all concerned with how these processes of power come together to reify and strengthen a conservation practice that secures protected areas as exclusionary territories that keep nature and certain people separate. Even conservation and development interventions, as discussed in Chapter 8, are designed to keep people out, not to bring them in as active participants, stakeholders, and beneficiaries in protecting and managing wildlife. However, we also see new conservation spatialities emerge. Chapter 7, for example, detailed
how conservation-security personnel mobilise vertical space and the three-dimensionality of conservation territories to overcome nature’s obstacles to pacify poachers and secure spaces of conservation and the wildlife within them. In addition, the biopolitical underpinnings of conservation law enforcement highlighted in Chapter 6 reveal the dual-sidedness of conservation territoriality. While practices of conservation law enforcement are meant to keep poachers out, when they do enter, rangers seek to contain them within to neutralise them.

To be sure, while there are similarities with long-standing practices of conservation as concerned with more than just the protection of biodiversity, in the current context, the stakes are arguably higher. Today, rhinos, elephants, and other species are indeed under threat. This presents a genuine and pressing ecological and conservation concern that motivates much of what this dissertation describes. The ecological is, to be certain, ever-present in this dissertation. While there is much focus on the social and human impacts of a security-driven approach to conservation, I also illustrate that such an approach takes away from traditional concerns of biodiversity conservation that focus on ecological and biological management and stewardship. This line of argumentation is meant as a way to speak to conservation practitioners and others who see critiques of conservation’s increasing securitisation as naïve and even part of some socio-ideological agenda emanating from the ivory tower (McCann, 2017; Mogomotsi & Madigele, 2017).

What emerges from these critiques and the arguments in this dissertation is that addressing wildlife crime and its consequences requires moving beyond the hunter and spaces of conservation for both social and ecological reasons. Many of those on the ground and promoting a military, enforcement-first approach also realise this. As the head of the IAPF explained, the organisation’s role in using a militarised approach is “to stop the bleeding.” However, an
alternative is seriously needed because the Mozambican borderlands and South Africa’s Kruger National Park continue to run red with the blood of humans and wildlife. In perhaps a strange way, the fact that we know this might serve as a source of optimism because there is time and indeed grounds for a re-allocation of resources and priorities to change course for more socially and ecologically just conservation futures.
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