MARIEKE S. REIJNEKER

Elephants, predators & politics: understanding socio-political landscape influences on farmer-wildlife conflict around Alldays, South Africa

How can socio-political landscape influences including *wildlife conservation* and *conflict governance*, explain farmers' behaviours toward wildlife?

MSc THESIS

NOVEMBER 2014

MARIEKE S. REIJNEKER[1, 2, 3]

Elephants, predators & politics:
understanding socio-political landscape influences on farmer-wildlife conflict around Alldays, South Africa

How can socio-political landscape influences including *wildlife conservation* and *conflict governance*, explain farmers' behaviours toward wildlife?

MSc THESIS

NOVEMBER 2014

FNP 80421
890826 690 130

SUPERVISORS
Dr. W.H. Dressler[1]
Dr. Ir. I.M.A. Heitkönig[2]
Dr. I. Gaigher[3]

[1] FOREST AND NATURE POLICY GROUP, WAGENINGEN UNIVERSITY
[2] RESOURCE ECOLOGY GROUP, WAGENINGEN UNIVERSITY
[3] MOYO CONSERVATION PROJECT

Front cover photos, [African elephant (*Loxodonta africana*) (n.d.) Copyright holder uknown; [White farmer] (n.d.) Copyright holder unknown; [Leopard (*Panthera pardus*)], (n.d.) Copyright holder unknown.

ACKNOWLEDGEMENTS

This Master's thesis has come a long way full of challenges, but in the end I am very proud of what I have achieved. It should however be said that without the most kind and professional support of many, I would not have been able to complete this period successfully. Therefore I am grateful to all whom have made a contribution to this thesis.

First, it is more than appropriate to thank my Wageningen University supervisors Wolfram Dressler and Ignas Heitkönig for their critical notes, useful advises and all their efforts that have made this thesis into a success.

Furthermore, I am grateful to Ian Gaigher and Willie Botha from Moyo Conservation Project, who have offered me the possibility to conduct my research in South Africa and without whose advice and support this thesis would not been complete.

Also to Mogalakwena River Lodge (Research Limpopo) with Caroline Kruger in particular, to join me in my visit to the local communities within and near the Blouberg Nature Reserve.

To all farmers whom I have interviewed, observed or met during fieldwork around Alldays, South Africa. Without their full cooperation, hospitality and openness I could never have shared their story and shed light on the farmer-wildlife conflict in this area. In this sense, they have made a great contribution to our scientific understanding of this phenomenon and made a great step forward in creating farmer-wildlife coexistence.

To FONA Conservation, a platform for research in nature conservation, who awarded me a grant to make this research possible.

And last but not least, I want to thank all my friends and family in particular, for their inexhaustible support and patience that they required many times. Your compassion and sympathy have helped me through some difficult times and I am very grateful for having such dear people around me.

ABSTRACT

In many places around the world, the presence of wildlife imposes risks and costs to farmers' livelihoods and overall agricultural production, urging farmers to kill the problem animal to avoid any more financial burden. But eradication of wildlife forms a constant potential threat to the existence of many wildlife problem species and greatly undermines conservation efforts. More input from social science is critical to come to understand the social and political landscape influences on people's attitudes and behaviour toward wildlife. Yet, this is a relatively undiscovered and often unconsidered field. Particularly the role of responsible government agencies is of great importance for human-wildlife conflict, because depending upon the way in which agencies handle conflict situations, such socio-political forces can mediate conflicts or conversely, preclude conservation initiatives and management activities.

My aim in this thesis is to better understand the influence of social and political landscape forces on human-wildlife conflict by exploring how the broader framework of wildlife conservation and conflict governance at place in Alldays, South Africa, can explain farmers' attitudes and behaviour toward wildlife. Primarily drawing on the rationale behind the Theory of Planned Behaviour, I explored how farmers' evaluations of the broader framework of wildlife conservation policies and conflict management can explain farmers' behaviours toward wildlife.

This study demonstrates how in the case of Alldays, social and political tensions and related major governance shortcomings, are manifested in illegal and unsustainable behaviour of farmers toward certain wildlife species, elephants and leopards in particular. Famers raised criticism about a lack of consultation, the province's incapacity and incapability, inconsistent and dishonest application of regulations and an overall lack of meaningful interest in the livelihoods of private farmers. Shortcomings in governance forms a significant source of frustration among private farmers and origins of such frustration can be found in historical social and political tensions. These findings strongly suggest that conflict situations not just represent tensions between humans and animals, but also *between* humans (farmers and the government) *about* wildlife and *about* countless other social and political landscape transformations. It is argued that the primary challenge for policy makers is to come to understand the needs of affected communities and critically evaluate their own role in conflict mediation, in order to rearticulate their communication and develop management activities more effectively. This thesis showed that where human-wildlife conflicts may initially arise as response to mutual competition over resources, social and political landscape influences are found to form a critical part of comprehensively explaining the whys and wherefores.

Keywords: *human-wildlife conflict, South Africa, attitude, behaviour, socio-political landscape, wildlife conservation policy*

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

ANC	African National Congress
ANP	Afrikaner National Party
DC permit	Damage Control permit
DEA	Department of Environmental Affairs
GDC	Green Dogs Conservation
Mapungubwe NP	Mapungubwe National Park
NC	Provincial office for Nature Conservation
PBC	Perceived Behavioural Control
PH	Professional hunter
SNP	South African National Parks
TOPS	Threatened and Protected Species Regulations
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
VBR	Vhembe Biosphere Reserve
Vhembe NR	Vhembe Nature Reserve
Venetia NR	Venetia Nature Reserve
WRSA	Wildlife Ranching South Africa

LIST OF FIGURES

1 INTRODUCTION

ELEPHANTS, PREDATORS & POLITICS

"A few years ago on the farm of a friend of mine next door, a leopard came at night-time and he killed 38 sheep, 2 goats and the little dog in the kraal. Why must a farmer ask a permit to kill this animal? That is unacceptable for me. This is damage."

(Kees, crocodile and sheep production farm, 11 November 2013)

The quote above is derived from an interview with a private landowner near the small town of Alldays, situated in the northern part of South Africa. Like in Alldays, the presence of wildlife in many places forms a threat to farmer's livelihoods and overall agricultural production (Graham et al., 2005; Inskip & Zimmerman, 2009; Treves & Karanth, 2003). Farmers living alongside wildlife face predation of livestock and farmed game (Marker et al., 2003; Ogada et al., 2003), raiding of crops (Hill, 1998; Lee & Graham, 2006), transmission of diseases (Thirgood et al., 2005) and occasionally human attacks (Messmer, 2000; Thorn et al., 2012). With even the smallest levels of disturbance being a potential threat, there would be little incentive for most farmers to tolerate financial burden arising from human-wildlife conflict (Marker & Dickman, 2004). Various costs and risks farmers associate with the presence of wildlife are believed to spur their intentions to kill the problem animal in retaliation (Marker et al., 2003; Treves et al., 2006; Woodroffe et al., 2005). In order to protect their resources and secure their livelihoods, farmers feel urged to remove problem-causing wildlife from their land (Marker & Dickman, 2004).

But people's responses to wildlife disturbance form a significant threat to the survival and existence of many wild species. Studies have revealed strong associations between human density and loss of wildlife populations (Woodroffe, 2000). Animals frequently exposed to conflicts are more prone to extinction compared to regions relatively secluded from human activity (Ogada et al., 2003; Distefano, 2005; Woodroffe, 2000). For instance in Africa, human populations growth has led to the transformation of wildlife habitats into agricultural land hereby increasing competition between local farmers and wildlife (Distefano, 2005). This has already resulted in drastic reductions in

populations numbers and ranges of many wild African species, including the African wild dog (*Lycaon pictus*) (Muir, 2010) and the lion (*Panthrea leo*) (Woodroffe et al., 2005). It shows that human-wildlife conflict and particularly local people's behaviour to kill conflict species, forms a constant potential threat to wildlife existence and greatly undermines conservation efforts (Lindsey et al., 2012; Packer et al., 2009).

1.1 A HUMAN-WILDLIFE, SOCIAL OR POLITICAL CONFLICT?

Considerable attention has been paid to understand how human attitudes and behaviour in the context of wildlife-conflict unfold. This is most crucial for finding ways to facilitate coexistence and create sustainable grounds for long-term conservation initiatives (Browne-Nuñez & Jonker, 2008; Gusset et al., 2009; Manfredo & Dayer, 2004; Thirgood & Redpath, 2008). The success of conservation activities cannot be guaranteed without support from local people faced with wildlife-inflicted risks and costs on a daily basis (Madden, 2004). This makes questions like: what attitudes do local people hold toward wildlife, how do they respond to wildlife damage and particularly what drives their behaviour, important for conflict resolution. However, despite all attention, no long-term mitigation strategy is yet developed and the number of conflicts continue to increase (Madden, 2004). This suggests that human-wildlife conflict is more complex and deep-seated than has previously been presumed. Scientists highlight that more input from social science is needed to come to understand the social, cultural political landscape dynamics of conflict situations (Dickman, 2010; Madden, 2004; Manfredo & Dayer, 2004; Treves et al., 2006). Contemporary research should move beyond the common assumption that human-wildlife conflict represents a biophysical process (perceptions of wildlife damage construct negative attitudes toward conflict species and spur retaliation) and embrace the role of society, politics, culture and economics in steering people's attitudes and behaviour (Browne-Nuñez & Jonker, 2008; Dickman, 2010; Inskip et al., 2013).

The Theory of Planned Behaviour (TPB) (Ajzen, 1991) identifies that humans live within a diverse social environment. The TPB claims that behaviour of an individual is depending on the *attitude* toward that behaviour and his or her *social norm* – beliefs about the behaviour arising from social interactions within a greater context. It is argued that the way in which humans behave is influenced by the norms and values, attitudes and actions of 'important' others: i.e. family, community, church, researchers and government agencies (Ajzen, 1991). Particularly the role of responsible government agencies is of great importance for human-wildlife conflict, because policies and regulations on wildlife conservation and utilization construct a broader framework of socio-political forces that, rather than local-scaled interactions, impose legal restrictions and limitations on the daily lives and activities of people at the receiving end of wildlife damage (Messmer, 2000). And depending upon the way in which responsible wildlife agencies handle conflict situations, such socio- political forces can either mediate conflicts (Gupta, 2013) or conversely, preclude conservation initiatives and management activities (Treves et al., 2006). Local

people may hold substantially different norms and values toward wildlife, have different views on wildlife-conflict resolution and different perspectives on conservation in a broad sense than responsible agencies (Madden, 2004). This may lead to tensions between local people and wildlife agencies and change what seems to be a competitive relationship between humans and wildlife, into a political or social conflict (Dickman, 2010; Hill, 2004; Madden, 2004; Messmer, 2000; Muir, 2010; Treves et al., 2006).

My aim in this thesis is to better understand the influence of social and political landscape forces on human-wildlife conflict and to explore how a broader framework of wildlife conservation and conflict governance can explain people's behaviours toward wildlife. Previous research showed that when conservation initiatives are perceived negatively or when conflicts are handled improperly, they can be sources of continuous frustration among local people (Hewitt & Messmer, 1997; Messmer et al., 1997; Messmer, 2000). Such dissatisfaction can constrain management activities or, where intended to mediate wildlife-conflict, work counterproductive and encourage people to kill wildlife (Hewitt & Messmer, 1997; Messmer et al., 1997; Messmer, 2000; Sillero-Zubiri et al., 2006; Treves et al., 2006; Zinn et al., 1998). For example, in Tanzania it was found that villagers held negative attitudes toward activities of wildlife management authorities, because villagers felt they had not been involved in deciding the best way to conserve wildlife (Gillingham & Lee, 1999). Villagers criticized that the government is more concerned with looking after the animals than after their people. And people that are unsatisfied with government involvement in human-wildlife conflict may resort in illegal and/or unsustainable behaviour (Gusset et al., 2009). Contrariwise, studies elsewhere have shown that the provision of financial compensation and a relatively wealthy and stable socio-political environment mediated the effects of human-elephant conflict (Gupta, 2013). It is nevertheless clear that the way in which people respond to wildlife disturbance heavily depends on socio-political forces in a larger context (Dickman, 2010; Gupta, 2013; Messmer, 2000; Hewitt & Messmer, 1997). This means that the nature of human-wildlife conflict is not necessarily a biophysical one, if representing a conflict between humans and animals at all. Madden (2004, pp. 250) understands conflicts about wildlife as being *"between people with historical wounds, cultural misunderstandings, socioeconomic needs, as well as gaps in trust and communication over how to conserve wildlife and ensure the well-being of people at the same time."* Hence a circumscribed focus on the biophysical dimensions or local explanations of human-wildlife conflict, risks overlooking the real whys and wherefores that can well be explained by the broader social and political context (Gupta, 2013).

1.2 PROBLEM DESCRIPTION: MOVING FROM LOCAL TO LANDSCAPE EXPLANATIONS

Though available literature on human-wildlife conflict is extensive and gives valuable insight into the risks and costs of wildlife damage, the attitudes and responses of affected people and

implications for wild populations, it mostly seeks for local explanations and explores proximate causes (Gupta, 2013) This might be very useful for understanding local dynamics but it does not consider the influence of broader social and political forces that form a key part of explaining why people respond the way they do (Browne-Nuñez & Jonker, 2008; Dickman, 2010; Gupta, 2013; Madden, 2004; Treves et al., 2006). But the effects of social and political landscape forces on human-wildlife conflict are thus far relatively undiscovered and often unconsidered (Dickman, 2010). Many authors urge to step away from common assumptions about the conflict process and to move toward a more nuanced understanding of how and why attitudes and behaviour of people at the receiving end of wildlife damage are formed (Gupta, 2013; Treves et al., 2006). Input from social science is needed to obtain rigor understanding of landscape influences on human attitudes and behaviour, since wider socio-political forces may constrain management activities and create unstable grounds for wildlife conservation (Hewitt & Messmer, 1997; Messmer et al., 1997; Treves et al., 2006). And although many authors touch upon the effects that governance may have on people's attitude and behaviour toward wildlife (Gusset et al., 2009), there is no study yet that thoroughly demonstrates *how* this process unfolds.

1.3 RESEARCH AIM AND QUESTIONS

In this thesis, I will use a case-study approach to demonstrate the effects of broader socio-political forces on local dimensions of farmer-wildlife conflict around Alldays, South Africa. Primarily drawing on the rationale behind the Theory of Planned Behaviour (Ajzen, 1991), I will explore how farmers' judgements and evaluations of the broader framework of wildlife conservation policies and conflict management on-site, can explain farmers' behaviours towards wildlife. In line with calls from literature (Browne-Nuñez-Jonker, 2008; Dickman, 2010; Madden, 2004; Manfredo & Dayer, 2004; Messmer, 2000; Treves et al., 2010), I will seek beyond local explanations and proximate causes to better understand the influence of landscape dynamics on local tensions between farmers and wildlife. Analysis from a social perspective helps to understand people's attitudes and behaviour better and gives guidance to the development of effective mitigation and prevention strategies and education efforts (Manfredo & Dayer, 2004). This is particularly of interest for policy makers, protected area managers and social scientists interested in wildlife conservation.

My research questions are based on the intensions of this thesis as described above. The main question that this thesis aims to answer is: *how can social and political landscape forces including wildlife conservation and conflict governance, explain farmers' behaviours toward wildlife around Alldays, South Africa?* This prime question can be divided into the following three sub-questions.

I. First, in order to understand the wider context in which farmers and wildlife are situated: *how can the social, political and economic landscape in which farmers and wildlife live and interact be described in a national and regional context?*

II. Secondly, to gain insight into the acceptability of wildlife policies and regulations in the area: *how do farmers judge and evaluate wildlife conservation policies and conflict management on-site and how do these constructs come to be?*

III. And finally, to understand the effects of wider social and political forces on farmer-wildlife conflict around Alldays: *how can farmers' judgements and evaluations toward the broader framework of wildlife governance explain farmers' behaviours toward wildlife in the area?*

These questions guided three-months of qualitative research, in which I rigorously analysed the beliefs, attitudes and behaviours of farmers to make sense of the relationship between farmers and wildlife and relate this to the broader system of socio-political circumstances. This study demonstrates how in the case of Alldays, social and political tensions and related major governance shortcomings are manifested in illegal and unsustainable behaviour of farmers toward certain wildlife species, elephants and leopards in particular. Shortcomings in governance forms a significant source of frustration among private farmers and stimulate farmers to resort in the illegal practice of killing wildlife. These findings strongly suggest that conflicts may also arise *between* humans (farmers and the government) *about* wildlife and *about* countless other social and political landscape transformations. It is argued that the primary challenge for policy makers is to come to understand the needs of affected communities and critically evaluate their own role in conflict mediation, in order to rearticulate their communication and develop management activities more effectively. This thesis showed that where human-wildlife conflicts may initially arise as response to mutual competition over resources, social and political landscape influences are found to form a critical part of comprehensively explaining the whys and wherefores.

1.4 WHAT TO EXPECT?

In this thesis, I will first describe the conceptual framework behind the cognitive process of human behaviour and take examples from the field of wildlife conservation, to critically discuss how I will apply and approach aspects of behaviour throughout this study (Chapter 2). Secondly, I will describe the methodology used in this study *(*Chapter 3) followed by the result section. To understand the broader context in which this case is being studied, I will first describe people, politics, agriculture and wildlife in a national and regional setting over time (Chapter 4). Then I will critically describe and debate farmers' judgements toward wildlife conservation policies and conflict management in the area and evaluate how these feelings come to be (Chapter 5). Afterwards, I will describe and discuss how these judgements together with farmers' attitudes, can explain their behaviour toward wildlife (Chapter 6). Finally, I will critically discuss these findings and interconnect them in the discussion and conclusion and show how these findings are of great importance for the field of human-wildlife conflict (Chapter 7).

2 CONCEPTUAL FRAMEWORK

ELEPHANTS, PREDATORS & POLITICS

This thesis will primarily build on leading theories behind three main concepts: *attitude, behaviour* and *socio-political influences* on aspects of human behaviour. In this chapter, I will first draw on the principles of the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and the follow-up Theory of Planned Behaviour (Ajzen, 1991) and take examples from the field of human-wildlife conflict, to clarify how I will apply and approach attitude and behaviour throughout this study and how both notions interrelate to each other (Paragraph 1 and 2). Secondly, in order to understand the influence of wider societal and political influences on human behaviour, I will critically evaluate both theories to see how behaviour links up to influences from the broader environment (Paragraph 3). This will eventually bring about a clear and multi-faceted conceptual framework (Paragraph 4) that will be used as a guiding empirical instrument throughout the rest of this study.

2.1 HUMAN BEHAVIOUR

A critical evaluation of the theory behind the cognitive process of human behaviour is fundamental to understand how behaviour comes to be and how it is shaped by influences from the social environment. Human behaviour is a broad and complex process that requires a strong theoretical framework for robust explanations and reconstructions. Rather than predicting behaviour *per se*, I will draw on leading theories to come to understand the constructs and motivations that underlie the behaviour that participants show or intend. This means that I will use this theoretical framework as guiding material to make sense of the beliefs, attitudes and behaviour participants show and to be able to explain how these constructs all link up.

The first theories explaining behaviour originated from social psychology and assumed that *attitudes* could well explain and predict human actions (Ajzen & Fishbein, 1980). The idea that attitude determines a person's response was integral to theories of human behaviour, until critical studies revealed weak connections between attitudes and behaviour (Wicker, 1969). Among

others, the social psychologists Martin Fishbein and Icek Ajzen have sought for ways to reconsider this assumed linear relationship. In 1975, they introduced the *Theory of Reasoned Action* (TRA); a theory that would enhance the ability to explain and understand human behaviour and its underlying constructs with great efficacy (see Box 2.1 *"The Theory of Reasoned Action and Theory of Planned Behaviour"*). The TRA looks at a person's *intention* to perform a given behaviour – one's desires, preferences and motivations – to explain behaviour rather than attitudes. Behavioural intent is considered to be the best predictor of actual behaviour: *"intentions are indications of how hard people are willing to try, of how much of an effort they are planning to exert in order to perform the behaviour"* (Ajzen, 1991, pp. 181). The stronger the intentions toward a behaviour, the more likely this behaviour is to be performed when the opportunity arises.

It should be considered, however, that a behavioural intention can determine behaviour only if this behaviour is under volitional control; if a person can make a rational choice to perform the behaviour or not (Ajzen, 1991; Montaño & Kasprzyk, 2008). In the TRA, it is assumed that "individuals are usually quite rationale and make systematic use of the information available to them. People consider the implications of their actions before they decide to engage or not engage in a given behaviour" (Ajzen & Fishbein, 1980, pp. 5). To also explain behaviour of people who feel they have little power over their attitudes and behaviour, Ajzen (1991) extended the TRA by creating the *Theory of Planned Behaviour* (TPB). Ajzen added the notion of *perceived behavioural control* (PBC) to account for factors outside the individual that may affect behaviour; it includes the influence of non-motivational factors, such as the availability of money, skills, tools and so on. PBC refers to *"people's perception of the ease or difficulty of performing the behaviour of interest"* (Ajzen, 1991, pp. 183). It assumes that the likelihood that a behaviour is performed is jointly motivated *and* depending upon available resources and opportunities. But in situations where motivations to perform a behaviour are strong and volitional control is not high, the effects of perceived control are marginal (Montaño & Kasprzyk, 2008). Altogether, this means that the TRA can adequately explain variances in behaviour that is so to say straightforward (under volitional

BOX. 2.1 – THE THEORY OF REASONED ACTION AND THEORY OF PLANNED BEHAVIOUR

Responding to criticism on the attitude-behaviour relationship, Martin Fishbein and Icek Ajzen (1975) developed the *Theory of Reasoned Action* to explain the influences on voluntary behaviour; behaviour over which people make a conscious choice. To be able to also understand behaviour that is not under volitional control, Ajzen (1991) developed the follow-up *Theory of Planned Behaviour*. Both theories are among the most flexible theories on behaviour and widely applied in fields of communication, public health, social psychology and social environmental studies. Their effectiveness is shown in hundreds of studies that have revealed how changing underlying constructs leads to subsequent change in behaviour. This is very useful for developing effective management interventions aimed to understand or change behaviour (Montaño & Kasprzyk, 2008).

control), but it would be insufficient in situations where a person's behaviour may be perceived as constrained. This thesis will primarily draw on the TPB because this theory is this most recent and inclusive of both. Also, including the notion of PBC provides information on potential constraints and is most useful to explain why intentions do not always explain behaviour (Armitage & Conner, 2001).

2.2 ATTITUDE

A critical part in explaining behaviour is to recognize that individual intentions are not independent: they capture the motivations that underlie the behavioural process. Though it does not always apply, a person's *attitude* is generally assumed to be the first determinant of behavioural intention. Attitudes are held with respect to aspects occurring in an individual's world; a physical object, a certain behaviour, a situation, or a policy. Many definitions of attitudes exist and interpretations vary widely, but it is commonly agreed that attitudes are *evaluations* or *feelings* about the entity in question, about a specific issue, situation or event (Ajzen & Fishbein, 1977). In the TRA, attitudes are defined in relation to the performed behaviour*: "beliefs about the consequences of performing the behaviour (behavioural beliefs) multiplied by his or her evaluation of these consequences."* In this thesis, I will approach attitude different senses. I will use this construct to come to understand how participants think about wildlife conservation policies and conflict management (toward a policy), but also how they feel toward killing problem wildlife (toward a behaviour). Depending on how attitude is defined, there are several ways to interpret this construct. Phrases or sentiments such as like/unlike, good/bad, positive/negative and agree/disagree, can be used to *indicate* an individual's feelings or evaluations about a specific issue, situation or toward a behaviour. And an individual will strongly intend to perform a certain behaviour if he or she evaluates this behaviour as being positive. For example, a person who holds a favourable attitude toward a given behaviour is more likely to perform this behaviour than someone with a rather negative attitude (Montaño & Kazpryk, 2008).

Understanding people's attitudes toward wildlife, conservation and management actions is of great importance for human-wildlife conflict. Attitudinal surveys help policy makers and wildlife authorities predict human responses, give information on the acceptability of management actions and guide mitigation strategies accordingly. Therefore attitudes are commonly surveyed within the scope of human-wildlife conflict (Browne-Nuñez & Jonker, 2008). As briefly noted in the introduction, an underlying assumption of many attitudinal studies is a direct correspondence between attitudes and behaviours (Browne-Nuñez & Jonker, 2008; Dickman, 2010). For instance, local communities experiencing a high degree of wildlife disturbance consider the damage-causing species as problematic and evaluate its presence as 'negative'. These people often hold a favourable attitude toward retaliation and are highly likely to remove the problem species from their property, because it is believed that wildlife removal will prevent future threats to livelihoods (Marker & Dickman, 2004; Woodroffe et al., 2005).

2.3 SOCIAL NORM

With the development of the TRA, Fishbein and Ajzen (1975) responded to disputes about the attitude-behaviour relationship and incorporated the idea of subjectiveness into the cognitive model of behaviour. They argued that people do not only act in correspondence to their attitude, but also construct a norm of subjectivity by interacting with other actors in their social world. The influence of social interactions is captured under the notion of *social norm*, or subjective norm. Social norms are constructed because a person continuously judges and evaluates beliefs, attitudes and behaviour of main actors this person interacts with. A person's social norm is so to say determined by *normative beliefs*; whether 'important' others – i.e. friends, family members, community members, authorities – approve or disapprove the performed behaviour. And then the individual 'decides' whether he or she identifies and feels need to comply to the opinion of others (Fishbein and Ajzen, 1975; 1977). For instance, a person who believes that other actors think he or she should perform a certain behaviour (i.e. 'my boss thinks that I should kill elephants') and is motivated to meet this expectation (i.e. 'he is my boss so I will comply'), this person will hold a positive social norm. Conversely, a person who believes that referents do *not* think he or she should perform this behaviour (i.e. 'the government prohibits it to kill elephants'), holds a rather negative social norm, depending on the motivation to comply (i.e. 'the government does little for me, so I feel no need to comply') (Montaño & Kasprzyk, 2008).

When applying the notion of subjectivity to human-wildlife conflict, this would mean that an individual farmer judges and evaluates how others think about wildlife or how conservation 'should be' and decides whether this meets his or her own expectations. I will use the notion of social norm to explore what farmers think about the policies, regulations and management activities of wildlife authorities with respect to human-wildlife conflict and seek whether this meets the expectations of farmers. Though many authors suggest that such social and political influences may (partially) shape people's responses to wildlife disturbance, only few studies have adopted a normative approach to human-wildlife conflict. For example, Zinn et al. (1997) used a normative approach to study public acceptance of management actions toward three different wildlife species involved in human-wildlife interactions. Others have used the notion of social norm to evaluate the acceptable encounter norms among deer hunters or the publics' norms for lethal control of problem wildlife (Messmer et al., 1997). Both studies showed that for policy makers and authorities, it is important to understand public acceptance toward their management actions, because it may determine the success of future conservation efforts (Hewitt & Messmer, 1997; Messmer et al., 1997; Zinn et al., 1997).

2.4 CONCEPTUAL MODEL

Altogether, the TPB assumes that behaviour can be explained by three determinants of intention: attitude, social norm and PBC. As such, they are considered the most useful concepts to be able

to explain behaviour in any given situation. As a general rule, Ajzen (1991, pp. 188) states that *"the more favourable the attitude and subjective norm with respect to a behaviour and the greater the PBC, the stronger should be an individual's intention to perform the behaviour under consideration."* The relative importance of attitude, social norm and PBC is expected to vary among individuals, and across behaviours and situations (Ajzen, 1991; Monaño & Kasprzyk, 2008). For example, in some situations a person's attitude may only have a strong impact on intentions where in others, subjective norm and attitude strongly determine behavioural intent. Since behaviour is highly context-specific, Ajzen & Fishbein (1977) identify four levels of specificity that should correspond throughout measurements: the *action* (i.e. killing), the *target* at which the action is directed (i.e. damage-inflicting wildlife species), the *context* in which the action is performed (i.e. wildlife pose a threat to livelihoods) and the *time* at which the action is performed (i.e. opportunistic/as soon as possible). A given action is always performed with respect to a given target, in a given context and at a given point in time. Considering these variables altogether while studying behaviour makes explanations more valid while considered individually, they may fail to well explain the correspondence between motivation and behaviour. For example, beliefs specifically about a proposed moose hunt explained more of the variances in respondent's attitudes toward the hunt, than beliefs about hunting in general (Donnelly and Vaske, 1995). Similarly, Zinn et al. (1997) showed how there was little public acceptance for lethal control of a mountain lion that had killed a pet, but there was greater public support for hunting a lion if it had killed a human. Since behavioural in all its aspects is highly situational, it is important to consider and understand the social, cultural, political and economic context in which participants live. This makes explanations on farmers' attitudes and behaviour toward certain wildlife species around Alldays more valid than general interpretations of human-wildlife conflict.

Bringing these constructs and considerations altogether gives rise to the conceptualization of human behaviour as shown in Figure 1. This conceptual model reflects how I will approach the phenomenon of human-wildlife conflict throughout this thesis. It should be considered however, that rather than being a linear and causal relationship, the proposed framework represents a cognitive process that is useful for understanding and explaining processes and patterns underlying participant's behaviour. More specifically, it represents a guiding instrument that gives direction to explore the influence of social and political forces on participant's behaviour and the relationship between participants and wildlife. This coheres with my intentions to explore social patterns rather than facts to explain behaviour and motivations and relate these findings to conceptual theories as described here and summarized in the model.

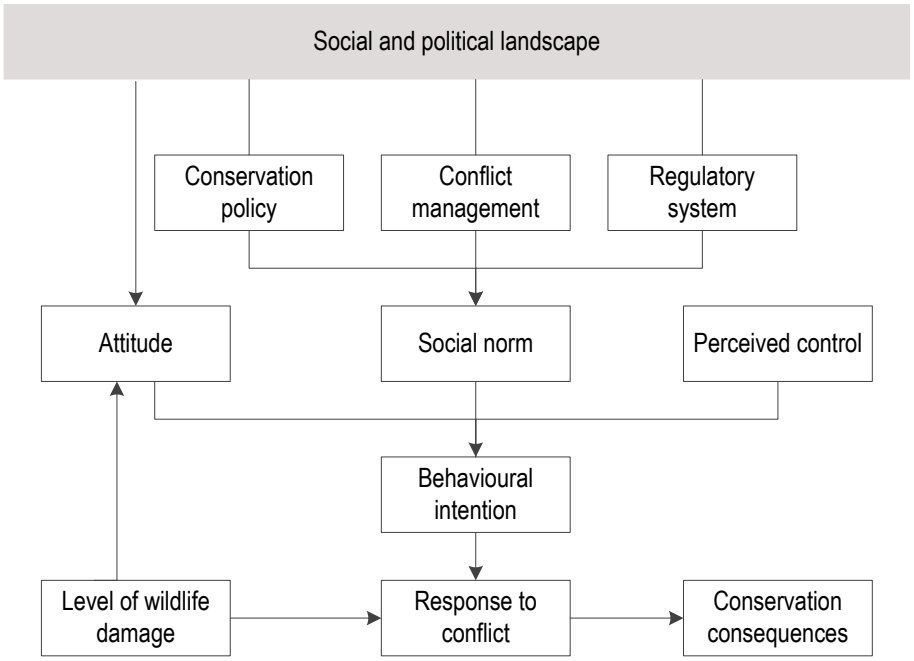

FIGURE 1. Conceptual framework used in this thesis to give meaning to notions of attitude, social norm, perceived behavioural control and behavioural intention in the context of human-wildlife conflict (following Dickman, 2010; Fishbein & Ajzen, 1975; 1977; Ajzen, 1991). Responses to conflict can best be explained by the *intention* prior to behaviour and intensions in turn are motivated by *attitude*, *social norm* and determined by *perceived behavioural control*. Influences from the broader socio-political landscape may affect a person's attitude toward the behaviour and his or her social norm.

3 METHODOLOGY

ELEPHANTS, PREDATORS & POLITICS

This chapter will thoroughly describe the methodology used in this thesis to gather the data needed in order to answer: *how can social and political landscape forces including wildlife conservation and conflict governance, explain farmers' behaviours toward wildlife around Alldays, South Africa?* First, I will describe the research design (Paragraph 1) followed by a description of the methods used for data collection (Paragraph 2). Then I will briefly note how data were analysed (Paragraph 3) and finally, but nonetheless important, I will critically discuss the limitations of this study in terms of the theory that is used, research methodology and researcher bias (Paragraph 4).

3.1 RESEARCH DESIGN

The primary principle of this thesis is that the beliefs, norms, attitudes and behaviour of participants are formed and affected by the environment they live in. Therefore, methodology in this thesis will draw on the principles of *social constructivism* which believes a great deal of human life is reflected in broader social and interpersonal influences on people (Owen, 1992). According to social constructivism, people are integral with cultural, political, historical and social dynamics in a specific place and time, that shape their beliefs, experiences and opinion toward an issue. It is understood that the sentiments people express toward a specific matter can be considered truth values that construct reality. I used *qualitative methods* to survey the beliefs, norms and attitudes of farmers. This means I explored feelings from the perspective of the study participants (farmers) themselves and placed this in the larger political and social context as it is found (Hennink et al., 2010). Using qualitative research methods allowed me to study the participants in their *real-world setting*: on their farm and in an environment that is familiar to them, to come to understand how the sentiments and feelings they express are constructed. Coherent with the perspective of social constructivism, this included studying the subjective meanings that people attach to their experiences rather than focusing on facts (Hennink et al., 2010). Via inductive analysis of sentiments and feelings of

individual farmers, I could identify greater patterns and themes that allowed me to well-interpret the data (Patton, 2005).

I made use of a *case-study approach* that allows for such in-depth analysis of beliefs, thoughts and opinions in a real-life context (Yin, 2014). Case studies are multi-perspective analysis in which perspectives of actors are studied in consideration to their interaction with other relevant groups of actors. Analysis of case studies is designed to describe the viewpoint of participants by using multiple techniques and sources of data for verification of reliability, also known as *triangulation* (Tellis, 1997). Triangulation allows the researcher to use multiple data collection methods and multiple information sources to enhance reliability and validity of the dataset (Green & Thorogood, 2013). In this thesis, I made use of a literature review combined with primary data from in-depth interviews and participant observations, to allow for triangulation.

3.2 DATA COLLECTION

3.2.1 STUDY AREA

Data for this thesis were collected during three months in and around the village of *Alldays* (population 1,813). Alldays is situated in *Limpopo province* (population 5,404,868), the northern-most province of South Africa. Limpopo province is named after the Limpopo river that forms the border with Botswana and Zimbabwe. The region was formerly named Northern Transvaal or Northern Province. Limpopo is the most rural province of South Africa with approximately 89% of the population living in non-urban areas (Wegerif, 2004). Also, it is one of the most arid regions in South Africa with low precipitation rates and only 14% arable land (DAFF, 2013). Fieldwork took place in the surrounding areas of a former (trophy) hunting farm, now used for conservation purposes (S22˚28.237', E029˚10.125') (see Figure 2).

Alldays region forms a main corridor of the larger *Vhembe Biosphere Reserve* (VBR). The biosphere covers an area of about 30 701 km^2 and was developed to facilitate conservation of distinctive environmental features in the region (UNESCO, 2010). Among those features is the high abundance of carnivores species in the biosphere, including twenty eight (80%) of all carnivore species in South Africa (see Appendix I). Ten of these species are threatened and therefore require urgent conservation attention. Two species are data deficient and more information is required on their conservation status. The VBR is the only place left in South Africa where five iconic carnivorous species, the African wild dog, lion, leopard (*Panthera pardus*), cheetah (*Acinonyx jubatus*) and the brown hyena (*Hyaena brunnea*), are free roaming outside nature reserves.

Within this greater biosphere lies *Mapungubwe National Park and World Heritage Site* (Mapungubwe NP). Mapungubwe NP is located at the confluence of the Limpopo and Shashi rivers, where South Africa, Zimbabwe and Botswana converge. The park covers an area of about 5 356 ha. and among others, hosts population of leopard, lions and elephants (SANParks, 2014). Besides

Mapungubwe NP, there are two greater nature reserves in private hands that are known to manage large populations of mammals. First is the *Vhembe Nature Reserve* (Vhembe NR), also known as the Mapungubwe Private Nature Reserve (not be confused with the Mapungubwe NP or the greater VBR). The Mapungubwe NR is comprised of several former private farms that were purchased between 1994 and 1996, with the aim to establish a greater private nature reserve. From here on, it took around 4 to 5 years to remove all the fences and create a transboundary protected reserve with a size or around 28 000 ha; roughly a tenfold of many other private farms in the area. The other private nature reserve in the study area is *Venetia Limpopo Nature Reserve* (Venetia NR). Venetia is owned by the Beers Diamond Mining Company: the world's largest producer and distributor of diamonds in the world. The reserve has an approximate size of 36 000 ha. and is situated adjacent to Mapungubwe NP and in close proximate to Mapungubwe NR. Within the confines of the reserve lies Venetia Diamond Mine. The mine is considered the Beers' flagship enterprise and is the largest producers of diamonds in South Africa. The Venetia NR was established by the Beers to compensate for any industrial impact on the environment, by hosting and protecting populations of wildlife, facilitating research initiatives and forming a buffer between mining activities and adjacent agricultural land. Currently, there are initiatives both from the VBR and amongst private landowners to integrate private properties into a large conservation area, to serve as a conservation corridor between the Mapungubwe National Park, the Tuli Wilderness Area in Botswana and conservation areas to the south.

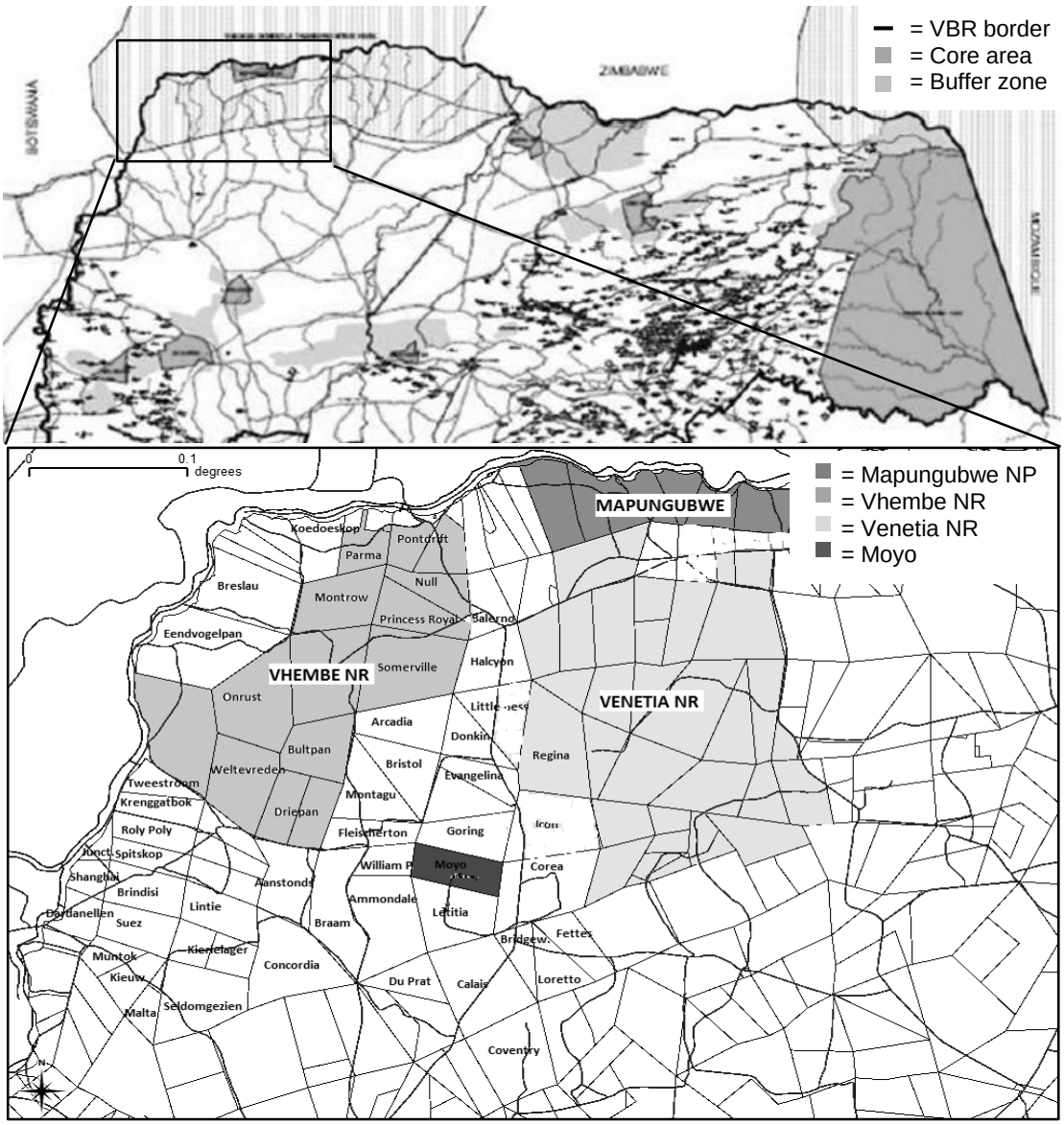

Figure 2. Upper: a map of the VBR showing the core areas, buffer zones and borders of the reserve (Vhembe Biosphere Reserve, 2012).
Under: Moyo lies proximate to protected areas Vhembe NR, Venetia NR and Mapungubwe NP.

3.2.2 RESEARCH POPULATION

This study focuses on private landowners and farm managers (hereafter shortly captured as "farmers"). All farmers were white and mainly of Afrikaner (see Box 3.1 "*The Afrikaner*") and fewer of British origin. Ages of participants varied from circa 30 until 70 years old. The far majority of all participants were man (16) and three participants were woman. Also years of landownership varied: some farmers grew up in the area and have lived in the surroundings for over 50 years, where others recently purchased their land and are only on the farm during the weekends and holidays. Farm sizes varied considerably from circa 200 ha. up to 8000 ha. or a nature reserve comprising 28 000 ha. Land was predominantly utilized for domestic stock and farmed game, though along the

Limpopo river many irrigation farms can be found. More information on land-use and -ownership in the area is described throughout Chapter 4 "*People, politics and agriculture in a national and regional context*".

BOX 3.1 – THE AFRIKANER

Afrikaners form a South African ethnic group descending from 17th century Dutch settlers to South Africa. The Dutch language spoken at the Cape Colony slowly transformed into a separate language, with differences in vocabulary, grammar, and pronunciation. Today, *Afrikaans*, the Afrikaner language, is one of the eleven official languages of South Africa. About three million people out of South Africa's total population of 42 million are considered Afrikaners.

3.2.3 SEMI-STRUCTURED INTERVIEWS

Over three months, I conducted 19 formally and prearranged face-to-face interviews complemented by ethnographic interviews. Interviewing is one of the most powerful ways to come to understand the beliefs, feelings and thoughts of people toward a specific matter (Hammersley & Atkinson, 2007). I used semi-structured interview to gather the beliefs and thoughts in the participant's own words while ensuring that all prescribed themes would be covered. The interviews mainly consisted of open-ended questions to encourage participants to give full, meaningful answers based on their own experiences and feelings. Questions were prescribed in an interview guide (see Appendix 1) that is most useful to direct the conversation and cover predetermined core themes. Predetermined themes were based on the research questions and data that needed to be collected to answer these questions. Duration of the interviews varied from 30 minutes up to or over two hours.

The interview roughly consisted of four sections. Participants were first asked *demographic questions* on the farm size, land use, type of resources and years of ownership. Then, questions were asked on the *nature of wildlife damage* in terms of perceived threats and damage, problem species, problem intensity and frequency and responses to the conflict. Third, the interview consisted of questions on the *wildlife conservation and conflict governance* in a broad sense. Questions were asked on participants' experiences with policies and intervention in terms of wider political themes, physical and financial support, conflict consultation and permit application and distributions, but also on what participants expect from government agencies in regard to wildlife conservation and conflict management. Finally, participants were asked what *solution* they would suggest for wildlife-conflict and what improvements they see for government agencies in this regard. The interview concluded with the option for participants to add additional information or give any suggestions on the interview.

I conducted a pilot study of three interviews in the first weeks to test the interview guide and alter questions according to preliminary findings. Interviews were mainly administered in English, which is the second language for most participants. Some preferred to conduct the interview in their own language (Afrikaans). Therefore, an interpreter (often the same person as the gatekeeper)

joined for every interview, to interpret if needed and also to forward the relation between the researcher and the participants. Establishing a good understanding with each participant is essential to enhance data credibility and reliability: it enlarges the chance to obtain truthful and meaningful answers. Also, interviews are oral accounts that are highly contextual and it is important to be aware of the situational dynamics that might influence participants' feelings of comfort, hence threaten the willingness and openness to talk. Therefore, most interviews (if possible) were administered in an informal setting familiar to the participant (i.e. on the veranda of the farm). This allowed the participant to calm much more than they would in an unfamiliar setting and may also provide insight into their sense of themselves and their world (Hammersley & Atkinson, 2007). All participants were prior-informed with a generic background of the researcher and the research purpose. Also, participants were asked for their permission to audio-record the interview. I was able to record all in-depth interviews and used fieldnotes to supplement audio-recordings. Fieldnotes included information on verbal communication and non-verbal communication, helpful for data interpretation.

3.2.4 PARTICIPANT OBSERVATIONS

Apart from in-depth interviews, I used participant observations to collect data that may confirm or support information gained from other sources. Participant observation means participating and integrating in the social world that is studied. I adopted an overt approach to observe; meaning that participants in the study area were aware of my presence as a researcher and brief intentions of my research. Advantages of overt observation are avoidance of ethical issues since participants are aware of the researcher's role and observing participants in their natural setting. However, one pitfall might be the observer effect where behaviour of those who are studied may be altered due to the presence of the researcher (Hammersley & Atkinson, 2007). During this research, I was based on a former hunting farm that is considerably well-known across farmers in the area. I could use the name of the farm and the name of the owner (also a key informant) to forward integration into the study area and advance the procedure to gain access and trust of the participants. I observed various events: from game auction visitation, participating in meetings among farmers from a community, to observing farmer behaviour and the farm site itself. Observations were captured in brief fieldnotes.

3.2.5 SAMPLING

I used a non-fixed and non-probability strategy to select participants resembling the larger research population. To start, I identified two gatekeepers that have considerable knowledge on the study area and were known to most participants. Based on information from these farmers and informal conversations with other members within the farmer community, I developed a system to map the individual farms and/or regions where high levels of conflict with wildlife were likely to

occur. From here, I used snowball sampling to gain access to other participants and systematically break down the research population into a most representative sample.

3.3 DATA ANALYSIS

If possible, data were transcribed into text as soon as the interview was administered. Transcribing data during fieldwork allowed for on-going analysis, where I could alter the research process and determine focus for future interviews. Data were analysed in two phases: first, I systematically read through transcriptions and field notes and simultaneously coded data according to open-coding. Open coding is relevant to line-by-line identify and formulate ideas and themes in a broad sense. Afterwards, I used a more fine-grained analysis to link the initial coding into a smaller set of ideas and concept. These ideas and concepts were translated into core themes in relevance to the research questions. Finally, I re-coded the transcripts guided by the core themes, to identify repeating patterns and layers of meaning to outline variations and interrelations among themes.

3.4 LIMITATIONS

3.4.1 THE USE OF THEORY

Using relevant theories to explain the meaning of concepts used in a research is very helpful to well explain how they will be approached and applied. The theoretical framework forms the baseline for a researcher's interpretations of what is said, what is seen and what patterns underlie these utterances and observations. This study primarily draws on the notions of behaviour, attitude and social influences conceptualized by the TPB, to make sense of the words, feelings and behaviours shown by participants. By using this theory I will be able to understand the course of human behaviour better and seek for a relationship between the broader social and political context which farmers are subject to. Though the TPB is widely applied in a variety of field and is considered a most useful approach to come to understand construct of human behaviour, there are some limitations to its application. Studies have shown that changing TPB construct lead to subsequent changes in behaviour, however, the TPB does not take personality or demographic variables into account. Meaning that it does not consider the effects of gender, age, personal traits or profession on the constructs underlying behaviour, while previous studies on human-wildlife conflict (Hill, 1998; Ogra, 2007) showed that such factors may affect people's attitudes. Also, this thesis specifically focuses on the effects that wildlife conservation and conflict governance may have on farmers' attitudes and behaviour, while the notion of social norm suggests a wider range of actors (i.e. family members, community members, neighbours, church) able to influence people's behaviour. Marginalization of the influence of personality, demographic variables and other social actors implicates that I cannot predict participants' behaviour with high accuracy. However, it should be considered that my aim here is to explain behaviour drawing on the rationale behind the TPB rather

than predicting behaviour per see. In this sense, TPB constructs and expectations can be used to better understand the interrelationship between attitudes, social norms and behaviour but meanwhile, I should be careful in any attempts to draw sound assumptions and conclusions about the behavioural process.

There are few other studies on human-wildlife conflict that touch upon TPB constructs (Browne-Nuñez & Jonker, 2008; Manfredo & Dayer, 2004; Zinn et al., 1998), but application of the theory in all its aspects within this field is relatively new. Although the notion of attitude is widely applied in studies on human-wildlife conflict to understand and explain people's behaviour, a clear conceptualization of the behavioural course is often lacking (Browne-Nuñez & Jonker, 2008). And those who do conceptualize attitudes using the principles of TPB, do often not incorporate the idea of social norm into the conflict process (Zinn et al., 1997). Foremost, this makes this thesis particularly relevant since drawing on TPB constructs allows for well-structured explanations of behaviour in the context of human-wildlife conflict, however, there was only little literature available to draw on. This implicates a strong need for future research to support findings from this study.

3.4.2 RESEARCH METHODOLOGY

This thesis primarily focuses on the beliefs, attitudes, intentions and behaviour of private farmers toward wildlife as such and on wider socio-political influences. I used information from two gatekeepers to identify specific areas or individual farmers most likely to experience a high degree of wildlife damage to from thereon, systematically breakdown this population into a representative sample. However it should be noted that all interviews were conducted with white, mostly Afrikaner farmers. Though a far majority of private land in South Africa is owned by white farmers, ideally, it would have been better to also include private farms that are owned by black Africans obtain a most varied study population. However, access to black farmer around Alldays was largely restricted. I used snowball sampling to use the knowledge and familiarity of gatekeepers and other farmers in the area to gain access to new participants. But no (white) farmer could connect me to a black private farmer in the area, even if it were their neighbours. White farmers do not seem to blend with black farmers, except for their black labourers. Therefore, access to the black population was largely restricted. Though on the one hand this can be considered a limitation to sampling, it did give me valuable information on the relationship between white and black farmers that can be used to complementary to other findings. However, it could be misleading to generalize findings in this research to all farmers in the area and one should be careful with doing so.

3.4.3 RESEARCHER BIAS

Drawing on social constructivism allows the researcher to integrate in the study area and observe participants in a most natural setting. However, this also means that the researcher brings

his or her own subjective influences into the research process. Acknowledging that the researcher's background, emotions and position is an integral component of the process is important in qualitative research. I used an overt approach throughout data collection, meaning that participants were aware of my role as a researcher and my intentions. The foremost advantage of this approach is that you avoid ethical issues. However, being aware of the researcher's presence could inflict a form of reactivity, where participants modify aspects of their answers and behaviour in response to the fact that they know they are being studied. Prior to every interview, I gave a brief explanation of the purpose of my research and the background of the researcher. On the one hand, prior-informing participants on the reason for your visit avoid any privacy claims, while on the other hand, there is a risk that participants modify their answers, either intentional or unintentional, to for instance comply with the research intentions. And doing this may affect the credibility of the dataset. During a number of interviews I noticed that participants considered me as a 'pro-conservationist' from the start and might have adapted their answers or leave out specific information. For instance, one female farmer explained to me how she experiences a considerable level of damage caused by baboons. However when I asked her if she could tell me how she intends to solve these issues, she does not want to tell me because I am a 'conservationist' and I would not 'like' her answer. Though this is a risk when you use an overt approach, conversely, my background in terms of nationality and appearance seemed to have facilitated my integration in the study area and access to participants. As noted, participants were predominantly Afrikaners, descendants from early Dutch settlers. Afrikaners have a strong feeling of identity and are 'proud' to be Dutch descendants. And for them, hosting a young Dutch woman is considered a privilege. Therefore, in contrast to black farmers, I could easily get access to white farmers in the study area.

4 AGRICULTURE, WILDLIFE & CONSERVATION: IN A NATIONAL AND REGIONAL CONTEXT

ELEPHANTS, PREDATORS & POLITICS

This thesis seeks to understand the effects of broader social and political forces on farmers' attitudes and behaviour toward wildlife around Alldays, South Africa. Foremost, an understanding of the context in which farmers and wildlife live and interact is required to explore how social or political factors within may explain certain feelings, attitudes or behaviours that farmers show. Therefore in this chapter, I will make use of existing literature combined with primary data to answer: *how can the social, political and economic landscape in which farmers and wildlife live and interact be described in a national and regional context?* First, I will briefly describe the history of South Africa and touch upon noteworthy political, social and economic occurrences to illustrate the broader conditions under which farmers construct their feelings, beliefs and attitudes (Paragraph 1). Secondly, I will restrict my focus and describe the consequences that these historical occurrences have had for agriculture, wildlife utilization and conservation around Alldays (Paragraph 2). Finally, I will explore farmers' beliefs and attitudes toward wildlife while linking these constructs with the broader socio-political context (Paragraph 3). Such information can eventually be used to determine the underlying motivations of farmers' behaviour toward wildlife and what this means for wildlife conservation in this regard.

4.1 PEOPLE, POLITICS AND AGRICULTURE IN SOUTH AFRICA

4.1.1 POST-COLONIZATION AND APARTHEID

Early in the nineteenth century, European settlers in South Africa, both *boer*[1] and British, dominated commercial farming in form of cattle and sheep for wool and meat production (Beinart, 1998). Though the majority of the country's national income was derived from a flourishing gold-mining industry, white farmers were entitled with massive state support. The government supported farmers with generous subsidies and protected them in their agricultural practices. In the first half of the nineteenth century, the white population in South Africa consolidated their control over the state and with that they strengthened their grip on the native black African population. Indigenous black tribes were displaced of their lands by whites based on their ethnic origin. In following years, Afrikaners argued for greater protection from the blacks and by 1948 the *Afrikaner National Party* (ANP) had managed to mobilize sufficient ethnic support to win the country's elections. Soon after, the ANP had transformed every state, provincial and municipal institution as such that is was governed by whites. Resolute to uphold white supremacy, the government started to implement the slogan *apartheid* as a *"drastic, systematic program of social engineering"* (Thompson, 2001, pp. 189). In many decades that followed, apartheid was applied in a system of laws and interventions that denied black Africans legal rights and ownership and excluded them form any meaningful participation to the country's economy (Carruthers, 2008). Most black Africans were assigned to 'homelands' (also known as Bantustan or Bantu homeland) while others were assigned as black labourers on farms owned by whites. For many decades, whites had relished under great protection and support by the apartheid regime. But towards the end of the 1970s, a sharp recession in South Africa's economy, a stronger growth rate of the black population than was foreseen and isolation of the country from the rest of the world, had put the apartheid regime in crisis. The philosophy to separate white from black was shared in many other countries for long, but ways had parted between South Africa and the rest of the world. With the first democratic and multi-racial elections in 1994, the ANP led by Pieter Willem Botha, lost their political power and status that have prevailed for so long (Thompson, 2001).

4.1.2 POST-APARTHEID

The constitution of the first democracy in South Africa signified the official end of apartheid and the end of Afrikaner nationalism. The victory of the *African National Congress* (ANC) in 1994,

[1] The term *boer* is the Dutch or Afrikaans translation of the word farmer and denotes a distinctive group of Dutch descendants of the larger Afrikaner nation (Du Toit, 1998).

with Nelson Mandela in the front, gave rise to how many would call it a 'new' South Africa (Thompson, 2001). But the transition to a democratic state posed a significant challenge to the democratic government, because apartheid had clearly left its marks. A census held in 1996 revealed that less than 1% of the entire population in South Africa owned 80% of all farmland, with this one percent almost entirely consisting of whites. Over three-quarter of the black population had access to less than 15% of all agricultural land and often even without recognized legal rights and ownership (McCusker, 2004). The democratic government had inherited a country with vast socio-economic differences among ethnic groups, a result of the historical unequal access to land and resources. In the early days of post-apartheid, South Africa had one of the greatest gaps between rich and poor (Thompson, 2001). Numbers from 1995 indicate that over half of all black South Africans lived in poverty. And this concept that did not seem to exist for the white population (Bhorat & Kanbur, 2006). The skewed distribution of socio-economic welfare could also be linked to high unemployment rates, unequal income rates and significant increase in criminal activity. In the first years of post-apartheid, South Africa's crime rates grew to some of the highest in the world. Murder rates, rates of rape and serious assaults exploded (Demombynes & Özler, 2006). Restoring the turbulences, imbalances and inequalities in the country has been and still is South Africa's primary challenge.

4.1.3 AGRICULTURE IN POST-APARTHEID

For decades, or even for centuries, white farmers in South Africa were privileged with massive state protection and support and maintained their dominance over the black population. But the transition to the first democracy in the country have had significant consequences for farmers and whole agricultural sector as a whole, both in socio-economic terms as in perceptions of human security. In the first years after 1994, the strong growth in crime rates was most evident on farmland. White farmers and their families had been plagued by murders, assaults, attacks and theft for many years for, what was believed to be, in retaliation for decades of suppression. Many farmers believed that farm attacks were explicitly racial or political and aimed at driving farmers off their land (Twala & Oelofse, 2013). But concerns raised by whites were largely overshadowed by government intentions of undoing the legacies of apartheid (Bhorat & Kanbur, 2006). To take on the white dominance on agricultural land, the government had developed land reform programs intended to restore the racial imbalance of landownership in the country. The government would assist the black population in purchasing land from whites who were willing to sell their land, with the aim to create more black commercial farmers (Wegerif, 2004). Most recent programs intended to redistribute 30% of all white-owned land back to the historical disadvantaged black population by 2014 (McCusker, 2004). But land reform has proceeded slowly since: just 1% of all agricultural land has been redistributed between 1994 and 2000 and much of the agricultural land is still owned by whites. Next to land reform programs, the government removed all direct state intervention for

BOX 4.1 – THE ATTRACTION OF WILDLIFE

Around the 1950s, domestic farmers in South Africa faced degraded land from overgrazing of stock. Meanwhile, scientists became interested in the harmony in which wild animals could live with their environment (Bigalke, 1966). They argued that wildlife could well be incorporated into farm management instead of being eradicated (Carruthers, 2008). Wildlife agencies, such as Kruger National Park and the provincial authorities (the agencies responsible for provincial game reserves and hunting legislation), became interested in this new evolving science. Soon after, commercial farmers started to keep game in fenced or unfenced areas, utilizing wildlife products through hunting, (eco)tourism, processed game products (venison), breeding or other (in)direct uses. In following decades, population numbers of game in South Africa grew significantly from 575 000 in 1960 to almost 19 million in 2007. Wildlife utilization evolved into an enormous enterprise with over 10 000 game farms and more than 4000 mixed livestock/game farms (Carruthers, 2008; Du Toit, 2013; Van Der Merwe & Saayman, 2005).

the agricultural sector. Declining subsidies, deregulation and removal of tariff protection left South Africa with a largely unprotected agricultural sector (Cousins et al., 2009; Wegerif, 2004). Agricultural subsidies are currently among the lowest in the world with about 4% (compared to 22% in the United States and 45% in the European Union) and net earnings from agriculture continue to drop. Where the agricultural sector used to be prosperous, its economic contribution severely shrunk from around 20% GDP in the 1920s to just 3.4% in 2004. Additionally, the strong urbanisation and a growing mining sector have also contributed to the economic crisis in the agricultural sector (Carruthers, 2008).

The liberalization of the agricultural sector and dwindling support from the state or from others organs that protected white farmers for so long, have stimulated farmers to seek for livelihood strategies that are economically sustainable under these new political conditions. Domestic farming was no longer profitable for many and farmers increasingly became attracted to the exploitation of game instead (see Box 4.1 "*The attraction of wildlife*"). A multi-species game production system holds major economic and ecological advantages over domestic farming (Van der Waal & Dekker, 2000). It has the potential to deliver high returns in areas where farming with livestock is no longer economically sustainable or where other land-uses are not viable, for example due to harsh environmental conditions (Carruthers, 2008b). And with the development of the Game Theft Act in 1991 (see Box 4.2 *"The Game Theft Act"*), which devoted legal ownership of wildlife to landowners, many farmers saw the possibility to expand their commercial farms with wildlife creating mixed farms, while others removed all stock and converted to game farming (Smith & Wilson, 2002). The threat of land restitution claims and expropriation, the prevalence of farm attacks and theft and a need to reduce farm labour, have only further stimulated the attractiveness of wildlife in the country over the past decades. Hence today, South Africa holds a larger number

of wildlife than has been the case for many decades ago and, as it might be expected, this is most evident on private farms (Carruthers, 2008).

4.2 AGRICULTURE AND WILDLIFE AROUND ALLDAYS

The attraction of wildlife utilization is nowhere more evident than in Limpopo, where cattle has made way for growing populations of wildlife (Van der Waal & Dekker, 2000). The province forms the heart of the wildlife industry in South Africa and accommodates nearly 50% of all game farms in the country (Eloff, 2000). As expected, the game industry contributes significantly to the economy of Limpopo, attracting visitors, not only from other provinces, but also foreigners that pay considerable amounts of money for, in example, trophy hunting (Van der Waal & Dekker, 2000). The high concentration of game farms in this area is related to the harsh and arid environment. Especially from Alldays up north to the Limpopo river, rain can stay away for long and there is little arable land available for agricultural practices. Though many farmers here have tried to farm with domestic stock for long, the land has very low grazing potential. Nowadays, populations of fenced-in game dominate the landscape around Alldays. Only few farmers still farm with cattle or sheep, where most have expanded their farm with game, entirely converted to game farming or have intentions to do either so. A growing market for (rare) game species and rising prices were appealing to many, because private farmers in South Africa at this time were by law the owners of wildlife on their land (see Box 4.2 "*The Game Theft Act*"), unlike in Kenya or North-America (Lindsey et al., 2005). They could get far higher profit from wildlife utilization compared to stock-farming and for most, economically sustainable farming is an urgency in an environment where white farmers can account for little support and protection from the state (Bhorat & Kanbur, 2006; Carruthers, 2008).

BOX. 4.2 – THE GAME THEFT ACT

Until 1991, all wildlife in South Africa was *res nullius* (an object that cannot be privately owned) and belonged to the state (Botha et al., 2009). Wildlife did not belong to the owner of the land on which it occurred, but could be owned when killed with the intention of the hunter to become the owner. Although landowners did not have legal ownership over wildlife, most considered wildlife on their land as private property and prevented trespassers, hunters and thieves to kill 'their' wild animals (Carruthers, 2008b). However in 1988 wildlife theft became such a growing problem that farmers requested the national government to change legislation in benefit of the landowner. Consequently, the Game Theft Act was developed in 1991 to regulate ownership of game and challenge theft, illegal hunting and capture issues. The Act devolved ownership of wildlife to landowners who adequately fenced their land and to those who could prove their ownership in cases of dispute. Additionally, landowners were given exemptions (via permits) from provincial regulations on the use of wildlife on their properties (Botha et al., 2009).

Most private properties in the area are managed for non-consumptive wildlife utilization, i.e. for trophy[2] and/or biltong[3] hunting or breeding of game, while fewer are managed for processed meat (venison) or ecotourism. And still fewer, restricted to margin areas near the Limpopo river, are purposed for irrigation, crop or crocodile farming. Especially the development of production farms that breed common game (also known as *plains game*; i.e. kudu, impala or blue wildebeest) or expensive and rare game species (i.e. buffalo, sable antelope or genetic mutations as golden wildebeest) for auctioning is attractive. In response to the growing number of game farms, an expanding hunting industry and high demand for meat production, prices of many game species have gone upwards since the 1990s. Turnover rates of game sold on auctions throughout South Africa grew from almost R9 million in 1991, to over R105 million in 2002. Though this number stabilized around 2001, there is still an active and growing demand for game and for rare species in particular (Van Der Merwe et al., 2004). Record prices for impala increased from R3 3550 in 2005 to R27 000 in 2007 and for a disease-free buffalo, prices are up to R285 000 (Carruthers, 2008). Hence breeding of plains game and mainly of rare species is becoming a very rewarding industry. Up going prices and values of many species are still attracting many farmers to purchase common or rare game and this is expected to continue in coming years.

4.3 WILDLIFE STRESSES ON AGRICULTURAL LAND

4.3.1 "MORE GAME MEANS MORE PREDATORS"

Bearing in mind how major changes in the social, political and economic climate have constructed certain norms and values of farmers toward wildlife, that from undesirable game that forms a threat to stock production to a valuable commodity, the question arises whether this also changed the relationship between farmers and conflict species. Populations of many wildlife species around Alldays have vastly grown alongside the enlargement of game farming. Though there is no data available specific to this region, numbers for the whole of South Africa suggest that populations of game have increased from 575 000 in 1960 to almost 19 million in 2007 (Carruthers, 2008). One older farmer, called Willem[4], grew up in the area and has lived here for over 55 years now. He describes how the landscape and land use of Alldays has changed over the past years:

[2] Trophy hunting represents activities where tourists, being accompanied by a professional hunter (PH), spend large sums of money to hunt a rare or high-valued animals selected for their exceptional physical attributes (i.e. large horns, tusks, great body size) (Lindsey et al., 2007).

[3] Biltong hunting can be defined as recreational hunting with the purpose to gather venison, or dried meat, for either personal use or for small sales (Van der Merwe et al., 2007).

[4] This is a pseudonym, real names will not be used throughout this research.

> *"as a young guy, when we grew up here in Alldays, you could only find impala and a few kudu. There was no game here in the 1960s, 1970s or 1980s. But in the 1990s, they started to put up fences and farm with game.* ***Now, you can shoot the big five in Alldays on more than 20 farms.****"*
>
> (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

With the noticeable increase in game populations, the availability of prey for free-roaming predators has also increased. Farmers note that since the expansion of game farming in the 1990s, populations of many predators species have strongly grown along. Farmers believe that it is much easier and more preferable for many predators to prey on game that is widely abundant on farms throughout the area compared to livestock. A study by Marker et al. (2003) showed how this is to be expected, given that hunting game is natural behaviour for in this case, cheetahs. And although the far majority of all game is fenced into smaller patches of distinct farms, most predators can easily move through these fences. Some even use the fences to increase their hunting success (Lindsey et al., 2005; Hayward et al., 2009). Many farmers note how they increasingly sight predators such as cheetah's, brown hyena's, lions but particularly the leopard, on their land. Willem describes,

> *… "as a kid when we grew up here, there were only a few leopards in the area. But now in the last 15-20 years, every farm now has got resident leopards.* ***Nowadays there are so many leopards that you cannot believe it.*** *Because everybody converted to game farming and it is much easier for leopards to prey on game. The owner doesn't actually realize how many of his animals get killed every year."*
>
> (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

And similarly, another farmer states,

> *… "a problem is that there are too many animals that attract predators. The number of predators is proportionate to number of game.* ***More game means more predators.****"*
>
> (Nick, plains game farm (formerly hunting, now purposed for conservation), Alldays, 5 October 2013)

The prevalence of many predator species on farmland around Alldays is not surprising, considering that this area forms an important corridor of the greater Vhembe Biosphere Reserve (VBR). It is known that the reserve accommodates 80% of all carnivore species in South Africa, including the leopard, cheetah, lion, caracal and few packs of African wild dog (see Appendix II). Under protection of the biosphere and adjacent nature reserves and protected areas, these predators are free-roaming throughout the region including private land. Latest numbers on the leopard population in the VBR outside the Kruger National Park indicate 1250 that individuals are roaming in nature reserves and on private land. This population is considered to be the greatest on private

land in South Africa (Gaigher, 2013). Though there is no data available on population fluctuations over the past years, these numbers support perception of a high leopard pressure in the area.

Livestock and game held on farmland are frequently subject to predation, and primarily leopards are held responsible for these losses. Farmers recognize leopard 'spoor' (tracks) near the kill, identify the nature of the kill (i.e. impala found in a tree, only leopards can do that), sight the predator itself where fewer farmers monitor them by cameratraps. Farmers facing depredation of livestock and farmed game predominantly view leopards as problematic, because: "*we are farmers, the leopard has got no function here*"[5]. The animal is believed to take out the weak links among livestock and game populations, but even the weakest animal stands for income. Especially considering that the expansion of game farming has vastly driven up the market-value of many species, rare species in particular. Today, the loss of a unit buffalo easily stands for a financial burden of R20 000 or more, which roughly means a hundredfold of predation of an unit sheep (Patterson et al., 2004). Not surprisingly, leopards are considered to be a threat to farmers' livelihoods and agricultural production and therefore several farmers are notably hostile toward leopards, where others more calmly state that leopards are useless on farmland. For example, the younger-aged owner of a larger game farm (8000 ha) for buffalo, sable antelope and rhino breeding, states that:

> *"a leopard does not have any value. The actual thing is, they are a threat to the farm. They kill cattle, they kill sheep, they kill everything. If they would have any value it would be for hunting."*
>
> (Anonymous farmer, expensive game farm (breeding and hunting) (12 December 2013)

However for fewer farmers, predation does not form an immediate threat but it can become problematic if predator populations continue to grow. For others, for instance a female middle-aged farmer, tells me that she does not mind the presence of leopards on her farm: *"as long as they don't take the gemsbok (oryx) or something like, than we are happy."*[6] And still fewer farmers are rather tolerant toward predators and consider them to be "*pure nature*"[7].

Besides leopards, also baboons are commonly cited as a pest. Though as it seems to be less problematic than leopards, baboons are primarily held responsible for crop raiding and like one farmer states: *"they destroy my lands"*[8]*.* Similarly, a female middle-aged owner of a game farm used for ecotourism, notes:

---

[5] (Danny, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

[6] (Anonymous farmer, mixed farm (crocodile production and plains game), Alldays, 12 December 2013)

[7] (Willem, owner of a mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

[8] (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

> *"Baboons are a problem. They come into the camp and they do cause a lot of damage. They attack the dogs and they attack the children, they scare the children, so honestly, I am not a big fan of baboons. So that's, that is more a problem then the other predators, the cat predators."*
>
> (Anynomous farmer, plains game farm (ecotourism), Alldays, 7 November 2013)

Conversely, cheetahs, lions and African wild dogs are considered to be less of a problem. Foremost because populations numbers of these animals are perceived to be lower compared to the leopard population (i.e. population of wild dogs in the area an estimated number of 40 individuals). And secondly, because these predators "*come and go*"[9] while leopards are considered to be resident and predate more frequently on farmed livestock or game.

No studies yet explored the relationship between the rising game market and dynamics of wildlife-conflict, however, a significant growth in game populations in South Africa (Carruther, 2008) and corresponding claims of farmers suggest that predator-conflicts, particularly leopard conflict have intensified. Marker et al. (2003) however, did find that game farmers more often considered cheetahs to be a problem than livestock farmers. Though similar patterns were not noticeable in this study, it does suggest that the rise of game farming brought major changes in the dynamic relationship between farmers and predators not only around Alldays, but also elsewhere.

4.3.2 ELEPHANTS BEYOND THE BOUNDARIES

Where game farms dominate the landscape closer to Alldays, irrigation farms upwards to the north rely heavily on the water availability in the Limpopo river to grow tomatoes, pumpkins and other crop production. There are fewer farms holding livestock or game and perceptions of predation risk are largely overshadowed by a considerable level of damage caused by African elephants (*Loxodonta*). The Limpopo river separates the study area in South Africa from the private Mashatu Game Reserve in Botswana, part of the larger Tuli Wilderness Area. Available data from around 1990 indicates that the reserve holds an estimated population of 550 to 600 elephants, where this number is likely to have grown ever since. The elephant population is believed to be overpopulated and under protection of the private game reserve, this population has exerted a considerable 'destructive' effect on the environment with many large mature trees being killed by *ringbarking*[10]. Any reduction in numbers could be politically misconstrued since elephant hunting is prohibited in Botswana (Spinage, 1990).

---

[9] (Anonymous farmer, plains game farm (trophy hunting), Alldays, 8 October 2013)

[10] Rinkbarking is the circumferential cut made around the trunk of a tree which removes a band of tissue to the depth of an including the cambium (Moore, 2013).

Until recently, migration of elephants from Botswana into South Africa was largely restricted. During apartheid in the mid-1980s, the Afrikaner-government installed a large electric fence along the Limpopo river – separating South Africa from Botswana and Zimbabwe – to prevent freedom fighters from crossing the northern border. But since the official end of apartheid in 1994, attempts for repatriation have not been successful. South Africa's borders are long and fairly porous and authorities have little capacity to control them (Kotzé & Hill, 1997). The 'fall' of the former apartheids-fence had opened the borders with Botswana and Zimbabwe and allowed growing populations of elephants to move into South Africa. Ever since, farmers living near the Limpopo river have noticed a vast increase in elephants on their land and blame this on poor maintenance of the frontier fence. The owner of a game farm used for ecotourism close to the border, explains how neglected fence maintenance of South Africa's borders have had severe consequences for both elephant pressure in the area and conflict issues emerging from this. He explains,

> *… "the government (ref. national government of South Africa) should repair the fences and all that, but they don't do so.* ***The old apartheid-regerings (government) fence, that kept the elephants out****. But now the elephants are here and it has become a big problem."*
>
> *… "And you know the elephants come from Zimbabwe because those electric fences went down when the blacks took over. They won't like it but it is true. And now the elephants are here. And it is a big problem, they damage the fences. That's why we don't like the elephants anymore."*
>
> (Anynymous farmer, plains game farm (ecotourism), Alldays, 21 November 2013)

Most notably, the overpopulation of elephants damage crops, trample aesthetic trees and bushes and destroy farm-fences and pipelines. High perceptions of damage have serious consequences for the attitudes of farmers toward elephants as such. Kees[11], an older man who owns a crocodile and sheep farm along the Limpopo river, illustrates how severely elephants damage his property:

> *"before sundown, the elephants are in my land. And I have to go and chase them out with the tractor. And they destroy my dripper pipes, because I got paprika there. Ja, I mean at this stage I get 90.50 rand for my paprika, and I can't afford the bloody elephants eating it."*
>
> (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

[11] This is a pseudonym, real names will not be used throughout this research.

Figure 3. Photograph that shows how maintenance of the old electric fence along Limpopo river, installed in the mid-1980s to avoid freedom fighters from entering South Africa, is strongly neglected after elephants trampled the fence and immigrated from Botswana into South Africa.

Later on, I visited his brother who simultaneously is his neighbour. His brother owns an irrigation farm and similar to Kees, he has lived in the area since his childhood. He becomes very emotive and is bitterly frustrated when he narrates how elephants regularly 'invade' his farm:

> *elephants make me aggressive, they make a desert of this country. Seeing how my watermelons are destroyed, I can tell you; it makes me cry. Just go out and see for yourself what damage elephants cause to the environment on the border. Anna trees used to be there all over, but not anymore.* ***Conservation will eventually destroy me.***
>
> (Anonymous farmer, irrigation farm, Alldays, 12 December 2013)

Farmers facing elephant-inflicted damage are very antagonistic towards elephants and show strong frustration and emotions. Responding to calls from many farmers who had urged me to see the 'destructive' effect of elephants with my own eyes, I decided to visit the old apartheid-fence along the Limpopo river. And consistent with what many farmers had described, I found a severely damaged fence that clearly had not been repaired in a long time (Figure 3). Most likely, large gaps and broken-down fences were caused by herds or individual elephants that either migrated into or, instead, out of South Africa. By coincidence, during my visit I came across two black labourers that were assigned by the *Veterinary service* (hired by the government) to maintain and repair the fence. However, equipped with two bicycles and a fistful of tools it is hard to imagine that two labourers deliver sufficient manpower to keep up with the intensity and frequency at which elephants are noted to trample the fence. This observation strongly suggests that the government is currently incapable and understaffed to maintain the fence properly (Kotzé & Hill, 1997) and hereby to exclude elephant populations from farmland.

4.4 CONCLUSION

A brief review of the cultural, political and socio-economic history of South Africa has revealed that white private farmers have gone through significant changes on landscape level, most notable in the fall of Afrikaner nationalism, with considerable consequences for white private farmers in the

country and the agricultural sector as a whole. With dwindling state support, declining subsidies and the threat of land restitution claims, the agricultural sector virtually collapsed. Farmers were urged to seek ways to sustain their livelihoods in this relatively new and unfamiliar socio-political climate. Changing views on wildlife utilization and a growing recognition for wildlife's economic potential yielded the option for many private farmers to expand their domestic stock with game or abandon livestock farming and convert to game farming. Particularly around Alldays, stirred by harsh environmental conditions, many farmers resorted in game farming for utilitarian or non-utilitarian purposes. But the attractiveness of game farming in due course is believed to have facilitated populations of predators in the area, leopard populations in particular. Farmers perceive a higher risk on predation of livestock and farmed game since 1994. And strikingly, similar patterns of elephant-conflict intensification due to political-changes were found on farms along the Limpopo river. Bare maintenance of the frontier fence (former apartheid-fence) with Botswana allows herds of elephants to raid crops, trample bushes and trees and destroy farm-fences and pipelines on South African farms proximate to the river. These findings have revealed that the broader socio-political context in which farmers and wildlife are situated have had considerable effects on the character of farmer-wildlife conflict as it is found around Alldays.

5 CRITICISM ON WILDLIFE CONSERVATION AND CONFLICT GOVERNANCE

ELEPHANTS, PREDATORS & POLITICS

Given the wildlife stresses on farmland around Alldays and knowing that momentous social and political landscape changes seemed to have intensified wildlife-conflicts, it remains in question how responsible agencies tackle farmers' concerns on wildlife-disturbance and how attention is given to wildlife conservation in this challenging socio-political environment in the first place. Exploring how affected farmers perceive such conservation policies, regulations and conflict management, is of great importance for human-wildlife conflict bearing in mind that such matters may influence farmers' attitudes and behaviours toward wildlife *and* toward responsible agencies as such. Therefore in this chapter, I will make use of primary data complemented by existing literature to answer: *how do farmers judge and evaluate wildlife conservation policies, regulations and conflict management and how do these constructs come to be?* At first, I will describe existing policies and regulations on wildlife utilization and conservation in South Africa and simultaneously discuss how farmers evaluate these policies and regulations and how these constructs come to be (Paragraph 1). Afterwards, I will describe and discuss farmers' sharp judgements on the role of the provincial agency in conflict-consultation and policy implementation to understand the (perceived) adequacy and appropriateness of conflict management (Paragraph 2). And finally, I will follow a rather similar approach and draw on farmers' judgements to explore the functioning of the regulatory framework on wildlife utilization in order to understand its (perceived) effectiveness in preventing unsustainable practices (Paragraph 3).

5.1 WILDLIFE CONSERVATION IN A CHALLENGING CONTEXT

5.1.1 LOW PRIORITY FOR WILDLIFE CONSERVATION

In a climate where political interest primary lies with readdressing the inequalities in post-apartheid (suppressing white dominance, restoring landownership and equalizing wealth among ethnic groups) there is little priority left for nature conservation (Cousins et al., 2009; Krug, 2001;

Leader-Williams et al., 2005). Budgets available for the provinces to execute conservation policies and assist local farmers are declining, managing state areas for wildlife is expensive and the worldwide known approach of purchasing land for biodiversity conservation is not prevalent nor viable in South Africa (Cousins et al., 2008; Leader-Williams et al., 2005). Bearing in mind the large numbers of wildlife on private farmland and the fact that over 80% of all land in South Africa is in private hands (against 14% state-owned)[12] (Child 2009), wildlife conservation in the country is predominantly a private land issue. Implicating that private landowners in this region are unmistakeably important for wildlife conservation. Therefore, it is crucial to ensure sustainable farm management wherein wildlife populations on farmland are utilized in line with conservation principles (Cousins et al., 2008). However, the rapid development of the game farming industry in the last two decades and the abrupt transformation of the national government, provincial departments, municipalities and other state organs, had led to increasing concerns about wildlife utilization practices that conflict with conservation principles. Revision of out-dated policies and the development of new regulations intended to safeguard sustainable use of wildlife, could simply not keep up with the rate at which the wildlife industry was evolving. Major concerns arose on the hybridization of different species and subspecies, selection on exceptional attributes for trophy hunting and removal of damage-causing species from farmland (Cousins et al., 2010). Also, the legal requirement for adequate fences on a game farm created clear borders of land tenure but simultaneously led to fragmented ecosystems, genetically isolated species populations and land patches more degraded compared to unfenced (Botha et al., 2009).

Responding to growing criticism on such unsustainable practices, the government developed the *Threatened and Protected Species Regulations* (TOPs) in 2008. TOPs aimed to create uniformity and provide national standards for the utilization of endangered and protected species in both owned and wild populations across South Africa, on private, communal and state land. Activities such as hunting, catching, gathering, translocating, breeding, trading and auctioning of listed specimens are entirely prohibited, exempted or allowed in possession of a permit (Cousins et al., 2010). These regulations would have an immediate effect on the way in which farmers could manage and utilize 'their' wildlife. Farmers immediately responded to the development of TOPs and their criticism was not gently. The Wildlife Ranching South Africa (WRSA)[13] – developed in 2005 *"from the necessity of government's desire to deal directly with a national body"* (Wildlife Ranching South Africa, 2014) – raised arguments against the regulatory framework by stating that the implementation of TOPs takes away the ownership rights of farmers as was previously provided

[12] Private land used for game farming even occupies more than double the area for national and regional game reserved and it almost a fivefold of the area assigned as national park (Du Toit et al., 2013).

[13] Wildbedryf SA

in the Game Theft Act (Wildlife Ranching South Africa, 2013). A majority of farmers living around Alldays share this statement and argue that they should be allowed to hunt, trade and utilize wildlife on their property without obstruction. Mainly because it is argued that *farmers are conservationists*, they protect their wildlife hence conserve them. Willem holds strong ideas and firmly argues, similar to many conservationists, that conservation should lie in the hands of private farmers (Child, 2009; Cousins et al., 2008; Brink et al., 2010; Kurg, 2001) instead of being the state's responsibility. Taking the immediate threat of rhino-poaching as a metaphor, he states:

> *"they (ref. poachers) shoot rhino's one a day. How can you tell me that it is impossible to stop that. You know, just for changing the law they can stop it. If they make it legal for the owner to own and sell his horn. I mean, then you can make money out of a rhino. Who is not going keep rhino then, and who is not going to cut the horn and sell it. And then, doing that, you definitely protect the rhino. Now if you take a rhino to the auction nobody wants to buy it, because it's a risk that you take. Poachers may come and shoot it tonight."*

Similarly, Derek[14], the owner of a larger game farm (8000 ha) with hundreds buffalo, sable antelopes and circa 35 white rhino, firmly states that *"The government should not interfere with game farm management."*[15] This farmer claims that if he can manage to host growing populations of buffalo, sable antelopes and even rhino, which brings major risks considering the immediate poaching threat, he is more than capable of managing and sustaining predators without legal restrictions. Various studies support this argument and revealed that private farming in South Africa, particularly game farming, have made a significant contribution to wildlife conservation. Pronounced examples are the recovery of the bontebock (*Damaliscus dorcas*), black wildebeest (*Connochaetes gnu*), Cape mountain zebra (*Equus zebra*) and the southern white rhinoceros (*Ceratotherium simum simum*), facilitated by reintroductions on private game farms that were sponsored by incentives derived from trophy hunting (Cousins et al., 2008; Leader-Williams et al., 2005; Lindsey et al., 2006). Although these examples show that private farmers in South Africa play a key role in species conservation, farmers argue that this is not (yet) acknowledged by the government. Willem states that the government should instead of denoting them as *boers*, realize that farmers are conservationists. He claims that,

> *… "the guy promoting conservation must not try to promote conservation to the farmers, they are all conservationists. The conservationist must go and teach the government, or try*

[14] This is a pseudonym, real names will not be used throughout this research.

[15] (Derek, expensive game farm (breeding and hunting) (12 December 2013)

to turn their heads. So that they can see the farmer as a conservationist, and not as a boer. The boer is a very ugly word."

…"The name boer must disappear, it must become conservationist. Conservationists should swing the minds of the government. Then you solve the problem."

(Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

But when I asked Willem and other farmers whether they feel that the government will change their perception toward private farmers, many were very hesitant and for example noted: *"I don't see this happening in South Africa, not with this government."*[16] This answer among others, implicate a lack of trust and prompted me to better understand the mutual understanding between farmers and the present regime. When I asked Willem and many others to describe their feelings toward the government in its broadest sense, I received bitterly frustrated and indifferent answers, such as: *"**Well, we do not really like the government**"*[17]*, "I think nothing of them!"*[18]*, "Fuck all" [Starts laughing]*[19]*,* and *"You do not want me to tell you that."*[20] These overwhelmingly negative sentiments clearly suggest mutual tensions and while digging deeper to make sense of the government-farmer relationship, I found that these judgments primarily stand in relation to the wider socio-political climate white private farmers are situated in.

A far majority of farmers living on private land in Alldays are white and identify themselves as Afrikaners. These farmers grew up during apartheid and familiarized with massive privileges and protection under a discourse of Afrikaner nationalism and white supremacy. Afrikaner farmers had great influence in national politics and the state conversely, largely supported white farmers with financial assistance and subsidies. But the end of apartheid in 1994 challenged white South Africans to adjust to a transforming social and political landscape where privileges are no longer for granted (Steyn & Foster, 2008). Black empowerment and certainly also the many difficulties that arose in post-apartheid (virtual collapse of the agricultural sector, land restitution claims, farm attacks and South Africa's abatement as a whole) constructed a relationship between white farmers and the government based on distrust, frustration and disparagement. Farmers are noticeably frustrated about the threats to their livelihoods and insecurities that post-apartheid brought about (*"Everything is lying at the government"*[21]) and primarily associate this to the (black) government's

[16] (Nick, plains game farm (formerly hunting, now purposed for conservation), Alldays, 5 October 2013)

[17] (Danny, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

[18] (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

[19] (Anonymous farmer, livestock farm, Alldays, 18 October 2018)

[20] (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

[21] (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

incapability and incompetence. Where farmers used to live in a (white) welfare state they are now subject to a black empowered regime that they largely distrust. A study by Verwey and Quayle (2012) on the Afrikaner identity and their racial perspectives in the challenging environment of post-apartheid revealed how Afrikaners rejected many stereotypes associated with Afrikaner identity, while simultaneously they "*recycled key discourses underlying apartheid ideology, particularly discourses of black incompetence and whites under threat*" (Verwey and Quayle, 2012, pp. 551). Rather similar patterns of black incompetence can be found among farmers around Alldays. This is particularly reflected in numerous conversations and discussions I held with John[22]. John is a white 20-years old South African student in Nature Conservation. John repeatedly told me how he identifies himself as an Afrikaner boer (he described this as being a white farmer, wearing khaki clothing and drinking beer centred around the 'braai[23]') and explained me how boers feel strongly reluctant toward blacks. For example, using a metaphor John stated, *"I'd rather die than visiting a black doctor, I do not trust them."*[24] Moreover, he regularly used the word *"kaffir"* when referring to a black person. Kaffir is a former neutral term to describe a black person in South Africa, but now it represents an ethnic slur that is considered to be highly racially offensive, comparable to the use of the word 'nigger' in the United States (Baderoon, 2004). But John was not the only one; also other farmers used this word, though often off the record, when they talked about a black person. One farmer even named his dog '*kaffir*' and while others did not use such distinct racial terms, they did show signs of disregard toward black people, most notable in the regular use of references as *"my blacks*, "*droppers*[25]" (racist term; to some extent comparable to the use of kaffir) or "*the blacks*[26]". These findings suggest major gaps in trust between farmers around Alldays and the governmental regime. And together with the government's lack of meaningful interest in wildlife conservation and agriculture, the question arises how this affects farmers' judgements on the role of the province in wildlife conservation and conflict governance, considering that the responsibility for the implementation of national and regional policies and regulations and communication with local farmers in South Africa, is devolved to the provinces (Carruthers, 2008). Therefore, it is worthy to explore the way in which provincial agencies manage wildlife and handle conflicts and see how these interventions are perceived by farmers, with the government-farmer relationship in the back of our minds.

[22] This is a pseudonym, real names will not be used throughout this research.

[23] Afrikaans for barbecue (Verwey & Quayle, 2012).

[24] (John, Afrikaner student in Nature Conservation, 15 October, 2013)

[25] (Anonymous farmer, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

[26] (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

5.2 THE ROLE OF THE PROVINCE

Provincial agencies operate under national guidance, in a somewhat mediating role between the government and local farming communities. Farmers experiencing wildlife damage can visit the provincial office to require assistance or to apply for an exemption permit to hunt, trade or utilize protected species in any other way. Alldays area falls under the jurisdiction of the provincial office of *Nature Conservation* (NC) situated in Louis Trichardt; a 1,5 hour drive from the town of Alldays. A far majority of farmers have every visited the provincial office, but they sharply criticise a lack of consultation manifested in the inability and inadequacy of the province to act. Danny[27], a middle-aged manager of a game farmer who is also a professional hunter (PH), well reflects this criticism in a brief summary of his recent visit to the provincial office:

> *"well Nature Conservation, I was there on Thursday to pick up my new PHs license. There were 11 people in the office. One guy came from the back to come and help me. One was sitting reading the newspaper, one was eating a packet of frites, the other one was sitting with his feet on the table, the others were just sitting and talking. So I mean* ***there was one guy out out of 11 working, 11 o'clock in the morning****."*
>
> *(Danny, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)*

Other farmers described similar experiences and feel that provincial servants are most often not willing or instead, not *able* to help. This became strongly evident during an informal conversation that spontaneously evolved with an elderly farmer called Kees. He owns a crocodile and sheep farm along the Limpopo river separating South Africa from Botswana. During one of my frequent visits to Alldays, Kees unexpectedly turned to me and full of frustration, he immediately narrated his visit to the provincial office of NC just some hours ago. He went to the office to apply for an exemption to kill elephants, because these repeatedly animals come in from Botswana and damage his electric perimeter fencing. Kees asks me,

> *… "can I talk? They (ref. provincial servants) said you have to electrify your own land and show the department of, what do you call it, Nature Conservation that you do something to prevent that they (ref. elephants) don't come on to your land. So I have to go back and do that. And if they break my electric fence, I am just going to take a photo and apply again for a permit. But I've told the guy there, what about the roads? You can't close the road with electric fence. And you can't put op 22V, what about the people walking at night-time? They come there and get shocked by that electric fence. You get in a lot of trouble then. He said*

[27] This is a pseudonym, real names will not be used throughout this research.

> *that I just have to put up some signs. How much signs do I need to make? You have to put a hell of a lot of money. You know on a small farm like mine, the electricity bill is R25 000, R26 000 a month. I mean, it is unacceptable for me to make extra expenses to take animals out of your land here."*
>
> (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

Kees is bitterly frustrated because he feels little willingness from the province to support him, and such frustration seems to be the rule rather than an exception. Similar feelings were found among many others, who are clearly frustrated and unsatisfied with the role of the provincial agency in conflict mitigation. For instance, another farmer states:

> *"you know they get paid for it, they are supposed to get in their car, drive up to here, if you got a problem they drive up here, investigate, and make, and give me advise what I can do. If he tells me shoot it, I say give my permit I'll shoot it. Thank you very much, I'll do that. If they tell me they reallocate it, thank you, tell me when you are at the gate, I'll open it and you can come and dart it and take it, and reallocate it. That solves the problem."*
>
> (Anonymous farmer, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

Green Dogs Conservation (GDC) – a non-profit organisation that trains specialised guarding-dogs to mitigate wildlife-conflict – collaborates with the provincial authorities and supports them in various ways. GDC is situated on one of the farms in the area and advises the province on conservation-related issues, including the justification to issue permits (i.e. assessing level of damage). The founder of GDC confirms that most farmers in the area feel frustrated because the province lacks to assist and support farmers affected by wildlife stresses. She describes the relationship between farmers and the provincial agency as *"not very good"*. The main problem that she identifies is a lack of resources and therefore incapability of the province to intervene. He explains:

> *"At NC, there are different guys with different attitudes. Some of which are very good and some of them are not very good. But a big problem is that they are hugely under resourced. If people are complaining about stuff they (ref. NC) often can't come out. They don't have the vehicle to come out or they don't have fuel allowance. So what I get from most of the farmers is that it frustrates them that no one wants to help him and no one is going to help them. In the department, some of them don't care but there are some really good people. But* ***their hands are completely tied****. They don't have a vehicle, I mean they are not earning big salaries and even if they were, why should they put all their salary into driving out here all the time to see some dead impala? Lack of resources is why they tend to partner with NGOs, they try to get us to do stuff for them. [..] But often there is a huge frustration because they (ref. farmers) cannot reach someone or they don't get someone on the phone."*
>
> (Founder of Green Dogs Conservation and owner of mixed farm), Alldays, 13 November 2013)

She recognizes that willingness of the province to help strongly depends on the individual civil officers one encounters. Also most farmers explained that depending on the civil officer, for example the manager of the provincial office, some have good intentions but lack the financial and physical resources and national guidance to act. Shortcomings in provincial intervention are often associated with deficiencies noted in the national government. Farmers argue that the absence of national guidance underlies and stirs the inability of provincial authorities to assist. As Kees states,

> *… "well, actually the guy there is a good guy. The head of them is a good guy. Ja, I can't say, that I don't like him. I mean, he also get rules from above him. But he is a good guy."*
>
> (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

And further elaborating on the role of the national government in this regard, he states,

> *… "nah, I think that is unacceptable for me. To put up electric fences to keep elephants out. I mean, the government couldn't get them out with fences, how do they think I must get them out?"*
>
> (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

The owner of land that is officially registered as a nature reserve, also experiences damage from elephants. Elephants recurrently trample electric fences and rinkbark trees on his farm. He emphasizes that control over the elephant population and associated conflict with farmers should be the responsibility of the government; more specific the executive province. But he describes how NC responded when he stated that they should take responsibility for the elephants on his farm:

> *"They (ref. NC) lifted their shoulders. They got no money, they can't even drive out here because they haven't even got fuel. But no one has any plan of action. On the one side they say we have to cull them,* ***on the other side there are sitting a bunch of green guys saying you cannot shoot anything****. Also in Botswana you cannot shoot anything and the problem is becoming huge."*
>
> (Anonymous farmer, plains game farm (nature reserve), Alldays, 21 November 2013)

Another notable loophole in the governing system is a lack of cohesion among provinces, resulting in a fragmented system where the way in which wildlife management is executed and conflict are mediated greatly depends on the provincial jurisdiction a farming community falls under. Danny for instance states,

> *… "it depends from nature conservation to nature conservation. I mean, the difference is if you go to north-west area there are laws and nature conservation, everything is totally*

different than here. Maphumalanga is totally different, Natal is totally different. Each area is, depending on whose on top and he makes the decisions."

(Danny, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

This finding is not exclusive as also other studies have showed how game farmers in particular, are concerned about inconsistencies between provinces but also about poor communication between the state and key industry stakeholders a lack of governmental support and recognition (Brink et al., 2010). Provincial differences and inconsistencies leads to a complex and highly fragmented governing system, risking unsustainable farming practices including the removal of damage-causing wildlife (Cousins et al., 2010).

5.3 FUNCTIONING OF THE REGULATORY SYSTEM

To overcome irregularities and achieve uniformity across the country, the South African government developed the TOPs system in 2008. Though the DEA had developed this regulatory system, similar to responsibility for wildlife management, regulations are implemented and executed by the provinces. This gives provincial agencies primary responsibility over permit applications and distribution. The province can refuse permits to kill, transport and trade in TOPS specimens if 1) the application does not appear in to be in the best interest of the threatened or protected species concerned, (2) the wildlife ranch to which the TOPS species is to be translocated falls outside of the natural distribution range of that species and (3) if there is a risk of spreading a disease or a risk of hybridization with other species on translocation of a TOPS species to an extensive wildlife system. Many of the 'common' problem species, including the leopard, lion and elephant, are protected under TOPs. Hence farmers experiencing considerable levels of wildlife-inflicted damage have to apply for a so-called *damage control permit* (DC permit), before they are allowed to remove this animal from their land. But alternatively, no permit is required for hunting the non-threatened black-backed jackal although this species is found to be frequently persecuted on farmland (Muir et al, 2010). Permits to hunt a TOPS listed species are, however, occasionally issued if this animal is assessed to cause severe problems for farmers.

Numerous farmers around Alldays have applied for a DC permit with the intention to remove a problem-causing animal from their land. And mostly this concerned a leopard or an elephant, since both species are considered to be most problematic in the region (see paragraphs 4.3.1 and 4.3.2). But the process of permit application and distribution by provinces can account for harsh criticism among farmers. Implementation of TOPS by permit distribution is perceived as a long-lasting process, wherein permits are unequally and dishonestly distributed among farmers. Whether a permit is issued depends, according to a far majority, on ethnicity, land use and is affected by corruption within the agency. For example, Nick summarizes,

> *… the government is not honest in dividing the permits. There are three types of permits: damage control, CITES and sport permits. Permits for damage control are easily given, but 90% of them are given to cattle farms, to black people.*
>
> (Nick, plains game farm (formerly hunting, now purposed for conservation), Alldays, 5 October 2013)

Nick clearly hints that the distribution of permits is dishonest and based on ethnicity. Many farmers feel aggrieved in permit distribution and state that they are disadvantaged. The distribution of primarily DC permits is perceived as being unequal and discrimination toward white farmers is claimed to strongly underlies this procedure. For example, one farmers perceives an old male leopard roaming on his farm as problematic because, as he argues, the animal forms a potential threat to the safety of his family and his labourers. This farmer has applied for a DC permit to kill this leopard, however he says,

> *… "to tell the truth. You get a DC permit if the leopard kills one of my black people.* ***It is easier to get 10 other black people in so he can kill them, then to get a permit without****."*
>
> (Anonymous farmer, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

Though it is difficult to prove whether the distribution of permits in reality is racially-driven, it was found that permits are not issued to hunting farms, in attempts to avoid false claims (Cousins et al., 2010). Also corruption, fraud and bribing are believed to play a role in permit distribution. Willem notes how bribing and corruption are apparent in permit distribution:

> *"Now you are not allowed to shoot them without a permit. And they don't issue a permit to every farmer every year.* ***And it's a big, it's a big story and a big problem****, because the people responsible for the permits are out on bribing. So if you want, if you appear as an outfitter and you know somebody there in the offices, and you give a nice bribe; you get your permit.*
>
> (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

Where Willem rather speculates about the prevalence of fraud within the permit system, another farmer narrates how he could easily persuade the responsible servant to backdate a permit:

> *"A permit, if you get a permit to shoot an elephant it was valid for say, three months. But this is not a big farm. The elephants come in at night and they can do all the damage in one night and they go out by the following morning. And now the permit is only valid for say 6 weeks. So we called the guy and told him listen, "we can't take a permit every 6 weeks". So he said to us, "ok fine. There is a permit granted to you if you shoot an elephant, just phone me and I'll backdate it for 2 days and then the permit is there."*

(Anonymous farmer, plains game farm (ecotourism), Alldays, 21 November 2013)

Though corruption[28], bribery and fraud are a very intangible concepts and hard to prove, the accusation of corruption in South Africa in post-apartheid is not uncommon. At least one public survey has revealed that nearly half of all South Africans (46%) suspect their government to be substantially corrupt. And indeed, there are studies suggesting a mounting number of incidences in South Africa since the elections of 1994. A very few number of allegations of corruption have been directed on national scale, however, provincial executive councils have been more susceptible to corruption claims (Lodge, 1998). Although this finding favours what many farmers note, it remains hard to soundly prove any accusations of corruption, bribery or fraud within the provincial or permit system.

Findings that the regulatory system on wildlife utilization is inadequate and knows many loopholes, is consistent with findings of Cousins et al. (2010) who thoroughly studied the evolvement of the regulations. This study revealed tensions among the state and provinces on the development of TOPs. Provincial employees argue that they would have been better equipped and knowledgeable to have developed the regulatory system than the DEA. Together with findings in this study, it shows that although TOPs were developed to enhance uniformity and enforce sustainable wildlife utilization in South Africa, the system knows many pitfalls and at the moment is not considered a sustainable enforcement framework according to a far majority of farmers.

5.4 CONCLUSION

An in-depth evaluation of wildlife conservation policies and conflict management on-site around Alldays, revealed that in the transforming social and political landscape of post-apartheid, wildlife conservation and sustainable utilization of wildlife on (game) farms in South Africa was found to be challenging. Budgets for provinces (responsible entities for the execution of conservation policies and implementation of regulations) and protected areas are diminishing and the state's interest in conservation is largely overshadowed by its first priority to undo the legacies of apartheid. But the state's little concern for wildlife conservation and the agriculture regime in general, receives sharp criticism of farmers and is manifested in major loopholes throughout the governing system. Famers raised concerns about a lack of consultation, the province's incapacity and incapability, inconsistent and dishonest application of regulations and an overall lack of meaningful interest in the livelihoods of private farmers. Origins for such frustration can be found in historical social and political tensions. Farmers are notably hostile toward the present government and show sentiments of mistrust,

[28] It is difficult to give a definition of corruption, but Ellis (1996, pp. 165) understands it as: "to entail the use of an official position for purposes of private enrichment or illegitimate advantage."

incompetence and disparagement: partially motivated by politically-imposed threats to farmers' sense of ownership, perceptions of socio-economic security and human security. And on the other hand, perceptions of distrust and disparagement toward a black regime originate from discourses of black incompetence and whites under threat.

6 SOCIAL AND POLITICAL EXPLANATIONS OF FARMERS' BEHAVIOUR TOWARD WILDLIFE

ELEPHANTS, PREDATORS & POLITICS

Bearing in mind farmers' sharp criticism on the permit system, a lack of consultation and frustrations about major governance shortcomings in a broad sense, the key question is how these concerns and frustrations together with notable wildlife stresses, can explain farmers' intentions to kill wildlife. Insight into the effects that such social and political landscape influences have on the dynamics of farmer-wildlife conflict is of great importance in the light of conservation, considering that frustration and dissatisfaction about conflict resolution may encourage unsustainable practices. Therefore, this chapter will address the final question: *how can farmers' judgements and evaluations toward the broader framework of wildlife governance explain farmers' behaviours toward wildlife in the area?* Drawing on the rationale behind the Theory of Planned Behaviour (TPB), it is important to first describe farmers' attitudes toward wildlife removal and to understand how these attitudes come to be, because this construct is considered to be the prime determinant of behaviour (Paragraph 1). But whether these attitudes correspond with behavioural intentions heavily depends on the motivation of farmers to behave conform the government-imposed policies and regulations on wildlife utilization. Therefore secondly, I will show that the influence of broader policies and regulations on behaviour of farmers is marginal and that their decisions to kill wildlife or not, are rather individually-driven (Paragraph 2). Finally, I will bring previous findings in this thesis together to explain how broader social and political forces motivate farmers to resort in the illegal practice of killing wildlife, particularly elephants, to compensate for wildlife-inflicted damage (Paragraph 3).

6.1 FAVOURABLE ATTITUDES TOWARD WILDLIFE REMOVAL

Following the principles of the TPB, farmers' *intentions* to kill certain wildlife species are primarily motivated by their *attitudes toward that behaviour*: beliefs about the consequences of performing the intended behaviour multiplied by evaluations of the consequences the behaviour brings.

Previous studies on human-wildlife conflict have found that favourable attitudes toward wildlife removal are primarily stimulated by high perceptions of wildlife damage (Dickman, 2010; Ogada et al., 2003; Marker et al., 2003). People exposed to wildlife stresses perceive the damage-inflicting species as problematic and are positive toward its removal. In this way, they believe that this behaviour will take away the immediate threat of wildlife disturbance and avoid any more burden. Similar attitudinal patterns are found among farmers around Alldays. Farmers that are subject to wildlife damage (crop raiding, predation, environmental burden, perceptions of insecurity) are notably hostile toward the damage-inflicting species or individuals from the conflict species, and are positive toward wildlife removal. Primarily because they presume that killing the problem animal or species will, at least for a while, take away the threats to their resources, agricultural production or sense of insecurity. For example, Kees is very antagonistic towards elephants as these animals inflict substantial financial burden by repeatedly trampling his perimeter fences. In order to alleviate the immediate threat of elephant-damage he explains,

> *… "**the only way is to shoot one of them**. Then they don't come back again. Yeah, they take several, about 2, 3 months before they come back again."*
>
> (Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

Similarly, another farmer who owns a game farm on a greater distance from the river, is convinced that elephant removal is an immediate solution to elephant-conflict:

> *"When you shoot one it is obviously of that herd. They are very clever so they don't come back to that area. They know. So for us with the fences it relieved us for 3 months."*
>
> (Anonymous farmer, plains game farm (nature reserve), Alldays, 21 November 2013)

Hence removing one or several elephants from a herd is believed to relieve the pressure of elephant-inflicted damage, at least some time. But since elephants form a structural and recurring problem to many, farmers claim that there is no other option left than to kill elephants frequently. Quite similar attitudes toward wildlife removal are found among farmers exposed to predation risk. Especially more southwards, where elephant are rather sporadically sighted, predators and most notably leopards are viewed as problem animals. Leopards are held responsible for depredation of livestock or farmed game and form a threat to the security of farmers, their families and labourers. A far majority of farmers state that therefore, leopards and other conflict predators should be removed. According to Nick, many farmers *"expect that it helps to shoot the animal because then the damage will be less."*[29] And similarly, Willem believes leopards should be eradicated, because,

[29] (Nick, plains game farm (formerly hunting, now purposed for conservation), Alldays, 5 October 2013)

> *… "you can't leopards them on a cattle farm or a sheep farm. Because there, on a cattle farm and a sheep farm you are the predators. The farmer is the predator."*
>
> (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

These examples indicate that farmers exposed to wildlife damage hence consider certain species to be problematic, primarily hold favourable attitudes toward wildlife removal since they believe that eradication of conflict animals will relieve or resolve the immediate threat of wildlife damage, at least for some time. But conversely, several others note that retaliation is not a necessity and that elephant-conflict can easily be prevented by sustainable farm management. For example Anna[30], a female middle-aged farmer that owns land adjacent to the Limpopo river – a region where elephant-conflict is most commonly cited – argues that adequate electric fencing can successfully exclude herds of elephants. She states:

> *"we do not have problems at all with elephants. We've got a really nice fence system up, with a huge energizer that keeps the elephants out. So we don't have any reason to have problems with elephants. Cause we maintain the fence, I mean there is no reason for me not to maintain the fence."*
>
> *… "But we are also one of the only people that sustain our fence and keep our fence up for the elephants to stay out."*
>
> (Anna, mixed farm (crocodile production and plains game), Alldays, 12 December 2013)

Though this farmer claims that elephant-problems can easily be mitigated by adequate farm management, she does recognize that many others (especially smallholders like Kees) cannot meet the financial requirements and therefore are favourable toward wildlife removal. Given that most farmers are notably positive toward wildlife removal (presumed to mitigate wildlife-conflict), but simultaneously frustrated and unsatisfied with the way in which authorities support farmers, it is yet to be answered how farmers actually behave toward wildlife in this context.

6.2 BEHAVIOUR IN RESPONSE TO SOCIAL AND POLITICAL LANDSCAPE INFLUENCES

A key part of understanding how favourable attitudes toward wildlife removal correspond with farmers' behaviour is to understand their social norm: the motivation to satisfy with the expectations of other actors. In this study, this means to explore whether farmers are motivated and willing to

[30] This is a pseudonym, real names will not be used throughout this thesis.

comply to the imposed regulations, policies and restrictions on wildlife utilization. This is particularly interesting considering that commonly cited problem species, the elephant and leopard among others, are TOPs listed and can therefore not be hunted, traded or utilized without permitted exemptions. But the willingness of farmers to apply for an exemption or to *not* kill wildlife at all, can mainly be related back to the harsh criticism of farmers toward wildlife governance and hostility against the political regime in a broader regard. Farmers notably show a lack of compliance, manifested in individually-driven intentions and behaviours arising from a discourse of political incompetence.

6.2.1 STRONG INDIVIDUALLY-DRIVEN INTENTIONS

Despite favourable attitudes toward wildlife removal, it is commonly agreed among farmers that it should primarily be the government's responsibility to control populations of undesirable wildlife on farmland. Mainly because it is believed that many farmer-wildlife conflict situations arose from insufficient political interventions in the first place – notable in dilapidation of the frontier fence, inadequate management of wildlife populations and a general lack of interest toward conservation and the well-being of white private farmers. But also because it is the state that restricts farmers to kill wildlife and therefore, they should also be the one's controlling their *"state leopards"*[31]. Though farmers resolutely pass the buck to government agencies, they simultaneously realize that the government is unable and incapable of mitigating wildlife-conflict effectively. And therefore it is commonly argued among farmers that, *if the state is not capable of handling conflicts appropriately and this 'incompetence' is affecting our livelihoods and production, then why are we not allowed to undertake action ourselves?* Hence farmers feel little obligation to behave conform the existing policies and regulations on wildlife utilization. Instead, while developed to mitigate unsustainable agricultural practices, the governing system seems to work counterproductive and motivates farmers to resolve conflicts in '*their own way'*. And considering the notable wildlife stresses in the area and farmers' strong and positive attitudes toward wildlife removal, resolving conflicts in their own way predominantly means that farmers are found to kill problem animals or have strong intentions to do so when the opportunity arises, regardless of the fact that this behaviour is illegal. To illustrate, Kees narrated how one day, he and his neighbour were faced with substantial damage due to leopard predation. His first priority in this case was to overcome the immediate threat of predation, and applying for a permit was considered as unacceptable and an inefficient. With bitter frustration, he frankly states,

[31] (Derek farmer, expensive game farm (breeding and hunting) (12 December 2013)

… "a few years ago a friend of mine, the next door farm, a leopard came at night-time and he killed 38 sheep, 2 goats and the little dog in the kraal. So why must a farmer be go and ask for a permit for that? That is unacceptable for me. That is damage, I mean."

*… "I**f predators come to my sheep and, I am not asking for, I am telling you straight, I am not asking for a permit.** I will shoot them, or catch them, or give poison, anything to just get them out. Because I am not going.. you know what is the problem? The guys there in the office, if he is short 50 rand at the end of the month on his pay, he will hell of a complain about it. But if one of my sheep has been caught, I mean it is a 1000 rand worth for me, then it is nothing. I mean, then I must take the response. And I, I don't accept that. If they cause damage to me, I'll kill them."*

(Kees, mixed farm (crocodile production and sheep), Alldays, 11 November 2013)

This narrative reveals how for Kees, a strong need to remove predators in order to resolve the immediate threat of sheep predation seemed to have stimulated his intention to kill leopards. Because apparently, Kees is not motivated to apply for an exemption as he feels that this is most inappropriate considering the financial burden he faces. This entails that predators roaming on his will most likely be killed. Other farmers frankly state that they kill baboons without exemption permits. For example, Derek considers baboons as a pest because they occasionally predate on buffalo or sable calves which stands for considerable losses. Derek states: *"Last year, we shot around 15 baboons with a bow*[3233]*."* Though baboons are listed as protected species, this and other farmers were found to kill them regardless of the fact that the government states differently. Furthermore, black-backed jackal are also indiscriminately removed from farmland however, it is not legally restricted to kill this species. Though it is striking that jackals are not commonly cited as problematic among farmers, suggesting that other incentives motivate the behaviour of jackal removal.

For Kees and for many others, particularly dissatisfaction and frustration about the permit system is a stimulation to undertake individual action to resolve wildlife-conflict. There are many loopholes in the permit system, making it a long-lasting process while it cannot be guaranteed whether the permit to kill damage-causing wildlife will be issued in the end. Clearly frustrated, one farmer explains:

… "then here comes the scenario that you want a permit, like a damage permit or a permit for whatever, an elephant or so, it is a long hanna hanna story and you sit with the problem.

[32] (Derek, expensive game farm (breeding and hunting) (12 December 2013)

[33] Bowhunting is a form of trophy hunting where game is hunted by archery.

> *And that's why you hear about all the farmers here that kill animals and so. You can't do nothing."*
>
> (Anonymous farmer, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

This quote strongly implicates that many farmers feel *urged* to resort in wildlife removal despite the fact that this is an illegal activity. And similarly, Willem notes,

> *"you know, if you're a farmer like me yeah, you want to shoot the leopards because he is catching your cattle. Then if you shoot, what can you do with it? Nothing."*
>
> (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

Willem is most frustrated that farmers' livelihoods and agricultural production are threatened by the presence of wildlife while simultaneously, their hands are tied. Farmers can count for little provincial assistance, the permit system is inadequate and inconsistent and it is illegal to kill elephants and many predators species that roam on farmers' property. Similar to many other farmers, Willem argues that the government cannot tell private farmers what they can or cannot do with wildlife that roams in their land:

> *"I mean you can't tell a farmer what to do on his farm. It is his money, there is not one farmer here in the world or in Africa that is not farming for the profit."*
>
> (Willem, mixed (livestock and plains game) farm (meat production), Alldays, 15 October 2013)

Another farmer, Derek, holds a similar point of view and argues that private farmers should become owners of *all* wildlife roaming on their property, including predators or elephants. It is argued that the state's policy of protecting common-problem species is inadequate and an inefficient way of conservation. Derek claims that,

> *… "all animals on my farm belong to me. But the state controls leopards. That is totally wrong because if I can manage all my other animals on the farm, then come here and get your leopards of my farm.* ***They are the state's leopards and it is my animals who I am protecting.*** *But if I can manage 200 buffalo and 200 sable, it must be allowed to hunt one leopard on my property. If have a problem I will solve it. If I can manage my own rhino, I can manage my own leopard."*
>
> (Derek, expensive game farm (breeding and hunting) (12 December 2013)

Altogether, these examples revealed that private farmers around Alldays hold substantially different norms and values toward wildlife (utilitarian versus non-utilitarian view), different perspectives on how wildlife-conflicts should be mitigated (wildlife removal or protection) and in a broader sense, what conservation should entail than responsible government agencies. And therefore, many farmers seem to hold a rather negative social norm toward the involvement of the state. The

influence of broader policies and regulations on behaviour of farmers seems to be marginal and their decision to kill wildlife is rather individually-driven, meaning that farmers hold a strong perception of control over their behaviour (Manfredo & Dayer, 2004). Knowing that farmers exposed to notable wildlife stresses are predominantly positive toward wildlife removal, and considering that the influence of broader policies and regulations seems to be marginal, many farmers show the intention to kill conflict species or, resort in illegal activities in order to regain benefits from financial burden wildlife damage imposes.

6.2.1 "SHOOT, SHUFFLE AND SHUT UP": RESORTING IN ILLEGAL REMOVAL

Despite his firm statement on leopard removals, Derek claims to not kill leopards on his farm. Mainly because especially new-born calves and large trophies are fenced in smaller camps to protect them from leopard predation. However, his son, simultaneously his business partner, states that,

> *"if a leopard catches five of my sable, or even one, and they (ref. NC) do not grant me a permit, I will just shoot it, dig a hole and nobody will know about it.* ***They think they are protecting it, but they are actually not protecting it****."*
>
> (Anonymous farmer, expensive game farm (breeding and hunting) (12 December 2013)

This farmer is clearly positive towards leopard removal if the animal will inflict any form of damage. But moreover, he implicates that farmers' frustration or discontent about the legal restrictions imposed on species utilization, stimulate illegal and uncontrolled wildlife removal. Meaning that the state's policy to prohibit leopard utilization without exempted permission, only prompts opposite results and spurs illegal activities that are not necessarily overt for authorities. Strikingly, this finding is not exclusive since other farmers stated rather similar thoughts. Danny for example, reveals that killing leopards is among farmers collectively known as: *"shoot, shuffle and shut up."*[34] Several farmers suspect their neighbouring farmers or others within the farming community to kill certain wildlife species illegally. And remarkably enough, some 'pointed their fingers' to farmers I had already spoken to, but in themselves claimed to not have the intention to kill wildlife. For example, during a two-hour interview with the farm manager of a game farm (the son-in-law of the landowner) the manager decisively argued that predators are natural beings that take out the weak links, and therefore, are not viewed as problematic. With great admiration, the manager states,

[34] (Danny, plains game farm (private purposes and trophy hunting), Alldays, 21 October 2013)

> *… "Yeah I love nature. And you must respect nature, that's my viewpoint. So I am very positive towards leopards, I don't want to kill them at all. No I don't have problems, I don't see it as a problem."*
>
> (Anonymous farmer, plains game farm (trophy hunting), Alldays, 24 October 2013

However soon after the interview, the founder of Green Dogs Conservation among others revealed that this farm manager, who simultaneously is her neighbour, is actually found to illegally kill many predators, especially lions. This example strongly implicates that the number of farmers I found to remove wildlife or have intention to do so, might be underestimated. Also other farmers claimed that especially up-north alongside the Limpopo river, farmers resort in illegal activities, for example, by purposively luring elephants in from Botswana to shoot them on private property; an activity that is better known as *elephant baiting*. With elephant baiting, elephants roaming on Botswana's side of the Limpopo river are lured onto farmers' private property (South Africa side) using a bait, predominantly crops as pumpkins, watermelons and tomatoes or luzern. Farmers apply for a DC permit as they argue that they face high costs and risks of elephant-conflict but subsequently, they pay-out an elephant-hunt to an external poacher in exchange of a considerable fee. For example, the owner of a game farm close to the frontier area explains how farmers illegally kill elephants at the Limpopo river:

> *"**You can shoot elephants illegal**, **that is what the guys did at the river here.** They shot elephants, they open their gates on the river and then they put out luzern for them to eat so, they come in and shoot them and they go back to Botswana."*
>
> (Anonymous farmer, plains game farm (ecotourism), Alldays, 21 November 2013)

Another farmer, Anna, managing a family-owned crocodile farm located alongside Limpopo river, explains how other farmers in the area including her neighbour, use elephants from Botswana as a hunting commodity to create financial benefits. Claims of Anna and other farmers were confirmed shortly after, when she guided me and my colleagues around on her property and showed a shortcut pass her neighbours farm onto a following farm visit. While we reached the gate separating both farms, I noticed large gaps in the country's border fence (former-apartheid fence) and the fence looked unusually damaged. In front of the impaired fence, we found a dozen of squashed tomatoes and pumpkins systematically dispersed into the farm's pasture (Figure 4). This farmer had clearly created an opening in the perimeter border fence and dispersed crops as bait to lure elephants onto his farm. And remarkably enough, the concerning farmer approached me soon after my arrival in the area and requested assistance with leopards predating on his sheep. According to Anna, this illegal activity is in result to the province's inability and lack of resources to adequately uphold a sustainable enforcement network. These farmers ignore imposed policies and regulations and instead, seem to profit from the major loopholes in the governing system.

Figure 4. Photograph showing how a private farmer situated alongside the Limpopo river, lures in elephants from the other side of the river (in Botswana) using pumpkins, tomatoes and luzern as bait. All in order to pay-out the elephant hunt to an external poacher in exchange of a considerable fee.

Another farmer regularly exposed to elephant-conflict, explains how he resorts in (partially legal) elephant poaching to compensate for elephant-inflicted financial burden. He describes how he acquired a DC permit to kill problem-causing elephants, but where only the landowner is allowed to make the kill, together with his neighbour and simultaneously his brother-in-law, he pays-out the elephant hunt to external poachers to regain any costs. This farmer frankly states,

> *… "you can shoot it yourself if you want to, but I won't, it is my personal.. I won't shoot an elephant. If I get somebody I won't even go with them to shoot an elephant. They can shoot it and they are willing to pay you something, it is fine."*
>
> *… "Well, we had a permit now and there was a problem elephant. When I found the hunter it was about 4 hours it was here. He got in his car and drove here, and shot the elephant.* ***I could have shoot I myself but then there was no money involved.*** *I need money to fix the fences and pipes and everything. He was willing to pay me something."*
>
> (Anonymous farmer, plains game farm (ecotourism), Alldays, 21 November 2013)

For this farmer, bitter frustration and discontent about the restrictions that the government imposes on utilization of problem-wildlife on private property, and toward the insufficient and inadequate way in which the province handles conflicts, are motivations for him and many others to resort in illegal and unmonitored activities. And in a challenging socio-political landscape, where conservation relishes little priority, the provinces lack national guidance and are insufficiently equipped to uphold a sustainable enforcing framework, farmers are found to have a strong sense of self-control over their behaviours and perceive few (legal) obstacles (strong perceived behavioural control). Similar

patterns of illegal behaviour were found by Gusset et al. (2009), who studied human-carnivore conflict in northern-Botswana. It was demonstrated that predator attacks fuel negative attitudes toward predators as such, but also toward government's efforts to conserve wildlife and mitigate conflict. Farmers resorted in the illegal practice of killing predators because they were not satisfied with the way in which the government responded to calls from farmers.

Overall, these findings strongly suggest that intentions of farmers to kill wildlife may initially be prompted by high risks and costs of wildlife-conflict, but intentions indisputably depend upon the social and political circumstances under which farmers construct their beliefs, judgements, attitudes and behaviour. And where for example, Gupta (2013) found that human-elephant conflict was mediated by a stable political environment, the situation of Alldays reveals that this is not necessarily the case. Similar to studies elsewhere (Lee & Graham, 2006; Madden, 2004; Treves et al., 2006), it was found that conflict between farmers and wildlife are to some extent manifests of underlying social and political tensions in a challenging environment.

6.3 CONCLUSION

A rigor analysis of farmers' behaviour toward wildlife, bringing notions of attitude, social norm and perceived behavioural control together, revealed that the way in which farmers' behave toward wildlife heavily depends upon the social and political climate both farmers *and* wildlife are subject to. Farmers exposed to wildlife-inflicted damage notably held *favourable attitudes* toward removal of leopards and elephants among others, because they presume that eradiation will relieve or resolve the prevalence of wildlife stresses. But following the rationale behind the Theory of Planned Behaviour (Ajzen, 1991), it was argued that the degree of correspondence between attitude and behaviour depends upon the willingness of farmers to behave conform the imposed policies and regulations on wildlife utilization. And bearing in mind farmers' dissatisfaction and frustration about the government's interest and involvement in wildlife conservation, farmers showed a notable lack of compliance (*negative social norm*). Though it was argued among farmers that conflict-species are the government's responsibility and because they cannot be owned or utilized by farmers, discourses of mistrust and political incompetence stimulate farmers to resolve conflicts in their own way. The influence of broader policies and regulations on behaviour of farmers is marginal and farmers' intentions to kill wildlife (or not, in fewer cases), are rather individually-driven. With a lack of governmental pressure and given that the priority of many farmers around Alldays lies with safeguarding their livelihoods, farmers resort in the illegal practice of killing wildlife, particularly elephants, to compensate for wildlife-inflicted damage. Executive provincial agencies do not have the capacity to uphold a sustainable enforcement framework, allowing farmers the opportunity to kill wildlife in illegal manner (*strong perceived behavioural control*).

7 DISCUSSION AND CONCLUSION

ELEPHANTS, PREDATORS & POLITICS

This thesis responded to calls from literature, urging a need to explore conflicts between people and wildlife in-depth by considering the effects that broader social and political forces may have on farmer responses to wildlife disturbance (Dickman, 2010; Madden, 2004; Manfredo & Dayer, 2004; Treves et al., 2006; Redpath et al., 2003). Where previous research provided valuable information on the local dynamics of conflict situations and proximate explanations of people's behaviour in this regard, this thesis intended to dig deeper into the concept by exploring the *social* and *political nature* of human-wildlife conflict. The situation of farmer-wildlife conflict around Alldays clearly illustrates how the way in which farmers at the receiving end of wildlife damage behave toward certain wildlife species heavily depends on the socio-political landscape on-site. It was found that a majority of farmers were firmly motivated to kill certain wildlife species, predominantly the elephant (*Loxodenta*) and leopard (*Panthera pardus*). And where this behaviour at a first glance seems to be in direct response to high perceptions of wildlife risk, intentions to kill wildlife were found to be heavily depending upon broader social and political influences.

7.1.1 SOCIAL AND POLITICAL EXPLANATIONS OF FARMER-WILDLIFE CONFLICT

The situation that white private farmers around Alldays face today represents a substantially different social, political and economic one than only some decades ago. While upholding the apartheid ideology of white supremacy over black Africans, white farmers prior to 1994 had been privileged with massive state support and flourished under a largely protected agricultural regime. But the transition to a democratic state later would have significant consequences for the socio-economic welfare of white private farmers and more deeply, changed the norms and values toward many wildlife species and toward the political regime. Challenged with land restitution claims, dwindling state support and (perceived) South Africa's deterioration in its broadest sense, private farmers sought for ways to ensure economical sustainability under these relatively new, and for

them unfamiliar socio-economic and political circumstances. Particularly around Alldays, stimulated by a growing demand for meat production and a mounting market for expensive and rare game, many farmers resorted in game farming for utilitarian or non-utilitarian purposes. The attractiveness of game farming in due course changed the character of farmer-wildlife conflict in the area considerably. Though no studies yet explored the relationship between the rising game market and dynamics of wildlife-conflict, a significant growth in game populations in South Africa (Carruther, 2008) and corresponding claims of farmers suggest that predator-conflicts have intensified. Farmers describe how growing populations of wildlife in the area led to a noticeably increase of, particularly, leopard populations around Alldays. Farmers face a higher risk on predation of livestock and farmed game since 1994. And strikingly, similar patterns of elephant-conflict intensification due to political-changes were found on farms along the Limpopo river. Bare maintenance of the frontier fence (former apartheid-fence) with Botswana allows herds of elephants to raid crops, trample bushes and trees and destroy farm-fences and pipelines on South African farms proximate to the river. Both situations (leopard as elephant) demonstrate how historical and significant political interventions (unintendedly) changed the dimensions of human-wildlife conflict and in both cases increased farmers' hostility against leopards and elephants as such.

In the transforming social and political landscape of post-apartheid, wildlife conservation and sustainable utilization of wildlife on (game) farms in South Africa was found to be challenging. Budgets for provinces (responsible entities for the execution of conservation policies and implementation of regulations) and protected areas are diminishing and the state's interest in conservation is largely overshadowed by its first priority to undo the legacies of apartheid. But the state's little concern for wildlife conservation and the agriculture regime in general, receives sharp criticism of farmers and is manifested in major loopholes throughout the governing system. Famers raised concerns about a lack of consultation, the province's incapacity and incapability, inconsistent and dishonest application of regulations and an overall lack of meaningful interest in the livelihoods of private farmers. Other studies have described similar concerns among (game) farmers in South Africa, particularly on weak support, inconsistent and fragmented regulations, a lack of capacity and leadership and indecisiveness in government (Brink et al., 2010). Shortcomings in governance forms a significant source of frustration among private farmers (Cousins et al., 2010) and the situation of Alldays reveals that origins of such frustration can be found in historical social and political tensions. Farmers are notably hostile toward the present governmental regime and show sentiments of mistrust, incompetence and disparagement: first this can be related to the many difficulties farmers have been exposed to in post-apartheid. While on the other hand, these feelings have a background in the turbulent historical relationship between white and black populations in South Africa (Steyn & Foster, 2008; Verwey & Quayle, 2012). These findings strongly suggest that conflict situations not just represent tensions between humans and animals, but also *between* humans (farmers and the government) *about* wildlife and *about* countless other social and political

landscape transformations that constructed gaps in trust and communication between stakeholders in time (Dickman, 2010; Hill, 2004; Madden, 2004).

The primary question that remains however, is how concerns and frustration among farmers about broader wildlife conservation and conflict governance together with notable wildlife stresses, can explain farmers behaviour toward wildlife around Alldays. Farmers notably held favourable attitudes toward removal of leopards and elephants among others, because they presume that eradiation will relieve or resolve the prevalence of wildlife stresses. Previous studies have shown that such positive attitudes toward wildlife removal are strong determinants of behaviour (Dickman, 2010). But following the rationale behind the Theory of Planned Behaviour (Ajzen, 1991), it was argued that the degree of correspondence between attitude and behaviour depends upon the willingness of farmers to behave conform the imposed policies and regulations on wildlife utilization. And bearing in mind farmers' dissatisfaction and frustration about the government's interest and involvement in wildlife conservation, farmers showed a notable lack of compliance. Though it was argued among farmers that it should be the government's responsibility to manage populations of 'undesirable' wildlife on farmland, discourses of mistrust and political incompetence stimulate farmers to resolve conflicts in their own way. The influence of broader policies and regulations on behaviour of farmers is marginal and their decision to kill wildlife or not, is rather individually-driven (Manfredo & Dayer, 2004). Given the lack of governmental pressure and bearing in mind that the priority of many farmers around Alldays lies with safeguarding their livelihoods, farmers resort in the illegal practice of killing wildlife, particularly elephants, to compensate for wildlife-inflicted damage. Situations have been noted wherein farmers purposively lure elephants from Botswana onto their property and subsequently pay-out an elephant-hunt to an external poacher (an activity known as elephant baiting). Executive provincial agencies do not have the capacity to uphold a sustainable enforcement framework, offering farmers the opportunity to kill wildlife in illegal manner.

This thesis aimed to better understand the influence of social and political landscape forces on human-wildlife conflict and to explore how farmers' judgements and evaluations of the broader framework of wildlife conservation and conflict governance, can explain the way in which people respond to wildlife stresses. The case of farmer-wildlife conflict around Alldays clearly demonstrates how local people's attitudes and behaviour toward wildlife on the one hand represent a response to wildlife damage, but also stem from interactions with the broader social and political landscape. An analysis of farmers' beliefs, attitudes and intentions using behavioural theories, highlights that the way in which wildlife conservation policies and regulations are implemented and enforced and conflicts with people are handled, can be considerable sources of frustration and discontent among affected farmers (Hewitt & Messmer, 1997; Messmer et al., 1997; Zinn et al., 1998), allowing for and stimulating illegal and unsustainable practices (Gusset et al., 2009). In this way, intentions to kill wildlife were rather in retaliation to the risks and costs that inadequate and deficient governance imposes on farmers' livelihoods than purely in response to wildlife stresses. In terms of policy implications for conservation, this analysis highlights that the success of wildlife-

related policies and regulations foremost depends on the ability and willingness of responsible agencies to satisfy the needs of local people. The primary challenge for policy makers is to come to understand the needs of affected communities and critically evaluate their own role in conflict mediation, in order to rearticulate their communication and develop management activities more effectively. Responsible agencies should realize that the acceptability and success of their management activities greatly depends on the effectiveness at which agencies address the concerns of private landowners, who are a critical components in deciding the future of wildlife populations and conservation initiatives (Hewitt & Messmer, 1997).

7.1.2 SUGGESTING A WAY FORWARD

It has been argued among several authors (Messmer et al., 1997; Redpath et al., 2003; Treves et al., 2006) that resolution of human-wildlife conflict requires participation of local stakeholders in decision-making rather than excluding their needs, norms, values and perspectives. However in South Africa, where efforts for wildlife conservation are challenging, giving private farmers the increased opportunity to participate in management decisions would require major revisions in conservation policies and adaptations in the relationship between farmers and government agencies. And considering the prevalence of gaps in trust and communication between private farmers and government agencies, it may be useful to involve a third party in order to facilitate dialogues between both actors (Madden, 2004; Treves et al., 2006). A third party, for instance researchers, NGO or other external organisations, may be needed to supplement the skills and resources available to wildlife agencies. The involvement of external actors can particularly be of great importance for farmer-wildlife conflict around Alldays, where the government's incapacity and inability and the historically impaired relationship with private farmers currently hinders effective conflict mediation.

In light of conservation consequences, this thesis emphasises a need to take concerns raised by private farmers on broader social and political forces, including wildlife conservation and conflict governance, seriously. Especially since similar findings on the effects that issues raised by local communities may have on attitudes and behaviour toward wildlife populations, have been documented (Gusett et al., 2009; Lindsey et al., 2005; Marker et al., 2003). Hence providing farmers the opportunity to suggest improvements and participate in management decisions that will affect populations of wildlife on farmland, may enhance the relationship with responsible agencies and help achieve long-term conservation and management objectives (Messmer et al., 1997). Constructive collaborations, participatory approaches and integrative actions will greatly improve the effectiveness of mitigation efforts and prevent conflicts (Madden, 2004). There are initiatives among several private landowners and local NGO's around Alldays to establish a larger nature reserve to serve as conservation corridor between proximate protected areas and private nature reserves. Initiatives to establishment of a greater nature reserve in the area, comparable to well-

known collaborative reserves as Sabi Sands, Timbavati and Klaserie near Kruger National Park, indicate a willingness among private farmers to proactively engage in wildlife conservation. And in an environment where the success of government-imposed policies and regulations are marginal (Brink et al., 2010) and land is predominantly in private hands (Carruthers, 2008), such collective initiatives should be strongly encouraged.

Important lessons for forthcoming research on human-wildlife conflict can be drawn from this case-study. Findings showed that human-wildlife conflict has a biophysical nature as well as social a political one. Where conflicts may initially arise as response to mutual competition over resources, social and political landscape influences are found to form a critical part of comprehensively explaining the whys and wherefores. Findings that the mutual understanding of farmers and the state, heavily depending on the socio-political landscape, influence the way in which conflicts between farmers and wildlife unfolds is an indication that it would be a misconception and a fallacy to argue that human-wildlife conflict is purely a biophysical matter (Dickman, 2010; Madden, 2004). A circumscribed and narrow focus on conflict situations fails to recognize the social complexity of the problem and may easily overlook rather 'hidden' motivations of people's behaviour (Gupta, 2013). The complexity of human-wildlife conflict calls for an interdisciplinary approach wherein input from both ecological and social sciences is needed (Treves et al., 2006). Yet most mitigation strategies, prevention measures and education efforts draw on principles of natural science. I recall what many authors have argued for (Dickman, 2010; Madden, 2004; Manfredo & Dayer, 2004; Redpath et al., 2003; Treves et al., 2006) and urge for a constructive collaboration between ecologists and social scientists. Acknowledging the interdisciplinary nature of human-wildlife conflict gives rise to a richer, fuller and more accurate explanation than has developed thus far (Madden, 2004) and represents a great step forward in successfully mitigating this urgent conservation issue.

8 REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi: http://dx.doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological bulletin*, *84*(5), 888.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social.*Behaviour. Englewood Cliffs, NJ: Prentice-Hall*.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British journal of social psychology*, *40*(4), 471-499.

Baderoon, G. (2004). Oblique figures: Representations of Islam in South African media and culture.

Bhorat, H., & Kanbur, S. R. (Eds.). (2006). *Poverty and policy in post-apartheid South Africa*. HSRC press.

Bothma, J. du P., H. Suich, and A. Spenceley. (2009). Extensive wildlife production on private land in South Africa. Pages 163–184 *in* H. Suich, B. Child, and A. Spenceley, editors. *Evolution and innovation in wildlife conservation—parks and game ranches to transfrontier conservation areas.* Earthscan, London, UK.

Brink, M., Cameron, M., Coetzee, K., Currie, B., Fabricius, C., Hattingh, S., ... & Watson, L. (2011). Sustainable management through improved governance in the game industry. *South African Journal of Wildlife Research*, *41*(1), 110-119.

Browne-Nuñez, C., & Jonker, S. A. (2008). Attitudes Toward Wildlife and Conservation Across Africa: A Review of Survey Research. *Human Dimensions of Wildlife*, 13(1), 47-70. doi: 10.1080/10871200701812936

Carruthers, J. (2004). Africa: Histories, ecologies and societies. *Environment and History*, 379-406.

Carruthers, J. (2006). Mapungubwe: an historical and contemporary analysis of a World Heritage cultural landscape. *Koedoe*, *49*(1), 1-13.

Carruthers, J. (2008b). " Wilding the farm or farming the wild"? The evolution of scientific game ranching in South Africa from the 1960s to the present. *Transactions of the Royal Society of South Africa*, 63(2), 160-181.

Cousins, J. A., Sadler, J. P., & Evans, J. (2010). The challenge of regulating private wildlife ranches for conservation in South Africa. *Ecology and Society*,*15*(2), 28.

DAFF (Department of Agriculture, Forestry and Fisheries). (2013). *Abstracts of agricultural statistics.* Pretoria.

Demombynes, G., & Ozler, B. (2006). Crime and local inequalities in South Africa.

Dickman, A. J. (2010). Complexities of conflict: the importance of considering social factors for effectively resolving human–wildlife conflict. *Animal Conservation*, 13(5), 458-466. doi: 10.1111/j.1469-1795.2010.00368.x

Distefano, E. (2005). Human-Wildlife Conflict worldwide: collection of case studies, analysis of management strategies and good practices. *In SARD* (Ed.), *Initiative report*. Rome: FAO.

Donnelly, M. P., and J. J. Vaske. 1995. Predicting attitudes toward a proposed moose hunt. *Society Natural Resources* 8:307-319.

Du Toit, B. M. (1998). *The Boers in East Africa: ethnicity and identity*. Greenwood Publishing Group.

Ellis, S. (1996). Africa and international corruption: the strange case of South Africa and Seychelles. *African Affairs*, 165-196.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behavior: an introduction to theory and research. Reading, MA: Addison-Wesley.

Gaigher, I. (2013). Proposal for the establishment of the Vhembe Carnivore and Primate Conservation Centre.

Gillingham, S., & Lee, P. C. (1999). The impact of wildlife-related benefits on the conservation attitudes of local people around the Selous Game Reserve, Tanzania. *Environmental Conservation*, *26*(03), 218-228.

Graham, K., Beckerman, A. P., & Thirgood, S. (2005). Human–predator–prey conflicts: ecological correlates, prey losses and patterns of management. *Biological Conservation*, *122*(2), 159-171.

Green, J., & Thorogood, N. (2013). Qualitative methods for health research. Sage.

Gupta, A. C. (2013). Elephants, safety nets and agrarian culture: understanding human-*wildlife conflict and rural livelihoods around Chobe National Park, Botswana. Journal* of Political Ecology, 20, 239.

Hammersley, M., & Atkinson, P. (2007). Ethnography: Principles in practice: Routledge.

Hayward, M. W., Hayward, G. J., Druce, D. J., & Kerley, G. I. (2009). Do fences constrain predator movements on an evolutionary scale? Home range, food intake and movement patterns of large predators reintroduced to Addo Elephant National Park, South Africa. *Biodiversity and Conservation*, *18*(4), 887-904.

Hennink, M., Hutter, I., & Bailey, A. (2010). *Qualitative research methods*. Sage.

Hewitt, D. G., & Messmer, T. A. (1997). Responsiveness of agencies and organizations to wildlife damage: policy process implications. *Wildlife Society Bulletin*, 418-423.

Hill, C. M. (1998). Conflicting attitudes towards elephants around the Budongo Forest Reserve, Uganda. *Environmental Conservation*, *25*(03), 244-250.

Hill, C. M. (2004). Farmers' perspectives of conflict at the wildlife–agriculture boundary: Some lessons learned from African subsistence farmers. *Human Dimensions of Wildlife*, *9*(4), 279-286.

Huffman, T. N. (2009). Mapungubwe and Great Zimbabwe: The origin and spread of social complexity in southern Africa. *Journal of Anthropological Archaeology*, *28*(1), 37-54.

Inskip, C., Ridout, M., Fahad, Z., Tully, R., Barlow, A., Barlow, C., . . . MacMillan, D. (2013). Human–Tiger Conflict in Context: Risks to Lives and Livelihoods in the Bangladesh Sundarbans. *Human Ecology*, 41(2), 169-186. doi: 10.1007/s10745-012-9556-6

Inskip, C., & Zimmermann, A. (2009). Human-felid conflict: a review of patterns and priorities worldwide. *Oryx*, 43(01), 18-34. doi: doi:10.1017/S003060530899030X

Kotze, H., & Hill, L. (1997). Emergent migration policy in a democratic South Africa. *International Migration*, *35*(1), 5-35.

Leader-Williams, N., Milledge, S., Adcock, K., Brooks, M., Conway, A., Knight, M., ... & Teferi, T. (2005). Trophy hunting of black rhino Diceros bicornis: proposals to ensure its future sustainability. *Journal of International Wildlife Law and Policy*, *8*(1), 1-11.

Lee, P. C., & Graham, M. D. (2006). African elephants Loxodonta africana and human-elephant interactions: implications for conservation. *International Zoo Yearbook*, 40(1), 9-19. doi: 10.1111/j.1748-1090.2006.00009.x

Lindsey, P. A., Du Toit, J. T., & Mills, M. G. L. (2005). Attitudes of ranchers towards African wild dogs< i> Lycaon pictus</i>: Conservation implications on private land. *Biological Conservation*, *125*(1), 113-121.

Lindsey, P. A., Roulet, P. A., & Romanach, S. S. (2007). Economic and conservation significance of the trophy hunting industry in sub-Saharan Africa.*Biological Conservation*, *134*(4), 455-469.

Lindsey, P. A., Masterson, C. L., Beck, A. L., & Romañach, S. (2012). Ecological, social and financial issues related to fencing as a conservation tool in Africa. In *Fencing for Conservation* (pp. 215-234). Springer New York.

Lodge, T. (1998). Political Corruption in South Africa. *African Affairs*, *97*(387), 157-187.

Madden, F. (2004). Creating coexistence between humans and wildlife: global perspectives on local efforts to address human–wildlife conflict. *Human Dimensions of Wildlife*, *9*(4), 247-257.

Manfredo, M. J., & Dayer, A. A. (2004). Concepts for Exploring the Social Aspects of Human–Wildlife Conflict in a Global Context. *Human Dimensions of Wildlife*, 9(4), 1-20. doi: 10.1080/10871200490505765

Marker, L., & Dickman, A. M. Y. (2004). Human Aspects of Cheetah Conservation: Lessons Learned from the Namibian Farmlands. *Human Dimensions of Wildlife*, 9(4), 297-305. doi: 10.1080/10871200490505729

Marker, L. L., Mills, M. G. L., & Macdonald, D. W. (2003). Factors Influencing Perceptions of Conflict and Tolerance toward Cheetahs on Namibian Farmlands. *Conservation Biology*, 17(5), 1290-1298. doi: 10.1046/j.1523-1739.2003.02077.x

McCusker, B. (2004). Land use and cover change as an indicator of transformation on recently redistributed farms in Limpopo Province, South Africa. *Human Ecology*, 32(1), 49-75.

Messmer, T. A. (2000). The emergence of human–wildlife conflict management: turning challenges into opportunities. *International Biodeterioration & Biodegradation*, 45(3–4), 97-102. doi: http://dx.doi.org/10.1016/S0964-8305(00)00045-7

Messmer, T. A., Brunson, M. W., Reiter, D., & Hewitt, D. G. (1999). United States public attitudes regarding predators and their management to enhance avian recruitment. *Wildlife Society Bulletin*, 75-85

Moore, G. M. Ring-barking and girdling: how much vascular connection do you need between roots and crown?.

Montano, D. E., & Kasprzyk, D. (2008). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. *Health behavior and health education: Theory, research, and practice*, 4, 67-95.

Muir, M. J. (2010). Human–predator conflict and livestock depredations: methodological challenges for wildlife research and policy in Botswana. *Journal of International Wildlife Law & Policy*, *13*(4), 293-310.

Nyhus, P. J., Osofsky, S. A., Ferraro, P., Madden, F., & Fischer, H. (2005). Bearing the costs of human-wildlife conflict: the challenges of compensation schemes. *Conservation biology series-Cambridge-*, *9*, 107.

Ogada, M. O., Woodroffe, R., Oguge, N. O., & Frank, L. G. (2003). Limiting Depredation by African Carnivores: the Role of Livestock Husbandry. *Conservation Biology*, 17(6), 1521-1530. doi: 10.1111/j.1523-1739.2003.00061.x

Ogra, M. V. (2008). Human–wildlife conflict and gender in protected area borderlands: a case study of costs, perceptions, and vulnerabilities from Uttarakhand (Uttaranchal), India. *Geoforum*, *39*(3), 1408-1422.

Ogra, M. (2009). Attitudes Toward Resolution of Human–Wildlife Conflict Among Forest-Dependent Agriculturalists Near Rajaji National Park, India. *Human Ecology*, 37(2), 161-177. doi: 10.1007/s10745-009-9222-9

Owen, I. R. (1992). Applying social constructionism to psychotherapy. *Counselling psychology quarterly*, *5*(4), 385-402.

Packer, C., Kosmala, M., Cooley, H. S., Brink, H., Pintea, L., Garshelis, D., ... & Nowell, K. (2009). Sport hunting, predator control and conservation of large carnivores. *PLoS One*, *4*(6), e5941.

Patterson, B. D., Kasiki, S. M., Selempo, E., & Kays, R. W. (2004). Livestock predation by lions (< i> Panthera leo</i>) and other carnivores on ranches neighboring Tsavo National ParkS, Kenya. *Biological conservation*, *119*(4), 507-516.

Patton, M. Q. (2005). *Qualitative research*. John Wiley & Sons, Ltd.

Vhembe Biosphere Reserve, (2012). Background and work programme.

SANParks. (2014). *Mapungubwe National Park*. Retrieved from South African National Parks: http://www.sanparks.org/parks/mapungubwe/tourism/fact-sheet.php

Smith, N., & Wilson, S. (2002). Changing land use trends in the thicket biome: pastoralism to game farming. *Terrestrial Ecology Research Unit Report*, 38, 23.

Sillero-Zubiri, C., S Ukumar, R. & Treves , A. (2006) Living with wildlife: the roots of conflict and the solutions. In: *Key Topics in Conservation Biology* (eds D.W. Macdonald & K. Service), pp. 253–270. Blackwell Publishing, Oxford, UK.

Spinage, C. A. (1990). Botswana's problem elephants. *Pachyderm*, *13*, 14-19.

Steyn, M., & Foster, D. (2008). Repertoires for talking white: Resistant whiteness in post-apartheid South Africa. *Ethnic and Racial Studies*, *31*(1), 25-51

Tellis, W. (1997). Application of a case study methodology. *The qualitative report*, *3*(3), 1-17.

Thirgood, S., & Redpath, S. (2008). Hen harriers and red grouse: science, politics and human–wildlife conflict. *Journal of Applied Ecology*, *45*(5), 1550-1554.

Thirgood, S., Woodroffe, R., & Rabinowitz, A. (2005). The impact of human-wildlife conflict on human lives and livelihoods. In R. Woodroffe, S. Thirgood & A. Rabinowitz (Eds.), *People and wildlife: conflict or co-existence*? Cambridge: Cambridge University Press.

Thompson, L. M. (2001). *A history of South Africa*. Yale University Press.

Thorn, M., Green, M., Dalerum, F., Bateman, P. W., & Scott, D. M. (2012). What drives human–carnivore conflict in the North West Province of South Africa? *Biological Conservation*, 150(1), 23-32. doi: http://dx.doi.org/10.1016/j.biocon.2012.02.017

Toolkit (2013) David Marvier, Petrolicious. Retrieved 23-10, 2014 from http://www.petrolicious.com/assembling-a-travel-tool-kit-for-your-classic-car.

Treves, A., & Karanth, K. U. (2003). Human-carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology*, *17*(6), 1491-1499.

Treves, A., Wallace, R. B., Naughton-Treves, L., & Morales, A. (2006). Co-Managing Human–Wildlife Conflicts: A Review. *Human Dimensions of Wildlife*, 11(6), 383-396. doi: 10.1080/10871200600984265

Twala, C., & Oelofse, M. (2013). Rural Safety and the Disbandment of the Commando Units in South Africa: A Challenge to Rural Communities and the African National Congress (ANC)?. *Studies of Tribes and Tribals*, *11*(1), 25-33.

UNESCO. (18-06-2010). MAB Biosphere Reserves Directory. Retrieved 11-9, 2013, from http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=SAF+06&mode=all

Van der Merwe, P., Saayman, M., & Krugell, W. (2004). Factors that determine the price of game. *Koedoe-African Protected Area Conservation and Science*, 47(2), 105-113.

Van der Merwe, P., & Saayman, M. (2005). Game farms as sustainable ecotourist attractions. *Koedoe-African Protected Area Conservation and Science*, 48(2), 1-10.

Van der Merwe, P., Saayman, P., & Krugell, P. (2007). The determinants of spending by biltong hunters. *South African Journal of Economic and Management Sciences= Suid-Afrikaanse Tydskrif vir Ekonomiese en Bestuurswetenskappe*, *10*(2), 184-194.

Wegerif, M. (2004). A critical appraisal of South Africa's market-based land reform policy: the case of LRAD in Limpopo: *Research report 19, University of the Western Cape School of Government: Programme for Land and Agrarian Studies*.

Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social issues*, *25*(4), 41-78.

Wildlife Ranching South Africa. (17-10-2014). *Welcome to Wildlife ranching.* Retrieved 17-10, 2014, from http:// http://www.wrsa.co.za/component/k2/item/286-welcome-to-wildlife-ranching.

Wild Leopard (n.d.) Copyright holder unknown. Retrieved 26-01, 2014 from http://www.bhmpics.com/view-wild_leopard-normal.html.

Woodroffe, R. (2000). Predators and people: using human densities to interpret declines of large carnivores. *Animal conservation*, *3*(02), 165-173.

Woodroffe, R., Thirgood, S., & Rabinowitz, A. (2005). The impact of human-wildlife conflict on natural systems. In R. Woodroffe, S. Thirgood & A. Rabinowitz (Eds.), *People and wildlife: conflict or co-existence?* Cambridge: Camrbidge University Press.

Yin, R. K. (2014). *Case study research: Design and methods*. Sage publications.

Zinn, H. C., Manfredo, M. J., Vaske, J. J., & Wittmann, K. (1998). Using normative beliefs to determine the acceptability of wildlife management actions. *Society & Natural Resources*, 11(7), 649-662.

I. APPENDIX

A. INTERVIEW GUIDE

My name is Marieke Reijneker, student Master Forest and Nature Conservation at Wageningen University in the Netherlands. I am here to study the relationship between private landowners and wildlife, from predators to primates and elephants. The purpose of this study is to come to understand how private landowners think about the way in which wildlife in the area around Alldays is conserved and wildlife-conflicts are handled by the responsible agencies. Such information will help me to better understand conflicts with wildlife and to give you the opportunity to give your opinion and perspective on this issue. The interview will take approximately one hour, depending on the amount of information you intend to give. And if you have any additional question about the interview or any other recommendations or interruptions, I am more than pleased to hear so. Do you have any question before we start?

Date	01-10-2013
Starting time	09:00
Ending time	10:00
Actual interview time	60 minutes
Land name	xxxx
Farm name	xxxx
Setting	In the living room.
Conditions	Neigbouring farmer.
Gender	Male
Age class	40-50 years
Ethnicity	White, Afrikaans
Function	Landowner/manager
Species	Plains game plus buffalo
Main species	Impala, kudu, blue wildebeest, buffalo
Size ±:	2000 ha.
Years of ownership	12 years

NOTES

WILDLIFE-CONFLICT

1. Are you aware of any predators or elephants that regularly pass through and enter your property and can you specify which species?
2. Which of them do you believe to be most common on your farm?
3. Can you tell me whether you believe the number of predators and elephants changed over the past twenty years?
4. Can you tell me whether predators and/or elephants inflict any damage on your farm?
5. Which predator do you hold responsible for these issues?
6. How do you know that it was this predator?
7. Do you believe that predator or elephant inflicted-damage poses a threat to your livelihood or production, or any other threat?
8. Can you describe how you feel towards predators and elephants?
9. Can you tell me whether you consider the presence of predators and elephants on your property rather positive, negative or neither of both?
10. Are you positive towards the practice of killing problem predators or elephants, and why?
11. How do you respond when you find out that the problem predator is on your farm?
12. How do you respond differently to any other predator species?
13. How do you respond when you find out that the problem elephant is on your farm?
14. (if applicable)
    Can you tell me whether you ever killed a predator and/or elephant on your farm, and why?
15. Can you tell me how your neighbours or other farmers you know, think about predators and elephants?
16. Can you tell me whether your neighbours or other farmers you know, kill predators and elephants, and why?

WILDLIFE CONSERVATION GOVERNANCE

17. Have you ever visited the provincial agency in Louis Trichardt, to acquire assistance in wildlife-conflict or apply for a permit?
18. How would you describe your visit?
19. How would you describe your relationship with the provincial agency of Nature Conservation?
20. Are you satisfied with the way in which they helped you, and why?
21. What can be improved in wildlife-consultation in your eyes?

22. How do you feel about the fact that many problem animals (leopard, elephant) cannot be hunted without a permit?

23. How do you feel about the fact that many problem animals (leopard, elephant) cannot be traded without a permit?

24. Have you ever applied for a permit, and can you describe this process?

25. Can you tell me whether you believe that this regulatory process is adequate?

26. What can be improved about the permit system in your eyes?

27. How do you generally feel about wildlife conservation in South Africa?

28. Do you feel that the government puts enough efforts in wildlife conservation?

29. Can you describe how the way in which the government's conserves wildlife affects your daily lives?

30. What can be improved in conservation policies your eyes?

31. How do you feel towards the present national government in its broadest sense?

32. Do you feel that the government puts enough efforts in the agricultural sector?

33. How would you describe your relationship with the government?

34. Did the relationship with the government change in the past two decades?

SOLUTION

35. How would you like to see the government's involvement in wildlife conservation and/or conflicts mitigation?

36. Why is that not possible at the moment?

37. Would you believe that the inclusion of external researchers, NGO's or other organization may help?

38. What would you address as the adequate solution to mitigate wildlife-conflict?

Thank you for your time. Are there any issues we did not discuss or do you have anything to add?

II. APPENDIX

A. CARNIVORE SPECIES IN VBR

Table 1. A list of carnivore species that occur in the Vhembe Biosphere Reserve. The marked column represent the list of carnivores that occur in the study area.

COMMON NAME	LATIN NAME	LAJUMA	MOYO	CONS. STATUS
Cheetah	*Acinonyx jubatus*	-	X	Vulnerable
Cape Clawless Otter	*Aonyx capensis*	-	X	Least Concern
Marsh Mongoose	*Atilax paludinosus*	X	X	LC
Side-striped jackal	*Canis adustus*	-	X	Near threatened
Black-backed Jackal	*Canis mesomelas*	X	X	LC
Caracal	*Caracal caracal*	X	X	LC
African civet	*Civettictis civetta*	X	X	LC
Spotted hyaena	*Crocuta crocuta*	X	X	Near Threatened
Yellow mongoose	*Cynictis penicillata*	-	X	LC
Black-footed cat	*Felis nigripes*	-	X	LC
African Wild Cat	*Felis sylvestris*	-	X	LC
Slender mongoose	*Galerella sanguinea*	X	X	LC
Small Spotted Genet	*Genetta genetta*	-	X	LC
Large Spotted Genet	*Genetta tigrina*	X	X	LC
Dwarf Mongoose	*Helogale parvula*	X	X	LC
Brown hyaena	*Hyaena brunnea*	X	X	Near Threatened
White-tailed mongoose	*Ichneumia albicauda*	X	X	LC
Striped Polecat	*Ictonyx striatus*	-	X	LC
Serval	*Leptailurus serval*	X	X	Near Threatened
African wild dog	*Lycaon pictus*	-	X	Endangered
Honey Badger	*Mellivora capensis*	X	X	Near Threatened
Banded Mongoose	*Mungos mungo*	X	X	LC
Bat Eared Fox	*Otocyon megalotis*	-	X	LC
Lion	*Panthera leo*	-	X	Vulnerable
Leopard	*Panthera pardus*	X	X	Near threatened
Sellous's Mongoose	*Paracynictis selousi*	-	X	Data Deficient
African Weasal	*Poecilogale albinucha*	-	X	Data Deficient
Aardwolf	*Proteles cristatus*	-	X	LC

I. LION

A small population of lions belonging to the so-called Tuli lion group occur in the Northern Tuli Game Reserve (in Botswana) (about 15), Venetia Game Reserve (20), Mapungubwe and

surrounding private game farms (unknown number). Because these lions move on to private properties which do not manage for their presence they are often killed so numbers remain below the carrying capacity of unfenced areas. The population in the Venetia Game Reserve is secure and numbers have to be controlled. This population is monitored by the Endangered Wildlife Trust (hereafter referred to as "EWT") on the South African side and by the Tuli Lion Conservation project on the Botswana side.

II. LEOPARD

The latest estimate puts the population of leopard in the VBR area outside the Kruger National Park at about 1250. This is the area with the largest population on private land in South Africa and also yields the most trophy animals for the hunting industry. Conflict with landowners (including owners of game farms) is rife in the area. Viable corridors need to be established to maintain genetic contact between populations.

III. CHEETAH

Regular complaints of negative impacts, particularly on game farms, indicate that the population is under pressure of persecution.

IV. AFRICAN WILD DOG

Despite several attempts by EWT and other organizations, the wild dog population in the Limpopo River area seems to be declining and the latest estimate indicate that there may only be 30 animals left. Landowners that we spoke to recently informed us that they do not occur on private farms to the east of Mapungubwe any more as in the past. EWT and other NGO's are monitoring and managing this population.

V. SPOTTED HYAENA

A recent survey estimated that the Northern Tuli Game Reserve has a good population of about 120 spotted hyaena. However, numbers seem to be low south of the Limpopo River, particularly on private land. This species requires further investigation.

VI. BROWN HYAENA

This species occurs throughout the area but is under a lot of pressure due its perceived negative impact on game and domestic animals. There is an urgent need for a detailed study of the species and its conflict with landowners.

VII. CARACAL AND BLACK-BACKED JACKAL

These two species are probably the most important problem animals in South Africa, particularly in sheep farming areas. Despite 300 years of persecution the problem still persists and it is necessary to look for more sustainable solutions.

VIII. SMALLER CARNIVORE SPECIES

There is general concern about the conservation status of smaller predators in South Africa due to habitat modification and persecution.

B. PRIMATE SPECIES IN VBR

Only one of the five primate species that occur in the VBR, namely the Samango Monkey area is threatened (Table 2). Chacma baboon and vervet monkey are serious problem animals throughout the area due to various factors that require attention.

Table 2. A list of primate species that occur in the Vhembe Biosphere Reserve. The marked column represent the list of carnivores that occur in the study area.

COMMON NAME	LATIN NAME	LAJUMA	MOYO	CONS. STATUS
Samango Monkey	*Cercopithecus albogularis*	X	-	Vulnerable
Vervet Monkey	*C. pygerythrus*	X	X	LC
South African Galago	*Galago moholi*	X	X	LC
Greater Galago	*Otolemur crassicaudatus*	X	X	LC
Chacma Baboon	*Papio hamadryas*	X	X	LC

Elephants, predators & politics:

understanding socio-political landscape influences on farmer-wildlife conflict around Alldays, South Africa