Human, Livestock and Wildlife interactions at the boundary of Hwange National Park and Tsholotsho Communal Areas in Zimbabwe

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presented by

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Declaration

I solemnly declare that I prepared the dissertation I am presenting independently and without undue assistance, that I have completely stated the sources and aids used, and that in each individual case I have identified the passages in the dissertation, including tables, maps and images, that are quoted from other works literally or in spirit as a borrowing; that this dissertation has not been presented to any other faculty or university for examination; that it has not yet been published, apart possibly from partial publication approved by the chairperson of the doctoral committee after consultation with the supervising professor, as well as that I will not undertake any such publication before completing the doctorate. I am aware of the provisions in Sect. 20 and 21 of the doctoral regulations. The dissertation I am presenting has been supervised by Prof. Dr. Michael Bollig.

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Dedication

I dedicate this thesis to my dad J.S. Whande.

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Abbreviations

BSAC	British South Africa Company
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBC	Community-Based Conservation
CBNRM	Community Based Natural Resource Management
DA	District Administrator
FMD	Foot And Mouth Disease
HNP	Hwange National Park
HH	Household
KAZA TFCA	Kavango Zambezi Transfrontier Conservation Area
PAC	Problem Animal Control
NGO	Non-Governmental Organisation
SADC	Southern African Development Community
TBNRM	Transboundary Natural Resource Management
TC	Tsholotsho Centre
TFP	Transfrontier Park
TRDC	Tsholotsho Rural District Council
TRDA	Tsholotsho Rural District administrator

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1. Introduction

Hwange National Park (HNP) is the largest game reserve in Zimbabwe and a significant part of the Zimbabwean share of the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) because of its large animal density and its biodiversity. To the south of the border of Hwange National Park lies Tsholotsho Rural District (TRD), a district with several villages that are situated directly adjacent to the boundary of the park. When one considers the popularity of the park and the grandeur of its present-day inhabitants, it warrants a review of how the park and its neighbours came into existence. Historically, the two areas were the first of their kind; the first game reserve and the first native reserve established during the colonial period. The history of the Tsholotsho Rural District can be traced back to one of the first native reserves in the country, a significant period which marked the beginning of changes in land use and ownership for African people. The effect of the creation of the native, forest, and game reserves (as well as the establishment of features such as the fence around the park), limited contact and separated people, natural resources, and wild animals from each other. The landscape became divided according to these aspects of land use and ownership. This background of Tsholotsho Rural District and Hwange National Park helps to contextualise both the present-day situation and problems that the park and its neighbouring communities are facing. These problems include the overpopulation of elephants, vulnerability to the severe effects of drought, and conflicts between humans and wildlife.

In this thesis, I will focus on the life of the villagers that live near the boundary that separates Hwange National Park and Tsholotsho communal areas. I will discuss the changes in land use and resource use of the landscape and how non-human organisms and diseases such as Tsetse fly and foot and mouth disease influenced the choice location of the park and the installation

of its physical borders. In this thesis I will also show how the proximity of the village to a wildlife area has influenced their livelihoods and perceptions about wildlife and conservation.

Background of the study

Since the establishment of the first game and native reserves, in what was then southern Rhodesia, Zimbabwe has undergone different changes in its land use and patterns of land ownership. The laws that overtly separated a select group of humans from wildlife and other natural resources have also evolved. In southern Africa, this evolution includes the change from fortress conservation to community based natural resource management (CBNRM) and recently to what Gewald et al., (2019) refer to as a 'renewed focus on exclusion, elite capture, and militarization' (Gewald et al., 2019: 5). Thus, history shows that it is characteristic of conservation initiatives to oscillate between being for or against the mixing of humans and wildlife/ natural resources, especially in and around designated conservation areas. The creation of Transfrontier Conservation Area is a significant initiative that has also emerged in the evolution of conservation initiatives in southern Africa. These TFCAs are designed to promote the co-management of wildlife and natural resources among multiple nations with shared borders and encourage community-based conservation. Since 2011, both Hwange National Park and Tsholotsho communal area form part of the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA).

The formation of Hwange National Park in the 1930ies consisted of many factors which included the displacement of African communities, the installation of artificial water sources, and the presence or lack of diseases in the region. Asymmetrical relations of power also played a vital role in this establishment because, during the creation of the park, much of the decision-making power concerning its inhabitants and environment was in the hands of colonial settlers. This relates to what Ramutsindela (2004) emphasized by stating 'that

national park systems largely reflect existing power structures among humans and between humans and nature' (Ramutsindela, 2004 :77). In the present-day context, the power structures are still largely skewed in favour of humans, particularly either the government or private sector. From this background one can assess that conservation initiatives are the product of human influence upon the environment.

Tsholotsho, Hwange and CAMPFIRE

According to the 2012 Census, Tsholotsho Rural District has twenty-two wards and a population of 115, 119 people (Census 2012 Provincial Report Matabeleland North). In terms of vegetation and climatic conditions, the district receives very low rainfall, and the dry season can last up to six months per year. Zingi et al., 2022, described Tsholotsho as a resource endowed district, although it lies in the low rainfall regions of the country. It has resources such as wildlife, timber, river sand, pit sand, slates, soap stone, grassland and wild fruits (Zingi et al., 2022). Unfortunately, the district has the highest national percentage of vulnerable and poor people "with more than 60% of the population living below the poverty datum line" (Zingi et al., 2022: 3).

The study by Zingi et al., (2022) focuses on the link between ecotourism and Local Economic Development initiatives in Tsholotsho. According to Zingi et al., (2022:8), safari operating is a leading economic activity within the district, citing that Matupula and Lodzi Hunting Camp are ecotourist ventures that have a trickle-down effect on the community road networks and flow of goods and services. However, their findings also show that party politics affects active participation in resource governance. This in turn affects business opportunities, inclusiveness in development or economic initiatives, and increases negative attitudes towards wildlife. They point out that centralisation and politicisation of natural resource

governance makes it a challenge to bring about Local Economic Development in the district (Zingi et al., 2022).

The paper by Chikuta et al., 2022 is a publication that provides an example of a study that describes the benefits and success of CAMPFIRE in Tsholotsho based on research conducted in Ngamo area. It discusses different activities that a safari operator facilitated, as examples of ecotourism success and the benefits of living near wildlife areas. Chikuta et al., (2022) also assert that the CAMPFIRE projects in Tsholotsho are the least documented although they are "the most successful" (Chikuta et al., 2022: 9). Although the paper presents positive reviews about CAMPIFE programmes in the area the authors acknowledge the need for more research studies on CAMPFIRE in Tsholotsho are needed to fully understand the success of the program.

The research conducted in Matetsi, Hwange District by Tichaawa and Mhlanga (2015) also studied the perceptions of the effectiveness of the CAMPFIRE programme. Respondents agreed on the positive economic, social and wildlife conservation impacts of CAMPFIRE programme in their communities. The popular perceptions include opinions about how CAMPFIRE has improved infrastructural development such as schools and clinics, however negative perceptions were about how individuals did not receive benefits or compensation for wildlife damages. The study by Tichaawa and Mhlanga (2015) thus showed that although the current model of eco-tourism in Zimbabwe can improve the livelihoods of communities, individual benefits such as receiving compensation for wildlife damage can help change negative perceptions. In addition, a study, about CAMPFIRE programmes near Hwange National Park, by Dube (2019), discusses CAMPFIRE in Hwange district and how the villagers have developed a negative perception about the program. According to Dube (2019), the respondents saw "limited economic gain from wildlife and have lost faith in the

management processes of the THMES" (Trophy Hunting market for ecosystem services) (Dube, 2019: 342).

Sibanda et al., (2021) evaluated whether the attitudes of farmers and livestock owners towards lions have changed after the implementation of a community-based lion conservation programme near Hwange National Park. Farmers belonging to both the treatment and intermediate groups held positive attitudes for the Long Shields program and had a positive shift in their lion attitudes. Their study showed that a community-based lion conservation program was able to shift villager perceptions about lions in the area. This is possible because the program may have given them information on the location of lions, hence helping them to prepare for or be aware of potential lion attacks.

Lastly, issues of gender differences also contribute to the management of community-based conservation initiatives and benefits. Dube et al., (1998) point out that a CAMPFIRE community in Ward 7 of Tsholotsho had a problem with gender imbalance and access to compensation. In one case, compensation for the damage to livestock and crops was mostly received by men who would spend it on other things such as alcohol, and the money would not benefit the entire family.

What is presented from this review of literature about the communities in Hwange and Tsholotsho that are located near the national park, is that human wildlife conflicts and CAMPFIRE management programmes are topics of concern that appear in research studies about this area. However, in researching literature to review about HNP and neighbouring TRD, I found that there are few studies that have been conducted on human, livestock and wildlife interactions in this area. The studies which focus on Hwange National Park and its interface with communities in Tsholotsho or Hwange rural district often have an ecological, zoological or ecotourism focus with only some social aspects integrated into the study (Dube,

2019; Tichaawa and Mhlanga, 2015; Chikuta et al., 2022; Zingi et al., 2022). A study by Sibanda et al., (2021) use social and ethnographic methods to study human livestock and wildlife interactions. Dickman, (2010) discusses how the study of human- wildlife conflict needs to consider a social approach because villagers may perceive risks and view wildlife based on social experiences and beliefs that can influence the way we understand human wildlife conflict and how to mitigate it. In this regard, the thesis will contribute to the study on human, livestock and wildlife interactions that occur at the boundary between Hwange National Park and Tsholotsho from a social and anthropological viewpoint lens.

Research questions

This thesis seeks to understand human and wildlife experiences at the edge of Hwange National Park, especially from the perspectives of people. The significance of this study is to highlight that as human- wildlife relations continue to characterize life at the edge of conservation areas, whether in coexistence or contention, and as the discourse of human-animal relations grows and moves into multispecies approaches to studying such relations, understanding the context and lives of the people who live near conservation areas is still important. Although the physical proximity of their homes to the park makes it an appealing location to conduct a study, it is their thoughts and experiences about this proximity and shared space with wildlife that help bring meaning and understanding to their day-to-day interactions. Based on the background of the above discussion, this research asks,

How can a multispecies approach help reconcile local people´s relations with wildlife and natural resources?

The main research question acknowledges that human, livestock, and wildlife relations at the boundary of conservation areas can be contentious. The question examines how a

multispecies perspective can help local humans resolve human-animal relationships at the boundary of a conservation area.

There are three questions that guide this research:

1. How have historical changes in land use, resource use and ownership affected human, livestock and wildlife relations in the area?
2. How does living on the edge of a national park shape the social and economic status of people in the village?
3. How do human, livestock and wildlife encounters influence villager perceptions about wildlife and living on the edge of the national park?

By analysing the history that created this conservation area, looking at the present-day social and economic status of a village that is located at the boundary of the park and discussing where and when contact among humans and animals occur, I will use villager experiences and perspectives to show how humans, livestock and wildlife interact with each other.

The Significance of the study

Although the exploitation of wildlife, minerals, forests and land characterized the colonial period, when conservation areas were created in southern African states, more value was placed on wildlife than on the people that were living in or around the conservation areas (Ramutsindela, 2004; Carruthers, 1995). As far as the nature-culture ideology upheld humans as exceptional to non-humans, in the case of indigenous or African societies the division that was created gave wildlife more prominence over them. Furthermore, the ‘othering' of non-humans originated from the idea of a standardized human, Euro-male, as the exceptional human (Kirksey and Helmreich, 2010; Ogden et al., 2013). While the othering of non-white humans characterized imperialism and colonial ventures, when colonists came to Africa, they

treated Africans as non-human. An example of this is that colonial settlers dehumanized Africans even to the extent of using Africans for target practice before they went hunting for wildlife (Ramutsindela, 2004: 27).

Africans, and other colonized states were able to regain their identity and dignity as people by denouncing racial oppression and, as nations, through independence. There was also increased acknowledgement of indigenous knowledge systems and the potential of community based natural resource management meant to give local communities the opportunities to use and manage the wildlife and natural resources in their area, an authority that they did not have during colonialism. However, even after 40 years of independence, in Zimbabwe the marginalization of rural and minority communities has not improved. The trajectory of change after independence did not overhaul this system of marginalization of communities as the government played a significant role in keeping local eco-knowledge in the periphery (Mawere, 2013a). Brockington (2015) also asserts that, even after colonialism, African states support fortress conservation practices of tourist visions of a wild Africa without people because "African states are happy to create spaces where tourists can go to. Tourists are good revenue earners" and "national parks provide a means of removing and modernizing indigenous peoples who are perceived as primitive and backwards by their governments" (Brockington, 2015: 10). Examples such as the San in Zimbabwe (Hitchcock et al., 2016; Dube et al., 2021; Phiri et al., 2020), or the Tonga in the Zimbabwean Zambezi region (Matanzima and Marowa, 2022), show how the marginalization of indigenous communities persists among the conservation of wildlife in post-colonial Zimbabwe.

It is behind this background that the study asserts the importance of analysing the historical background, showing how human and non-human relations at the edge of conservation areas evolved. With a historical analysis, we can confer that those asymmetrical relations of power

existed among Africans and wildlife, the white settlers and Africans, and among the white settlers and wildlife. And although multi-species studies argue against human exceptionality in relation to non-humans, there are inequalities among human beings and wildlife based on racial, political and economic differences that make me think about the multispecies society in another light because, in the context of colonial societies, racial disparities and bias influenced the value of African people versus nature.

The multispecies perspectives seek to decentre humans, although not all humans and not all non-humans are starting at the same level in society, due to historical backgrounds that have caused inequalities. The binary view of species in a multi-species society as either human or non-human is, therefore, abstract and homogeneous. Humans have different histories and backgrounds which influence the way that they interact with the non-human beings around them. Similarly, non-human beings such as animals (domesticated and wild), come from diverse backgrounds and histories, and the way they interact with humans is different. In the case of wildlife and tourism initiatives for example, the relationship and experience of tourists and wildlife versus the relationship and experience of villagers living near conservation areas with wildlife, will differ. This again highlights that in multispecies contexts humans and non-humans may have diverse kinds of relationships. Hence, consideration of how the political, racial, capitalistic and socio-ecological background of these relationships has shaped the perspectives of humans, is important. Petitt (2022) even proposes an intersectional approach to multispecies studies by noting that the diverse backgrounds of humans and non-human beings should be acknowledged.

In the case of conservation areas, Gewald et al., 2019 recognize there is a shift that has occurred in the study of human-wildlife relations and advocate for the inclusion of all beings that have experienced marginalisation. They argue that “given the scientific evidence that has

broken down the species divide between humans and animals, we are now entering the phase of sentient conservation" (Gewald et al., 2019:12). According to Gewald et al., (2019) sentient conservation refers to:

> *'...a label in which the morality to include all sentient beings, and the marginality of both human and non-humans in wildlife conservation come together. It is not about prioritizing the non-human above the human. It is about recognizing the marginality of both local communities and animals and trying to do something about them in equal terms, making the marginality of both the local community and the animal the centre of attention in 'sentient conservation' through acknowledging sentience across species boundaries as well as a morality that equally applies to both human and non-human animal' (Gewald et al., 2019:12)*

The idea of sentient conservation thus gives one a different way of viewing and understanding human and non-human relations, especially in a background where the needs of one-being (non-human, wildlife), was previously considered more valuable than the other (human, African communities). In the case of sentient conservation, humans living at the margins of wildlife areas are thus just as valuable as the wildlife that is located near them. Consequently, the thesis shows that while non-human beings are significant contributors to the way of life in this area, the need for increased visibility of the marginalized and vulnerable human communities living at the edge of conservation areas, is also highlighted.

Conservation in Zimbabwe

When European imperial travellers travelled to new countries to study nature, they authored stories or reports about their 'discoveries' about the environment or landscape, which often

left out descriptions about the inhabitants (Pratt, 1992). These stories formed or influenced how Europeans perceived and later treated Indigenous communities during colonialism. The background and history of early national parks in southern African states is, thus, the product of processes characterized by racial, capitalist, and imperialist ideologies. This is indeed evident among colonial societies which created protected areas by eliminating or displacing the inhabitants of that area and refusing access. This type of conservation (fortress conservation), was present in southern Rhodesia (Zimbabwe). In the case of Hwange National Park, fortress conservation involved the displacement of communities such as the San and Nambya to create Wankie Game Reserve.

When Zimbabwe gained independence in 1980, there was a shift in the rights of the inhabitants of communal areas situated near the game reserves to access and use wildlife and natural resources. Policies emerged that moved away from fortress conservation to community-based conservation (CBC); this is also referred to as "moving beyond the fences" (Spierenburg and Wels, 2006). This meant that the new government intentionally introduced programmes to include local communities who would be able to participate in conservation management as well as be in receipt of the benefits associated with such. In Zimbabwe, such communities began to receive access to natural resources through a community-based natural resource program called the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE). The program was very popular, and Zimbabwe was the pioneer of such a programme.

Whether this renewed access to resources brought about positive changes or a positive relationship among humans and wildlife at the edge, is something that is frequently debated on. There is disillusionment and disappointment among some communities towards CAMPFIRE programmes in Zimbabwe today (Dzvimbo et al., 2018; Tchakatumba et al.,

2019; Tichaawa and Mhlanga, 2015; Alexander and McGregor, 2000; Dube 2019). Vorlaufer (2002) points out that, in many districts, CAMPFIRE has not been able to alleviate the poverty of its targeted group due to modest earning and extensive damage by wildlife. Another issue that other scholars have pointed out is the lack of participation of local people involving CAMPFIRE plans and revenue capture in Hurungwe, for example (Dzingirai et al., 2019). Another study about the implications of ethnic heterogeneity for natural resource management by Mukamuri et al., (2013) showed that people living in rural areas are heterogenous and that one's ethnicity or origins can affect access to things such as CAMPFIRE benefits (Mukamuri et al., 2013). In theory CAMPFIRE gives communal areas, or African communities, the ability to engage with the use and management of wildlife and natural resources. However, the overall sentiments about CAMPFIRE initiatives in Zimbabwe is that they fall short of the expectations of individuals living in communities that are near wildlife areas.

Transfrontier conservation areas (TFCA)

The concept of national CBNRM programmes evolved into an international concept of transfrontier conservation areas in Africa. Although Africa is not the first continent to establish TFCAs, their implementation on the continent is said to be moving at a fast pace (Katerere et al., 2001). There are 8 established TFCAs, 4 emerging TFCAs, and 6 conceptual TFCAs in Africa (Peace Parks Foundation website[1]). The TFCAs in Africa are based on three reasons. Firstly, to help promote peace among the countries that share borders linked together by their national parks or protected areas. Secondly, it is believed that TFCAs can help to restore environmental migratory routes for wildlife that were disrupted when boundary

[1] The Dream - Peace Parks Foundation Date accessed 9 July 2022

formations were created when colonialists parcelled out the African continent. Thirdly, it is envisioned that TFCAs, like CBNRM programmes, will give local communities the chance to gain economically through the increase in tourism and continued implementation of community-based management of resources. All these reasons are noble and, to some extent, seek to address the historical injustices created in the origins of some conservation areas. I find that by seeking to address the segregation, of both humans and animals from environmental resources, the last two reasons relate much to this thesis. The creation of artificial boundaries around the park brought changes that affected both humans and non-humans. Wildlife was cut off from resources such as water that they relied on during dry seasons, and Africans were displaced from their homelands and resettled at the peripheries of the protected areas, thus disrupting their livelihoods and way of life.

Ramutsindela (2004); van Amerom and Büscher, (2005:159) and Andersson et al., (2013:1) have, however, widely discussed these three reasons for the establishment of TFCAs in Africa, and they point out that these goals have not yet been fulfilled. One of the challenges associated with the lack of success of TFCA, is that there are different names and slightly different descriptions of what transfrontier conservation areas are; the names TBNRM, TFCA, TFP and Peace Parks being often used interchangeably. Although the meaning of these names differs slightly from each other, according to Wolmer, (2003:2) 'in essence these all refer to situations where conservation initiatives straddle national boundaries.' However, other scholars see the use of multiple and interchangeable names as an indication of the problem of the lack of clearly defined objectives (Metcalfe, 2003) and the elusiveness of the concept (van Amerom and Büscher, 2005:164).

TFCAs have diverse inhabitants and do not solely focus on wildlife; this speaks to the heterogeneous nature of these large conservation areas. As discussed by Mukamuri, (2013)

ethnic heterogeneity among communities living in/ around conservation areas is something that is important to note so that their differences in experiences and opinion are represented. Differences in age, gender, and income among the villagers are some of the other heterogeneous characteristics of communities found near conservation areas. Hence, although TFCAs are a union of different African countries, the individuality of people, families and the communities in such areas is important to keep note of. This helps protect against the risk of ignoring people who are living in such a large area, and reduces opportunities for promoting notions of a wild and pristine environment devoid of people.

Lastly, the question about benefits will remain an important part of the discourse about conservation areas and the people living in or around them. TFCAs have a role to play in the development of these communities. This is not only because of the expectation that TFCAs will provide economic benefits for communities, but also because many of the communities are considered poor and need the social and economic support. The goals of TFCAs are to promote or encourage the 'sustainable development' of these communities. Hence, they not only focus on conserving natural resources, but also on the development of the neighbouring communities. This is a challenge that most southern African countries have on their hands. How do they ensure the conservation of natural resources and at the same time facilitate the development of local communities' adjacent to conservation areas? This leads to the issue of defining what benefits and development is required by people living in communities at the edge. It is thus important to understand the needs of local communities, how they perceive and view development for their community, and then make efforts to meet those needs. This would go beyond improvement of infrastructure and move forward to understanding the benefits of having access to wildlife or forest resources, thus developing their traditional knowledge and cultural practices so that they can pass it down to other generations, as discussed by Dominguez and Luoma (2020:10). This suggests that the notion of what is

beneficial should be a holistic consideration, not only of income or infrastructure development, but also issues to do with "local identity, effective participation, and secure rights to land and natural resources" (Metcalfe, 2003 :1).

The Kavango Zambezi Transfrontier Conservation Area

The Kavango Zambezi (KAZA) TFCA was established in 2011 through the signing of the KAZA Transfrontier Conservation Area Treaty during the SADC Summit in Angola. It includes amalgamated land from five African countries namely Angola, Botswana, Namibia, Zimbabwe, and Zambia. This is 'the world's largest Transfrontier conservation area, 'covering an area of about 520 000 km2 and consisting of '36 proclaimed protected areas such as national parks, game reserves, forest reserves, community conservancies and game/wildlife management areas' (Peace Parks Foundation website[2]). The KAZA TFCA also hosts world heritage sites such as the Victoria Falls and the Okavango Delta. In addition, there is an estimated elephant population of 250 000, making it a promising premier tourist destination (Peace Parks Foundation[3]). The contiguous feature of the KAZA TFCA makes it possible to host so many elephants, all of which can move 'freely' across the different countries. The vastness of animal, vegetation, aquatic, and ecosystem diversity makes it an attractive tourist destination and appealing for studying interspecies relationships.

According to the Peace Parks Foundation, "a key objective of KAZA is to ensure connectivity between key wildlife areas, and where necessary, join fragmented wildlife habitats to form an interconnected mosaic of protected areas, as well as restore transboundary wildlife migratory corridors between wildlife dispersal areas (WDAs). These corridors re-

[2] https://www.peaceparks.org/tfcas/kavango-zambezi/ (Date accessed 02 March 2023)
[3] https://www.peaceparks.org/tfcas/kavango-zambezi/ (Date accessed 02 March 2023)

establish and conserve large- scale ecological processes that extend the boundaries or protected areas"[4].

Apart from the grandeur of natural resources and biodiversity, the KAZA is also home to humans. There is an estimated number of 2.5 million people living in or around KAZA TFCA, and over half of the land is communally managed and "used for subsistence farming or grazing" (Fraser, 2012). Due to the contributions of historical, environmental, and political influences, most of the communal areas in the KAZA are poor. The KAZA TFCA is focused on improving the socio-economic conditions of these people 'by routing development, tourism and conservation projects to them in line with TFCA objectives.' On their website, the KAZA TFCA expresses that 'the region has an incredibly rich cultural heritage, so rich and varied it is difficult to describe' (Kavango Zambezi website[5]). The website also describes the cultural heritage of the area as 'the magical backdrop to the "people" side of the KAZA TFCA' (Kavango Zambezi website[6]). This shows recognition of the presence of the people living in this area; however, the description presents their culture and cultural heritage as a resource to be experienced and explored like a tourist attraction, and disengages with the area as a home or personal place for the people.

In a study about people living near protected areas in six southern African countries, Snyman (2014) analysed the impact of various demographic and socio-economic variables on the attitudes of the community members. The study showed that formal education positively impacted attitudes towards conservation, while conflicts between humans and wildlife negatively impacted attitudes toward conservation. It was also observed that, "community members in the study felt that tourism creates employment and can help reduce poverty"

[4] https://www.peaceparks.org/tfcas/kavango-zambezi/ (Date accessed 02 March 2023)
[5] https://www.kavangozambezi.org/travelling-in-kaza/ (Date accessed- 02 March 2023)
[6] https://www.kavangozambezi.org/travelling-in-kaza/ (Date accessed- 02 March 2023)

(Snyman, 2014:7). However, Snyman (2014) also notes that, in communities where tourism has been in operation in a community for a longer period, least positive responses were received about conservation than communities where tourism was new (ibid). This example shows how the value of tourism activities in communal areas in TFCAs may potentially become unpopular, based on the impact of human-wildlife conflicts.

This shows that the conservation of Africa's wildlife attracts global attention like many other designated wildlife and natural resources protected areas across the world. Conserving Africa's wildlife is not solely motivated by the desire to protect wildlife and biodiversity ecosystems. The motives are also rooted in obligations to adhere to international conservation guidelines and income generation through tourism.

Concepts from multispecies studies

Multispecies approaches consider that the agency and sentience of non-human beings identifies examples of coexistence, or co-creation of life between humans and non-humans. The multi-species theory has become more prominent in the ongoing discourse about the Anthropocene (van Dooren et al., 2016). Proponents of the multi-species theory turn our attention to the sociality and agency of non-human beings and challenge the dualistic ideas that have separated humans from the environment, also known as the nature-culture divide (Fuentes and Baynes-Rock, 2017; Tsing, 2013; Smart, 2014; Kirksey and Helmreich, 2010). Hence, recognizing human beings as organisms living among other non-human organisms, suggests a kind of equivalence among humans and non-human beings, thus reducing the exceptionality of human beings. According to Ingold (2000) ‘if persons are organisms, then the principles of relational thinking, far from being restricted to the domain of human society, must be applicable right across the continuum of organic life’ (Ingold, 2000: 4). Kirksey and

Helmreich (2010) also propose to challenge the general idea of viewing human beings as a central point of reference or organizing principle with the rest of the non-human organisms as the 'other' (Kirksey and Helmreich, 2010: 562). Their approach presents the possibility of studying each organism outside the realm of the otherness and that all organisms possess the capacity to be studied in relation to each other under the same principles (Ingold, 2000: 4).

These organisms, or non-human beings, are described as 'agentive beings' (Ogden et al., 2013:6), and 'social beings' (Kirksey and Helmreich 2010: 554). This guards against the potential of limiting one's view of non-human beings and relegating other species to the role of passive objects. The view that non-human organisms have agency is a significant issue that emerges from the multispecies discourse and spotlights the importance of considering how non-human beings relate to each other, as well as humans. Thus Ogden et al., 2013 define 'multispecies ethnography' as ethnographic research and writing that is attuned to life's emergence within a shifting assemblage of agentive beings. By 'beings we are suggesting both biophysical entities as well as the magical ways objects animate life itself" (Ogden et al., 2013:6).

There are examples about elephants (Münster, 2016; Hewitson and Sullivan, 2021), primates, (Riley et al., 2017) and salmon (Swanson, 2017) that show that multispecies approaches study different animals. However, multispecies ethnography is not only concerned with the relationship between humans and animals but also other organisms such as plants, insects, and viruses (Ogden et al., 2013; Kirksey & Helmreich, 2010). The multispecies approach thus gives room to study non-human organisms in conservation settings.

"becoming" and "contact zones".

This thesis uses concepts from multispecies studies such as "contact zones" and "becoming with" to understand the relationship between humans, livestock, and wildlife. Therefore, the

central ideas in multispecies ethnography present human beings as organisms living with and among non-human organisms (Ingold, 2000). It diverges from other perspectives on human-animal relations, by acknowledging that every organism influences the emergence of life and way of life of the other in a process of cobecoming (van Dooren et al., 2016) or becoming with (Haraway, 2008). The prompt is to also encourage us to observe the life of non-human organisms as coexisting, co-creating beings on earth, recognizing that we are in relation with each other rather than separate and different from each other. The MS approach studies phenomena according to the experiences of both humans and non-humans, giving one access to non-human worlds.

Notably significant to the multispecies discourse, is the idea of 'contact zones' (Haraway, 2008). The phrase contact zone was coined by Pratt, (1992) to refer to the space where geographically and historically separated people meet and establish relations, "usually involving conditions of coercion, radical inequality, and intractable conflict" during colonial encounters (Pratt, 1992: 6). Contact zones are essential elements of a multispecies society because this is where human and non-human beings build relationships and the process of becoming takes place. According to Ogden et al (2013), 'there is a notable methodological emphasis on choosing research sites that foster multispecies encounters, what Haraway called 'contact zones' (Ogden et al., 2013: 10).

In the contact zone, organisms develop ways to communicate with other organisms that are different from them. This helps them identify whom their companions are and who they are (Haraway, 2008). Thus, contact zones are social zones of communication and identity formation because 'one can only be somebody only if someone else is something' (Haraway, 2008: 206). Furthermore, contact zones are also places of sustenance and sustainability for both humans and non-humans, such as 'zones of livelihood and zones of forest protection' as

described by Tsing (Tsing, 2005: 175). Furthermore, the spaces or areas in which these organisms meet and influence each other are significant, especially in terms of how resources are used.

Contact zones are also spaces where distinct cultures meet, and are characterized by power 'relations of domination and subjugation' (Sundberg, 2006: 240). These power relations may be caused by different forms of economic and political influence. Conservation areas for example, are considered 'important zones of encounter and contact shaped by distant and near actors' (Haraway, 2008: 218). This suggests that, while a diverse number of organisms may live in the same area, their existence is shaped by the authority of local, national or international actors. Over the years, different actors have influenced the characteristics of conservation areas as spaces that seclude or include humans and wildlife.

Multispecies ethnographers also acknowledge that all organisms influence the emergence of life and the way of life of other organisms (van Dooren et al., 2016). Becoming, is a term described by Donna Haraway (2008). It a occurs when organisms develop and their identity is formed as they interact with other organisms. Becoming is also a process influenced by time, as each organism becomes the product of a compilation of historical and present-day entanglements (Haraway, 2008). Haraway recognizes that historical and everyday events such as 'labour practices,' the weather, 'environmentalism and class' contribute to the current state of organisms (Haraway 2008: 6). Becoming also includes environmental or social formations that occur due to encounters, and identity formation is also about meaning making (Wilson, 2019) because identities can take on negative or positive forms. Thus, the multispecies concepts can help provide a framework to analyse the history of human and animal relations at the edge of the park and a discussion on how to help with the emancipation of locals from marginalization.

The outline of this thesis

This thesis seeks to bring attention to the relationship between humans and non-humans at the edge of conservation areas. Chapter two describes my experience collecting data in Zimbabwe. This includes an explanation of different methods that I used, as well as the challenges that I faced in the process. In chapter three, the historical background and factors that led to the formation and creation of Wankie Game reserve and Gwaai Native reserve are discussed. These factors include influence from colonial settlers, the presence of diseases, and changes in land use and ownership. Chapter four focuses on the present-day context, specifically the life of people living in Tsholotsho Rural District near the Hwange National Park. In this chapter, I describe the income and livelihood strategies that are available to the villagers, their experiences with drought, food security, and access to water. In chapter five I focus on presenting the places where humans, their livestock, and wildlife are likely to encounter each other. This includes both spatial and temporal spaces. In this study, I lean more towards highlighting the life of humans using concepts from multispecies studies, such as contact zones. In chapter 6, I discuss the villagers' perceptions and opinions about living near the boundary of a national park. This includes their perceptions about wildlife and conservation, the importance that they place on living near the national park, and the value of the national park fence. The chapter also discusses the future aspirations of the villagers, especially in relation to their relationship with wildlife.

2. Methodology

This chapter describes the research methods I used to collect data and my experiences in the field, including how I managed the challenges that I faced. My travel to and stay in Zimbabwe, for the purpose of data collection, occurred in three phases: June 2019 to September 2019; March 2020 to July 2020 and January 2022 to March 2022. I used specific methods with the goal of answering my research questions, which mostly included qualitative methods and quantitative methods. At the start of my field work, I used approaches such as free-listing and pile sorting, reviewing archives, and informal interviews to help me understand the topic and research site better. I complimented these methods by conducting interviews, surveys, and focus group discussions as I progressed with the research. Observations also played an integral role throughout my time in the field, especially while I was at the village. Planning my trips and managing interactions with different people, fall into another category that would allow me to comment on how I experienced the field and navigated the different challenges I faced, such as Covid19 outbreak.

Entering the field- first impressions

I collected data during the time I spent in Thokozani village, in Tsholotsho Rural district and other places, such as the national archives. Before I reached the village, I had met and spoken with officials from The Zimbabwe Parks and Wildlife Management Authority, the Department of Livestock and Veterinary Services, as well as reviewed some material from The National Archives of Zimbabwe. This section on entering the field is a description of my initial experience with finding a field site and host family, and a description of some of my interactions with different authorities that formed the beginning stages of my data collection process.

While in Harare, I visited and introduced myself and my research project to the different organisations related to my research, from whom I applied for a research permit and requested approval to conduct my research. These organisations included the Zimbabwean Parks and wildlife Authority, the Department of Veterinary Services, the Research Council, and the National Archives. I also visited CIRAD, an organisation that has done research on foot and mouth disease in Zimbabwe.

Identifying and selecting a field site

The initial premise of my research was to study to what extent foot and mouth disease (FMD) influences the relationship among humans, livestock, and wildlife. I was interested in studying the communities located near Hwange National Park to understand how such communities navigate through the problems and threats of wildlife related disease that are associated with living near the edges of conservation areas. I planned to select a village or study site, which was near the park, by identifying a community that had high numbers of FMD outbreaks. I planned to gather information from the authorities that work in this area and to examine the statistics of FMD occurrence to identify a village based on the number of outbreaks. However, two reasons influenced the change in my topic and decision on the location of my field site. Firstly, my informal interviews with officials from the veterinary services and those from the Parks and wildlife Authority, soon revealed to me that the rural communities in Tsholotsho rural district are direct neighbours of Hwange National Park, this is unlike communities in Hwange District that are buffered by forest areas and safari areas. The border that separates Hwange National Park and Tsholotsho communal lands is about 140 km long; it is the largest border separating humans and wildlife in the KAZA region (Hwange Management Plan (b). Hence, my discussions with these experts influenced my decision to go to Tsholotsho Rural District and identify a relevant village there, instead of Hwange District, as I had initially planned. Secondly, when I began my research into

statistics and records about FMD in this area, I faced a challenge of unavailable data. There was no available data of FMD outbreaks in Tsholotsho Rural District that I could refer to. One veterinary officer explained that there had not been any cases of foot and mouth disease outbreaks in the last 30 years in Tsholotsho district. Therefore, there were no statistics or information available to me to determine which villages to choose from. Without statistics that I could use, it was difficult for me to use the number of FMD outbreaks to identify a village. Therefore, the process of choosing a village involved randomly selecting a village that was located near the national park fence in Tsholotsho district.

Visiting Tsholotsho Rural District

Like Hwange District, Tsholotsho Rural District is in Matabeleland North Province, which is in the North- western part of Zimbabwe (Figure 1). Apart from short stays or driving past Bulawayo, I had never lived in the Matabeleland Province. In mid-July 2019, I travelled by bus to Bulawayo, which is located about 440 km away from my family home in Harare. I lived with relatives while I prepared for my journey and stay in Tsholotsho District. These preparations included introducing myself to the District Administrator of Tsholotsho Rural District council, and requesting permission to conduct my research, searching for accommodation, as well as identifying the different organisations that are working in the area. Whilst in Bulawayo I visited, introduced myself to, and conducted interviews with the Provincial Veterinary officer of Matabeleland North in Bulawayo.

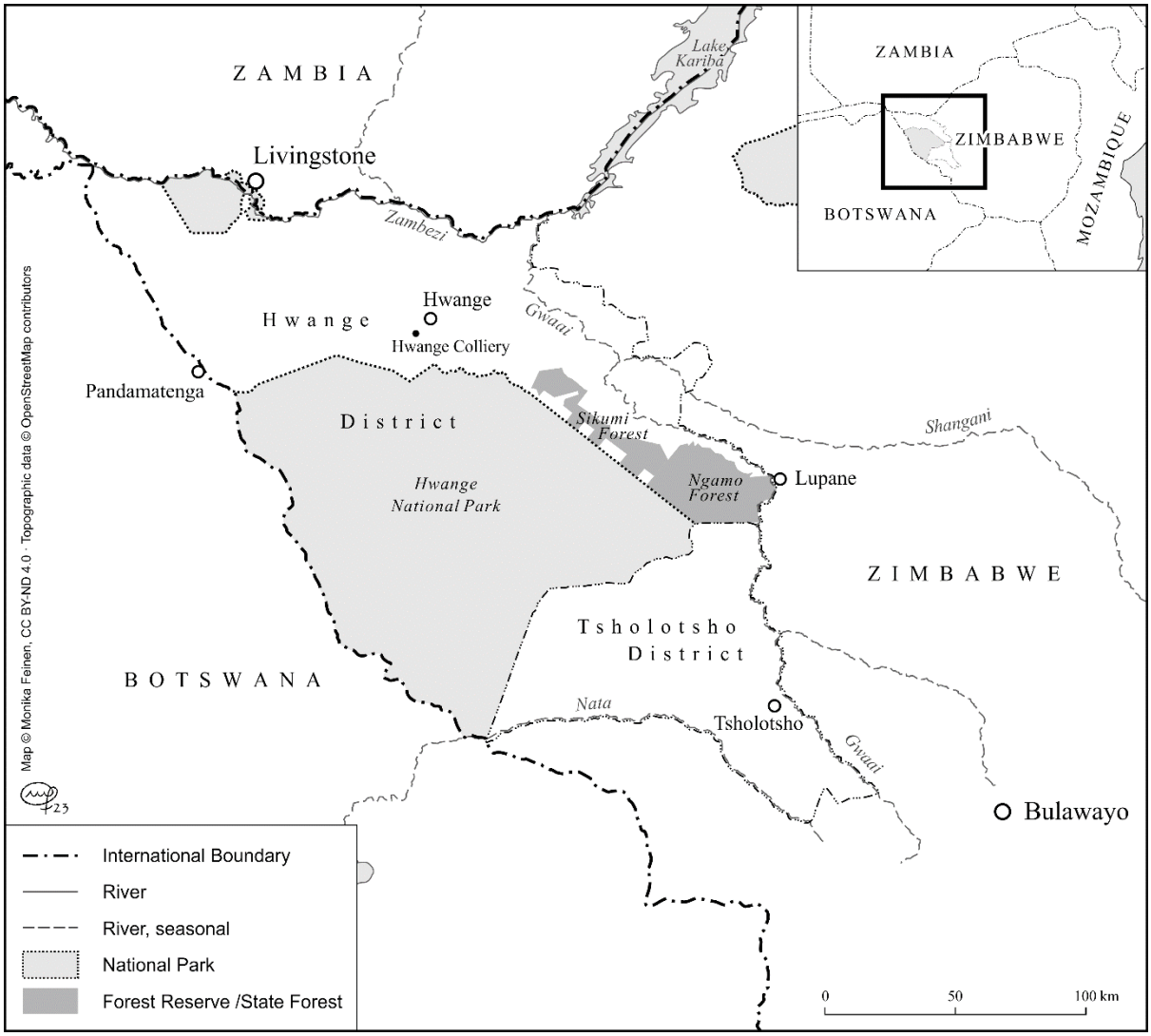


Figure 1 Map showing the location of Tsholotsho and Hwange National Park

I visited Tsholotsho Centre (TC) for the first time in August 2019. My visits to Tsholotsho centre involved commuting from Bulawayo to Tsholotsho Centre because I was not able to secure adequate accommodation at Tsholotsho Centre. Tsholotsho Centre is located about 120 km away from Bulawayo. Most government offices, and offices of NGO's working in this district, are in Tsholotsho Centre. I travelled using public transport, usually a commuter omnibus, which I boarded near the road traffic intersection at Emakhandeni, in Bulawayo.

The journey takes about two to three hours with public transport, depending on whether you experience delays from either breakdowns or passenger pick-ups/drop offs.

In addition, the road to Tsholotsho Centre from Bulawayo consists of a strip tarred road, with some rough patches of potholes along the way, making the road unsuitable for travel with small vehicles. Although most of the potholes are small and not deep, they are littered across most of the tarred road, especially from Nyamandlovu to Sipepa turn-off, thus increasing the time spent on the road. On my first trip, I boarded the commuter omnibus at 9:15am and I arrived at my destination at 12pm. The three-hour journey was because the bus experienced a fault, the engine was overheating. The driver stopped the combi on the side of the road and attended to the fault. Luckily, there was a nearby homestead with a well, and the driver was able to obtain some water to help cool down the engine.

Upon arrival, my first action was to look for the District Administrators (DA's) office and ask for permission to conduct research in this district. After locating the DA's office, I spoke to him and explained the purpose of my visit and research. He approved my request and his assistant asked me to make photocopies of my papers so that each office had a stamped copy of my documents. I went to the office providing photocopying services and the young lady who did the photocopying was surprised to learn that I wanted to go to that part of the district (near the national park fence). 'You will get raped by those old men in the village!' she said as she skimmed through my papers, while photocopying. I was speechless, because although concerns about my safety are always on my mind when I visit unfamiliar places, I was not expecting such a comment from her. In hindsight, I should have prodded further and asked whether cases of rape in this area are common, but I was rather speechless and I did not think of her statement as a warning. I resolved to continue, because at the initial stages there were a number of things that I did not know about the area I was going to. I decided that I would

first visit the village and, at the time, also assess the safety. I had also received other opinions about safety that family and friends had expressed when I'd talked about my desire to conduct research in this part of the country. For example, a few days before coming to Bulawayo, a family member had mentioned that I should be careful because they thought people from this part of the country are so violent, and they do not like Shona people.

The lady photocopying my documents continued by asking '…how do you plan to conduct the research since you cannot speak any Ndebele?' I told her that I was looking for a research assistant and translator, to which she replied and suggested that I could hire her to be my assistant and translator because she comes from Tsholotsho, and went to university. At that moment I decided that I would not make any promises of hiring her until I had located a host family and determined whether my research assistant and I can stay there or, better yet, if I could find a research assistant who lived in the village. I left the office after photocopying my documents and returned to the DA's office, where his assistant stamped my documents. As advised, I then proceeded to the office of the Chief Executive Officer of the Rural District Council, Natural resources department, the police, and the president's office with the photocopies to obtain the necessary approval and stamps.

Arriving at Thokozani village for the first time

I found that asking for help and explaining my research to family and friends assisted in the progress of my research. I asked family and friends for help in finding accommodation. Family members and friends would refer me to people that they knew who lived or worked in Tsholotsho, or they referred me to people who knew someone who lived and worked in the district. Through these connections, I managed to contact different people working with different local Non-Governmental Organisations (NGOs) and, after explaining the purpose and intent of my research, I asked for their help in identifying a village located near the fence

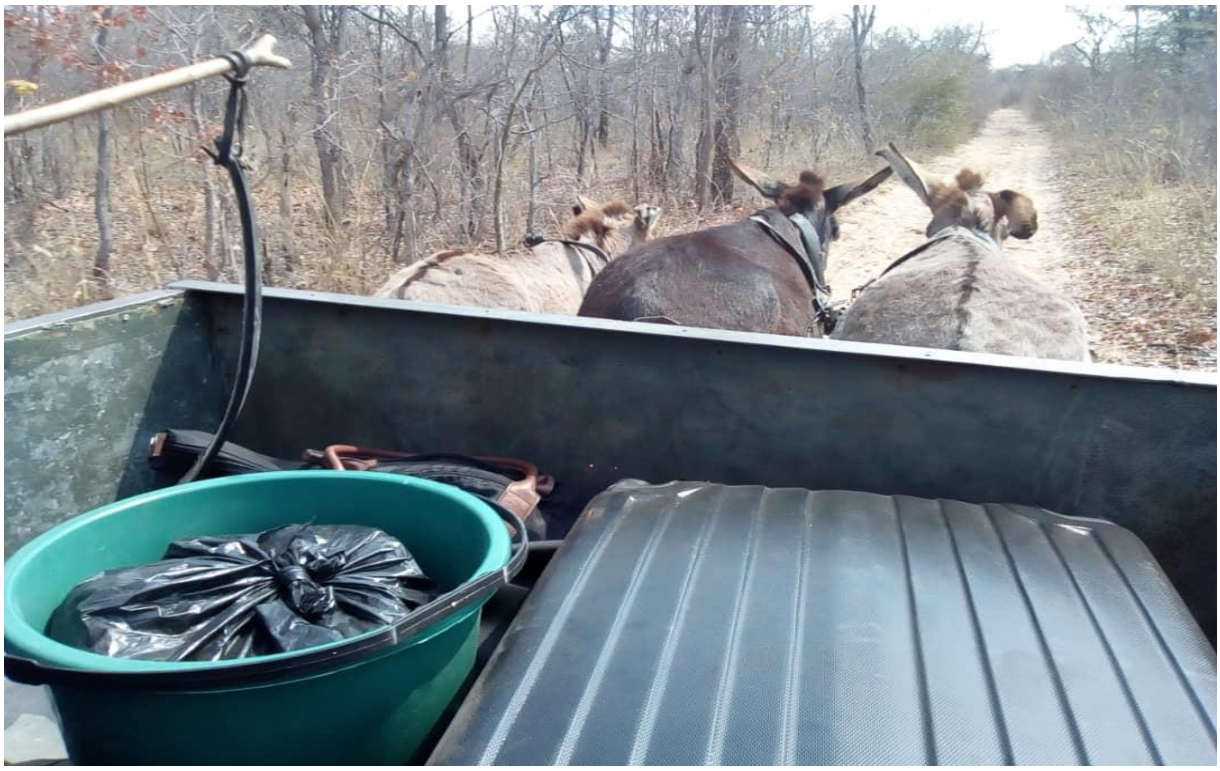
of the park, as well as finding accommodation. My cousin knew someone from her church who knew someone who worked for an NGO in Tsholotsho. I contacted this lady, and she introduced me to my host father to whom I explained my interest in doing research and my need for a place to stay during the time. He agreed to have me stay with him and his family at their homestead, which is located near the park. Therefore, about two and a half months into my fieldwork I finally managed to find a family to stay with.

My host family´s village is located about 87 km from Tsholotsho Centre. Most of the households are located about 3 km away from the border of Hwange National Park. Traveling to this village from Tsholotsho Centre was also a challenge because of the lack of available public transport and bad road. “You need a 4x4 to access these areas”, one official told me. Luckily, during one of their field visits to distribute food to Ward 3 where my village of interest is located, one local NGO I was in contact with, gave me a lift from Tsholotsho Centre to Kapanyana bus stop. The night before the journey, I slept over in Tsholotsho Centre in a single room, after a family member drove me to Tsholotsho Centre with my luggage and groceries. The following morning, I travelled the 80km journey from Tsholotsho Centre to Kapane, accompanied by people from the NGO. After dropping off the supplies meant for their field visit, the driver of the NGO dropped me off at Kapanyana bus stop (Picture 1), where I met my host father, who was waiting for me with a donkey drawn cart.

We loaded my luggage into the cart, climbed in, and started off towards his homestead. It is a 7 km journey from Kapanyana bus stop to the homestead however, this part of the road is narrow, sandy, and located within a bush area - as shown in Picture 2. When I arrived at the homestead, my host father´s wife, his daughter in law, and mother warmly greeted and welcomed me. After sunset, before supper, my host father stood at the centre of the

homestead, where they usually light a fire outside the kitchen and he said, "…this place is the place that they call Ziga, and we welcome you here..."

Picture 1: Taken in August 2019 at Kapanyana Bus stop



Picture 2: Taken in August 2019 during my first visit to the homestead, when my host father picked up me and my luggage at Kapanyana bus stop.

Each village in this Ward is divided into what locals refer to as Lines (villages) headed by a village head. Thokozani village is divided into three villages: Ziga, Zandile, and Nganyani (Figure 2). Ziga village is where I was staying. It has an estimate of 22 households, while Zandile and Nganyani have an estimate of 57 and 96 households, respectively. Before I started visiting homesteads and interviewing people, I met with and introduced myself to the village head and sought permission to interview people in his village. We communicated with each other in English because he understood English very well, like my host father and his family. The village head of Ziga welcomed me to the village and gave me permission to interview people in his village. In addition, he informed me that he would call for a meeting of all the villagers to introduce me.

At 12pm, on the day of the meeting, the villagers and I gathered at the appointed meeting place, about 200m from his homestead. We sat under the shade of many trees at a space cleared of grass and stones, with several tree trunks mounted slightly from the ground to form benches. The men sat on the benches while women sat on the ground. The headman welcomed the people and thanked them for coming. After an opening prayer was said by one of the women, the headman gave an introduction about me that included with whom I was staying with. The headman also asked my host father to explain more about the purpose of my stay and research. Afterwards, I was asked to introduce myself and how I plan to conduct the research. I explained that I will first visit the homesteads, door to door, to speak individually with the household heads or next available leader at home; this is because I first intended to conduct free listing and sorting exercises, as explained in the upcoming section about data collection methods. During the meeting, the headman spoke in Ndebele, the main language spoken by most of the villagers. I addressed the villagers in English and Shona, and my host father assisted me with translating.

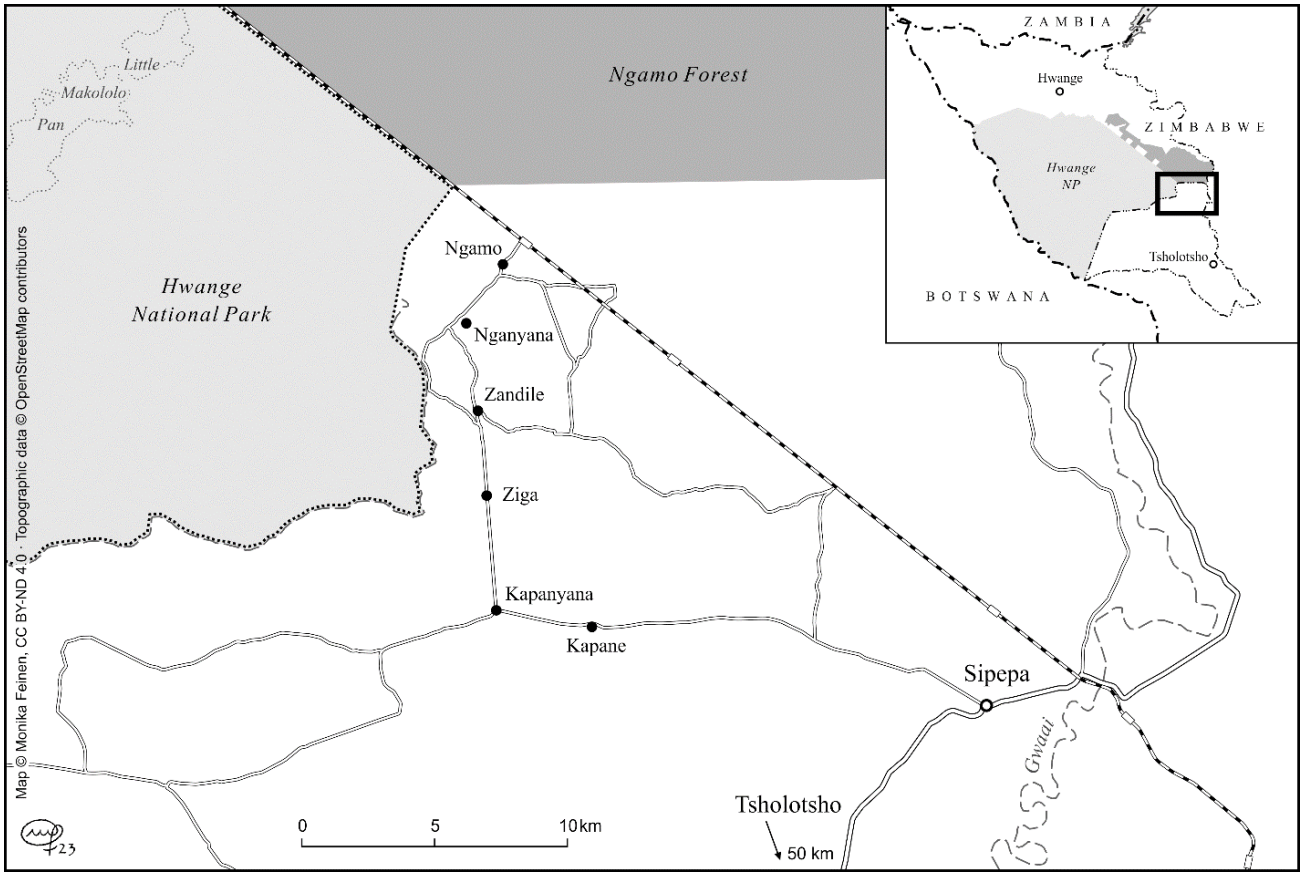


Figure 2 Map showing the location of study sites (Ziga, Zandile and Nganyana)

Data collection and analysis methods

Archival records

I began my data collection at the National Archives in Harare. When arriving at the gate a person is supposed to enter their name, home address, time of entry, and purpose of visit into the logbook of the security guard. Entering personal details when visiting most offices or business places, is common in Zimbabwe. When entering the building, there is also a visitors' logbook where one must enter their name, address, purpose of visit, date and time of entry and departure at the reception desk. At this point one is also required to pay the entrance fees and receive a receipt with a number. When entering the reading room, one must also enter their name, address, receipt number, institution of affiliation, and specify the topic being

researched. Near the glass walled reading room there are cabinets that hold the catalogues and cards of the archive. One can search through the catalogues and request any documents needed by filling in slips of paper with the reference number and titles of those files. These slips are placed on the desk of the staff member on duty and the staff responsible for retrieving the files from the repository retrieve them and bring to the appointed desk in the reading room. A researcher can only request four files at a time.

Before requesting a file, I searched the cards in the catalogue, making a list in my notebook of all the titles and file numbers that I thought were relevant to the topic and location that I was researching. For example, I searched for files with titles such as Game, Wankie Game Reserve, Gwaai Native Reserve, Foot and Mouth Disease, Tsetse Fly, Ted Davison, Wildlife, and Elephants. Afterwards, I would request the different files, four at a time, and wait for the retriever to bring them to my desk in the reading room.

I also selected files and records from different government departments, such as the Prime Minister's Office, the Veterinary Services Department, and Native Commissioner Reports. However, I could not find much information on foot and mouth disease specifically pertaining to Thokozani village or the district of my field site. I was able to retrieve some information on conservation in Zimbabwe and Hwange National Park from past publications and reports from wildlife Journals, Chief Native Commissioner Reports and Game Warden's reports. I also reviewed archival material that I could find about the improvement of access to water for Africans living in the Gwaai Native Reserve, during the colonial period. There were also several files on Tsetse fly. However, some files could not be retrieved from the repository because the retrievers could not find them.

As a non-historian the opportunity to consult with, and be assisted by staff members at the National Archives, helped me to know how to search and request for documents and

materials. The staff was also very friendly and helpful. However, even after gaining approval from specific staff, and paying a fee, I was only able to make copies and scan a limited number of files. The information I obtained from the files was qualitative, and I used MAXQDA and CITAVI referencing software to code and analyse the information and documents that I had. After scanning the documents and uploading them into the software, I coded or grouped the information based on topics such as Wankie water sources; Wildlife management laws; foot and mouth disease in Rhodesia, Buffalo and cattle in Rhodesia, Tsetse fly at Wankie; Foot and mouth disease in Wankie, Foot and mouth disease in Gwaai Native Reserve, and History of the fence. Using CITAVI helped me with organising the file names and numbers into one database so that I could be able to create a reference list of the files that I had used in my thesis.

Free listing and sorting

When I arrived at the village, I made the decision to use free listing and sorting exercises as one of my first methods. This is because I wanted to obtain the first impressions about the villagers' perceptions of living near the national park and their view of wildlife diseases. My host father was assisting me with translation so, when he and I arrived at the homesteads of the respondents, we would ask to talk with either the head of the household or the oldest person who was at home at the time. I conducted free listing and sorting exercises with people from seventeen of the of twenty-two households in Ziga. This included eight female and nine males. Since Ziga has an estimate of twenty-two households, my goal was to conduct the exercise with the heads of each household, but one of them refused to participate and no one was at home at the other four homes.

In order to first determine the major challenges, they face due to living near wildlife areas, I conducted two sets of free listing and sorting exercises. This enabled me to determine the

degree of danger associated with the challenges, and their ability/methods of coping with the challenges. I asked the respondent to "please list the challenges you face due to living near wildlife?" This exercise give me an insight into the main problems experienced by villagers living near the edge of the national park. This helped me to have a snapshot of where the problem or the threat of FMD ranks in relation to other challenges that they face. I conducted a second set of free listing and sorting exercises to determine their knowledge of livestock disease, the level of danger associated with each disease, and their ways of coping with the disease. I asked respondents to list the names of livestock diseases that they know and those that have affected their livestock in the past. I later asked them to rank the diseases according to how dangerous they think they are.

I entered the data that I collected from the free listing and sorting exercise into Microsoft Excel and created some of the tables and graphs that I use in the thesis. This exercise helped me to have first level insight into how much the villagers know about livestock diseases and how dangerous they perceive them to be. It also helped confirm some of the issues that had already been alluded to by the officials and experts that I had spoken with before visiting the village, which include the view that diseases such as foot and mouth are not the top problems that affect people here because of the lack of outbreaks of the disease in the area.

Interviews

I used informal interviews, semi structured interviews, and in-depth structured interviews during the data collection process. In 2019, when I was interviewing respondents from the village, as well as experts from the Veterinary Services Department, Zimbabwe Parks and Wildlife, and people working from the different NGO's, I used a combination of interview methods (such as informal interviews and semi-structured interviews) specifically at the beginning stage of the data collection process, as I wanted to get a sense of the how the topic

of foot and mouth disease was viewed by the different targeted participants. The purpose of semi structured interviews was also to obtain descriptive data from the villagers; I could do this with the use of requests and questions such as ‘narrate a time when your livestock fell sick fell sick and what actions did you take? How would you describe healthy livestock? To what extent does the ill health of your livestock affect you and your household? Narrate a time when wildlife attacked your livestock and what actions did you take?’ I asked these questions after conducting the free listing and sorting exercise. As the respondents gave their responses, I had the opportunity to ask questions that followed up on the information that they had given. This also helped me because I was able to have the foundational information that I would use to create questions for survey questionnaire (in 2020) and in-depth structured interviews (in 2022) later in the data collection process.

In 2022, with the help of my research assistant and translator, I was able to conduct twenty-seven in-depth interviews. I conducted the interviews with nineteen women and eight men. I asked the questions in English and my research assistant would then translate the question and ask the participants in Ndebele. While a few responded in English, most participants made their replies in Ndebele. My assistant would them translate their responses into English for me. I grouped the questions into four different topics, such as opinions about living at the edge of the national park; opinions about conservation and wildlife; livelihoods and income and lastly, opinions about their future aspirations for the village and national park. All the in-depth interviews were digitally recorded using a recorder and a mobile device. I transcribed the interviews from the digital recording to a Microsoft Word document and then uploaded the document onto MAXQDA software. In MAXQDA I coded the information based on themes such as the fence; living on the edge; the significance of livestock and land; and the significance of conservation.

Survey

In June 2020 when the President had lifted covid 19 restrictions I conducted a households survey in all three villages, Ziga, Zandile and Nganyana. I created a questionnaire with both open ended and close ended questions. I divided the questionnaire into different sections. One section consisted of questions about demographic background and assets of the households. There was also a question asking about the different sources of income and livelihoods available to a household. In another section of the questionnaire, I asked them about their access to food and water in their household with the intention to understand their experience of the effects of the drought. In the last section of the questionnaire, I asked them about human wildlife interactions. I specifically asked about the kind of wildlife they come across and the places they and their livestock were likely to encounter wildlife.

Before my research assistants and I began collecting any data, we drove to Kapane Clinic to inform them about our presence in the village and to introduce myself at the clinic because of concerns about Covid-19. The nurse in charge advised that since I was coming from Harare, a high-risk area, I should be cautious if I started to show any signs and symptoms of Covid 19. She also advised the use of masks, hand sanitizers, social distancing (1 meter apart) while conducting interviews, and she discouraged focus group discussions. Lastly, she asked me to write down my name and contact details in their visitors' logbook in case something happens after I leave, and they need to trace me.

In preparation to conduct the survey, I first printed out a few copies of the questionnaire and met with one of my research assistants to discuss the questionnaire and its translation. Afterwards, during a two day pilot, I first assessed the questionnaire with respondents only from Ziga. During those two days the driver and I travelled from Bulawayo to the village. We woke up early and left Bulawayo around 5:30am, heading for Thokozani village. During our

drive we came across roadblocks, and in Nyamandlovu the police stopped our car and asked to see our Covid 19 travel exemption letters, which I produced. After two days of this pilot procedure, and reviewing the questions, I printed them out while I was staying in Bulawayo.

The driver, two research assistants and I then set out to conduct the survey on the rest of the villagers. In terms of accommodation, to conduct the survey questionnaire, the driver and I stayed at a very modest 'bed and breakfast' in Tsholotsho Centre, instead of staying at the village or in Bulawayo. There were two main reasons for staying in Tsholotsho Centre and driving daily to Thokozani village: first, there was no adequate accommodation to house the driver, my two research assistants and me in the village; secondly, there were concerns about the spread of the corona virus. The survey lasted 4 days and so, from Monday to Thursday, we drove back and forth from Tsholotsho Centre to the village, picking up my two research assistants who lived near Tsholotsho Centre along the way.

According to the village heads, Thokozani village has 175 Households (HH). My target was to survey 150 of them. In the end I only managed to survey 98 households (19 in Ziga; 29 in Zandile and 50 in Nganyana). We would drive from one village to another, park the car at a convenient place, and then walk from homestead to homestead. The drive from Ziga to Zandile passes through large tracks of farm fields enclosed inside a fence made from shrubs and thorn bushes. Unlike Ziga, Zandile has more homesteads, the 'lines' of which are more orderly, and one can follow along from one homestead to another. However, we soon realised that although this village has more homesteads a significant proportion of them looked abandoned, as though people had not lived there or had not been at home for a long time. "They are ruins" was the statement that one of my research assistants used to describe the condition of some homesteads. It was clear that the state of abandonment would reduce the number of households available for the survey. As a consequence, we lost approximately 10

households which would otherwise have been available in Zandile. The condition of the homes could indicate that although, the households are counted as belonging to someone, they are not always occupied by their owners. Owner/occupiers could be villagers who live in the city or town, or in neighbouring countries, and only occasionally return to their village home. This situation also confirms that migration out of the village is apparent. Although remittances have so far been considered a general characteristic, they do seem to be emerging as the number one, characteristic source of income and livelihood. Migration makes this possible, and is further discussed in chapter four.

We continued to drive towards Nganyani; the homesteads in this village are more dispersed, almost scattered when compared with the previous villages. This village also has more homesteads in comparison to the other two. We acknowledged that the dispersal of the homesteads in this village is not in a linear manner, and the distance and time spent walking from one homestead to another was more, in comparison to the other villages. In Nganyani we ran into a familiar problem. As in Zandile, many of the homesteads were unoccupied.

Another problem that we encountered while administering the survey, was that some people were not home because they had either gone to collect food at the food distribution point or they were attending the ritual of the Tsikamutanda (witchdoctor). At one home however, they did not want us to interview them at all - for example, a child was sent to the entrance of their homestead to tell us that no one was at home. Because not all villagers were at home during the survey phase, I could not meet my expected target. This was problematic.

When I created the survey questionnaire, I also included a short, semi structured interview schedule. The questions asked during this interview were open ended but they targeted a specific issue that had come up during informal talks, free listing, and sorting sessions - and I wanted to get more information from the villagers about it. My goal was to ask 20 people.

However, my research assistants and I managed to ask 17 people (8 male, 6 female and 3 not stated). Each of the respondents were from different homesteads that we had visited during the survey, and whom we selected randomly. After the survey was completed, I entered the data into a Microsoft excel sheet according to the different categories of the questionnaire. I also used MS Excel to produce descriptive illustrations of the data, with graphs and tables.

Observations

Observations contributed a crucial part in my data collection process. Observing the things that were happening around me during my stay, helped me to understand the context of what the villagers described during interviews. In addition, during my stay, I never saw any wild animals, only signs and sounds of their presence around the village (as described in chapter five). I hold the view that this experience is common for some of the villagers. They may not be able to visually see the wild animal because it either passes the village at night or the bush where livestock graze, but they see its presence through the destruction of crops, destruction of vegetation, spoors, and the attacks on their livestock.

Within the day-to-day schedule of my host family, I was able to observe the time they spent performing different activities around the home. I observed time spent doing household chores and how these chores varied according to age and gender within the household, and even across the village. At times I would sit with my host mother and her daughter-in- law while they worked their handmade wares. I also noticed the time and care that they give to their livestock, for example, making sure they have water during the dry season and making sure they enclose their livestock in the enclosure at sunset.

Focus group discussions.

When returning to the village in 2022, I was able to conduct two focus group discussion. In 2019, I was still developing the topic and getting to know my field site. Consequently, this did not seem like a good time to conduct group discussions. Unfortunately, by, 2020, Covid regulations made it impossible for me to conduct them. So, during 2022, I returned to the village and conducted two group discussions. One group consisted of five young men between the ages of 18 and 32. The second group discussion was with a group of five women between the ages of 54 and 74 years. The discussions lasted 55 minutes and 39 minutes, respectively. Both groups gave their different perspectives about living near the national park. Although they highlighted some differences related to their daily work, based on gender differences, they have similarities when it comes to the responsibility of protecting their livestock from the attacks from wildlife. As during the interviews, I conducted the group discussions by asking the questions in English. My research assistant then translated the questions and asked the participants in Ndebele. The participants would most often respond in Ndebele, and my assistant would then translate into English and tell me the response. Both group discussions were digitally recorded using a mobile device or recorder and later transcribed to Microsoft Word.

Challenges

Social and economic situation in Zimbabwe

During the time of my fieldwork, Zimbabwe was experiencing fuel shortages, municipal water shortages, electricity shortages, cash shortages, severe effects of a drought7, a cyclone and a global pandemic. The electricity shortages significantly affected my data collection.

[7]https://edition.cnn.com/2019/10/21/africa/zimbabwe-elephant-drought-starvation/index.html
Date accessed 10 October 2019

While conducting field work in 2019, I witnessed the extent of the severity of power shortages in Zimbabwe. This consisted of eighteen-hour black outs, usually between 5am to 10pm, due to load shedding. There were days when I could not gain access to the National Archives because there was no electricity and no generator. I also noticed the effects of the power cuts on the use of mobile network services. Whilst in the village, in September 2019, we spent about six days without mobile service network coverage, including internet access. Normally, when there is no electricity, the nearest mobile network antenna tower uses a generator. However, during that time, diesel was not easily available and, since the electricity was out for many days, the network tower was down. The other network tower in Ngamo was also not working. This affected my ability to communicate with my family, communication I was making with respondents, and my ability to search for a research assistant.

Research assistants

Unfortunately, I am only able to speak Shona and English, two out of the sixteen official languages spoken in Zimbabwe. Ndebele is the main language spoken at my field site. Most of the respondents did not speak Shona and, although other villagers spoke English well, I noticed that they are more confident expressing themselves in Ndebele. During my first visit in 2019, I planned to select and hire a translator and research assistant who lives in the village. During my time there, I met a few young people who worked for NGO´s in another part of the ward. I thought they could be good research assistants however, because of their commitments and responsibility to their jobs, as well as the distance between their place of residence and where I was staying, they could not assist me. They would have preferred to help me if I had access to a car because coming to that part of the ward on foot was difficult, not only because it was far but because walking in the sandy soil was uncomfortable, “it is as if you are walking in water” one of them had said.

My host father also referred me to one young lady who lived in the village and had learnt English up to Ordinary Level; he thought she might be willing and able to assist me. When we met with her, I conducted a mock exercise with her; my host father and mother. The exercise was to demonstrate how I planned to conduct the free listing and pile sorting exercise, and help determine how well she could translate. Although the lady understood some of the English, she was not able to properly translate what I was asking or what my host father was answering. Since my host father speaks and understands English very well, he proceeded to respond to the questions in English instead of Ndebele once he realised that the young lady was unable to do so. After this exercise, my host father agreed that he would assist me with the free listing and sorting exercise, as well as some of the interviews during my stay in 2019. Hence, my host father assisted me with translation in 2019 when he had available time from his work around the homestead.

A few days after the mock test, my host father and I were conducting the free listing exercise at one homestead, and I noticed that the woman I was speaking with spoke very good English. After we left the homestead, I told my host father that I was interested in asking this lady to help me as a research assistant. He, however, mentioned that it might be difficult to have her assist me since the woman´s husband was away working in South Africa, and her in-laws would first need to ask their son for permission and, most likely, they would not agree. This incident also left me asking myself whether there is a negative perception about a woman walking around the village, asking people questions or was it concern about safety. This also made me reflect on my position as a female visitor at the village who was going around asking people questions although I never walked around the village alone, I was always in the company of either my host father, his wife or daughter-in -law, my research assistants and the driver.

When I returned in 2020 and 2022, I searched for research assistants before I went to the village by contacting someone who worked for one of the local NGOs in the district. They referred me to people from Tsholotsho Centre who normally assist them as data collectors with their own research projects. In 2020, both were teachers at different schools in Tsholotsho Rural District. One taught at a primary school and the other one taught in Secondary school. They were also born in Tsholotsho, and both live at Tsholotsho Centre, or the nearby villages. In 2022, because one of the previous researchers was unavailable, I hired a recent university graduate who lived in Tsholotsho Centre, in their place. However, I would only ever have two research assistants at a time. Although they did not come from Thokozani village, it was still very valuable that they lived in Tsholotsho and that some of them grew up and went to school in Tsholotsho district.

Travel and Transportation

As my areas of interest were in different parts of the country, travel was a large element of my data collection experience. Whilst my study area is located close to almost 600 km away from Harare, the National Archives, Veterinary Services Head office, and the Parks and Wildlife Head Office are there in the capital city of Zimbabwe. Additionally, Tsholotsho, the District Administrators office, offices of local NGOs, CAMPFIRE offices, and the Veterinary Services offices are in Tsholotsho Centre, which is about 87 km away from the village. More often than not, I would use public transport to travel between the different cities, particularly at the start of, and during my field work in 2019. While in Bulawayo, a relative on occasion would dropped me off in Tsholotsho Centre or at the nearest bus stop to the village. In 2020 and 2022, I used public transport to travel from Harare to Bulawayo and back, but for the time spent data collecting in the villages, I needed personal transport. So, in order to travel from Bulawayo to Tsholotsho, I borrowed an old Nissan pick-up truck from a relative who

lived in Bulawayo. I also hired a driver from there. I sent the car for service to get it fixed and to assess its suitability to drive long distances. This personal transport made it easier for me to quickly access all three villages and travel with the research assistants from Tsholotsho Centre to the village.

Corona virus

The corona virus outbreak affected the second phase of my field work. I flew to Zimbabwe on the 27th of February, a few days after Karneval in Cologne had taken place. At Harare International Airport, a worker using a handheld infrared thermometer, checked the temperature of each disembarking passenger at the "port of health". Immediately after, airport officials directed passengers to the side and gave us forms to fill in our contact details and the purpose of stay in Zimbabwe. This was part of their measures to enable contact tracing and follow up on recent travellers to Zimbabwe. The week after my arrival I went to submit my application for the renewal of my research Permit with the Parks and Wildlife Authority, and I later collected my permit on the 13th of March.

On the 17th of March, I travelled to Bulawayo to stay with a relative, enroute to Tsholotsho. Later that day, the President of Zimbabwe declared Covid-19 a state of national disaster in anticipation of its impact and to make it possible for the government and its staff to prepare resources and measures against it - although there were no confirmed cases in the country yet. On the other hand, our neighbours Namibia, Zambia, and South Africa had already confirmed some cases of the virus. At 07:00 Sunday 22 March, I received a phone call from my host father. In a faint tone, attesting to the bad mobile connection, he said; "Tsikamutanda is visiting the village… you should wait to come here because it might interfere with your research. I do not know when he will finish but I will call you to inform you when it is ok for you to come.' Tsikamutanda is a witchdoctor who moves from homestead-to-homestead

performing rituals to help people remove the bad things hindering their progress or success in life. I complied with the advice of my host father and decided not to travel to the village the following day, as planned. When I managed to return to the village in June, there was a witchdoctor again in the village, and some people were not home because they had gone to attend a beer brewing ceremony conducted by the witchdoctor. I do not know if this was the same Tsikamutanda who was there in March. It was, however, interesting to hear that this kind of witchdoctor still visited or was invited to the village nowadays; most people believe that their practices are deceptive and used to eventually swindle villagers of their money or livestock. Due to the time constraints of this phase of my fieldwork, I did not seek to join his ceremony or probe further about its purpose or outcome.

On Monday 23 March, news came that announced the first death due to Covid-19 in Zimbabwe. By this time Zimbabwe had three positive cases of Covid-19. The following morning I decided to travel back to Harare from Bulawayo; I realised that it was not possible for me to proceed to the village, first because of the witchdoctor, and secondly because of -the rate at which Covid-19 concerns were increasing in the country, and Southern Africa. I assessed that it would be better to return home to Harare until the situation improved. On the evening of Friday 27 March, shortly before 8pm, the president announced that from Monday 30 March Zimbabwe would be under 21 days of lockdown, like South Africa, which had started its lockdown a few days prior, on Thursday.

When I entered supermarkets or shops during the lockdown, security guards or shop employees were dispensing hand sanitizers to each person who entered and exited the shop. Apart from the commercial hand sanitizer or disinfectants on the market, some people also used methylated spirit. Some major supermarkets, business offices and schools placed large buckets of water with a tap and a dish at the entrance of their buildings so that visitors could

wash their hands before entering (see picture 3). When I travelled to my field site in June, after the lockdown restrictions had eased, I noticed that many homesteads had installed a hand washing station at the entrance, using materials such as a 5-litre plastic bottle, string, and wood sticks (see picture 4).

Picture 3 Shows a hand washing station outside a supermarket in Harare.

Picture 4 Shows a handwashing station at the entrance of my host family´s homestead.

On the 1st of June, it was a Monday, my brother drove me to our local neighbourhood police office to ask if there was a possibility of me obtaining an exemption letter permitting me to travel to Bulawayo and then Tsholotsho to do my research. The previous week I had found out that if one was able to give explanation for the purpose of their visit, this kind of travel authorization was issued by the police. Our neighbourhood police station referred me to the city's central police station. I bought an affidavit form for about 12 (ZW) dollars at a nearby pharmacy, as directed by the policeman. I filled it in explaining the purpose of my travel. When I entered the gate of the central police station, I was directed to the lawn, a few meters from the entrance of the building where a female police officer sat at a desk. I stood in the queue and waited my turn to speak to the officer responsible for authorizing travel requests. She read what I had written on the affidavit and asked to see my identity documents. She also asked about how I would travel all the way to Bulawayo as public transport operators were not yet allowed travel in the country. I replied that I would travel with a family friend who was driving to Bulawayo for work. She then stamped and signed my letter and gave it back to me. On Sunday 7 June, I travelled to Bulawayo and, as I explained in an earlier section of this chapter, I later travelled to Tsholotsho to conduct Household surveys.

My last visit to the village was in 2022, and the last activity that I did in the village was the female focus group discussion.

Conclusion

During the data collection process, I had the opportunity to travel and live in Tsholotsho. This experience was new and challenging. It was challenging in the beginning because I had very little knowledge of the district and community that I was planning to research. Communicating with, and asking different people for help and information about the area, helped me to plan my stay and activities. My background as a Zimbabwean helped me

managed the social and economic situation in the country and be aware of some of the cultural norms that framed my interactions with the villagers. Minor similarities with some of the villagers, such as sharing the same totem (lion), made it possible to break the ice in conversations and create a platform to build relationships. Furthermore, my sense of belonging and familiarity in the country was also higher because of my proximity to my family members. I believe that these personal characteristics helped and contributed to my being perceived or understood as a local visitor to the villager.

However, because of my limited level of Ndebele, my time in the village was challenging. In this case, my lack of knowledge about the language made me an outsider. Finding research assistants that could help me with translation helped solve that problem. I acknowledge however, that there is the possibility that some of the information or expressions may have been lost in translation.

There were also other instances that may have cemented the way my position as an outsider in the village was perceived. Apart from an inadequate knowledge of the language, my level of formal education may also have contributed to the villagers perception of me as an outsider. Some of the villagers, for example, were surprised to learn that my two siblings and I had all undergone formal education to at least undergraduate level. One person asked me what my young brother was doing, and I answered that he had finished school and is now working; they then asked, “he finished secondary school?” and I said, “no, he graduated from university.” They went on to ask, “so your sister went to university, you went to university, and your brother also went to university?” and I said “yes”, to which another responded by noting that “the people in Harare have money to send all their children to university.” This was probably surprising to her because it was not common for young people in the village to obtain a higher education certificate. I pondered over this comment during and after

fieldwork. It made me aware of how my background influenced people's perception of me as someone from the capital city with access to higher education and now studying in a foreign country. As a consequence of this experience, I would assess that my position as researcher within this geographical area be better described as an local-outsider because I am a national to the country, but an outsider to the community due to my ethnicity, class, and educational background.

3. Historical background: Zimbabwe's Land use and Conservation History

In this chapter, I focus on Zimbabwe's land and conservation history in relation to Matabeleland north, where my field site is located. This is with the intention of highlighting the environmental history and context from which both Hwange National Park and the communal areas in Tsholotsho come, and how they relate to human-wildlife relations. The chapter seeks to answer the research question, which asks how historical factors and changes in land use, and resource use and ownership have affected human, livestock, and wildlife relations in Hwange National Park and surrounding areas. The sources of information for this chapter come from literature review and review of archival material. The chapter begins by discussing how some pre-colonial societies in Zimbabwe lived and interacted with the environment and resources around them. I also discuss the colonial period, beginning with the arrival of the British South Africa Company (BSCA), its aggressive take-over, and use of natural resources. In what became Southern Rhodesia, the racially biased (Floyd, 1962: 566) and capitalist driven demarcation of land by the BSAC during the colonial era, determined the use of land and thus the location of communal and conservation areas today.

Human environment relations prior to the colonial occupation

San and Nambya communities

What is apparent is that historians such as Haynes (2014) and Sagiya (2019) note that the area that is present day Hwange National Park was not void of early human life, use, or settlement in precolonial times. This assessment is based on their study of archaeological sites, such as stone age tools (Haynes, 2014), rock carvings (Austen, 1971; Haynes 2014), and stone-walled ruins (Sagiya, 2019; McGregor, 2005).

The work of Haynes (2014) shows that the area, which is present day Hwange district and Hwange National Park, was home to a group of early humans in the stone Age as early as 400 000 years ago (Haynes, 2014: 90), hence the presence of stone tools found in the park. San people are possibly the descendants of the stone-age foragers (Haynes, 2014). Because of the presence of the rock carvings at Bumbusi and Detema, Austen (1971) similarly describes the presence of humans in Wankie National Park during prehistoric times. From the rock carvings and the tools, it was deduced that there was a possibility that hunting and gathering was part of the way of life for these early people. This suggests that early humans in this area interacted with animals through hunting, for purposes such as nourishment or defence. The presence of rock carvings suggests that the extent of the closeness in relationship between humans and their environment, was such that the early people created rock art depicting their shared life. Hunting practices were good for providing food for pre-colonial societies as well as other by-products, such as raw material for implements, clothing, adornment, ornamentation, and medicine (Manyanga and Pangeti, 2017).

Hunting and gathering formed the livelihoods of nomadic San communities. According to Haynes (2014), San territories inherited foraging ranges and "kept within the boundaries marked by waterholes, hills, recognizable trees or abstracted distance such as ´a day walk' or ´as far as the eye can see´" (Haynes, 2014: 86). This description by Haynes (2014), suggests that the different San communities managed the space and resources among them to prevent over utilization or encroaching into the area of another community.

In addition, the area also had spiritual significance among the San. According to Bhebhe and Chirume (2016), the National Archives of Zimbabwe has oral testimonies that document the religious beliefs of the San that they used to practice religious rituals in the area which is now Hwange National Park. They usually performed these religious rituals at worship centres,

such as such as “Chini, Bhongobhogo, Bakikabara, Gomo, Lompanda and Chamzeze (Jane, Interview 12 June 2012),” which were mostly near watering holes (Bhebhe and Chirume, 2016: 64). This also highlights that, when the area became a game reserve, the San lost access to an area that not only served as a space for hunting and gathering to fulfil their livelihoods, but also places that held spiritual significance.

The signs of the first farmers in the area are believed to have come from people who practiced farming between one and two thousand years ago (Haynes, 2014: 99). These signs of farming practices either indicated that populations had increased, and people had to farm to increase food supplies, or it was the result of the arrival of farmers from somewhere else. In either case, the population had shifted from a reliance on wildlife and started cultivating the land. On the other hand, Haynes (2014) postulates that the San people kept distance from the farmers and retreated into the Kalahari sands when new settlers came into the area. Although different ethnic groups may have, at some point, shared similar space and resources, they had different uses for it based on their different lifestyles. In addition, during my review of literature about the historical background of the area, I was not able to find any studies that discuss whether this increase in population and changes in land use influenced wildlife and its interactions with humans. Such studies would help to show to what extent, if any, the arrival of a sedentary group of people have had on the movement of wildlife and its natural ranges.

Fire was also a present feature in the arrival of farming (Haynes, 2014; Austen, 1971). Radiocarbon dated charcoal of 1800-2200 years ago, suggests that fire was an integral part of farming practices in this area as it accompanied a system of burning to clear land for cropping, hunting, and gathering, or caused by lightning. Therefore, farming in this area was present, which suggests that there were some areas that had favourable conditions for

growing crops even though the region is well known to be dry with low rainfall patterns. Haynes (2014) describes the Nambya as "farming people with deep roots in the land" (Haynes, 2014: 124). This group of farmers was sedentary and settled on hill tops in Hwange after they broke away from the Rozvi Dynasty (Figure 3) in the eighteenth century (Haynes, 2014; Chiweshe, 2022). According to Chiweshe (2022), although the area offered few places with good land for cultivation, the Nambya were able to adapt their agricultural practices by planting crops, such as bulrush millet, and growing crops in the river valleys.

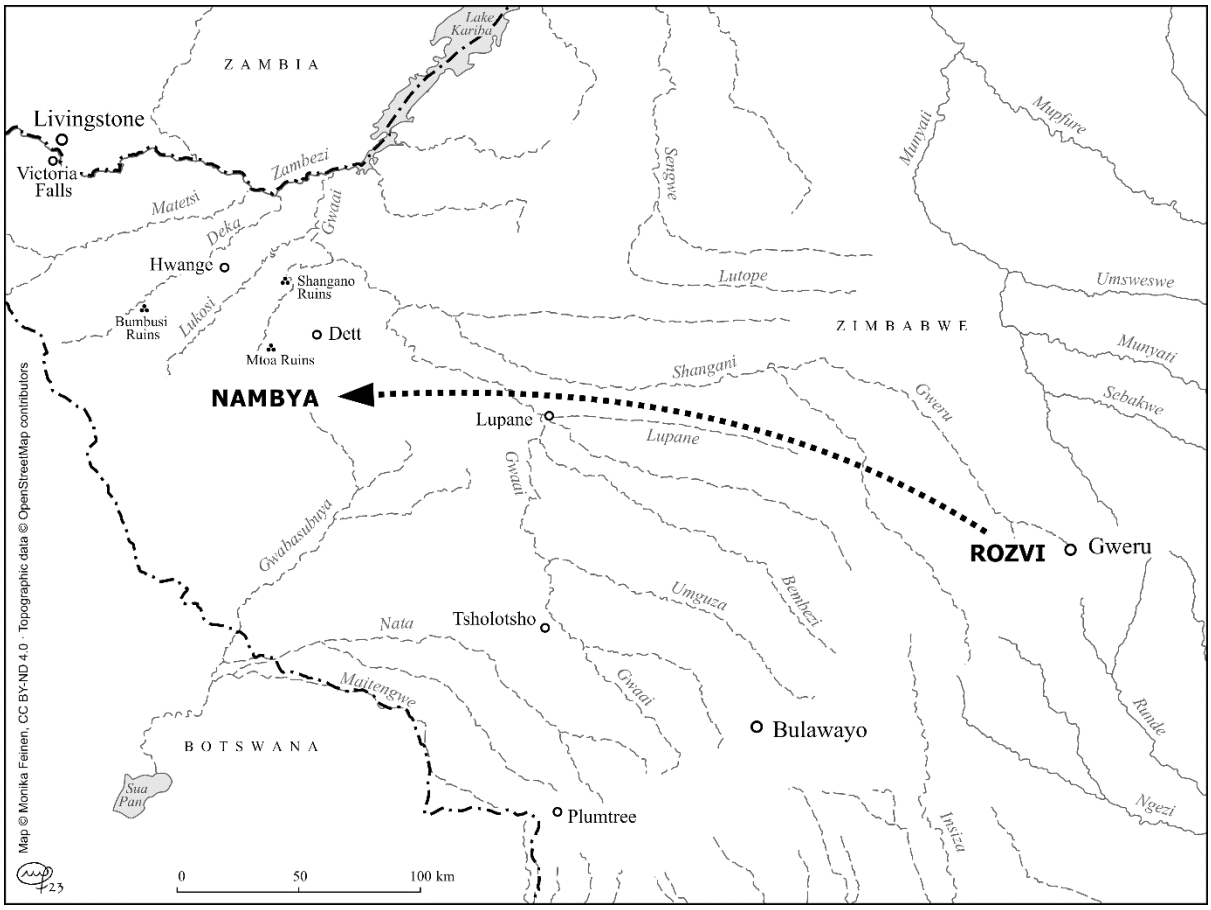


Figure 3 Map showing Rozvi Dynasty and Nambya locations

There are about fifty stone-walled ruins in Hwange National Park today, and these ruins have been built by people with ancestral links to the Nambya (Sagiya, 2019). These ruins, such as the Bumbusi and Mtoa ruins (Figure 3), held spiritual significance to the Nambya because

they performed traditional ceremonies, such as asking for rain and wellbeing (Chiweshe, 2022; McGregor, 2005). Hence, the area was more than just a source of food and sustenance for people, it was also of cultural and spiritual significance. The name Wankie, which was later changed to Hwange, is derived from the Nambya who lived under the governance of a chief named Whange (Haynes, 2014).

In addition to hunting and farming practices, the use of forest resources was important to the way of life of the people in the north-western part of Zimbabwe. As explained by Kwashirai (2009), the Ndebele referred to the forests as *gusu*. Before colonial settlers and the laws that came with them, the forests served the people in different ways. According to Kwashirai (2009), the Zambezi teak woodlands in north-western Zimbabwe, were particularly important to the survival and livelihoods of Africans during the late 19th century. Africans used wood to build canoes, construct huts, and for firewood (Kwashirai, 2009). There were forms of management in place for the use of the forests and wildlife. Kwashirai notes that:

> *"Customary management practices of wild fauna and flora were based on rules, beliefs, and taboos enforced by religious and political leaders, notably spirit mediums. Disobeying such guidelines was believed to cause drought, famine, and disease. The nature of local customary practices and their enforcement by leaders were not uniform and varied by community and available natural resources. These traditions, more flexible than codified written laws, changed over time and were modified by circumstances"* (Kwashirai, 2009:15).

This suggests that there was a form of conservation and management practices that existed among Africans before the colonial period. Another example of such conservation and wildlife management practices is that of the Ndebele, who also came to settle in the region.

The Ndebele and wildlife management

The Ndebele arrived in the highveld, what is present day Bulawayo (Figure 3), in 1838, led by Mzilikazi. Fleeing Shaka Zulu in South Africa, the group headed north and crossed the Limpopo, and they settled in the highveld. This area was strategic because it was free of Tsetse fly, and had favourable conditions for keeping cattle (Palmer, 1971). The Ndebele became the dominating power in the region with a large and strong army that would raid the Shona communities and other neighbours for grain, cattle, and captives, or receive some form of tax (Palmer, 1971).

European missionaries, hunters, traders, and adventurers had been present in the Ndebele kingdom since the late 1850s, requesting permission from the Ndebele kings and Shona chiefs to pursue different interests (Msindo, 2016). Mzilikazi and Lobengula, the Ndebele kings, implemented different laws against overhunting of wild animals for different reasons. Mzilikazi implemented a form of game laws against the hunting of Elephants for the purpose of managing the presence of tsetse fly in the area (Mavhunga, 2018: 38). This view is also expressed by Robert Moffat, who stated that "in Moselekatses country, elephants are numerous during winter, especially when the tsetse abounds, but he, like anyone else who ought to have wiser heads, has instituted game laws, so that no one but his own people can hunt the elephant" (Wallis, 1976: 375). In 1870 Lobengula, the son of Mzilikazi, became King after the death of his father. According to Manyanga and Pangeti (2017), Lobengula also had a hunting reserve and would issue "hunting concessions as a way of restricting hunters to routes in an effort to protect Ndebele hunting rights," because in the 1870s there was an increasing number of European hunters who requested permission to hunt in his area (Manyanga and Pangeti, 2017: 285). In 1915, Colonial officers also expressed the possibility of the presence of game laws during Lobengula´s time when they acknowledged that

enforcing game laws among Africans was not a new thing; during Lobengula´s time "there was a game reserve to the west and northwest of Bulawayo"[8]. The difference between the laws of Lobengula's time and those enforced by the colonial administration was that there was no fee required for killing "ordinary game," one only needed the permission of the King. However, the King required payment for the killing of animals such as elephant, ostrich, giraffe, and hippopotamus. The Superintendent of Natives Victoria described the conditions of hunting during this time as follows:

> *"No one was allowed to kill game there without special request or permission. The King´s boys, i.e., his own hunters used to hunt there for him. Occasionally I knew him to ask a white man to go and kill some special kind of game for him there. Natives were allowed to hunt any kind of game over the whole rest of the country - and used to sell ivory, rhinoceros horns, ostrich feathers, and cow hides (for sjamboks) to the white people: as far as I ever heard, never paid any fee for the privilege - but a successful hunter periodically took some gift of ivory or feathers to the king as a matter of policy. No restriction was placed on Europeans, except that of asking, nor was any fee charged for the killing of ordinary game, but payment was asked for the right to kill elephant, ostrich, giraffe, and hippopotamus."*[9]

Selous (1907) recounts his first experience when seeking permission from Lobengula to hunt elephants in 1875. A few years later he asked for permission to hunt in mid-April but was only given the go ahead to start hunting in mid-June, with instructions to not "*go to Mashuna country, but told us that we must hunt to the westward of the river Gwai*" (Selous, 1907: 67). On this expedition, Selous set out in the north-west direction and recalls that they arrived at "Linquāsi valley" and made permanent camp (Selous, 1907: 69). The "Linquāsi valley,"

[8] National Archives of Zimbabwe (NAZ) N3-24-5-7, 6 August 1915 Game Laws in Lobengula´s time
[9]NAZ N3-24-5-7, 6 August 1915 Game Laws in Lobengula´s time

which Selous described, is in present day Hwange National Park. Furthermore, the area he could hunt was located west of the Gwai river, south of the Zambezi, and east of the Victoria falls. These areas are also now part of present day Kavango Zambezi TFCA. According to Selous:

> *"The tract of country in which I was principally hunting was a wild, hilly region, situated in the angle formed with the Zambesi by the Gwai, which empties itself into the Zambesi about eighty miles to the east of the Victoria Falls. These hills are for the most part thickly wooded, though some are very rocky and precipitous, and nearly all of them rough and thorny. In some parts they open out into broad grassy valleys, which, dotted with clumps of trees and bush, present quite a park-like appearance"* (Selous, 1907: 70).

From the accounts of Selous we can infer that Lobengula would instruct hunters to hunt in the north-western part without crossing the Gwaai river, especially during certain seasons. Although the area where Selous received permission to hunt had wildlife, it is difficult to ascertain the exact populations that were present in that area at the time. What is clear is that managing when, where, and possibly how much game was hunted, was important to African societies such as the Ndebele. The African rulers enforced these hunting restrictions probably because during the 19th century there was depletion of wildlife numbers due to European hunters, and the game laws may have been a way to protect the economic resource from depletion. In addition, Beinart (1990) claims that, apart from being important for subsistence and trade among the Ndebele, hunting was also a way of asserting "royal economic control" (Beinart, 1990:163).

There were, therefore, at least three different African communities that lived in and around what is present day Hwange National Park and who had a relationship with the environment

and wildlife through hunting, gathering, and farming, as well as spiritual and cultural practices. The earliest known community is that of the San who had a mainly hunter gatherer lifestyle, while the Nambya people were a sedentary group whose spiritual and cultural connection to areas inside the park can be traced back to the stone wall ruins. Other ethnic groups that were also present in the area include Tonga and Dombe communities (Andersson and Cumming, 2013). Although the Ndebele appeared later, the historical evidence shows that they also demonstrated a significant relationship with how they managed the use of wildlife and natural resources. Although the use of resources may have differed among the African communities, there is consensus among different scholars that spiritual/religious beliefs and political leaders played a significant role in the conservation of wildlife and natural resources (Kwashirai, 2006; Manyanga and Pangeti, 2017; Mavhunga, 2014; Mawere, 2013b and Murombedzi, 2003). Furthermore, the evidence presented above points towards the presence of "game laws" and "game reserve" during the reign of Ndebele Kings. The question that comes to mind is, if African communities were acquainted with some form of wildlife and environmental governance enforced by African leaders, what was the difference between these laws and the game laws that were later introduced by colonial settlers?

The colonial occupation and its changes to land use and ownership

The overhunting that characterized the early colonial years, led to diminished wildlife numbers (Andersson, 2013; Cumming, 1981). The years between 1890-1896, are described as the 'age of the fortune hunters' because acquiring wealth as quickly as possible through mining, was the main motive of the early colonial settlers (Palmer, 1977; Kwashirai, 2009). In 1890, Cecil John Rhodes pursued the prospects of gold north of the Limpopo River; because of his desire was to find the second Rand. However, the land was already home to diverse groups of Africans, such as the Shona and Ndebele. It was through deception that

Rhodes, and two hundred men of the British South Africa Company (BSAC) were able to obtain mineral rights through the Rudd Concession in 1888. Their rights were upheld by the British Government, and they eventually entered the land based on the Royal Charter of 1889 (Palmer, 1977).

These fortune hunters were soon disappointed though, as their prospecting in Mashonaland did not yield the desired results. Consequently, Rhodes turned his attention to Matabeleland "whose mineral potential was considered to be at least the equal of Mashonaland, and where the fertile highveld, well stocked with Ndebele cattle was an added inducement" (Palmer, 1971: 43). This desire eventually led to the start of the Matabele War in 1893. However, despite many of the European men being very dejected by the lack of gold in Mashonaland, they were not motivated to fight in the war. To motivate those European men who were refusing to fight in the Matabele war, Rhodes promised they would receive certain concessions if they participated.

> ´*... that everyone who took up arms was to be entitled to a farm of three thousand morgen (6,350 acres) anywhere in Matabeleland. Moreover, the invaders were under no obligation to occupy their farms. Each man was also granted fifteen reef and five alluvial claims, while the 'loot', the Ndebele cattle, was to be shared, half going to the Company and the remaining half being divided equally among the officers and men. Needless to say, the British Government was not informed of the Agreement*´ (Palmer, 1971: 43).

Unfortunately, the BSAC defeated the Ndebele during this war in 1894. The Matabele War had an immense impact upon future land problems especially because the above mentioned agreement set a precedence for the kind of attitude held by colonial settlers' concerning rights to land and the treatment of Africans (Palmer, 1977).

The defeat of the Ndebele led the BSAC to create the first native reserves, Gwaai Native reserve and Shangani Natives, which later became present-day Tsholotsho and Lupani Districts. Some of the Africans were moved out of Bulawayo and into these reserves, others refused to move and remained as labourers or tenants to the new landowners; others became squatters and some Africans moved into missionary farms (Msindo, 2016). The BSAC therefore moved into Bulawayo highveld, established the town, pegged out farms, and seized Ndebele cattle. The implications of cattle looting were grave for the Africans because cattle were a valuable resource to them. Cattle were a symbol of status and prestige, they were a currency used during barter trade, and had cultural and religious significance. Eventually the lands of the Ndebele became "private estates of individuals and the commercial property of companies" (Palmer, 1977: 38). However, by the end of 1895, when the pioneer column had not had any success in finding the expected amount of gold in Matabeleland, these private individuals and commercial companies turned their attention to other resources and uses, this included agriculture, timber, and the mining of other resources.

The first Chimurenga war occurred from 1896-97, when both the Shona and Ndebele fought for liberation from the colonial settlers. The BSAC defeated both the Ndebele and the Shona and claimed all the area and land as war booty, thus justifying their ownership of the whole land, including minerals, forests, cattle, and wildlife (Kwashirai, 2008). It is possible that fighting during the war distracted African´s attention and authority away from wildlife management, and thus affected wildlife numbers. The period of 1896-97 was however, also the time when an outbreak of rinderpest occurred, and this led to a decrease in both wildlife and cattle numbers, including the disappearance of tsetse fly. Therefore, human wildlife relations were affected by the rinderpest outbreak and the war by limiting the amount of time that Africans could spend managing wildlife.

After the uprisings and defeat of Africans, the BSAC created additional native reserves across the country (Palmer, 1971:59). The colonial government also later established forest reserves and game reserves. These new laws and ways of governing the land and resources affected the patterns of land use as well as wildlife management and conservation. Hence, the actions of the BSAC not only affected Africans by barring them access to land and its resources, but their actions also affected the natural environment and vegetation. Factors such as deforestation and soil erosion were major problems due to the extensive and exploitative mining, agriculture, and timber- based economy that the settler colony had set up.

Gwaai Native Reserve (GNR)

In 1894, Gwaai and Shangani Native reserves (Figure 4) were the first native reserves in Southern Rhodesia created by the BSAC at the onset of colonial occupation in 1890 (Palmer, 1977:30; Andersson and Cumming, 2013). These reserves marked the end of pre-colonial ways of land use and ownership and the beginning of privatisation and capitalism under a minority population of European settlers. The creation of the native reserves was based on information obtained through a Land Commission. It is noted that the two men responsible for the Land Commission did not diligently examine the suitability of the proposed area, but simply recommended the location, falsely citing that it was 'well-watered and fertile and is regarded as being the best grazing veldt in Matabeleland, and has been, and is still being occupied by natives' (Palmer, 1977: 32). In addition, some of the colonial officials were concerned that the land lay along the tsetse fly belt, especially the Shangani reserve (Palmer, 1977). However, L.S. Jameson dismissed this argument based on information from a group of police who visited the area and did not see any tsetse fly. Furthermore, it was believed that since the tsetse fly belt was constantly shifting, the reserves were not really located along the belt (Palmer, 1977). However, a new commissioner, called Earl Grey, later deemed the location of both reserves to be 'grossly inadequate' for settlement (Palmer, 1977 :66).

Kwashirai (2009) asserts that the Ndebele did not like the area because it was dry, waterless, and had infertile soils. The new commissioner also stated that "that the Ndebele regarded the two reserves as 'cemeteries not homes'" (Palmer, 1977: 33).

Negative perceptions about the suitability of the reserves abounded among both Africans and European settlers. Apart from fears of tsetse fly, Alexander et al., (2000: 44) claims that Protestant Ndebele and missionaries saw the Shangani Reserve as a "place of pagan culture, fit only for wild beasts and wild men, incapable of supporting large-scale plough cultivation; bereft of clinics and schools." In 1920, the African Methodists described the Gwaai and Shangani Reserves as "barren and useless" (Alexander et al., 2000: 44).

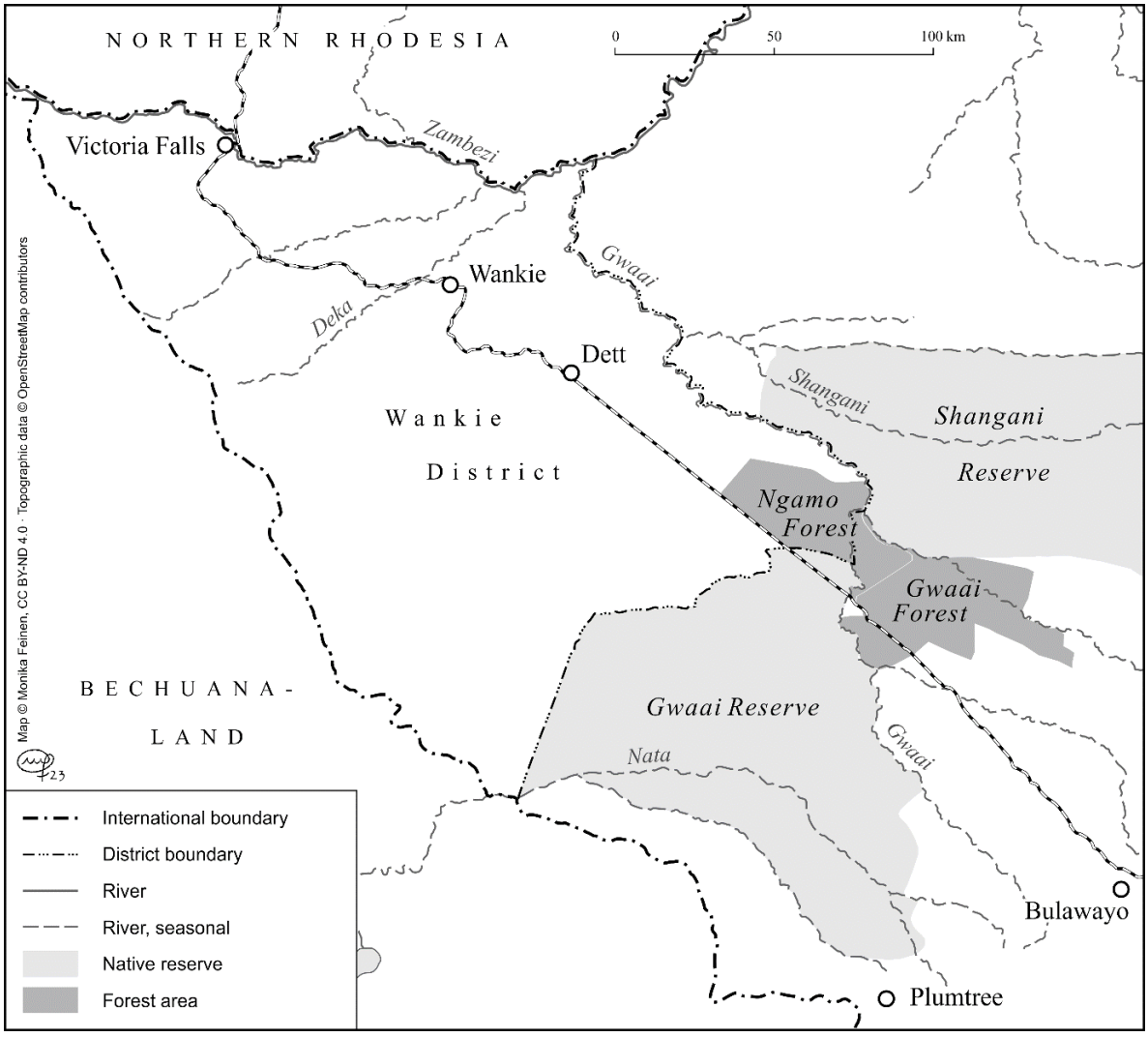


Figure 4 Map showing the location of Gwaai and Shangani Native Reserves

Water in the Gwaai Native Reserve

One of the problems at Gwaai Native reserve was the lack of sufficient water. About five sixths of the Reserve did not have any surface water for nine months of a year (Zvobgo, 1891). In 1921 the total area of the reserve was "1 106 000 acres or 1728 square miles", and it was "said that there are practically no natural permanent supplies of water in the whole of the reserve"[10]. Therefore, the reserve lacked any "internal rivers that can be dammed and in consequence the only surface water that can be provided was in the form of pans."[11]The colonial government were planning to move several Africans from Bulawayo and Matobo districts to this reserve; however, the lack of access to water was a problem they needed to solve if they wanted many Africans to move.

> *"The scarcity of water in the Gwaai Reserve has prevented a large influx of natives, who for various reasons, are obliged to move off private property; and as provision will have to be made in the near future to meet the requirements of a large native population, who will be obliged to remove from the Bulawayo and Matobo Districts next year, I am of the opinion that early steps should be taken in the direction suggested … for augmenting the water supply in the reserve"*[12]

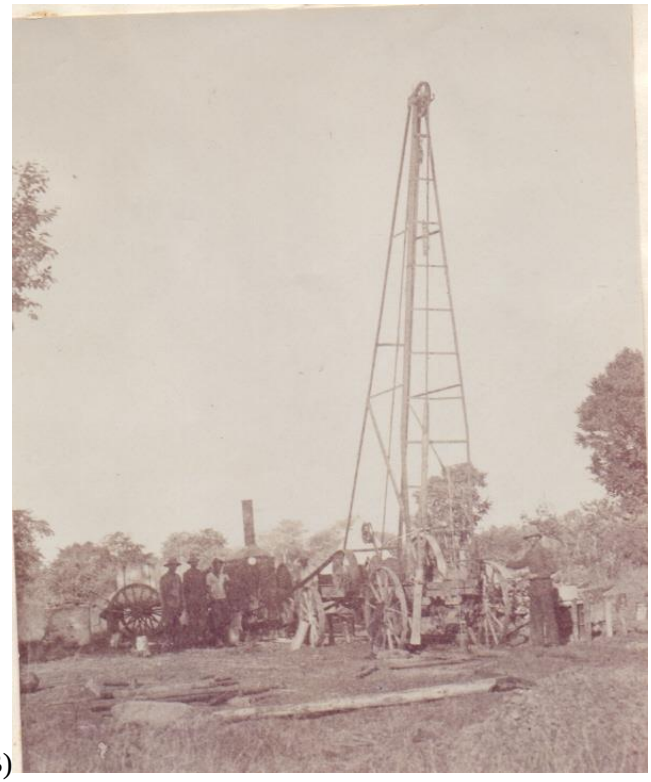
From the years of 1913 to 1923, there were actions that were taken to increase the access to water in different parts of Gwaai Native Reserve through drilling boreholes, windmills, and the installation of tanks and troughs. To sink the wells or drill the boreholes, Africans were often required to provide (free) labour or to financially contribute to the process. In 1921, there was communication between the Irrigation and Agricultural Engineer and the Director of Agriculture about the importance of making water available for resettlement in certain

[10] NAZ N9/5/1, 30 December 1921 The Government Irrigation Engineer writing to the Chief Native Commissioner Salisbury
[11] NAZ S2627-10-2, 22 October 1958 Pan Deepening: Gwaai Reserve
[12] NAZ W1/4/1, 19 September 1913 Chief Native Commissioner Bulawayo to the secretary, Department of the Administrator

native reserves, such as the Gwaai, Nata and Semokwe Reserve[13].They suggested that water could be made available by means of boring or sinking about 70 boreholes during the next 3 years.[14] In the 1950s, suggestions were also made to deepen existing pans because they improved access to water for cattle and they reduced the strain of the use of boreholes used by humans. Deepening the pans would help increase the amount of rainwater that collects into the pan so that the water in the pan lasts longer during the dry season. Given the background described above, it shows that when the colonial settlers first created native reserves, providing access to water in this area was an important task. Further research to examine to what extent colonial officials were successful in providing access to water would help shed more light on the present-day state of access to water in the whole district of Tsholotsho.

(A) 

[13] NAZ N3/24/8, 15 January 1921 Irrigation and Agricultural Engineer writing to the director of Agriculture.
[14] NAZ N3/24/8, 15 January 1921 Irrigation and Agricultural Engineer writing to the director of Agriculture.

(B) 

Picture 5 (A) "A lady pumping Water" (B) "At work in Gwaai Reserve"[15]

Gwaii Forests Reserves

Although the forest areas were not a conducive environment to the population needs and lifestyle of the Ndebele who had been resettled from the highveld (e.g., farming and pastoralism), there were niches within this forest area that provided a living to those who lived there (Alexander et al., 2000; Kwashirai, 2008). This meant that the Africans who had formerly lived in this area benefited from other multiple uses of the forest, as described by Kwashirai (2007). The forests were zones that offered a source of livelihood and different resources for the people who lived there. This does not negate the point about the reserves being unsuitable for the settlement of the Ndebele but rather that the forest offered alternative

[15] NAZ N9/5/1, 30 December 1921 The Government Irrigation Engineer writing to the Chief Native Commissioner Salisbury

ways of life or provision that were not necessarily large areas of land, sufficient water, or complete freedom from the threat of the tsetse fly.

The unique value of the forest areas in the native reserves soon became of interest to the colonial settlers, especially when their expectations of gold were not fulfilled. Surveys were even carried out in the late 1890´s, in 1909 and 1910, to determine the value of trees found in these forests (Kwashirai: 2009). When the BSAC realised that they had not adequately evaluated the potential of the land, especially the forest areas, they decided to resettle some of the Africans away from the forests and into less favourable land. According to Kwashirai, the Gwaii Forest reserve in North-western Zimbabwe "was endowed with the largest and most important indigenous hardwood in the country" (Kwashirai, 2008: 146). Gwaii forest reserves are rich in the Zambezi teakwood and this wood was very attractive for use in different industries owned and propagated by the colonial settlers (Kwashirai, 2009). This colonial government repossessed parts of the forest area into state land. *´The largest area repossessed for European settlement and forest purposes, 257, 132 hectares, was carved out of the GNR in 1915 to create the Gwai forest Reserve`* (Kwashirai, 2008: 157). It appeared therefore, to become common practice for the government to repossess the favourable parts or niches of the native reserve and place them under state control as forest reserves. In addition, in the 1930´s, the land in the native reserves was divided into residential, farming, grazing and forest areas, with most of the native forest areas taking up space for farming (Kwashirai, 2009).

In the 1923, Gwaai forest area was one of the first forest areas to be identified for protection and later gazetted in 1930 (Mutekwa and Gambiza, 2016). Although some Africans remained settled in the Gwaai Forest Reserves, they were either forced to work in the forest reserve, or made to assist the rangers with issues such as managing forest fires. Although native reserves

were first created to push Africans away from favourable land, this did not guarantee that Africans had ownership or rights over the newly settled areas. European settlers evicted Africans that settled in favourable parts of the forest, many, many times.

The attractiveness and value of the forest areas meant that the sale of timber became especially important to the development of the colony. According to Kwashirai, timber exploitation together with ranching and tobacco cultivation were the top three colonial economic activities in Matabeleland (Kwashirai, 2009). The Gwaai forest areas played a crucial role in supplying wood fuel and timber to ranching and tobacco industries across the country. This particular forest reserve is in present-day Lupani district, with Tsholotsho communal area to the south. There were also other forest reserves that were created in the 1930´s, including Sikumi forest, which is located to the northeast of the park.

The colonial government demarcated the land and often apportioned it based on racial and capitalistic ideals; this led to the constant manipulation of the boundaries of native reserves to meet the needs of the European settlers. European settlers would reclaim any fertile, productive, and well-watered portions of land in the Gwaai Native reserves and declare them part of Gwaai Forest reserves with the effect of restricting African access to forest. When districts were formed in the colony, 'the huge Gwaai Reserve was included in Bulalima-Mangwe and Wankie, but from 1910 it became part of the new Nyamandlovu District' (Palmer, 1977: 270). The district was later renamed after a pan to Tsholotsho; a name that has its origins from the San language (Mukamuri et al, 2013). In the years 1911, 1914-15,1925 and 1941, further reclaims and manipulations to the allocated land was made (Palmer, 1977). According to Palmer (1977) "the Europeans had virtually all the land in the eastern part of the district near Bulawayo, while Africans were confined to the barren Kalahari sands to the west" (Palmer, 1977: 274).

The first native reserves and forest reserves were the beginning of the land and conservation laws that would soon follow in the country. However, the colonial government did not put much thought or effort into the quality, or the quantity of the land given to Africans. Their major concern was to exploit or extract as much as they could (Phimister, 1988). The history of Gwaai Native reserves and the Gwaai Forest reserves has shown that Africans no longer had any form of power or say regarding where they lived and the land that they used. This situation would also increase when the creation of game reserves came into effect.

Wankie Game Reserve

In trying to pinpoint the factors that led to the creation of the first game reserve, I understand that the idea of present day "national parks" has its origins in colonial history (Ramutsindela, 2004). European interest in and exploitation of game was also carried into the colonial establishment, and it was in 1902 that the first game laws came into effect (Cumming, 1981), including the identification of areas which would be demarcated as game sanctuaries. Wankie Game Reserve was proclaimed as a reserve in 1928 and its proclamation marked 'the beginning of a period of protected area formation in Southern Rhodesia.' (Andersson and Cumming, 2013: 39). The area selected to be a reserve was part of the Wankie area in Wankie district (Figure 5). The game reserve became a national park in the 1950s.

Identifying the area and creating the first game reserve in the country was a process involving many factors. In 1926, Major W.J. Boogie, a legislator, suggested that certain parts of Rhodesia be set aside for the creation of game reserves because he was worried about "the rapidity with which game was disappearing" (Gale, 1978 :11). Although Major Boogie favoured the Wankie area, there were some objections among his fellow legislators who thought that "preserving the game would aggravate the tsetse fly position; the government would have to see to it that it did not proclaim a mineralised area and this interfere with

prospecting; a game reserve would be expensive to maintain and patrol" (Gale, 1978 :11). The country was then surveyed for about 6 months and the area in Wankie district proved suitable, meeting nearly all the requirements (Gale, 1978).

It is also important to remember that the Wankie Colliery, located in Wankie district (Figure 5) in Matabeleland north, has coal deposits which were believed to be as important as gold because the coal provided energy, transportation, and other by products that enabled the functioning of other sectors in the colony and neighbouring countries (Phimister, 1994; Mavhunga, 2014/5). The first coal shaft was sunk in 1897 and, by 1902, production had already commenced. However, because of forced labour, low wages and bad living conditions, Wankie colliery had a bad reputation among Africans (Phimister, 1994). This meant that the idea concerning where to preserve wildlife was also predicated on how much it would affect potential mining resources. Hence, even in the present-day context, the availability of coal in the region is a significant feature with the ability to influence conservation initiatives in the future.

When Wankie game reserve was created, it was already home to other people, which include the San and Nambya, as explained earlier. According to Austin (1971), there were still "Bushmen" party's semi-resident in the Southern section when the area was declared a Game Reserve in 1928. Austen (1971) also acknowledges that even "Bushman" from Botswana used much of the area for their hunting activities, at some point. The San and Nambya suffered eviction from this area and some of them resettled in the surrounding native reserves of Wankie District and the Gwaai Native Reserve.

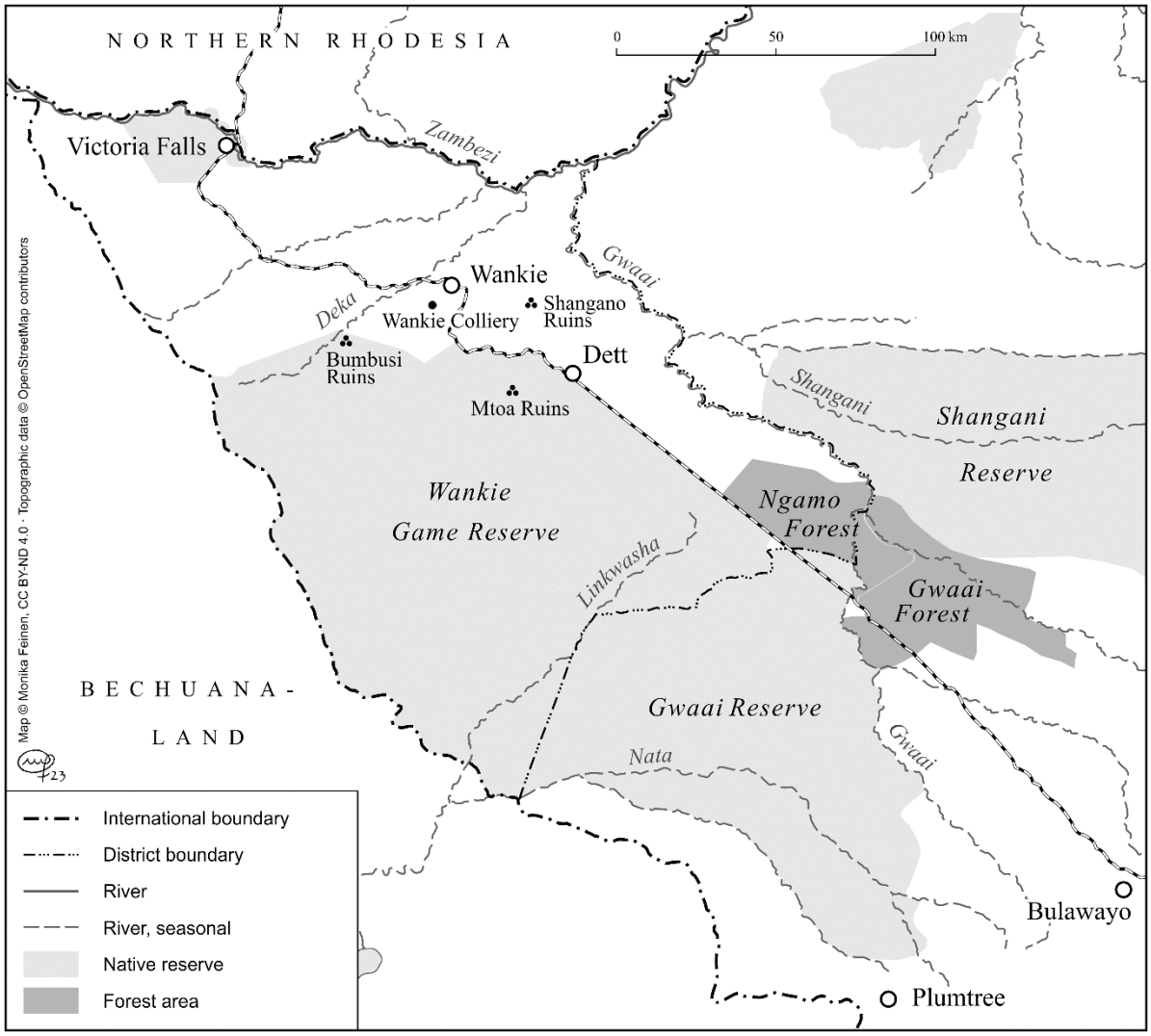


Figure 5 Map showing the location of Bulawayo, Wankie Game Reserve, Wankie Colliery and Gwaai Native Reserve

The proclamation of the area into a game reserve also changed the forms of income generation and access to livelihoods for the different people groups. After Wankie Game reserve was proclaimed in 1928, people could no longer hunt inside the reserve or use the forest resources. Permits for timber concessionaries and those European hunters who hunted wildlife for the purpose of zoos expired, and they were not renewed (Davison, 1967). The nomadic hunter-gatherer lifestyle of the San changed to a more sedentary lifestyle - one of agropastoralism and waged labour (Dube et al. 2021; Hitchcock, 1995). According to Edward

Davison, the first game warden, when he first met or learnt about the San, they would mainly hunt for their needs. However, Davison perceived that this characteristic of the San changed after the establishment of the park; they became less nomadic and more commercially oriented because they began to hunt not only for their needs, but to sell to the native reserves or to the mining compounds (Davison, 1967:80). It is believed that some became dependent on casual labour as a source of livelihood. This affected their ability to maintain their own fields and thus resulted in food shortages (Dube et al., 2021). Some of the San are described "as self-sufficient food producers who combine agriculture with various rural industries" (Hitchcock, 1995:175).

The creation of the game reserve

At 22-years-old, Edward Davison was assigned as the first warden of Wankie Game Reserve and is credited for the successful establishment of the park during his 33-year tenure as game warden. According to Austen (1971), the Game reserve was under the administration of what was then the Southern Rhodesian Forestry Department. Previously, Davison had two years of experience working as a tsetse fly ranger in the Lomagundi district which is in present day Mashonaland west (Haynes, 2014). Therefore, although working in forest areas was not new to him, the assignment of game ranger was a new position to him, as this was the first game reserve in the country. Davison admits that when he started the job, little was known about the area which is now the game reserve. Writing in his book, ´Wankie: the story of a Great Game Reserve,´ Davison (1967) reveals that the land chosen to become the Game reserve was part of Wankie Native District and the decision to change its status to create a game reserve with some of the land was based on the results of a questionnaire that the government had "sent out to all native commissioners, and other people who had some knowledge of the

game of Rhodesia" (Davison, 1964:6). Davison expresses his first impressions about the area by revealing that:

> *'My first visit to the administrative officers had not produced any valuable information on the country of which I was now in charge* ***beyond the names of some of the local residents who might know something of the locality. I came away feeling that very little was known about the place, the game, or the people living in it****. '...'I knew nothing of the area when I arrived other than what I had been told, and the prospects of making a successful game sanctuary of it did not look very bright.* ***There was apparently, very little water in the dry season and there was a threat of a Tsetse fly invasion from the north-east, across the Gwaai river****.* ***Game was not very plentiful.*** *Even in Selous´s days (when the hunter visited the district) he preferred to hunt in the hilly country north of the proposed reserve and not in the reserve proper; even though the greater part of this flat Kalahari sand country was free of fly as was the case before the game was depleted by the Rinderpest of 1896'* (Davison, 1964:6)

There are some points reflected in Davison´s statement that can help us understand what the situation was like at the onset of the establishment of the park.

San knowledge about the area

The problem of a lack of knowledge about the area is a good starting point as it highlights how interactions among colonial settlers and African communities involved an exchange of knowledge. The warden acknowledges that neither he nor the colonial administrators had much knowledge about the area. To some extent this reflects on the problem experienced by the colonial officials who lacked knowledge about the areas they worked in. In addition, some of the staff were not considered qualified professionals in the fields or industries they were tasked to work in. Indeed, lack of qualified staff remained an issue that caused disputes

even among wildlife conservators in the 1970s. When referring to the squabbles which occurred regarding the professional qualifications of staff S.E. Aitken-Cade reminded them that, *´it is not the experts who have built up and preserved our National Parks and Wildlife areas, it has been due to the efforts of men who felt that our wild life and its habitat were worth preserving´*.[16] This comment makes one wonder about the contribution of African knowledge to the creation and management of the national parks. In his work on tsetse fly, Mavhunga (2018:30) explains that the facts, truths, or knowledge that African people had about the insects, was often the only information that was available to aid in the survival of colonial settlers in the unfamiliar environment. Knowledge provided by the Africans in the area is what sustained colonial settlers at the beginning. When this was later mixed with the "scientific" knowledge of colonial officials, it became what Mavhunga (2018) describes as knowledge encounters.

Their lack of knowledge about the Wankie area did not mean that no one else knew the area, though. Davison admits that there were some residents who might have had some knowledge of the area. He could have been referring to some of the European farmers or settlers, the timber concessionaries operating in the area, or the Europeans who used to capture game to sell to zoos in Europe or Australia. However, there was also the confirmed presence of San communities who lived in different parts of this area.

The knowledge and experience that Africans had about the area contributed to the creation of maps, roads, and place names in the game reserve; this challenges the notion of the meaning of expert or professional knowledge during the colonial period. Oral historical accounts of the San people retell their harsh experiences as scouts for the game warden when being called on to identify the secret waterholes in the area and work to pave the roads that connected to the

[16] NAZ S/WI40, 7 November 1970 ´Report on the Wildlife Commission´ by S.E. Aitken-Cade in Wildlife Society of Rhodesia Newsletter No.47

secret watering holes (Bhebhe and Chirume, 2016). According to Bhebhe and Chirume (2016) oral history interviews indicated that,

> *"Joshua (Interview 2012) said the area (Hwange National Park) was good for their livelihood both in terms of fauna and flora. The name, which is continuously mentioned in the interviews, is that of a person they refer to as ´Dabson`, who victimised them in the process of establishing the game reserve. They said ´Dabson` forced them to pave roads that connect to watering holes. They say ´Dabson` even took their donkeys, which were fed to the lions. The San people also mentioned how some of their parents died or disappeared in the process (Samson, Interview 18 June 2012)"* (Bhebhe and Chirume, 2016:62)

According to Haynes (2014:83), the San were used as trackers either walking or riding on donkeys while the Warden rode on a big horse during month-long patrols into the remote parts of the game reserve. Furthermore, the extent of how much knowledge the local people had of the area is reflected when one considers that the "names of the majority of the pans and seepage springs in the park have" San names (Austen, 1971: 278). Although, in the extracted quote below, Davison describes the reserve as a "vast expanse of unoccupied land," his perception is entirely questionable if we consider that those living in this area may have had a unique way in which they managed and made use of the land when compared to the way that European settlers expected. This also shows that how Africans used the land was not entirely understood or known by colonial settlers.

One could assert that the establishment of the great game reserve was not the sole work and effort of the game warden(s) and other colonial officers. Local people, like the San communities who were already living there, served or contributed in different ways to the establishment and improvement of the game park, specifically through their knowledge of the

area, and by their labour. Carruthers (1995) highlights how African labour, whether voluntary or coerced, did not receive recognition regarding the establishment of Kruger National Park, in comparison to colonial officers. I also reflect on and draw some similarities with the work of Münster (2016), who describes how non-human beings such as elephants also contributed to the shaping and creation of a forest reserve. Thus, the role of the knowledge of the San, as well as the labour of other Africans, contributed to the creation of the park.

Figure 6 A sketch map of Wankie National Park showing the location of water pans based on Davison, 1967

Elimination of natural boundaries and the role of artificial water sources

Apart from the lack of knowledge about the area, the ecological situation of the game reserve was made more complicated by the fact that when the colonial administration demarcated the borders of Wankie Game Reserve, no natural water sources were included inside the reserve due to what Davison termed as 'political reasons' (Davison, 1964: 13). Water sources such as the Deka river, Gwaai river and Nata River are outside the boundaries of the park. It is likely that game used these water sources during dry or migratory seasons.

> *'The natural boundaries of this vast expanse of unoccupied land from an ecological point of view were the Deka river in the north, the Gwaai river to the east and the Nata River to the south. But all these rivers had been denied to the reserve for political reasons and even in those early days I could see trouble when game increased as eventually it would, if my work was to be successful and animals started drifting to the bigger natural water supplies during the dry season.' (Davison, 1964: 13).*

The reasons for the exclusion of the natural boundaries may be based on the historical background that this region also boasted other favourable resources, such as the rich coal deposits, forest areas, as well as the land for native reserves, as mentioned earlier. Therefore, the accessibility of these resources played a significant role in influencing the boundaries of the park. These reasons show how human interest also played a role in the establishment of the park boundaries. In addition, the fear of tsetse fly, as explained later in this chapter, may have also contributed to the boundary formation.

As a consequence, access to water in Wankie game reserve was initially poor, especially during the dry season, and alterations to the area by the drilling of boreholes had to be made to make water more accessible for wildlife. Davison had valid concerns about the problem of

water and he predicted that problems with wildlife seeking water sources outside the designated boundaries would occur. In 1934, there was already a problem with the game leaving the Wankie Game Reserve and damaging privately owned farms to the east of the reserve. Organisations, such as the Wankie Farmers´ Association, sought for government intervention and assistance with this matter by proposing that the government allocate funds for improving the supply of water in the game reserve because it was believed "that in time the game will realise that the reserve is a sanctuary and will not stray, provided adequate water supplies are available."[17]

Farmers in Wankie district, to the north of the park, also had problems with game that was coming from Wankie Game Reserve and Kazuma Pan Game Reserve. The Farmers' Association held a meeting with the game warden to discuss the possible ways of managing the problem of straying wildlife, such as elephants. It was resolved that "farmers on farms within the vicinity of the reserves should be allowed to keep one shooting boy free of licence, together with five dogs free of tax."[18] This suggests that white settlers who had farms located outside the game reserve had permission to shoot wildlife that strayed on to their farms and destroyed their crops. This also shows how shooting was an option in the management of problematic wildlife, such as elephants. The warden however, warned against the overuse of shooting because it might not have the desired effect, and it might only get rid of the problem elephants temporarily[19].

Game was also leaving the reserve not only going into neighbouring private farms but into native reserves as well, damaging crops, water supplies, and cattle. In 1939, Davidson

[17] NAZ S1194/1613/1, 22 August 1934 The Secretary to the Prime Minister by C.L.R AG. Secretary, Department of Agriculture and Lands
[18] NAZ S1194/1613/2, 13 December 1935 ´The Secretary to the Prime Minister´
[19] NAZ S1542/G1 Volume 4, 24 July 1939 ´Destruction of crops by Elephants: Sipolilo´ by E. Davison, Game Warden

observed that in the case of native reserves, elephants repeatedly raided crops in the Gwaai native reserves and, as a form of management, Africans would "resort to the beating of drums and cracking of whips."[20] This also shows that Africans may have used methods of scaring wildlife away from the native reserves that may not have included the use of guns.

To solve the problem of lack of water in the dry season, Davison facilitated the drilling of numerous boreholes around the park. This started in the early 1930´s (Davison, 1964). This influenced the success and biodiversity of the park. In 2015, about sixty pans received water from diesel-powered and solar-powered boreholes, and there are also numerous seasonal pans that are found in the area (Hwange National Park Management Plan b). Visiting tourists attest that they hear that sound of the diesel-powered generators throughout the day and night, and fondly refer to it as the heartbeat[21] of Hwange National Park. The prolonged sounds heard by tourists suggest the park's heavy reliance on the pumps and artificial water sources. These artificial water sources provide water for the wildlife and are responsible for the growth in population of elephants. The introduction of artificial water sources also shows that the ecology of Hwange National Park was largely shaped by a combination of human and nature. The availability of water played a significant role in the growth and availability of wildlife. In the present-day context, boreholes are still used to supply water in the national park. The question of the sustainability of these underground water sources is, however, something that can affect the future of the park and its inhabitants.

[20] NAZ S1542/G1 Volume 4, 24 July 1939, ´Destruction of crops by Elephants: Sipolilo´ by E. Davison, Game Warden

[21] https://www.wildlifephotographyafrica.com/the-heartbeat-of-hwange/ (Date accessed 23 December 2022)
https://www.pressreader.com/canada/zoomer-magazine/20190930/281535112697449 (Date accessed 23 December 2022)
https://www.imvelosafarilodges.com/assets/discover-zim-2014-nal1345-p.29.pdf (Date accessed 23 December 2022)

Increase in wildlife numbers.

Despite appearing to be part of a solution to water management, the drilling of boreholes, begot the problem of an increase in wildlife and proved insufficient for the growing number of wildlife, such as elephants and buffalos, especially during periods of drought. In 1944, Davison revealed that at peak periods, there was an estimate of 1500 head of elephant in the reserve, and he cautioned that *´the elephant population has now reached such numbers that control measures will become advisable in a few years' time, when it will be necessary to destroy some elephant in order to keep pace with the natural increase´*[22]. Cumming (1981) notes that there was an "elephant problem" in Zimbabwe starting in the early 1960´s. It was a problem because the elephants were over-eating and needed to be excluded "from expanding areas of subsistence agriculture and from tsetse control corridors" (Cumming, 1981: 93). In 1966 and 1967, the first culling operations took place in Wankie National Park; this involved the killing of 500 elephants out of an estimated population of 5000 (Cumming, 1981). The present-day number of elephants is estimated at 45 000 (Hwange National Park Management Plan (b)).

Another solution to the problem of elephants encroaching on neighbouring farms was the suggestion of extending the boundaries of the Game Reserve. For example, a proposal by Posselt in the late 1930´s was to include a piece of the land that is to the north of the Nata River[23]. Although Posselt´s idea and petition to extend the reserve was disregarded, correspondence shows that the boundaries of the game reserves, like those of the forest reserves and native reserves, could be manipulated and changed. One of the reasons for these

[22] NAZ S1194/1613/11, 28 January 1944 ´Elephant Control´ by E. Davison, Game Warden

[23] NAZ S1194/1613/6, 18 October 1938; 15 June 1939 Suggested addition to Game reserve; 22 June 1939; 15 July 1939; 28 August 1939

reconsiderations included the possibility that the addition of land to the game reserve would have increased its value and added to the wellbeing and security of game.[24]

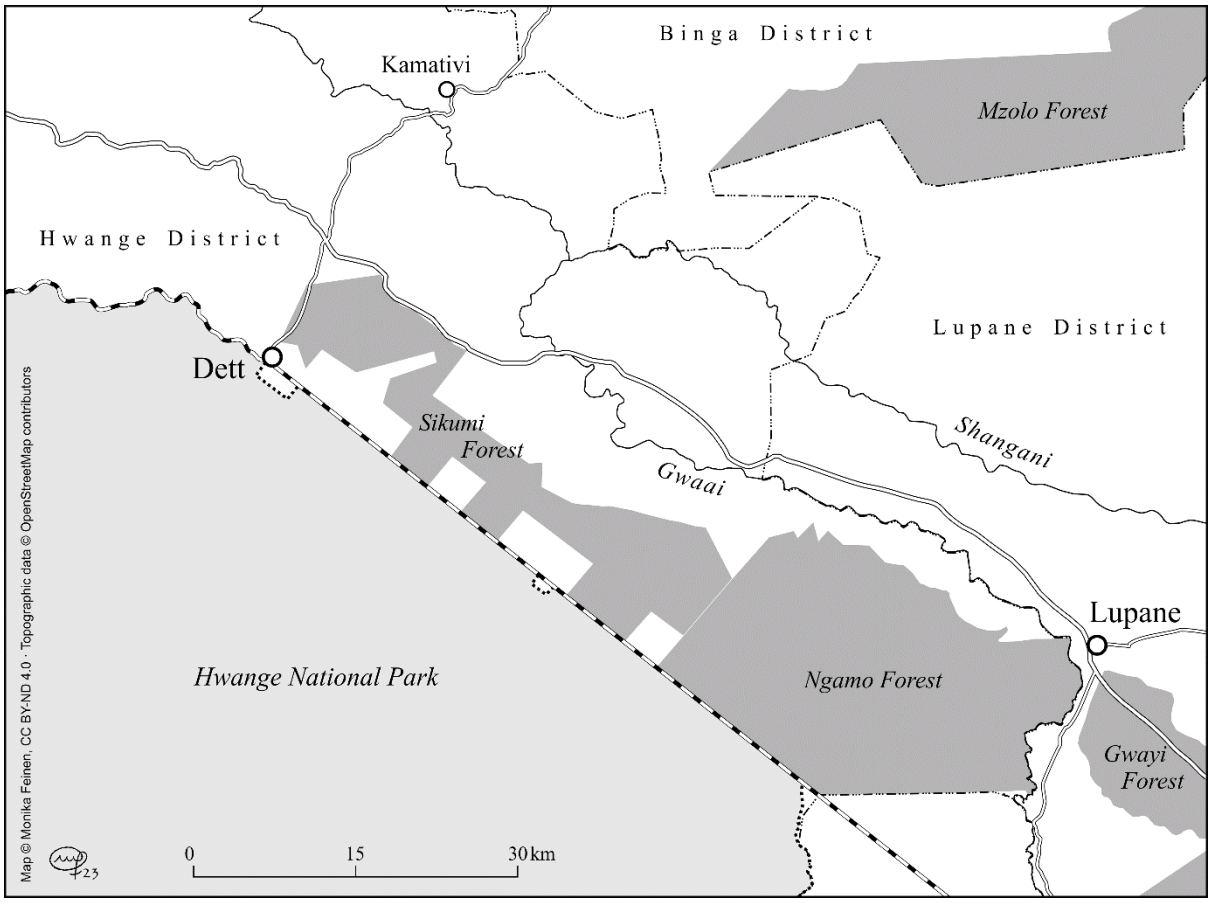


Figure 7 Map showing proposed piece of land for extension. The Gwaai river on the east, the Ngamo forest reserve on the southeast, the railway line on the southwest, and the Dett-Kamativi Road on the northwest

In 1946, there was another suggestion to extend the park boundaries to the Gwaai river, which is on the east side of the park. Although improved water conditions now existed inside the park (due to an increase in the number of boreholes), more game than usual had still crossed the railway line[25]. The proposal was to extend *´a piece of land bounded by the Gwaai*

[24] NAZ S1194/1613/6, 18 October 1938; 15 June 1939 Suggested addition to Game reserve; 22 June 1939; 15 July 1939; 28 August 1939

[25] NAZ S1194/1613/11, 15 September 1946, ´Extension of Boundaries Wankie Game Reserve´ by E. Davison, Game Warden

river on the east, the Ngamo forest reserve on the southeast, the railway line on the southwest, and the Dett-Kamativi Road on the northwest to the point where it crosses the Gwaai river, would embrace all the country suitable for the protection of these animals´... including a small portion of Wankie Native Reserve area A[26] (Figure 7). The recurring requests to extend the boundaries show how much the creation of the boundaries was a disruption to both the natural way of life of wildlife and the use of the landscape. The act of boundary formation also shows how perceptions about the use of the space or land differed among wildlife and humans. Where the colonial settlers sought to place boundaries or designate the use of space for one specific thing, the animals had a different view about how to use the landscape and where they could roam.

Free from Tsetse fly

Through the history of colonial Zimbabwe, we learn that colonial settlers also experienced problems with animal and wildlife diseases. Since the time of their occupation, Southern Rhodesia battled to solve the challenge of animal diseases and vectors, such as Rinderpest, Tsetse fly, Anthrax, and foot and mouth disease (Sinclair, 1922). It is not surprising therefore, that the threat of wildlife related diseases was also a factor that contributed to the creation of the Game Reserve. The possible spread of tsetse fly from the east, was a concern for both the game warden and neighbouring farmers. At the time of its inception, it was the lack of Tsetse fly that made this large Wankie area a better alternative to the Sebungwe region (Andersson and Cumming, 2013). The Sebungwe region is the present day Binga District, in North-western Zimbabwe (Figure 8). Because of the limited threats of tsetse fly to the area, when

[26] NAZ S1194/1613/11, 15 September 1946, ´Extension of Boundaries Wankie Game Reserve´ by E. Davison, Game Warden

compared to other regions in the country, one might conclude that the Wankie area was a better option at the time.

However, colonial officials and farmers constantly feared that the tsetse fly belt was moving towards the direction of the reserve. Cattle near Gwaai river were reported to have been affected by tsetse in 1920. In 1921, cattle owners in Wankie district believed that trypanosomiasis along the Gwaai and Sikumi rivers caused the increase in the mortality of their cattle. Because the colonial office believed that the disease was spreading due to mechanical transmission, whereby "it could be transmitted from one beast stung by a tsetse fly to other beasts by means of other biting flies"[27], prohibition on the movement of transport vehicles was one of the measures taken to address the problem. However, not all farmers agreed with this measure. One of the colonial framers' in Sikumi, Ngamo, for example, was displeased with the instruction of quarantining his cattle and disobeyed the quarantine notice prohibiting the movement of transport cattle without a permit[28]. By the 1930´s, fears that the tsetse fly was spreading at an alarming rate continued, and there were suggestions made for the cleansing of traffic on the Bulawayo Falls Road, located to the east of the game reserve, and that shooting of wildlife be undertaken[29].

From 1932, Davison took cautionary measures to help identify when disease was present in the game park; he did this by using a group of indicator cattle that was kept there. The indicator cattle were a group that Davison kept isolated from any other domestic animals however, they could mingle freely with game, using the same drinking points as wild animals (Davison, 1967: 171). If the indicator cattle fell sick with wildlife related diseases, such as Trypanosomiasis or foot and mouth, this would be an indication that wildlife had infected the

[27] NAZ V1-10-3, 30 September 1921 Chronicle- Tsetse Fly Peril, Disease spreads Wankie Farmers´ Report Theory of mechanical Transmission
[28] NAZ V1-10-3, 15 October 1921 Letter from Chief Veterinary Surgeon
[29] NAZ S1193/T4 Wankie Game Reserve; Tsetse fly: 1927-1929

cattle and that the disease was in the game reserve. Davison (1967) acknowledges Trypanosomiasis as one of the first diseases to affect their indicator cattle in the 1930s. However, the disease caused by tsetse fly did not cause much damage to the cattle as only two deaths occurred, and one horse was lost. The game warden claims that the disease did not reoccur in the park and attributed it to the possible success of the anti-tsetse operations outside the park (Davison, 1967). Tsetse fly eradication measures in the country included bush clearing (which occurred from as early as 1918[30]), game elimination experiments and dipping experiments in 1919[31], and aerial and ground spraying (using dieldrin and DDT) in the 1950´s and 1960´s (Pilossof, 2016). Other major tsetse fly control operations occurred in the 1960´s, 1970´s, 1980´s and 1990´s (Shereni et al., 2021).

This history about tsetse fly shows that the tsetse fly belt was constantly shifting back and forth from the east towards the game reserve. This was, therefore, a threat to farmers and cattle owners living in that area. If the disease had spread into the park and surrounding farms it would have resulted in cattle loss or quarantine, as well as game elimination and bush clearing within the reserve; these actions and measure would have been regressive to the goal of creating a wildlife sanctuary. These methods of extermination and management would have also influenced the ecology of the area. I, however, did not find corroborating information attesting to whether tsetse fly or Trypanosomiasis, were ever found again within the game reserve or its surrounding farms after its appearance among indicator cattle in the 1930´s. According to Condy (1970), in 1967, cattle in Rhodesia were fairly distributed over tsetse fly free areas and there were “no cattle kept in the tsetse fly regions or in the 5000 square miles of Wankie Game Reserve” (Condy, 1970: 7) (Figure 8).

[30]NAZ G 1/3/2/4 Tsetse fly eradication, Bush clearing.
[31] NAZ V1-10-3, 22 April 1919 Tsetse Experiments- Dipping

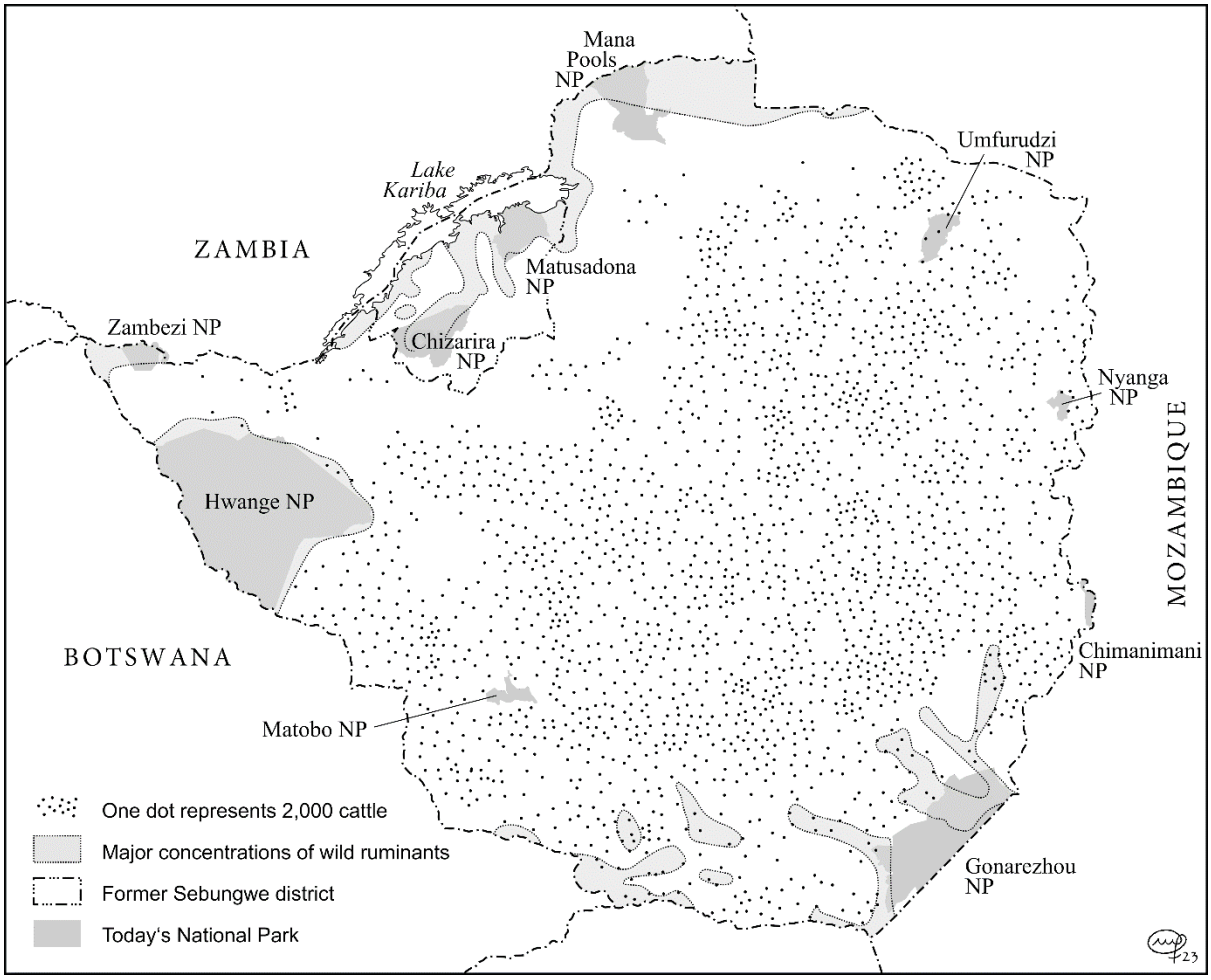


Figure 8 Map showing the location of Sebungwe region; location of present day national parks and the distribution of cattle and major concentrations of wild ruminants in Rhodesia in 1967 based on Condy (1970: 8)

The role of foot and mouth disease in the introduction of a fence

Foot and mouth disease also contributed to the creation of the park, especially to the introduction of a fence around its boundary. Although the outbreak of 1931 at Nuanetsi cattle Ranch in Southeast Zimbabwe, was the first major outbreak to be recorded (Condy, 1970), foot and mouth disease is suspected to have occurred in Zimbabwe in the early 1890's (Condy, 1970:1) and 1903 (Sinclair, 1922), as shown in Table 1. Rhodesia was exporting about 61 000 head of cattle annually however, after the outbreak in March 1931, government

banned the export of cattle[32]. At the time of this first outbreak, Southern Rhodesia was trying to establish itself as a beef exporting nation (Phimister, 1978). However, foot and mouth disease became a problem and only added to the challenges the colony was facing while attempting to establish cattle ranching in the colony (ibid).

Table 1 Summary of the history of Foot and mouth disease in Southern Rhodesia

Summary of the history of Foot and mouth disease in Southern Rhodesia	
Year	**Event**
1892	'First heard of in Mashonaland and the Northern Part of the Transvaal' (Sinclair, 1922:170; Condy, 1970:1)
1903	Suspected FMD infection among government camels in Goromonzi district (Sinclair, 1922:171)
1931	First recorded out-break occurred in 1931 at Nuanetsi Ranch. (Condy, 1979b:176)
1932	Kenya seeks to conduct collaborative research with Southern Rhodesia[33]
1960's	Evidence collected over 35 years of veterinary research starts to show that wildlife plays a significant role in initiating FMD outbreaks while dissemination is by domestic stock (Condy, 1967)
	More research on the origins of FMD was encouraged[34]
1970s	Condy publishes historical study of FMD in Rhodesian Wildlife (Condy, 1970)
	Attempt at creating FMD free Buffalo on farms far from FMD endemic areas in Rhodesia´s S.E. lowveld by capturing and isolating young buffalo calves that have not yet acquired FMD infection (Condy and Hedger, 1978:87; Condy: 1979a)
	Debates on the value of cattle versus buffalo appear[35]

[32] NAZ S1193/D4/23, 16 November 1931 Foot and Mouth Diseases: Meetings of and with cattle owners: 1931 October to November; Circular letter to cattle owners

[33] NAZ S1193/D4/7, 23 February 1932 Foot and Mouth Disease: Research- General 1932 March- June; The Chief Veterinary Research Officer, Veterinary Research Laboratory, Kenya Colony

[34] NAZ S/WI40 Wildlife Society of Rhodesia Newsletter No. 29, January 1968

[35] NAZ S/ZIM 775 Beef or Buffalo: Is this the choice facing Zimbabwe? In Zimbabwe Wildlife, No.38, March 1985, p6-11

The 1931 outbreak "spread over two thirds of the cattle rearing areas of Rhodesia" (Condy, 1970:1), facilitated by the role of ox-drawn transport (Condy, 1979b). This scenario resonates with the concepts of feral proliferation as described by (Tsing et al., 2019). It was believed that modes of human engineered infrastructure, such as ox-drawn transport, played a role in transporting the disease to various parts of the country[36]. It was suspected that mobility using transportation could spread the virus, as infected cattle or donkeys drawing wagons could carry the virus from one part of the country to the other. This theory was also present when colonial officers feared the spread of tsetse fly from the east, and they sought to cleanse/disinfect traffic on the Bulawayo Falls Road of the game reserves, as mentioned earlier. This shows how humans, through mobility and the use of technology, can facilitate the movement of organisms such as insects and viruses.

The occurrence of Foot and Mouth Disease in Gwaai Native Reserve and Wankie Game Reserve

When compared to the number of FMD outbreaks that occurred in other parts of southern Rhodesia, the numbers in Matabeleland North were lower (see Table.2). I, however, present the history of FMD in Wankie Game Reserve and its surrounding areas because the disease influenced the creation of fences along the boundary of the game reserve. In addition, archival reports and research indicate that from its first recorded outbreak in 1931 to the 1960´s, the host of the virus was assumed to come from wildlife, but there was not yet any scientific evidence pinpointing a specific animal. However, because most outbreaks occurred in areas near wildlife populations, hypotheses about the role of game frequently featured in discussions among veterinary scientists and conservationists about the possible origins of the

[36] This also resonates with the situation that we are in today when considering how viruses such as the covid-19 virus can spread with the help of movement and travel of humans.

disease. The historical records show that the presence of FMD in Wankie Game Reserve and Gwaai Native Reserve contributed to the discovery of the host of FMD.

Table 2 Summary of FMD outbreaks that occurred in or near Wankie Game Reserve

Summary of FMD outbreaks that occurred in or near Wankie Game Reserve				
Outbreak No.	**Date**	**Type**	**Original Focus**	**No. of cattle**
7.	August 1940	-	Wankie Native District 2 Farms	700
25.	12. July 1957	SAT1	Gwaai Reserve (Nyamandlovu District)	94 463
27.	14. March 1958	SAT 2	Westwood Farm (Wankie District)	1068
28.	26. August 1958	SAT 1	Sialwindi Dip (Wankie District)	9885
30.	27. Feb 1959	SAT 1	Railway Farm 50 Wankie	191
31.	27. June 1960	SAT 1	Wankie Main Camp	80
32.	8 Sept 1960	SAT 1	Kazungula irrigation scheme	742
33.	5 July 1960	SAT 1	Makanda Dip. Maitengwe Crown lands	47 920
41.	March 1966	SAT 2	Tabolisa Farm Matetsi	3459

(Based on "*Table 1. Original Foci of Foot and Mouth Outbreaks and number of Bovines infected with foot and mouth disease virus in Rhodesian cattle" in Condy, 1970)*

The economic effects of animal diseases, such as Trypanosomiasis and FMD, in southern Rhodesia was grave, and it is understandable to note that the threat of disease outbreak among the game was something that brought anxiety and concern to the game warden (Davison,1967). When an area north of the reserve, located in Wankie district was also struck with FMD in 1940, this was the only other primary outbreak that occurred near wildlife areas apart from the occurrences in the southeast (Table.2) (Condy, 1970: 31). In a letter to The Conservator of Forests, in October 1940, Davison wrote about the FMD outbreak that had occurred north of the game reserve. A cattle inspector and the game warden shot and examined a kudu, a buffalo, and a sable for FMD. Davison described the test results as

positive for FMD for the kudu, free of the disease for the sable, and doubtful for the buffalo. However, in the memo, Davison acknowledges that there was an influx of buffalo in the previous two or three months, with an estimate of not more than 400 head at the end of the rainy season, and these buffalo had spread across different parts of the game reserve[37]. The example of the presence of Buffalo shows that, in that period, an increase in the number of Buffalo had occurred, thus affecting the ecology of the game reserve and, in this case, further increasing the suspicion of wildlife being the source of FMD.

Animals in surrounding areas of Wankie Game Reserve contracted foot and mouth disease, and the first reports of an outbreak came out of neighbouring Gwaai Native Reserve in 1957. Table 2 shows that 94 463 cattle belonging to Africans in the Gwaai Native Reserve got affected by the outbreak. It is said that the outbreak occurred "right on the boundary of the reserve where grazing and water were shared between cattle and game" (Davison, 1967: 172). The disease was found present in seven dipping areas, the Ngamo area such as Nduna dip tank, Gwaai Native Purchase area, Gwaai forest area, Regina Mundy Mission, and the Gwaai Siding (Condy, 1970). Two other cases were later found among game at Ngamo, where animals such as kudu, sable, roan, impala, reedbuck, giraffe, and buffalo showed signs of FMD infection (Davison, 1967). Quarantine measures incorporated by the veterinary services helped to keep the disease under control, and the disease died down.

These incidents further supported the hypothesis about game being the host of the disease. However, there was no scientific evidence to substantiate the claim and, because the outbreak did not occur inside the park, wildlife proponents remained less inclined to support the hypothesis about game being the cause. In general, wildlife proponents did not agree and often argued against accusations that cited wildlife as causes of diseases such as foot and

[37] NAZ S1194/1613/7, 12 October 1940 Foot and Mouth Outbreak

mouth disease or trypanosomiasis[38]. This, to some extent, decreased the efficiency of the response towards the prevention or spread of FMD in the country. They questioned the allegation that FMD came from wildlife in Wankie by saying:

> *An allegation was recently made that foot and mouth disease had been spread by game from the Wankie Game Reserve, following which we took the matter up with the Game Department and the Department of National Parks. There is apparently no proof that this infection did emanate from the Game Reserve, although it is stated that primary foot and mouth disease infection has always commenced near areas of heavy game concentration. ... It is indeed unfortunate that there is still no scientific evidence as to how foot and mouth disease is transmitted and that in the absence of such evidence game animals are so often blamed. We agree that foot and mouth disease has been found in game animals, but there is only circumstantial evidence, which can easily be misleading, that they transmit it to cattle. We can but hope that one day research will find the answer.*[39]

The indicator herd at Main Camp remained unaffected, even though the disease also affected surrounding areas such as Botswana. However, following the outbreak in 1940, it would be another 20 years, until FMD broke out among indictor cattle (a group of cattle kept isolated from any other domestic animals but could mingle freely with game, using the same drinking points as wild animals) in the main camp of the game reserve, as recorded by Davison (1967) and Condy (1970). Davison reports that it was only when indicator cattle at the main camp became infected by FMD in 1960 that the veterinary services department considered this a viable reason to separate wildlife and cattle. Measures came in the form of creating a fence

[38] NAZ S/WI40 Wildlife Society of Rhodesia, Newsletter no. 13, 15. September 1964

[39] NAZ S/WI40 Wankie Foot and Mouth Disease (in The Wild life Protection society of Southern Rhodesia, no.2, September 1958)

that ran from the Gwaai river along the boundaries of the farming area and then south towards the Botswana border. The fence also ran from Ngamo to Nata.

According to Davison (1967:173) the fence was not worthy of its name because it was too frail, making it inadequate; it could easily be broken through or smashed down by animals such as elephants, buffalo, and wildebeest. This led to measures such as veterinary officers shooting of all the game that broke down the fence (ibid). Various animals sought water sources located on the other side of the fence, and while animals such as kudu and eland could easily jump over the fence, at times their young ones found it difficult to do so. As a consequence, the presence of the fence was met with negative sentiments and opinions from both rangers and wildlife conservationists. Rangers and patrol men witnessed how wildlife was affected by the fence, including how they were caught or tangled in it, or how young animals were separated from their herd because they are unable to jump over or crawl underneath the fence (Davison, 1967). According to Davison "what the fence patrol men thought and said about these things could not be told in this book. We, of course, mourned the loss of our animals, and the suffering they endured distressed everyone on my staff" (Davison, 1967: 174). It was also expensive to put up fences, and wildlife proponents questioned whether this was a justifiable expense, especially if a fence could not help controlling the movement of small animals, birds, or baboons.[40]

The creation and purpose of the fence around Hwange National Park was meant to prevent and control the spread of foot and mouth disease. The fence represented a physical border structure meant to separate wildlife from livestock and deter them from crossing the boundary, limiting the possibility of contact among wildlife and livestock. When I first started my research, I was informed by villagers and veterinary officials that parts of the

[40] NAZ S/WI40 Foot and Mouth (in Wild life society of Southern Rhodesia, no.10, October 1963, p. 4)

fence was damaged. However, when I visited Tsholotsho in June 2020, the part of the fence that I saw was not damaged but rather wide and porous (Picture 18). It is possible, though, that out of 140 km of boundary fence, I only saw the part which was still intact and thus some parts of the fence were damaged, as attested to by the villagers. When I saw the fence, one could clearly see that it was easily permeable for wildlife or livestock to move in and out.

Research on foot and mouth disease host

According to Condy (1967), evidence indicating that wildlife-initiated outbreaks and domestic livestock disseminated the disease, was mostly circumstantial. However, "using new techniques developed in Europe, for detecting minute amounts of virus carried in the throats of cattle, Zimbabwe Rhodesia was the first to find that buffalo harboured live FMDV" (Condy, 1979b:176).

Veterinary research conducted between 1959 and 1968, pinpointed the African Buffalo as the host of FMD (Condy, 1970). In 1962 a serological survey was carried out; this included the collection of blood serum and other specimens from a variety of wildlife. An investigation done in the country into the virus carrier status of wild ruminants, started in 1965. At first, samples were collected in 1964 during game destruction operations and tsetse fly operations. Africans stationed at hunting camps, hunted for the animals and collected the serum samples. The Animal virus Research Institute in Pirbright, England, assessed the samples. About 912 samples were taken from different wildlife species and a long list of those animals such as buffalo, sable, impala, and giraffe came from Wankie. Experimental infections were also conducted in 1965 and 1966. In 1968, specimens were collected from 46 buffalo from 6 places, 97 impalas from 5 places, 1 sable, and 47 bovines from one locality to investigate the carrier status. "Five foot and mouth disease isolates were obtained from 12 of the 46 buffalo tested. All three Southern African Territory types of viruses were recovered. No virus was

found in the 97 Impala and one sable tested," (Condy, 1970: 62). According to Condy, the isolations were the "first record of the virus being found in a wild free-living ruminant which showed no clinical signs of foot and mouth disease." (ibid).

The discovery of the buffalo as the host of FMD amplified debates surrounding the value of domestic animals, such as cattle, versus the value of wildlife, such as buffalo. These debates predominantly reflected the situation of the time, a time in which southern Rhodesia - and the region found itself - questioned the value of conservation areas (wildlife) at the expense of (cattle ranches) livestock, or vice versa. These debates showed where the identity of wildlife (buffalo) was rooted, not only as something that needed to be protected and conserved but also as an income earner for the colony. And, although livestock such as cattle was an important source of income and revenue to the country, its value or worth as a contributor to the economy was also weighed in comparison to wildlife. In one newsletter, the writer expresses how different professions perceived the buffalo, by stating,

> *"to the sportsman, it is one of the "Big four", renowned for its size, toughness, cunning and ferocity…to the wildlife biologist, it is an example of an animal beautifully adapted to environments which are often harsh in respect of climatic conditions…to the veterinarian, it can be a problem as a carrier of the foot-and-mouth disease (FMD) virus in areas where its distribution overlaps into cattle country - or rather, where cattle have been superimposed on its habitats (the buffalo, of course, occurred naturally on many Rhodesian ranching areas long before cattle were introduced by man)"*[41].

[41] NAZ S/WI40 The Rhoman Trust, ´What future for the Buffalo on Ranches in Rhodesia? ´ in Wildlife Rhodesia, no.17, October 1978, p22

These mostly positive attitudes present the buffalo as a grand, important animal and, although its negative characteristic as an FMD carrier is noted, the opinion highlights the buffalo as an indigenous animal "naturally occurring" to the country, while cattle is acknowledged as an animal that was introduced by humans.

One of the options to manage the disease and curb infection of the virus to livestock was a suggestion to eliminate either cattle or buffalo. For example, a suggestion was put forward for the elimination of "all buffalo in the lowveld outside of the Gonarezhou National Park."[42] In an interview, the Minister of Agriculture, Mr. Denis Norman, explained the importance of the cattle industry in the country and the role played by the Lomé contract in influencing the need to eradicate some of the buffalo in certain parts of the country[43]. I, therefore, notice that in the history of animal and disease management, the process of elimination or extermination played a significant role. Steps such as the slaughter of game had been put forward as a measure to protect the cattle ranching industry. The option of eliminating game during the 1970´s and 80´s, highlights the precarious position that animals were in based on how economically valuable their industry was perceived to be. The vulnerability of livestock to the threat of extermination for the purpose of controlling FMD, is explained by Mwatwara and Swart, (2015).

Conclusion

This chapter brings to our attention how a landscape was divided into categories of communal area, private farms, game reserve, and forest reserve. Although Hwange National Park was the first official national park to open in Zimbabwe, there are different political,

[42] NAZ S/WI40 The Rhoman Trust, ´What future for the Buffalo on Ranches in Rhodesia? ´ in Wildlife Rhodesia, no.17, October 1978, p22

[43] NAZ S/ZIM 775 *Beef or Buffalo: Is this the choice facing Zimbabwe?* in Zimbabwe Wildlife, No.38, March 1985, p6-11

social, and ecological factors that shaped its physical boundaries and facilitated its creation from the time it was first declared as Wankie Game Reserve, in the 1920´s. These factors included the initial selection and demarcation of the first native reserves, Gwaai and Shangani native reserves, the displacement of people, land, game and forest laws, the creation of artificial water sources, and the presence or absence of diseases. This chapter presented how these different historical variables contributed to the location of the park and the communal areas bordering it, as well as its ecology.

The historical relationship of humans, wildlife, and livestock have evolved and possibly changed as perceptions in the value and use of the landscape have also changed. Although Africans had measures to control and manage wildlife prior to the colonial period, these measures differed from what was later introduced by the colonial government. The governing of wildlife prior to colonial occupation was led by both spiritual and political leaders in communities to help provide people with guidelines to prevent overuse. Hunting among the San, Ndebele, and the colonial officials differed, and the examples demonstrate how access to, and use of the wildlife and natural resources changed with each group. The San hunted and gathered in areas with boundaries that they identified according to the natural features or abstracted distance, such as how far they can walk or how far they can see. While the Ndebele selected areas set aside for hunting based on the consent of the king. The colonial government introduced stricter conservation laws, including the explicit division of the landscape to private farms, game reserves, native reserves, and forest areas. They also displaced people and settled them in lands which were less favourable to their lifestyles. This brought change to the lives of different ethnic groups, such as the Ndebele, San, and Nambya that used that area.

Archival material from Southern Rhodesia also reflects the challenges and contention, that different officials and stakeholders experienced with wildlife management during the colonial era. Problems of wildlife encroaching into farmland, the problem of access to water, and issues to do with wildlife diseases have a long history that goes back as far as the colonial period. Regarding the influence of diseases, such as trypanosomiasis and the foot and mouth virus, in the creation of the game park, it is interesting to see how responses to the diseases on a national scale did much damage to non-human beings - including through actions such as game and livestock slaughter and restrictions to their mobility. Diseases such as foot and mouth disease gave wildlife and conservation areas a bad image, especially when it was confirmed as originating from the African buffalo. This led to debates about the value of wildlife versus livestock, the non-human beings at the centre of this controversy. Official measures to curb the spread of wildlife related diseases also included physical boundary formation to enclose specific wildlife areas and separate them from livestock areas.

Turning the landscape into forest reserves, game reserves, and native reserves was part of a process that resulted in the commoditization of wildlife and natural resources. The strict and exclusionary concept of protecting wildlife and forests through game reserves and forest reverses was also at the expense of the African communities' access to these resources. In this situation, the value and identity of wildlife, natural resources, as well as African communities shifted within the shared experience of colonial administration. The social, cultural, and spiritual relationships that African communities had with the non-human beings around them was challenged, and redesigned to suit a profit driven and exploitive relationship that characterized the early colonial period. In the present-day context the presence of wildlife may still have significant cultural and economic influence on neighbouring communal areas. Although it is unlikely to fully reconcile the relationship that African

communities had with wildlife and natural resources prior to the colonial period, the changes that occurred based on this history, influence human-wildlife relations.

4. The social and economic dynamics of a village in Tsholotsho Rural District

In this chapter I discuss how living on the edge of a national park may influence the social and economic characteristics of villagers in the present-day context. It follows the chapter on the historical background about changes in the landscape, land governance, and land use by discussing how these historical factors relate to the present day social and economic dynamics of the village. These are important to the study because they shed light on the position of human vulnerability and opportunities in the context of human - wildlife relations. I discuss livelihood options, such as income and job opportunities that are available to the villagers, with the purpose of showing the different livelihood sources and how reliant they are upon the land and natural resources available to them. To provide more context about the wellbeing of the villagers and their vulnerability, I further discuss the food security status and the problem of drought – an experience shared by wildlife, humans, and livestock in this area. In addition, I examine the role played by access to energy in helping maintain livelihoods and a shared life among humans and their livestock through the provision of resources, such as water. Information for this chapter comes from interviews, group discussions, observations, and the Household (HH) survey data.

Demographics

In order to provide more context about the village, its population, and its location in Tsholotsho District, I will describe some of the demographic characteristics of my field site. There are twenty-two Wards in Tsholotsho District. Six of them are located close to its shared border with Hwange National Park. These are Wards 1, 2, 3, 4, 5 and 7 (Figure 9). It is

important to note that this study is based on research that I conducted in a village located in ward three.

Figure 9 A map showing the 22 wards that are in Tsholotsho Rural District. Wards one, two, three, four, five and seven are very close to the boundary with Hwange National Park. (based on https://www.cnfa.org/amalima/tsholotsho-district/ ; accessed on 17 August 2022)

Tsholotsho's population is diverse, consisting of Kalanga (42.9%), Ndebele (51.4%) and San (5.7%) (Mukamuri et al., 2013). There are more than 200 San households in Wards 7, 8 and 10 in the extreme southern and western parts of Tsholotsho district; Ward 7 has the highest population of San people, comprising 6% of the total Ward population (Mukamuri et al., 2013: 99). The San have been marginalised and live on the fringes of the district's economic and socio-political systems however, their tie to the area is evident when one considers that

the districts´ name, Tsholotsho, is derived from the San name of a pan. There are also other places in the district that indicate San heritage, with names such as Cawunajena, Gulalikabili, Gariya, and Gibixegu (Mukamuri et al., 2013). Further research and studies on the life and history of the San people in Zimbabwe, appears in studies by Phiri et al., (2020), Hitchcock (2019), and Hitchcock et al., (2016).

Given this background and history of the San and Tsholotsho, it is important for me to point out that, although some of the issues I discuss in this thesis reflect on life at the edge of the national park, this study is unable to completely show how differences in ethnicity can affect lifestyles and experiences of all the people who live here, for three reasons; the data from my research, and the survey I conducted, was from one village in Ward three; most villagers identified themselves as Ndebele; Ndebele is the dominant group of people living in the district.

Migration history

The data from the Household (HH) survey shows that out of 98 responses, the forebearers of 36 respondents´ moved to the area from Nyamandlovu. Seven other respondents came from Esigodini and six from Umguza. Other respondents mention that they had migrated from Siwela (5); Solusi (3); Mandau (3); Emabandeni (2); Esigodini (2); Redbank (2); and Sawmill (2) (Figure 10). Eleven of the respondents could not recall the name from where their forebearers came, and eight of the respondents did not have any migration history.

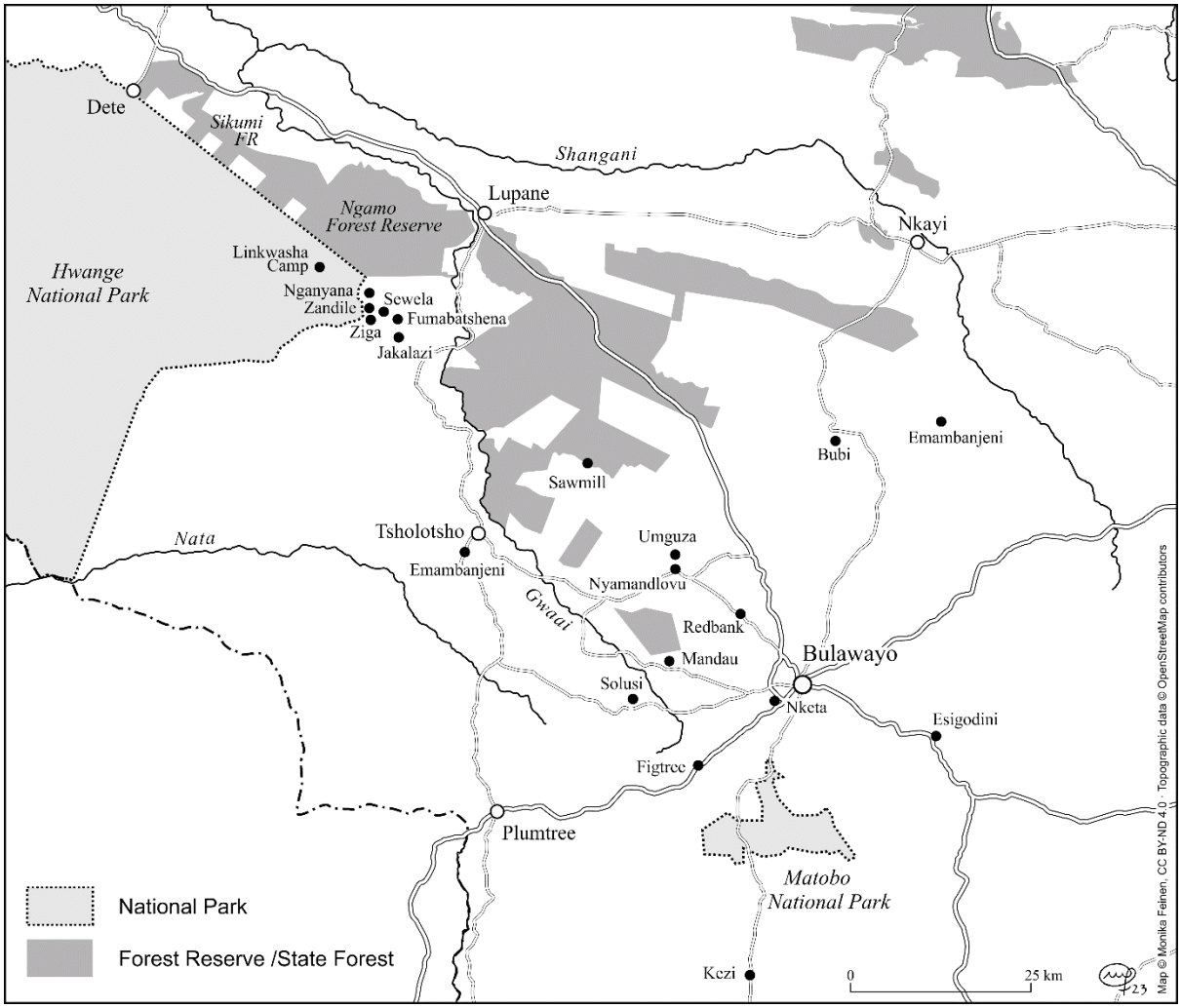


Figure 10 Map showing the different areas of origin

To provide a comprehensive view of the years and timeline of the migrations, I analysed the data and grouped them in ten-year periods, with the following results (Figure 11). The period from the 1920's up to the 1940's shows elevated levels of migration into the village, with a total number of 49 respondents revealing that their forebearers moved to this village during this period. Eight respondents attested that their families moved from Bubi, Nyamandlovu, Sawmill, and Zambia in the 1920's, to make their home in Tsholotsho, while twelve respondents can trace their roots from Nyamandlovu, Umguza, Jakalazi, Fumbabtshena, and Emabanjeni in the 1930's.

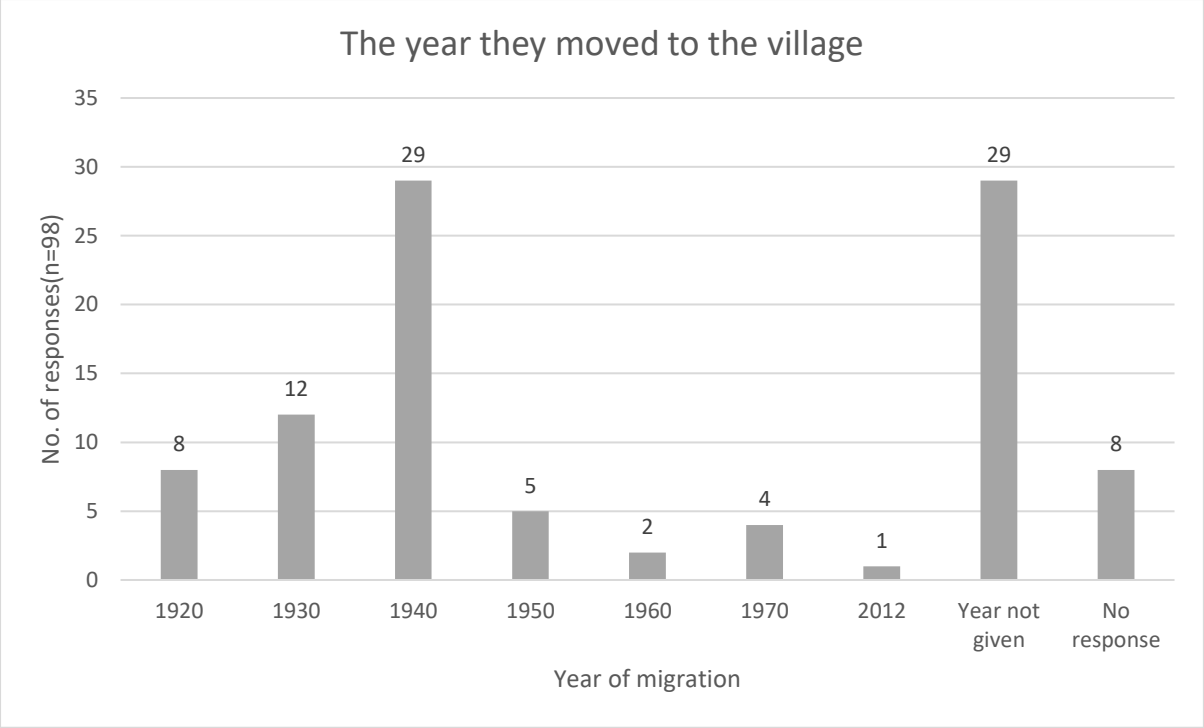


Figure 11 Showing the year of migration into the village

The 1940's saw the highest number of movements into the village, with twenty-nine respondents mentioning that they originated from either Nyamandlovu, Esigodini, Dibutibu, Umguza, Solusi, Siwela, Mandau, or Figtree. Fewer respondents mentioned that they moved to this area in the 1950's (five respondents), 1960's (two respondents), 1970's (four respondents), and 2012 (one). Twenty-nine respondents did not state the year they moved to this place. This information shows that most migrations to the village occurred between the 1920's and 1940's, during the colonial period. It is also important to point out that different HH may have the same forefathers. For example, my host father has two brothers that have their own homesteads. Most of these migrations into the reserves occurred forcefully, as explained by one male respondent, aged 69, who spoke to me about how his family came to live in this village. His example shows how the colonial government would relocate people unexpectedly, with force and, consequently, leading to the loss of their property. His story

also indicates that some people may have been moved from one place to another more than once until they came to settle in this particular village.

> "This is what I heard from my father. He said that we come from a place called Entabazinitakata, in Bulawayo. The colonial government moved them from Entabazinitakata to Inketa in the year 1936. They stayed in Inketa for four years and then they were driven away to Mandau. They stayed at Mandau for three or four years however, the colonial officers also told them that 'this place is no longer suitable for you to stay, and you are going to be resettled to another place'. That is when they came here, where we are now; it is called Sihumi area. From the 1940s until today we are still living here. They told them that this is the place that is suitable for them to stay. They were also told that the place that they were living before will be occupied by a white man. From Entabazinitakata to Inketa my fathers were also told the same story, and driven to Mandau, and they were told you are not fit to stay here, this place is to be occupied by a white man. When they moved here, some of them were transported by lorries while their luggage went in the other direction in another lorry. This is because people were put in one lorry and their belongings were put in another lorry. You could not go piled together with your luggage and, as a result, people lost their property as well as their grains. This movement was very, very wrong because you cannot catch one bus and put your luggage on to another bus. Some people would even try to herd their cattle to the new area, but on their way, they would be asked 'where are you going with those cattle?' They would answer that 'I am going to such and such a place,' but they would be told to leave their cattle and go alone. So, this was not good for us." 69-year-old Male; interviewed on 24 February 2022

Livelihoods, income, and job opportunities

Assessing livelihood or income generating activities is important in order to understand how people living in perhaps one of the poorest and driest regions in the country, make a living. In this section I discuss the different opportunities and ways in which the villagers acquire an income and job opportunities. In the survey of 98HH, the villagers were asked about the different sources of income available to their household. Results from the household survey show that over half of the villagers rely more on groceries or money that they receive from relatives living and working away from home, than formal opportunities for work within the village. Villagers also sell different things for income, such as arts and crafts. While assets such as livestock and land do contribute to their livelihoods, villagers mostly hold onto livestock as a long-term resource; they will use this resource for farming, to pass on as an inheritance, or for use during significant life events, such as for the bride price, paying school fees, or medical expenses, and thus this resource is not regularly disposed of. Land for farming is also significant, as discussed in this chapter. However, produce is susceptible to minimum rainfall and vulnerable to attacks by wildlife, such as elephants, which consequently affects food security.

Remittances

Remittances can be described as the "unidirectional flow of money" and goods to a household, community and country from a mobile worker (Cohen, 2011: 104). Fifty-seven of the ninety- eight HH survey responses indicated that they receive income and goods from family members working in other cities and countries. Although remittances are important throughout Zimbabwe, they are particularly important for this village. Migrating out of the area or village is occurring in the present-day context as people seek alternative income or livelihood sources in other parts of the country, and neighbouring countries. This confirms

findings from previous studies by Nzima et al (2016) and Maviza et al (2019) which indicate that remittances are the main source of income for most households in Tsholotsho Rural District. Due to low education levels and the lack of access to formal employment opportunities, most families rely on family members who have left the village to seek employment opportunities in neighbouring countries. This may also explain why at some homesteads, no one was home, or the homes seemed to be abandoned during data collection.

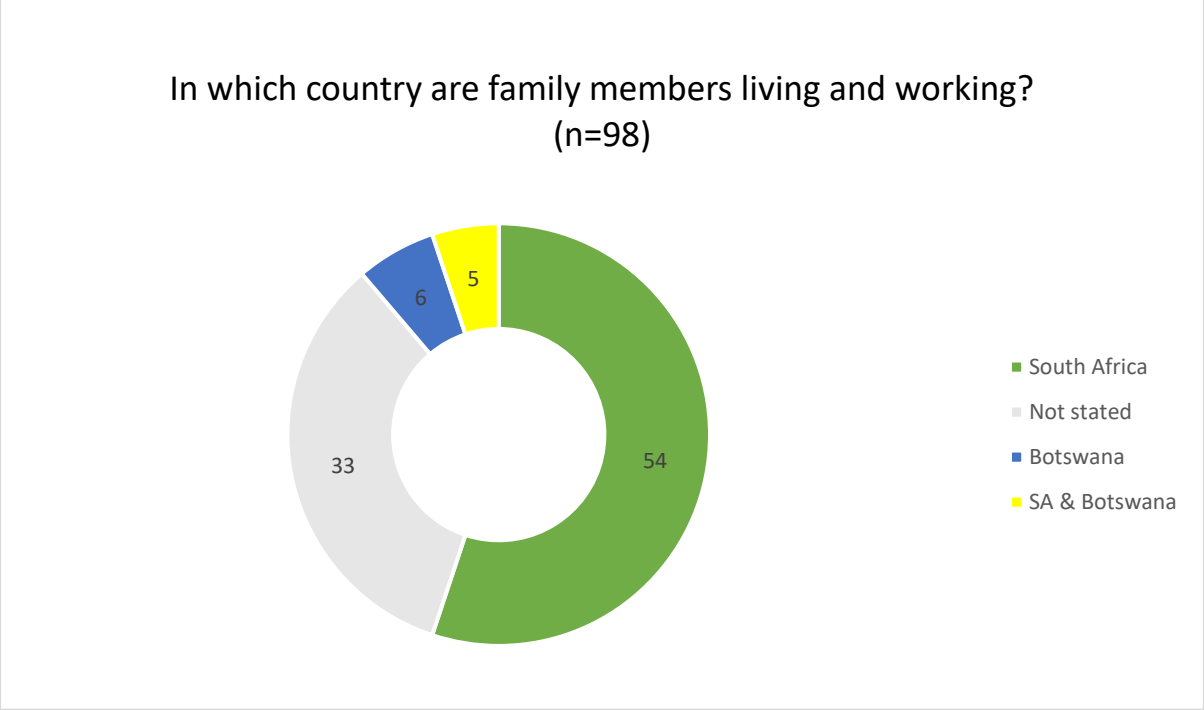


Figure 12 Country where family members are living and working

Sixty-five HH have at least one family member living and working in a neighbouring country. South Africa is the most popular host country for 59 households who have family members working or living outside the country. Eleven households also mentioned Botswana as a host nation for those living and working outside the country. Although Zimbabweans based in other countries use various services to send their relatives money back home- including the use of money transfer services such as Mukuru, World Remit, Money gram,

and Western Union- I do not know the number of households in the village receiving money using services such as these. Distance to the nearest town and lack of access to these services in the village, would suggest to me that receiving cash by this kind of transfer would be a difficult option. There are, however, the popular *Omalayitsha*[44],informal cross border couriers who drive to and from Zimbabwe, transporting goods or money from neighbouring South Africa (Thebe and Mutyatyu, 2017). When you drive to Tsholotsho you are most likely to see a number of minibuses and cars with South African license plates, transporting different goods such as furniture, food, and building materials for their customers.

Nzima et al (2017) underscore that, in this region, migration to countries such as South Africa is an embedded culture. Young people often leave to search for opportunities in South Africa and Botswana soon after finishing high-school, or they drop out of school to search for jobs in these countries. However, as popular as remittances are as a source of livelihood, moving to neighbouring countries does not always prove to be successful; many of the young people experience difficulty finding work. During my stay at the village, I met a young man and a young woman who had been to South Africa in search of work however, due to difficulty finding work and opportunities for permanent stay in the country, they decided to move back home to Tsholotsho.

In addition to remittances from family members outside of the country, villagers rely on family members living and working in a neighbouring city or town in Zimbabwe to send them money or goods. Nineteen HHs out of the ninety-eight HHs who participated in the survey, have one or two family members living and working in neighbouring towns or cities. As shown in the graph, Bulawayo and Tsholotsho Centre are the most popular neighbouring city and town that people move to live or work domestically.

[44] Omalayitsha: Matebeleland's unsung heroes | The Chronicle (Date accessed 09 August 2022)

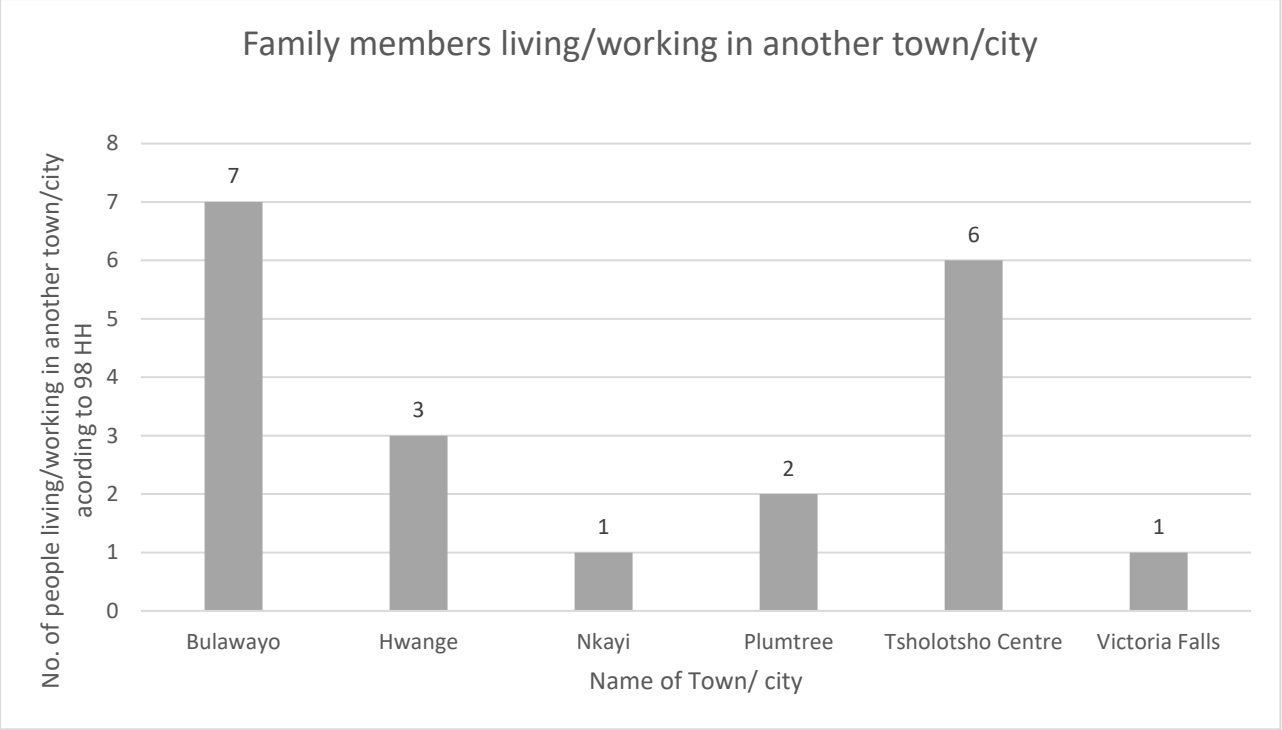


Figure 13 City or Town where family members are living and working

Sale of handmade arts and crafts

Fifty-two HHs out of the ninety-eight HHs stated the sale of handmade arts and crafts as a source of income. Women can sell their baskets, mats, or bags while young men can sell their wooden sculptures to visiting tourists. During my time in the village, I observed women engaged in creating or making these products either as individuals or in a group. For example, my host mother and her daughter in law were observed weaving baskets and mats together on a regular basis. This is something they often do in the evenings, after supper, or during the day when they have fewer chores to do around the home. My host mother also makes other products such as crotched bags or home decoration items made from wool. When I visited other homesteads, I came across two other women also creating such mats or baskets. The material they use for the mats and baskets comes from tall, dried grass that they gather from the bush and secure into bundles. The plastic thread used to wrap around the

dried grass and mould into either the shape of a mat or basket comes from plastic sacks used to package 50kgs of rice, sugar or mealie meal. They often buy these bags empty and clean in assorted colours from the market in Bulawayo. As revealed by my host mum, they sell their wares (Picture 6) to neighbouring Lodges and Safari operators, visitors to the area, and to people living in neighbouring countries, such as South Africa.

Some women in the village also work together as a group to create various products. My host mother and her daughter in law, for example, are part of a sewing club that meets together twice a week at the nearby primary school. This sewing club began in 2013 and consists of a group of 19 women who sew things like food covers, napkins, aprons, tablecloths, tables runners, and mats. They use different types of fabrics with printed motifs of wildlife, huts, or calabashes. They often sell their wares to the nearby safari camps, among themselves, or to other households. This production of handmade arts and crafts was once very popular because of the presence of the nearby lodges. When I first arrived at the village and my host father was showing me around, we came across an area under a shade off trees, close to his homestead where the remnants of stalls used to be. My host father explained that in the past, villagers would sell their products to tourists who would come from the nearby lodges. However, these days villagers no longer set up stalls to sell their different wares. It was also unfortunate that the Covid 19 pandemic affected these activities. During the pandemic, no tourists came to the village, and this caused the sales of such products to decrease. The young men that I spoke to mentioned that they stopped carving wooden sculptures because there was no one to sell them to. They are hoping to resume these activities once the pandemic subsides and tourists return to the area and visit the village. In this case, I saw that the skills and ideas of making and selling these different arts and crafts remained, especially amongst the women - although tourists do not frequent the village as they used to. I was not able to ascertain the total amount of income that villagers receive from such entrepreneurial activities

however, a research study done by Nzima et al., (2016) showed that the sale of handmade crafts in Tsholotsho, does not earn a lot of money and that remittances are a dominate source of income.

Picture 6 Mats and baskets woven by my host mother and her daughter in law using plastic and dried grass

On the other hand, I met a man in the village who does carpentry at his home, and this is the main source of income for his household.

> "*I am a carpenter by profession, so that is what I do to earn an income. Although we do domestic farming, carpentry is the one that gives me a livelihood even though I farm and keep livestock. With farming, sometimes you face droughts and then I end up using the money that I generate from carpentry to buy food or even, sometimes, I lose my livestock through lions and hyenas, and I use the money to replace them*."

He sells his carpentry products to the local safari operators, to customers in Bulawayo, and even some of the villagers support him by buying his products. However, I observed that he is more of an exception, as most villagers are engaged in subsistence farming and not everyone does something like carpentry as their main source of income.

Sale/ trading of other goods

Apart from selling handmade arts and crafts, a few households also sold other goods for income, however these were only a minority. Some of the other ways that people can earn and do earn an income are through the sale of: livestock (nine households), vegetables/ fruit (six households), non-timber forest products which include medicinal products or wild fruits and insects (fourteen households), sale of crops (nine households), and selling other things such as Mobile Airtime or Groceries (eight households). Overall, they sell these goods to other villagers, which means their market is limited to the village. This suggests that the economic network of the community is mutually reliant because there is not much trade or selling that occurs outside the village; they rely on each other for custom. It is a challenge that the village is in a remote area, and they have limited ability to access other markets due to lack of transportation and accessible roads, therefore the villagers trade goods among themselves. If someone needed to carry their goods from Tsholotsho Centre for example, they would need to use a public minibus stopping at Kapanyana Bus Stop and then either walk or use a donkey drawn cart to transport their goods from the bus stop to their homestead. Another option, which is not often available, would be to ask someone who has a car and is driving to that area to help them transport their goods. On one occasion, we helped carry large sacks of sugar from Tsholotsho Centre to the village, for one villager who was planning to sell to other villagers.

Formal employment

Given the villagers proximity to the national park and some of the lodges, I was interested in knowing whether any of the households had a member of their household who worked for any of these organisations. The goal was to identify whether there are any options of employment that have come from wildlife related activities. In the survey, respondents were asked, whether they or any member of their household has worked or is working for any of the listed organizations. I compiled a list of organisations, based on information I had gathered during my stay at the village and the names of organisations that I heard mentioned by villagers in previous interviews and conversations. Working for a Safari operator/lodge was common among the respondents, with eighteen out of ninety-eight HHs revealing that they or someone in their household has worked for a safari operator (Table 3). There are three Safari operators or Lodges operating close to the village.

Table 3 Have you or any member of your HH ever worked for or work for these listed organisations?

	Parks & wildlife	Safari operator/ Lodge	NGO: WWF	NGO: Amalima	Private game farms	CAMPFIRE	Forestry Commission	Hwange lion project	Veterinary services	Agritex	Other
Yes	1	18	0	1	0	2	0	0	2	1	0
No	97	80	98	97	98	96	98	98	96	97	98

As illustrated in Table 4 ‘Job/ employment position,’ Safari operators/ Lodges hire the villagers to do different jobs. Working as a security guard or in security is the job most commonly stated, with five respondents revealing that they or someone in their household had worked as a security guard. Other jobs worked by villagers include the role of Handyman

(three villagers), Housekeeper (two villagers), Assistant Manager, Butler, Chef, Guide, Receptionist, and Scout. The list below shows that there are diverse kinds of jobs available through safari operators/lodge operators, but further research would help in determining whether these job opportunities and salaries are sufficient and to know how many unemployed villagers are actually interested in working for the safari operators and lodges.

Table 4 Job/ employment position

Organisation	Position/Job	No. of responses
Safari operator/ Lodge	Security	5
Safari operator/ Lodge	Handyman	3
Safari operator/ Lodge	Receptionist	1
Safari operator/ Lodge	Housekeeper	2
Safari operator/ Lodge	Assistant manager	1
Safari operator/ Lodge	Butler	1
Safari operator/ Lodge	Scout	1
Safari operator/ Lodge	Chef	1
Safari operator/ Lodge	General hand	1
Safari operator/ Lodge	Guide	1
Agritex	Agritex officer	1
Veterinary services	Handyman	1
Veterinary services	Representative	1
CAMPFIRE	Intern	1
Parks and wildlife	Game Ranger	1
Total		22

Income or support from wildlife related activities

According to my host father, villagers located near the national park do not receive any form of compensation when wildlife destroys their crops or attack their livestock.-Some of the

villagers acknowledge that they have received assistance from neighbouring safari operators. For example, villagers mentioned that one safari operator has helped with paying for school fees and building schools and, that during the famine period, they have also received food from them. Some villagers also mentioned that another safari operator also introduced a project to help the elderly women to sew the baskets that they would eventually sell to tourists. When they sewed baskets before the pandemic the women would come together with their wares in one place, and the safari operator would then bring tourists to the village to buy the products. Other support received by the villagers, from nearby safari operators, included the installation of solar panels at a school, a borehole with a tank for running water, and a feeding program at schools.

The value of livestock

Livestock such as cattle, donkeys, and goats are major assets to the villagers, as they help to provide transportation, draught power, meat, manure, and other related products. Livestock forms a particularly important foundation to the livelihoods of the villagers, who attach much value to livestock, especially to cattle. Among the 98 HHs represented in the survey, the estimated number of the different livestock is 648 cattle: 732 goats, and 235 donkeys. Most households do not have more than nine animals in each group of livestock. There are only two households that reported having 40 or more cattle, and one household reported having 40 or more goats. The average number of livestock among villagers, according to the household survey, was 6,6 cattle, 7,5 Goats, and 2,4 Donkeys per HH. Some of the villagers also possess other domesticated animals, such as fowls and rabbits.

Table 5 Livestock numbers

Number of livestock	Number of HH with Cattle	Number of HH with Goats	Number of HH with Donkeys
0	26	17	42
1-9	45	50	54
10- 19	21	24	2
20-35	4	6	0
40 and above	2	1	0

Villagers value that they have individual ownership of their livestock, unlike wildlife which they do not own. According to a 74-year-old woman, livestock is important to her because as a widow who lives alone, having livestock helps her when she needs money, and she can sell them when the need arises. According to her, this is unlike the wild animals, which she says are not even hers at all and she does not even benefit anything from them. With the livestock that she owns she can choose what she will do with them because she has ownership over them, they belong to her. However, when it comes to wild animals, she does not have such power. This woman´s view is an example of how some villagers believe that they do not have ownership over wild animals but have ownership over their livestock with the power to dispose of it when they need to do so. Hence, for this woman and many other villagers, the aspect of having ownership and decision-making power over what happens to the animals gives livestock more significance and value than wildlife because they can control what happens to their livestock in comparison to wildlife.

Because their livestock possesses monetary value, the villagers often expressed similar sentiments towards the fear and great pain they experience when wildlife attacks their livestock, or when their livestock falls sick. When I spoke to one villager, during individual

interviews, they equated having livestock to having money in the bank by saying, livestock *'is one of my banks. If you lost your money, won't you be troubled?' (Respondent #13, interview on 5 September 2019).* This man's view of livestock as a bank illustrates how livestock is likened to a financial facility that helps villagers save and accrue wealth. It is a very painful experience when one loses their livestock because they fear '*if the donkey or goats die, we will be left without anything' (Respondent #09, interview on 5 September 2019).* The loss of livestock brings a substantial change or impact upon the family's wealth. Livestock, therefore, forms the foundation of their economic status. Furthermore, livestock diseases affect their ability to improve their lives both economically and socially as they are likely to experience the financial burden of caring for and treating sick livestock.

> '*It affects us because I expect to be improving my life, so if my livestock is sick, I know I am going backwards, starting at zero again. The children will also cry because they love livestock. I have already told them that I will give them livestock, that this one is yours, this one is yours, therefore if the livestock is ill, the children will be upset.' (Respondent #15, interview on 5 September 2019).*

For another villager, it is also equally important to keep animals healthy for his children. One 90-year-old male thought it was important so that when he dies his children can get something from him and share it as an inheritance (Interview Male 90 years on 23 February 2022). These views show that livestock is also a source of generational wealth and inheritance that villagers plan to pass on to children at a certain age or time.

Although villagers view their livestock as having monetary value, they only sell their livestock when they are in desperate need of money to pay for things like school fees, or to buy food when wildlife destroys their crops, or when they experience a poor harvest due to lack of sufficient rains. Consequently, livestock is seen as a safety net that villagers use to fall

back on during times of hardship. Furthermore, since there are no hospitals or clinics nearby, they use livestock to carry people to the hospital. They take donkeys or cattle and tie them to the scotch carts and transport the sick to the clinic. Lastly, in times of lack, livestock can help foster community relations among people who have livestock and those who do not. This is noted because some villagers mentioned that they often borrow their neighbours' cows to plough their fields, or they borrow donkeys to help transport sick people to the clinic.

Social and spiritual matters are also related to the value of livestock among the villagers. For example, I learnt that when one of the villagers passed away, they buried him near the livestock enclosure. I asked a family member about the meaning of this practice because I had never seen or heard about this before. He replied by saying that:

> *"Long back, people did not have the knowledge about Christianity, and they believed in ancestors, their belief was that if a man dies, he should be buried next to the livestock kraal because they thought he would be guarding his livestock. Similarly, a woman would be buried near the granary because she would be guarding the grains in the granary. This is what the people long back believed and for us to change this belief to another belief we have failed so we are still doing what we were taught by our elders."*

The family member of the deceased explained that although they still practice this, it did not reflect on their current beliefs as Christians. This example, however, highlights the different gender roles associated with both the care of livestock and domestic responsibilities assigned to men and women.

A 90-year-old man believed that, *"livestock is life, and when the life is taken away from you, you have nothing left."* He said that since he is now old the only thing that he owns and puts his hope in, is livestock. According to him, if wild animals attack his livestock, he is dead

because to him losing your livestock is the same as dying. Likening the loss of livestock to the loss of life sounds extreme, but his view shows that his strong attachment to the value of livestock goes far beyond its value as a means to provide food, beyond its ability to secure wealth, and extends further than any cultural value it may have.

On the other hand, the challenges that come with owning livestock at the edge of a national park has some of the villagers re-evaluating the value they assign to livestock. One 50 year old man, acknowledges that livestock is important but to a lesser extent; he now sees livestock as less important because he does not know how much livestock he is going to have by sunset on any given day, he feels that he cannot rely solely on livestock. *"I am just keeping livestock for the sake of keeping it. But it is no longer like before when you could keep a big herd of cattle, it is risky now."* The man believes that aspiring to keep a big herd of cattle is a risk these days because the livestock numbers may dwindle down due to attacks from wildlife. His attitude highlights that the day-to-day uncertainty of the potential loss of livestock through wildlife attacks discourages him from keeping large herds of livestock. Therefore, in this area one cannot always rely on livestock as a safety net to fall back on because there is uncertainty over how secure one's livestock can be. This suggests that living near a wildlife area can change a person's attitude towards the value of livestock. Although the view that being kept near a wildlife area diminished value of livestock was an opinion raised by one villager in one area, it would be important to revisit this research area to ascertain whether such attitudes are increasingly present or developing among other villagers in the future, especially if the problem of wildlife attacks on livestock persist.

The value of land

Land has different uses and value to the villagers. Villagers not only view it as the place where they plough their crops and graze their livestock, but also where they dwell and place their homes (homesteads). One young lady, aged 28, believes that the land is important to her

because it is where she lives and where personal interactions take place. To her, the formation of all relationships happens on the land. Another young lady, aged 21, believes the same; she said that the land is important because that is where they are staying now, they have built their homes on the land. While recalling stories of his grandfather's displacement from Entaba in the late 1930´s and their finally settling on this land, one man describes what the land and living here means to him, by saying:

> *"As it is, we are now living here, we are now free. So for us to stay here it is because we see it being fit for us because we are living friendly with everyone who is around. No one can say 'move from this area and go to such and such a place'. We see this place being fit for us to stay in it because we are now powerless to move from this place and maintain another living which can be better like this. In terms of land, my grandfather was the village head for the people who came here. He was showing every person who wanted a place to stay here where to place their own homesteads and where to farm. He would go with you and say 'choose a place where you want to make your own land to till.' My grandfather had his mealie meal land here, from this big tree, down westwards to that neighbour's homestead over there. That was the mealie land of my grandfather. But it came a time when the white men would say, 'each man could only have 10 acres of land to plough.' So, the whites pegged the land, these fields which we have now, the white man pegged them. If you had sons, you would get 10 acres and another son gets 10 acres."* (Interview with 69-year-old Male on 24 February 2022)

The perspectives of the young women, as well as that of the older gentleman, show that the land is not just a place where they have built homes or places to stay, but it also facilitates a sense of belonging, where people come together and interact with each other. Furthermore, the history behind how they came to settle in this area plays an important role in reinforcing

feelings of belonging. This is because ever since their forefathers settled here during colonial times, they have not faced relocation from this place like their forebearers did before them.

Farm fields

When it comes to farm land, the villagers share similar sentiments about its importance because the food and resources produced from the farm fields helps them survive. For example, an elderly woman who takes care of orphans said that when they experience good rains and an excess harvest, she sells the excess harvest and uses the money to pay for school fees and uniforms. However, despite the land being vitally important, the unavailability of new, uncultivated land poses problems. According to some, the land is very fertile, but many others complain that because uncultivated land is no longer available, they always plough on the same piece of land - thus depleting the land of its nutrients, and harvesting less lustrous crops. They are thus facing the challenge of needing fertilizers to help improve the soil quality and produce better crop yields. This view highlights their desire for more space to plough and rotate farm fields. Some villagers make use of organic manure from livestock to help combat this problem, however, one villager lamented that it is exceedingly difficult to maintain the supply of organic manure as they cannot keep huge livestock enclosures because of the problem of the wild animals. In this situation, the land is important to the villagers, but inputs like fertilizer and organic manure are hard to come by.

The villagers have usufruct rights on communal land. This is like other communal areas in the rest of Zimbabwe where all land in communal areas is state land[45]. As shown in Table 6, the size of land the villagers cultivate varies from household to household, with 20 HHs estimating that they cultivate their crops on 10 acres or more of land. Accessibility and availability of water plays a crucial role in their ability to grow their food. The region has low

[45] Scoones Ian (2019), Land and tenure in Zimbabwe´s communal areas: why land reform was needed, blog post https://zimbabweland.wordpress.com/2019/10/14/land-and-tenure-in-zimbabwes-communal-areas-why-land-reform-was-needed/ Date accessed 02 March 2023

average rainfall and drought, both of which affect crop yields. Consequently, the villagers grow crops that are more likely to withstand the low rainfall patterns of that region. They grow various crops, such as Sorghum, Millet, and Maize. Because the farm fields help villagers produce food and resources for sustenance, they are an important zone for them, and are generally located a few kilometres from their homesteads (Picture 7).

Table 6 Estimated size of land according to the 98 HH that took part in the survey

Size of land	**No. Households**
1 acre	2
2 acres	13
3 acres	12
4 acres	15
5 acres	18
6 acres	6
7 acres	7
8 acres	5
10+ acres	20
Total	**98**

In addition to the farm fields, some families have gardens inside or close to their homesteads. My host family, for example, had a small vegetable garden where they grow green leafy vegetables, carrots, and tomatoes for household consumption and sometimes for sale. They use a bucket filled with water drawn from the nearby borehole to water the vegetables using the cut-out of an empty plastic Mazoe bottle perforated at the bottom. My host father would often say that it is his dream to have a borehole inside his homestead and he would then increase the size of their garden to grow different vegetables for sale and HH consumption. As I will discuss in an upcoming section, there are a total of only six boreholes available to

villagers, and much time and labour goes into fetching and pumping water. Thus, the opportunity to have a borehole inside one's homestead would significantly help reduce this constraint. Other crops that the villagers grow for household consumption include gourds, beans, cowpeas, round nuts, ground nuts, onions, and melons.

Picture 7 Elephant dung on the road next to a farm field during the dry season. The fields are usually protected from animals by a fence made of thorn shrubs and wooden poles.

The forest and forest products

The village is in an area that has a bush area. The buffer area that is between the village and the national park is also a bush area. Their homesteads are situated in linear positions, although there are a lot of tree and shrubs surrounding them. When I finished conducting a free-listing and sorting exercise and was about to leave one homestead, the man I was interviewing went over to a tree that was on the other side of his yard and picked Matohwe/ Uxakuxaku (*snort Apple/ Azanza garfeana*) from the tree. He brought a handful of them, and

we shared them between my host father and me. Other fruit trees that I noticed when I entered other homesteads, include lemon trees, mango trees, and guava trees. Apart from these, they also source fruits and edible insects from the nearby bush. One afternoon, while returning from their women´s sewing meeting, my host mother and her daughter in law returned with Matamba (*Strychnos cocculoides*) that they had collected on their way back home.

As shown in the Figure 14, there are various forest fruits available to the villagers. In addition to the wild fruits, though, the villagers also seasonally collect Mopani worms, flying ants and flying termites. Forest areas produce a variety of foods that make up the diet of some of the villagers. The question is whether these resources are enough to cater for the needs of the villagers or are sufficient to alleviate the lack created during times of drought. In my opinion, they play a role as supplement for the food basket of villagers rather than a substitute for main meals; these resources are not sufficient to replace daily food requirements although in the past, resources foraged from forests contributed majorly to the food basket of earlier African societies, as I discussed in the previous chapter.

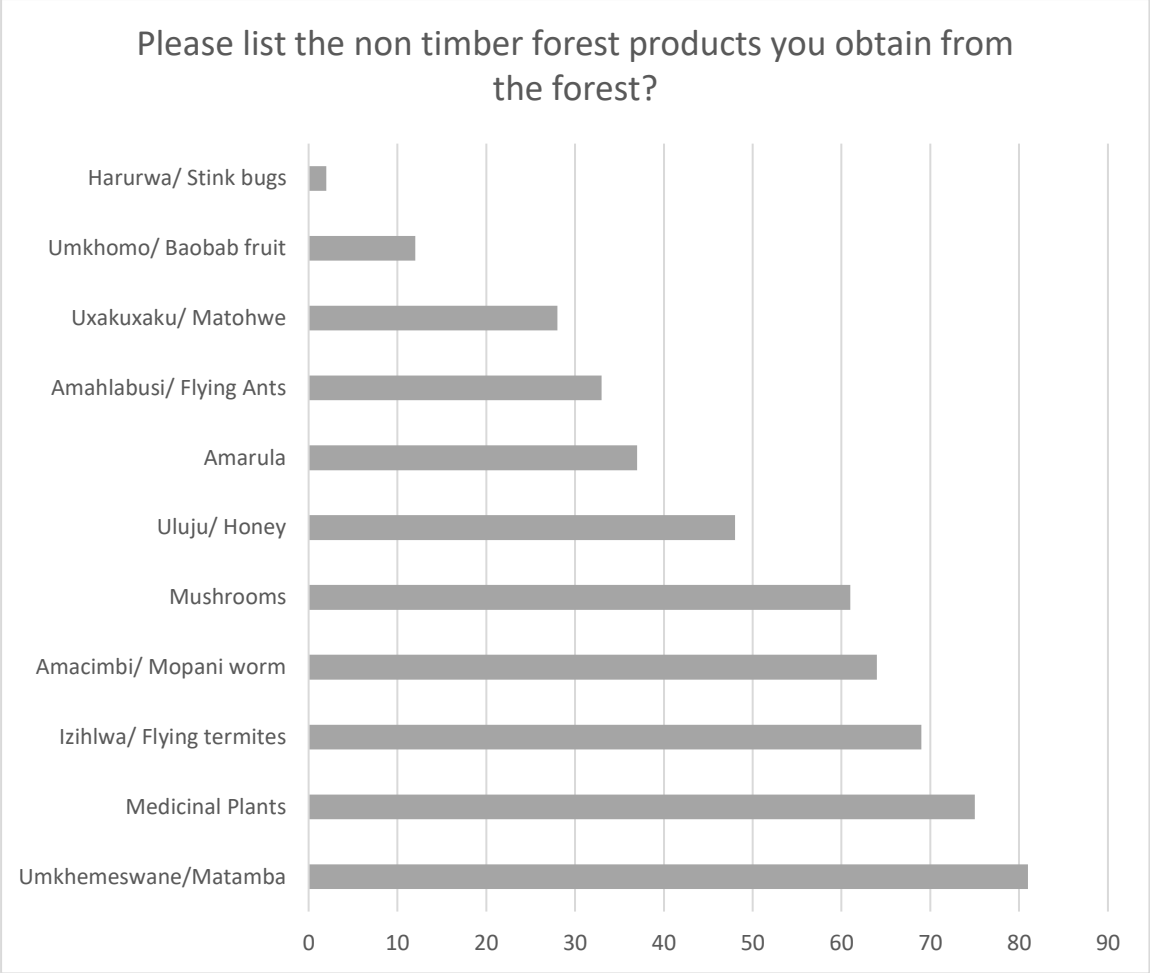


Figure 14 List of non-timber forest products

Villagers also sometimes sell forest fruits, such as a seasonal fruit called umviyo (*Vanguaria infausta*) and umsosobiyane (*Cross berry/ Grewia occidentalis*), at Tsholotsho Centre. Women and young people usually collect the fruit in the forest and travel to Tsholotsho Centre to sell it or they sell it to someone who is going to Tsholotsho Centre. For example, one 74-year-old woman collects umsosobiyane and then boards a bus to Tsholotsho business centre and stays there with family while she sells the fruit. When the fruit is in season, she does this once a week, especially when much of it is available in the forest. Her customers are different groups of people, and although she does not necessarily always get money from the

sale of the these fruits, she receives other things in exchange. For example, if she has a 10-litre bucket full of umsosobiyane, she can get something such as clothes in exchange.

Apart from edible fruits and insects, they also get materials, such as droppers (wooden poles) that they use for building and securing their homes, and for fencing livestock enclosures. The bush is also important because that is where they get firewood for cooking and warming purposes and the grass to thatch huts. One does not need to ask for permission or to pay a fee, however, when collecting firewood, they must only collect dead wood that has fallen. They are not to chop down any trees. Villagers also use firewood to make fires at the all-night vigils during farming season. The men stay awake at night, sitting near the farm fields so that they are ready to chase away any wildlife, such as elephants, that threaten the destruction of the fields.

Villagers are also able to source medicinal plants from the surrounding bush. However, one of the village heads mentioned that although medicinal plants are available in the bush, few people make use of them. He has observed that *"in the past, African people used herbs entirely for our medical needs but now, because of modernisation, the information and knowledge about herbs is not being passed down to the next generation and people are now going to get medication from hospitals, and this is such a loss."* His opinion shows that knowledge about the forest herbs and medicine is now rarely passed down to the younger generations and that modern medicine has challenged the idea of the use of traditional medicine. The loss and lack of knowledge about traditional medicine can also affect the level of encounter that people will have with the forest and its resources, as very few people will seek out herbs for medicine.

Picture 8 A picture taken by the author in June 2020 showing the road that leads to the village from Kapanyana bus stop. Many trees and shrubs flank the road, and the picture is characteristic of the forest area surrounding the village.

Lastly, land, livestock, and the forest area are closely related resources that are valuable to the villagers to varying degrees. One of the men told me that *"you cannot distinguish that this is the forest, and this is the village because we are part of the forest, there are trees that are very important to our livestock such as Umtshibi*[46] *that are eaten by the livestock."* (Interview with 69-year-old Male on 22 February 2022). His view describes how the village, livestock, and the forest are very closely linked together, and yet he does not see a distinction that separates where the forest is and where the village is, but rather he sees how the three aspects are interrelated. Other villagers have contrary opinions about the proximity of the forest to the village, and its ownership. A 90-year-old man believes that the forest area does not

[46] Guibouttia coleosperma

belong to him, but rather it belongs to the wild animals because that is where the animals live. He says that his family only moved here because of the colonial laws brought by the colonial officials, therefore the forest does not belong to him but to the wild animals.

Another villager also believes that the forest is not important to him because it attracts the wild animals that cause problems for them. *"The gusu doesn't help us at all, instead it is the one that is causing all these problems because animals from the park now come into the gusu and they start causing havoc. They are no longer staying in the park, but they are coming into the gusu that is on the village side."* (Interview with 37-year-old Male on 24 February 2022). According to my host mother, the forest area is not important to them, but it was important to her elders when they came here and built their homes. She, however, acknowledges that that they get some fruit from the forest, but she bemoans the problem of elephants eating and destroying these trees. She says that "*the elephants are eating the same wild fruits that we eat, for example, amagwadi*[47]*, and umsosobiyane. And when the elephants come, they don't just eat, they also destroy the whole tree!"*(Interview with 54-year-old female on 23 February 2022). In this case, she believes that they are competing with the elephants for the wild fruits and the situation is similar to the problem they have with the elephants destroying their crops.

Food and food security

The discussion about the value of the land for farming, forest resources, and grazing area for livestock is related closely to the produce the villagers receive from their land. I often received questions from friends, family, and people I met during my fieldwork about what food I ate during my time at the village. People often wanted to know what is eaten in this region. I recall that when I conducted fieldwork in the Eastern Highlands of Zimbabwe for

[47] Amagwadi- Spiny monkey orange/ Strychnos pungens

my master thesis, no one ever asked me about what I ate or the experience that I had with food. At first, I interpreted the enquiries as ones directed towards my wellbeing, but after receiving such questions from more than 3 people it brought my attention the perception of outsiders about the availability of food in this area, especially during the time of drought and economic instability in the country. Although I already had questions about how the drought had affected people from the village, the concerns that I received from outsiders enhanced my curiosity. In the following section I describe my observations and analysis of collected data about food and food security, not for the purpose of answering the questions of these people, but to describe villager experiences, given the problem of wildlife attacks on crops as well as low rainfall and drought.

Meals

Whenever I came to the village during the different phases of my fieldwork, I brought groceries with me that included sugar, cooking oil, and rice, as well as soap which I gave to my host mother when I arrived. I brought the groceries with me because when I was living with them, I wanted to contribute to food and a gift. I also ate what they prepared and ate as a family. My host mother and her daughter in law prepared and served different types of meals. The meals included dishes such as sadza and dried green vegetables, samp with onion and tomato soup, and occasionally they would serve sadza with stewed chicken. In the morning or afternoon, they prepared mealie meal porridge, groundnuts, boiled eggs, Umxhanxa, and Inkobe. Sadza is a thick form of mealie meal porridge that is common in Zimbabwe and people usually eat it with vegetables and/or meat. Umxhanxa is a dish made from melon and maize. Inkobe is a dish that consists of a mixture of boiled round nuts and ground nuts. It can also be mixed with sun dried maize.

To further my understanding about the frequency and variety of meals in the village, I included questions about the food and meal times to the survey questions. This action gave

me an overview of the food situation in the rest of village. The results illustrated in the charts, show the responses to those survey questions. The purpose of asking respondents to state what they ate at different times of the day over a period of three days was to evaluate the frequency and variety of meals. The three charts present the frequently stated dishes that they have during their morning, afternoon, and evening mealtimes. Where it is indicated as 'none' it means that some of the respondents did not provide information about a meal at that time of day. This is possibly because they had already stated it before, and thus suggests a lack of variety, and/or they do not eat anything at that time of day - thus suggesting a limited number of meals per day.

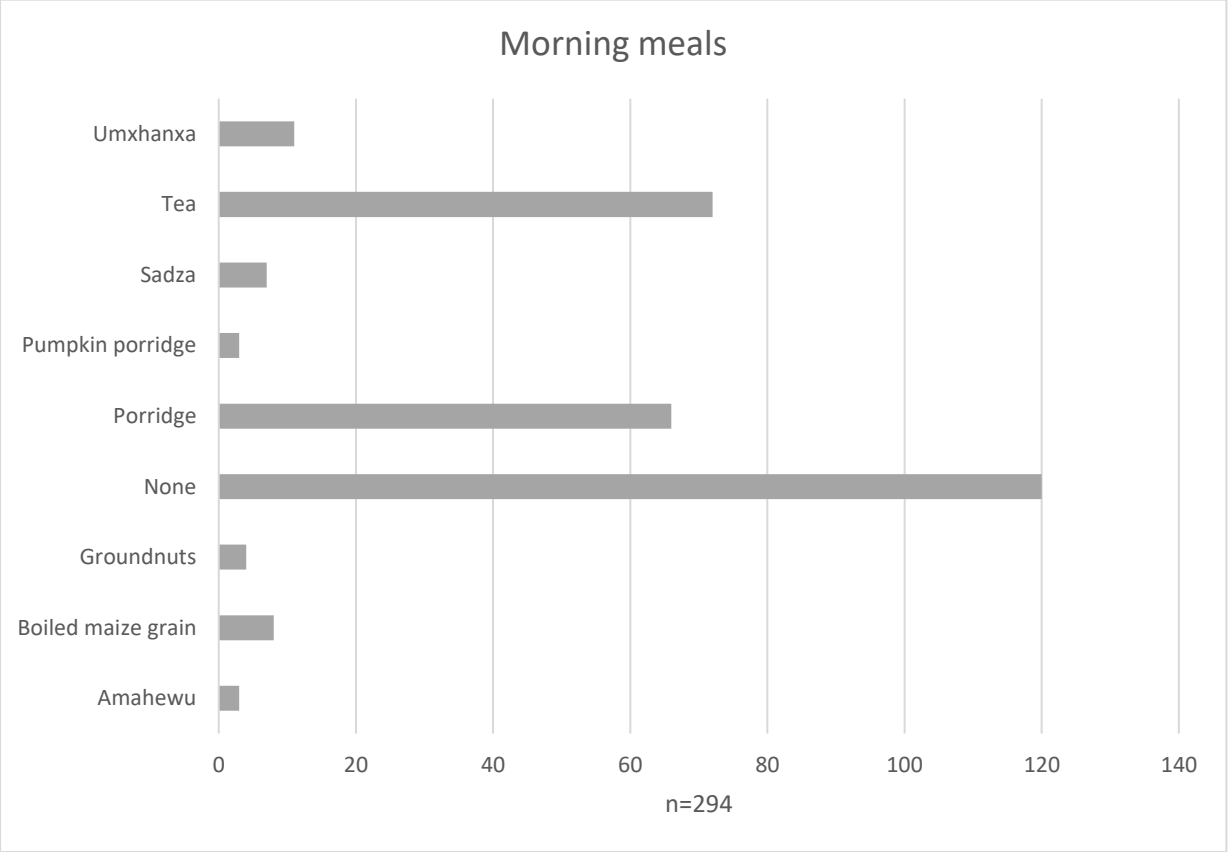


Figure 15 Respondents listed the morning meals they had during the past three days[48]

[48] The respondents from 98 HH were asked a. How many meals do you and members of your Household have in a day? b. What do these meals normally consist of? c. List the food eaten at mealtimes in the morning, afternoon, and evening during the past three days. Therefore, n= 294 in each chart presents (98x3days) responses.

Notably, most villagers do not have meals in the morning. The graph shows that morning meals had the highest number of 'none´. However, in the morning some villagers are likely to have Porridge, Umxhanxa, or Tea (with dishes such as groundnuts, boiled maize grain or left-over evening meal such as Sadza). Another beverage likely to be consumed in the morning is aMahewu, a fermented mealie meal drink.

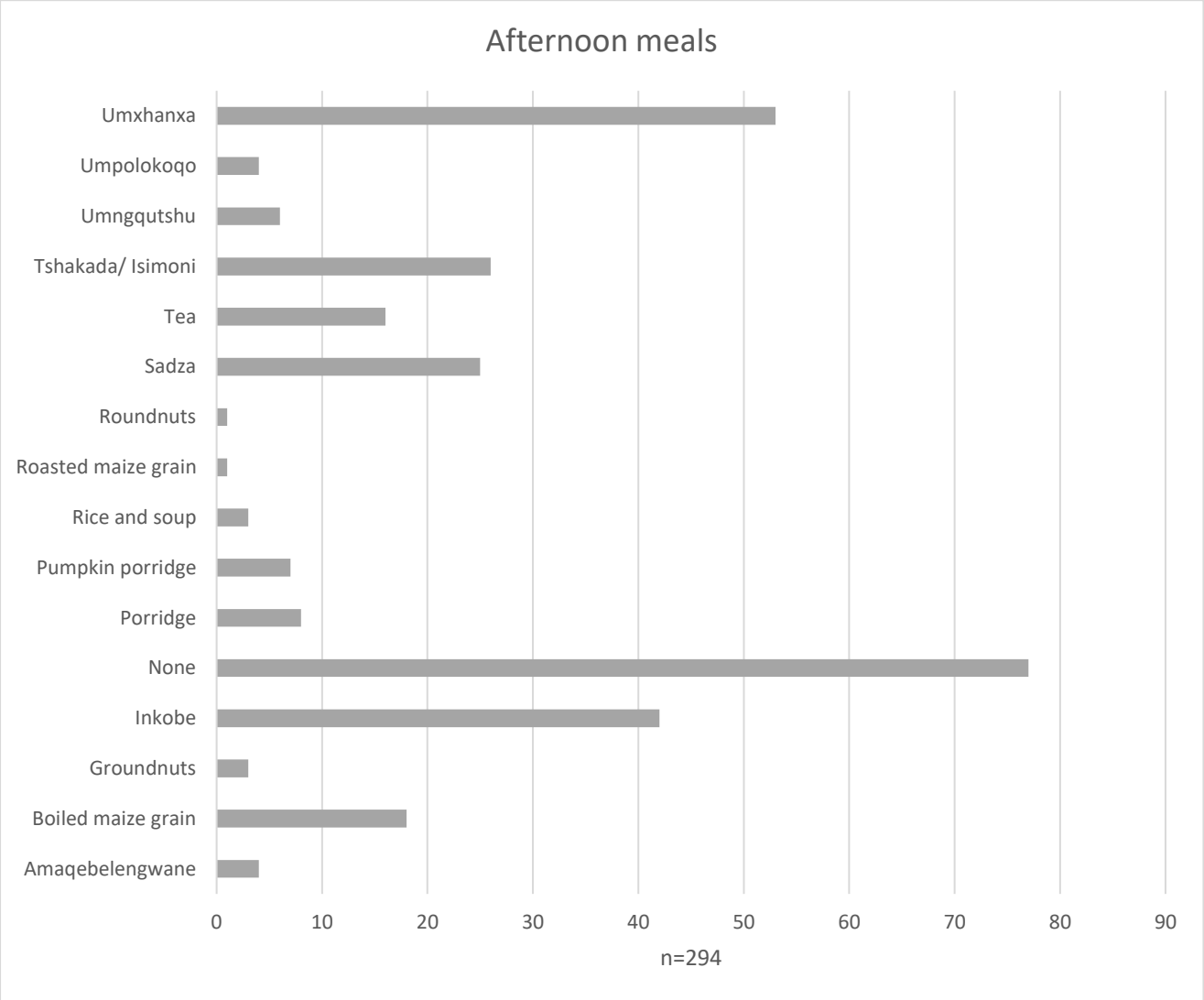


Figure 16 Respondents listed the Afternoon meals they had during the past three days

Dishes such as Umxhanxa, Inkobe, Sadza, Tshakada/Isimoni, and Amagwadla are quite common in the afternoon. Although the respondents mentioned that they eat Inkobe,

Amagwadla, Amaqebelengwane, Umngqutshu, Umpolokoqo[49] in the afternoon, they usually take these dishes with tea, or hot water with lemon and sugar for those that do not have tea leaves.

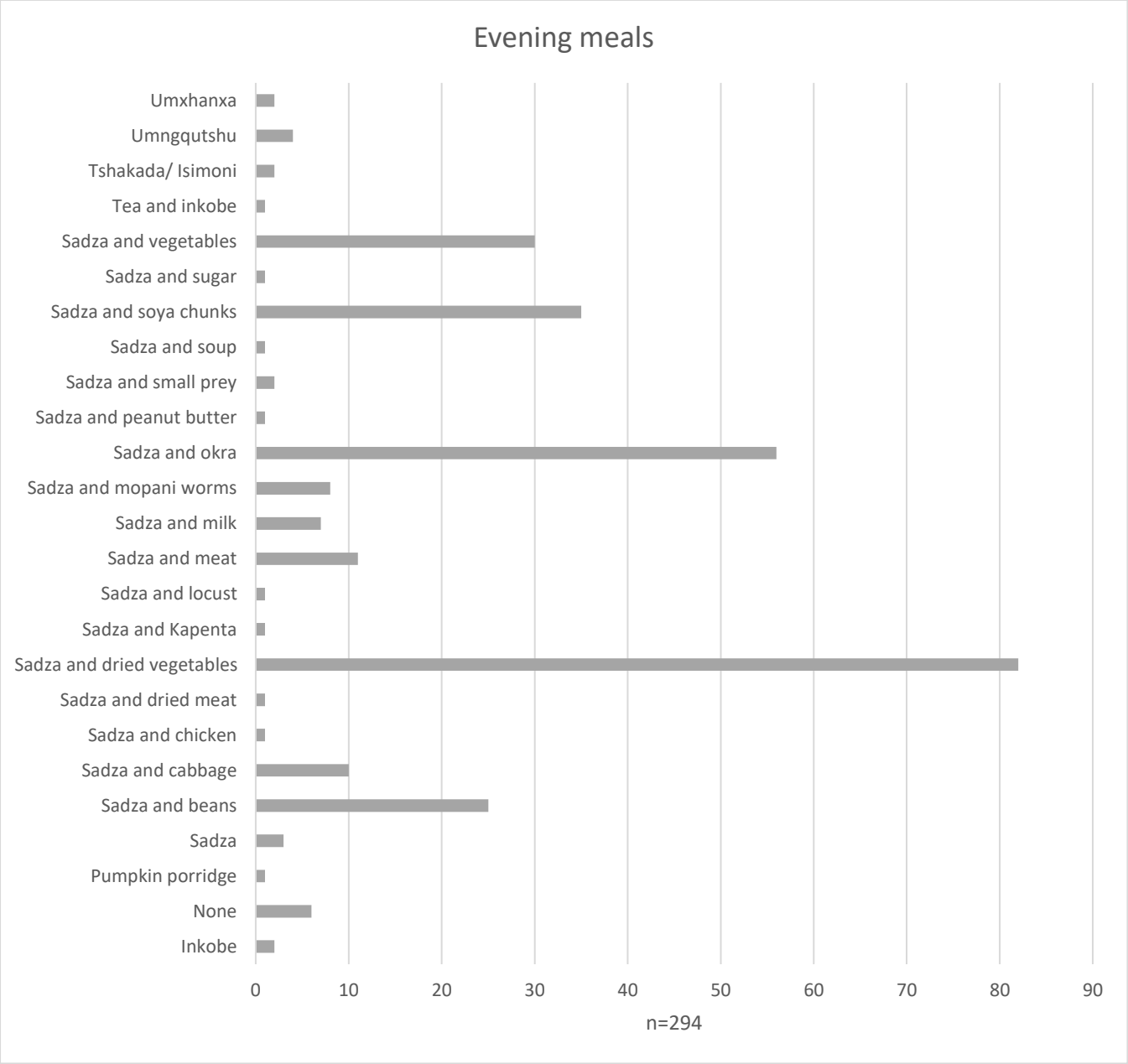


Figure 17 Respondents listed the evening meals they had during the past three days

[49] Amagwadla- boiled maize; Amaqebelengwane - form of bread or cake made from mealie meal; Umpolokoqo - crumbly maize meal porridge; Isimoni - a mixture of samp, roundnuts, and groundnuts; Tsakada-boiled corn without their outer peels; uMngqutshu - a mix of maize corn with their peels and roundnuts or groundnuts

Having a meal in the evening is more common among the villagers. Although the dishes consist of sadza, the staple food of Zimbabwe, it is taken with other side dishes, such as mfushwa (dried vegetables), okra, soya chunks, beans, mopani worms, and vegetables (e.g. chomolia or spider flower leaves). Sadza is also served with meat, or milk on occasion.

Drought

Reflecting on the issue of the current drought, I witnessed how both mainstream news and social media reported about the drought that affected Southern Africa in 2019-2020. Zimbabwe appeared in the media with news related to the decrease in water flow of the Victoria Falls and the death of elephants in Hwange National Park. Although the drought affected both wildlife and humans during this time, much of the attention from the media focused on either its effects on wildlife or natural resources particularly in the case of the deaths of elephants and the decrease in water flow in the Victoria Falls. As significant tourist attractions, the reporting by media regarding these areas, brought the problem of the lack of water to the forefront and made it more widely visible. This reporting reminded me of the concerns that erupted on social media after the death of Cecil the lion, a few years ago (Widlok, 2019, Mkono, 2018 and Macdonald et al., 2016). The effect of drought on communal areas did not receive the same reaction as concerns about wildlife, in the case of the (social) media. It shows how, although the communal areas and the national park are in the same vicinity and experience similar weather conditions, the plight of wildlife, as reported by the media, may overshadow the plight of humans. Media reporting, may direct the empathy of the public more towards wildlife. This does not mean that there is no response from the government, or from NGOs who are working in this area to distribute food or equip villagers with lessons and tools on how to manage natural disasters, such as drought. However, I highlight this observation to indicate that, in this same region, drought affects both wildlife and people.

Since the village and Hwange National Park are neighbours, I wanted to understand the villager's experiences and opinions about the drought. One of the village heads mentioned that one of the main problems affecting people in his village included starvation, because the lack of sufficient rains decreases crop yield, and wildlife destroys their crops and livestock, exacerbating the levels of hunger and starvation in the village. Thus, there is a cycle of events and factors that can lead to food insecurity in the village. On our way to the homestead, on the day I first arrived at the village, in 2019, my host father mentioned that the lack of rains had been very severe the previous year, to the extent that many people did not have enough food to eat because their crop yield was very low. He, however, went on to assure me that I would not starve during my stay with them, because his household was able to produce better yields. I later learnt that he attributed this success to learning and participating in NGO supported programmes that provide villagers with information on how and what to plough to help cope during disasters, such as drought.

During my stay at the village, I observed, about three times, that villagers had to collect grain or porridge at a food aid distribution occasion. One of the food distributions occurred near the clinic and another one occurred at a meeting hall. I recount one such occasion of collecting food at the distribution point that I witnessed when I had to travel from the village to my grandfathers´ funeral, in 2019. It was almost sunset when I received the news about the passing of Sekuru BT. I woke up the next morning to leave the village to attend the funeral in Gweru. The nephew of my host father prepared the donkey cart, and he escorted me to the bus stop with the goal of catching the only public bus that passes there at 10am every day. We stopped by one of the neighbours to pick up a crate full of tomatoes that he intended to sell to other villagers at the food distribution that afternoon. We arrived at Kapanyana bus stop shortly after 10 am and, surely, I had missed the bus. We waited for an hour until we decided to leave the bus stop and move to where the food distribution was going to take place (Picture

9). By 12:00pm a large group of people had gathered at the meeting area, which was a large open hall with a roof, enclosed within a fence. People from other villages in the ward also attended this meeting.

Picture 9 Showing the meeting area near Kapane

Two lorries filled with grain, arrived shortly after midday, and the program started. I waited hopefully, outside the fence, for transportation traveling to Tsholotsho Centre, but no form of public or private transport passed by - except for one lorry and one pick-up truck that were not going to Tsholotsho Centre. After the officials finished addressing the villagers, the off-loading and distribution of 50 kg sacks containing grains of maize, started around 2 pm. In addition to the officials conducting the distribution, about four police officers were present.

At around 3pm, I had moved closer to the trucks because some of the villagers suggested that I should ask for a lift from one of the lorries' that was returning to Tsholotsho Centre. I approached and asked one of the drivers, and he agreed. When the distribution was ending and most of the sacks of grain had been offloaded from the trucks, one of the police officers I was now standing next to was shaking his head as he motioned to show me four women who were sitting on the ground below the back end of the truck picking up some of the grain that had fallen out from the bags during the off-loading process. By 3:30 pm, the truck that was heading back to Tsholotsho had finished offloading the bags and I was able to catch a lift to Tsholotsho Centre, where I boarded public transport to Bulawayo; the following day I went from there to Gweru.'

My experience on this day, showed me that public transportation to and from the village is hard to come by; hence, the opportunities for villagers to sell and expand their produce to other places in the ward or district may be difficult, especially for someone who does not own transportation, such as a car, or even a donkey cart and donkeys. Villagers usually sell their vegetable produce among themselves. This experience also showed me that there are food relief programmes that support the village when there is drought, however I cannot attest to how sufficient or consistent they are. One of the villagers said that they manged to cope with the drought because of the safari operators and NGO´s who came to help them by giving them food. The villagers told me that in 2020 there was an organisation called Umawonganisa, then in 2021 there was LEAD. *"Imvelo safari came from March last year up to late around August and then LEAD came to take over from there up to March, I think they will stop in March because people have something in the fields now, but after that, after harvesting, they will come back depending on the outcome of the harvest"* (Interview with 50-year-old male on 24 February 2022).

Role of African traditional religion in rain making

I cannot accurately determine or account for the impact the drought has caused humans, livestock or wildlife, however some inferences about the causes and effects of drought could be drawn from the opinions of villagers. When I asked the villagers about their views and experiences with the drought, they pointed out that the drought kills domesticated animals and wildlife, and it forces wild animals to go out of the park to look for water. During individual semi structured interviews, 17 villagers were asked about what they think is the cause of lack of rain. There were different responses given and some of the responses claimed that the lack of rituals and rain making ceremonies caused the lack of rains, and other villagers mentioned about changing times. The rituals or ceremony mentioned include Njelele. Njelele is a rainmaking shrine that is located in Matobo Hills, just outside Matopos National Park, about 100 km south of Bulawayo (Bhebhe, 2019). The concern about the lack of rituals or practicing spiritual ceremonies by some villagers reflects on beliefs about the role of religion in affecting environmental changes. During the female's group discussion, I asked whether they think that low rainfall or drought is connected to the lack of ceremonies such as Njelele, they replied that rainmaking ceremonies were something that people used to do in the past and although the places are still there, they no longer practice it because people are now going to church. This conflict in opinions may suggest that although some villagers may acknowledge that certain spiritual practices play a role in the availability of rainfall other villagers may not believe in performing them due to changes in religious beliefs. Although these rituals are no longer practiced, the possibility that spiritual forces may influence environmental situations is presented in the potential that for some of the villagers, spiritual phenomena exists to give meaning and explanation for environmental changes.

Changes in time

Change was also another aspect that resonated with most of the villagers. Five of the seventeen participating respondents, mentioned in interviews, the phrase 'changing times' as the cause of the drought or as an influence on the lack of rains. This group of people view the situation as part of the changes that are occurring as time passes. The word “changing” highlights that some villagers believe that the situation is not static and that ways of life (including beliefs) and temporal cycles of the environment, are in transformation. The drought is part of the changes that have come with time. Specific reference to climate change as the cause of the drought was made by three of the respondents.

The drought affected both people and their livestock and the villagers took different initiatives to help themselves and their livestock cope with the effects of the drought. During the group discussion with the young men, they expressed that *“it is “tight” (difficult) here when there is drought. People go to neighbouring countries such as South Africa and Botswana; others go to the mines, and some just eat the dead animals that they find in the bush that have died from the drought. The people that have a higher level of education go and look for jobs locally*.” The women from the group discussion also expressed that the period of drought “*was extremely hard, some of us tried to even sell our cows, but people would not buy them. Instead, we took leaves from the shrubs and tried to feed the livestock, but it did not work.”* Their experience shows that in the event of climatic perturbation such communities are vulnerable and further exposed to the risk of starvation. Having access to water from the boreholes played a crucial role in sustaining them.

Water and energy access at the edge of a wildlife reserve

This study focused on presenting an account of the life at the edge of a national park. This led me to focus on the day-to-day life of the villagers. Therefore, as energy access and use are a significant feature for the community, I observed the sources, access and use of energy for different purposes by the villagers. There exists a great demand for energy and its use in productive ways that sustain their life and livelihoods. Most villagers do not have access to electricity and most of them make use of solar energy, but at very low levels of capacity. This section will reflect on the importance of energy access and water access for humans and animals in this village. I observed three uses of energy that intersect with human - animal interactions at the edge of a wildlife reserve. These include the relationship between water access and energy use, the popularity of solar energy at the household level, and its influence on income generating activities.

Energy use and access to water

As previously mentioned, the village is in an area that experiences low rainfall, with the dry season lasting up to six months. This not only affects crop yields, but also household and livestock water supplies. Hence, the most important uses of energy in the village are the use of diesel fuel or solar energy to access water from boreholes. This water plays a key role in sustaining the life and livelihood of humans and their livestock. There are six boreholes, spread across various locations in the village. One borehole uses a small diesel generator (Picture 10A), two of the boreholes use solar energy pumps (Picture 10B and Picture12) and three of the boreholes are pumped manually. Each village has a manual borehole in its vicinity, while the diesel operated pump is only in Ziga. Zandile and Nganyana each have a solar powered water pump for their borehole. Therefore, each village has two boreholes. During the group discussion respondents mentioned that some of the boreholes were installed

in 1986 and 2002. However, one man recalled that the first borehole in Ziga was installed in 1952, but it is no longer in use.

> *"There was no borehole here, when they came to live here. The borehole, which was here, was very far. I can say maybe this village, which is called Zandile, that's where they were getting water, and another place over there called Kapanyana, where you turned. … there were no carts, they were using their heads; a woman travelled from here to Kapanyana or from here to Zandile to fetch water every day. The first borehole which was dug here, it was dug in the year 1952, after a period of more than eleven years struggling to get water."* (*69-year-old Male; interviewed on 24 February 2022)*

During the dry season, villagers obtain their water supply for both humans and their livestock from boreholes. During the rainy season, livestock usually drink from nearby pools on the village side of the fence. The residents of Ziga use the manual borehole all year round. The average distance from the borehole, for each HH that participated in the survey, is 1 km. When diesel is available, villagers in Ziga pump water for their livestock from the borehole pumped by the diesel generator, and they always fetch water for household use from the manually pumped borehole. The diesel-powered generator gives the villagers problems because, sometimes, the supply of diesel in the country is inconsistent and the cost of fuel makes it difficult for all the villagers to use this borehole. As one villager explained, *"the person who has money buys the diesel. We cannot really take turns or have a duty roster to buy diesel, because not everyone has money to buy diesel...if you have money, you buy, if you do not you do not.'*

Picture 10 (A) shows the diesel generator in Ziga that helps pump water from the borehole into the tank and trough. (B) shows the solar powered borehole in Zandile, it has a tap and, about 100m away, there is a trough.

During the day, and at times in the evening, I could hear the diesel generator roaring in the distance from my host family's homestead. Early in the morning, after releasing the livestock from the livestock enclosure, my host father leads the cattle, goats, and lastly the donkeys to the borehole for them to drink water before going grazing. Sometimes, when diesel is available, he uses the diesel pumped borehole or the manually pumped borehole (Picture 11). Using the manually pumped borehole for both household needs and livestock is a process that is physically taxing and time consuming, however, villagers work together to pump the water. Whenever I went to fetch water with my host mother and her daughter in law, we often found some of our neighbours already present and, after exchanging morning greetings, we would join them around the pump lever to pump together. There would be five or six people around the pump and we would push up and pull down the lever of the pump to either fill the buckets lined up for water, or let the water flow from the pump to the trough where the cattle or donkeys were waiting to drink.

Picture 11 shows a group of villagers pumping water for their cattle and household use at the manual borehole in Ziga.

In contrast to the manually pumped boreholes, the solar powered boreholes have a tap connected and villagers do not need labour to pump the water. The solar boreholes also pump water into a trough or pool for livestock to have drinking water, as shown in Pictures 12 and 13. In Zandile, fourteen HH's, of the ninety-eight HH's that participated in the survey, mentioned that they only use the manual borehole, while fifteen HH's use both the manual and the solar powered borehole. According to the data taken from the survey of ninety-eight households, only seven households in Nganyani use the solar powered borehole, while thirty-two households claimed that they only use the manual borehole all year round. Eleven HHs mentioned that they use both the manual borehole and the solar borehole. Many of the residents from Nganyani mentioned that, although it is heavy to pump water manually, the solar borehole is too far away. The solar borehole is also near the dipping site for livestock, hence there is less use of the solar borehole in Nganyani for household use.

Picture 12 Shows the solar power system that pumps water into a nearby water tank, a dip tank and tap, as well as a pool of water.

Picture 13 Shows a pool that receives water from a borehole.

The solar powered borehole in Nganyani, is in an open area along the road to Ngamo, a neighbouring village. Once you emerge out of the row of homesteads, you can spot the solar panel and its tank, which are about 300 metres apart from each other. There is also a pool of water, that receives water pumped from the solar borehole on the opposite side of the water tank. The design of this solar borehole is like the one in Zandile, but it is in a more open space and, instead of just a trough, the water can pour from the borehole into a pool of water. There is also a dip tank for cattle. Although there is the option to use a solar power borehole

in Zandile and Nganyani, the villagers mentioned that there are also other challenges with accessing water.

Challenges associated with accessing water.

The results of the survey reveal that only twenty-one HHs mentioned that they do not have problems accessing water, while the other seventy-seven listed the different problems they have with accessing water. The most common complaint put forward by residents from all three villages was that of the 'lack of power' to pump the manual borehole. The handle of the borehole is very heavy and requires a group of people to pump. For Ziga residents it is much more difficult, *'laborious and exhausting to attend to livestock needs for water'* in addition to household water needs. It is an even more difficult feat for the older villagers, who reported that they do not have enough strength to manually pump water. As mentioned earlier, most of the people use the manual borehole more than the diesel borehole because of the lack of money to buy diesel. This leaves Ziga residents with only one borehole when there is no fuel.

Villagers also complained about the overcrowding of people and their livestock at boreholes, especially during the dry season. Villagers from both Zandile and Nganyani, especially, complained about the shortage of boreholes. The boreholes are few and water is difficult to access because the distance from their homestead to the solar borehole is too far for them to carry all the water they need. In addition, some households do not have a donkey cart or donkeys to help them carry many buckets of water at the same time. Therefore, they opt to use the manual borehole that is closer to their homestead, and this results in overcrowding at the nearest borehole.

Villagers also face the problem of wildlife crossing the fence in search of water from some of the water pools in the communal areas. Although these pools are located outside the park boundary, they are near the park, and wildlife crosses the boundary to drink from these pools.

The villagers attest that even during the dry season, wild animals, such as elephants, frequently cross over the fence and into the villages seeking water from the boreholes. This increases the chances of contact among livestock and wildlife.

There were also complaints put forward about the boreholes constantly breaking down and taking a long time to repair. Villagers mentioned that repairs are usually done by the owners of the surrounding lodges. One of the women from Nganyana explained that, when the borehole is not working, she fetches water from the small water pans that are in the forest; she carries water back for use in the household, but she remains at the water pan to wash their clothes. And at times, even if the borehole is working, she prefers to use this source of water because it is closer to her homestead than the borehole. Even though she sometimes sees wildlife such as elephants there, she continues to go there to wash her clothes. She says she is not afraid; she just runs away and comes back another day.

Furthermore, when the sky is cloudy, solar energy is not dependable, and this affects the efficient pumping of water. The problem of access to sufficient water is thus noticeably big in this area, whether it is the lack of sufficient rainfall or lack of reliable, accessible water from the boreholes. The villagers would like access to water in the village to improve. Many cite the need to drill more boreholes to reduce the distance between the current boreholes and the homesteads and reduce the overcrowding of livestock at boreholes, especially during the dry season. It is possible that an increase in the number of boreholes would reduce the distance between households and the boreholes however, over time, access to water can also lead to an increase in livestock numbers. Most villagers also have a desire to separate the supply of water for livestock from the supply of water for humans by recommending the creation of additional forest pools that receive water from a borehole.

Other uses of solar energy

The use of solar energy is also popular among many of the households in the village. Results from the survey showed that the majority of HHs own solar lamps and solar panels. Out of the ninety-eight households that participated in the survey, fifty-five households indicated that they each own one solar panel, while twenty-one households own two solar panels each (Figure 18). The solar panels are generally placed outside the hut in the morning, leaning against the wall, and taken back inside in the evening. Some villagers though, have mounted their solar panels onto a pole outside their hut. Solar energy is, therefore, a common source of energy for most of the households.

Although owning one or two solar panels is common among households, villagers do not use solar energy extensively. Many of them had one or two large solar panels that they used for lighting, charging mobile phones, and powering appliances like radios and speakers. Furthermore, they usually do not connect the solar panel to all the huts in a homestead. The homestead of my host family for example has five huts however, only one hut is connected to the solar panel. This was the hut that I slept in, which belonged to the daughter in-law of my host father. The hut is divided into two and I slept in the living room. In the morning, she would place lean the solar panel against the outside wall of the hut to charge the battery.

Because women use the light from the lamps at night while cooking, weaving baskets, sewing, or crocheting different handmade pieces (described in an earlier section of this chapter), these solar devices also help to contribute to the livelihoods of the home. Although the sale of these goods is not at a large commercial scale, the goods contribute to the income of some of the villagers and the role and use of solar devices shows that they are part of the villages' productive use of energy.

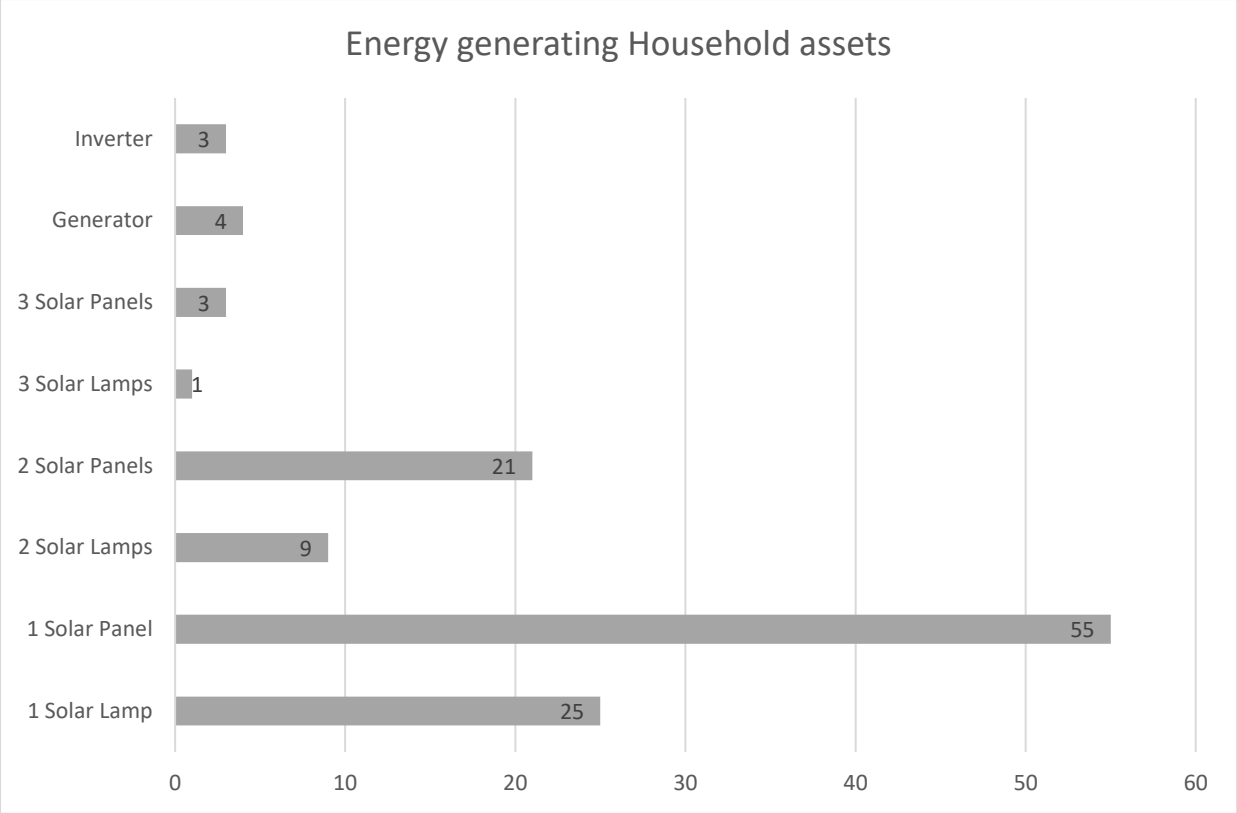


Figure 18 Energy generating household assets

Conclusion

In this chapter I discussed the different social and economic characteristics that are in the village in this present-day context. By discussing the income and livelihood status of the villagers, I was able to shed light on how much their proximity to wildlife affects livelihoods and provides opportunities for income generation.

Firstly, migration is a key factor in helping us understand the economic background of the villagers. Whether internal forced migration into the area during the colonial period or migration out of the village to neighbouring South Africa to seek economic opportunities, the past and present economic situation of the village is bound by migratory patterns. Settling in this area during the colonial period involved starting anew, which included their loss of land

and livelihoods, such as livestock. According to Ruwitah (1988), involuntary population movements was a colonial institution that undermined the economic system of Africans. The new system also resulted in a situation that Africans had to seek job opportunities as labourers in farms and mines (ibid). This also involved movement within country or to neighbouring countries such as South Africa. The results of this study showed that in the present-day situation, most of the income and groceries of the villagers come from remittances from family members who migrated out of the village.

There are also different livelihood opportunities that are related to wildlife and tourist activities. Although the villagers produce handmade art or craft pieces for sale to tourists, these items do not fetch a lot of money and they are dependent on the number of tourists that come to the village to buy. A few of the villagers have been employed in neighbouring lodges and safari operators, however this is only a small number of villagers. The economic situation of households does not rely on income generating sources related to wildlife resources because other things, such as remittances, play a significant role in contributing to the income of many households. This suggests that their income or ability to earn money is dependent on remittances rather than informal or formal work. Although the villagers are located near the national park, individual direct benefits are not common, but communal benefits such as the building of schools, food aid, and the installation of boreholes are some of the things that come from wildlife related activities.

Secondly, the research highlights the dilemma that villagers, their livestock, and wildlife find themselves in, regarding relationships of power and ownership. As an asset, livestock has considerable sentimental value as well as monetary value and, as owners of their livestock, villagers have the power to dispose of their livestock as they wish. Usually, villagers sell livestock or exchange livestock for other goods or services in times of hardship. The

villagers, however, have a different relationship with wildlife when compared to livestock. Villagers have more power over what happens to their livestock than wildlife, and this affects the way they value livestock over wild animals. For example, livestock can be passed down as family inheritance however, as individuals, they do not own wildlife to pass it down to their offspring. On the other hand, paradoxically, as individuals' villagers only have limited power over wildlife and measures to control wildlife, regardless of their position as members of a CAMPFIRE community. This situation highlights how having "rights to use and benefit from a resource often do not equate with ownership" (Child and Chitsike, 2000).

Thirdly, I highlighted both the problem of food insecurity and drought that villagers face due to lack of adequate rains, and their experiences as humans at the edge of the national park. I showed how since the colonial period, water is still only accessible to villagers and their livestock, through artificial sources such as boreholes. Although boreholes use various energy sources, such as solar energy, a diesel generator, or manual labour, the villagers face different challenges when it comes to pumping water for use in their daily life. The link between access to water and availability of food is also presented. The drought has affected both humans and wildlife and causes them to act within their capabilities to cope with this problem. How villagers cope with reduced access to water is important both in the present-day context and future. The situation with the drought, for example, has shown that a global problem such as climate change may have consequences on rural agriculture and livelihoods (Dube et al., 2016).

Therefore, when faced with global problems such as climate change, value or attention should be placed equally on both human and non-human beings as proposed by multispecies proponents, and solutions should be found that affect both without compromising or favouring the life of the other. A multispecies approach looks at such a situation from the

perspectives and experiences of all the different species in society. Cases such as drought, where both humans and non-human beings share adversity and challenges are an important example that show why all beings in a multispecies society need to be recognized.

Lastly, the invisibility of the villages is something that potentially affects how they receive services and how they can access markets to improve their economic situation. In researching this village, I observed that people that live in this part of Tsholotsho District are invisible. By invisible, I do not mean that they are unknown, but their challenges and problems may be easily overlooked due to difficulty in accessing the area. Their physical inaccessibility makes it challenging to visit, respond to, or provide services. Villagers informed me that when they have queries or complaints about such things as wildlife destroying crops or attacks on livestock, they report to CAMPFIRE offices located in Tsholotsho Centre, which is about 80km away, and they have to wait for them to respond. I found that the distance of the location of the village from offices, makes it difficult to manage and protect these villages from the threat of wildlife. One veterinary officer, as well as an NGO official, mentioned that they only visit this part of the district when there is a car at their disposal. Therefore, the accessibility of these villages to service workers or public service providers, such as veterinary service officers, NGO personnel and CAMPFIRE, is difficult. Villagers also lack adequate access to transportation, and this affects their access to markets and other places, such as Tsholotsho Centre and larger cities, to buy and sell goods. In addition, because they are seldom mentioned in academic literature, they become invisible in this area too. I had challenges in finding literature about this area, specifically on the topic of human-wildlife interactions. This makes them invisible within an academic setting.

5. Contact Zones where humans and their livestock encounter wildlife.

This chapter presents the places where humans, their livestock, and wildlife encounter each other in different contact zones at the boundary of Hwange National Park and Tsholotsho Rural District. The phrase contact zone was coined by Pratt (1992) to criticise imperial travel writing that often erased the presence of indigenous people by concentrating mainly on describing flora and fauna. According to Pratt (1992:7), a "contact zone is an attempt to invoke the spatial and temporal copresence of subjects previously separated by geographic and historical disjuncture's, and whose trajectories now intersect." In this chapter I focus on describing the physical areas as well as the temporal spaces in which humans, their livestock, and wildlife are likely to encounter each other. I also describe how this ongoing human-wildlife relationship involves conflict that leads to the destruction of livelihoods.

In the following sections, the places that I describe as contact zones are based on my observations, survey results, and interviews that I conducted. During interviews or informal conversations with the villagers, they often mentioned certain places or areas where they encountered wildlife or where their livestock encountered wildlife. Information gleaned from these conversations influenced the creation of the list of places of encounter; this list of choices was also given to respondents when the survey was conducted. As drought was a big problem for both the villagers and wildlife, I expected to hear mention of encounters taking place at water points or in the forest, but they did not mention meeting wildlife at these places. I needed to gain clarity on this, particularly as some of the villagers attested to collecting non timber forest products or wood fuel in and around these areas. Survey responses were therefore, used to help me verify the information that I had obtained through initial observations and interviews.

My decision to include certain animals and not others, in the questionnaire, is based on both the initial free-listing exercise that I did at the start of my fieldwork, and initial informal conversations with the villagers. When asked, during free-listing exercises, to list some of the challenges that they experience due to living near wildlife, villagers often mentioned animals such as hyenas, lions, and elephants. Therefore, the list of animals (elephant, buffalo, lion, hyena, fox, leopards, vultures,' and baboons) given to respondents to choose from during the survey was based on some of the initial observations and conversations I had when I first arrived at the village. Although villagers did not mention animals such as baboons and vultures during everyday conversations and the free-listing exercise, I added them as options within the questionnaire to verify the findings from the interviews and free-listing exercise. Lastly, I observed that if the animal did not cause harm to the villagers' lives and livelihoods, they were less likely to mention or talk about it.

Encounters are a form of contact that occurs among human and non-human beings. According to Wilson (2019:717), the "notions of encounter are central to accounts where non-human animals are somehow rendered out of place or too close for comfort." During the administration of the questionnaire, my research assistants and I explained that the term 'encounter' referred to the sighting of wildlife or identifying the sign of the presence of the animal in the village. These signs of presence include spoors, excreta, destruction of crops/ vegetation, attacks on livestock or humans. I expanded the meaning of this term 'encounter' to refer to signs of the presence of an animal because, during my time at the village, I did not witness any wildlife with my own eyes. This may have been due to different factors such as, visiting the village during the dry season when lion attacks and elephant attacks are less frequent. Furthermore, wildlife like elephants usually visited the village in the evenings and signs of their presence could then only be determined during the day by their spoors, dung, or the damage they made to vegetation.

In the following paragraphs I will discuss how humans and their livestock encounter different wild animals at different places, and at different times of the day, and of the year. The responses also reflect how frequently wild animals are likely to cross into communal areas. As discussed in chapter six, the permeability of the fence opens possibilities for wildlife to cross into communal areas and for livestock to cross into the park. This suggests that there is always the possibility of encountering wild animals in the communal areas outside of the national park. I acknowledge, however, that much of the information about wildlife crossing into communal areas is based on the perspectives and experience of the villagers and does not represent the full experiences of livestock and wildlife. Furthermore, when I asked some of the villagers whether they themselves cross into the park, they would often say that they do not because it is not allowed, and they could get arrested if they do so.

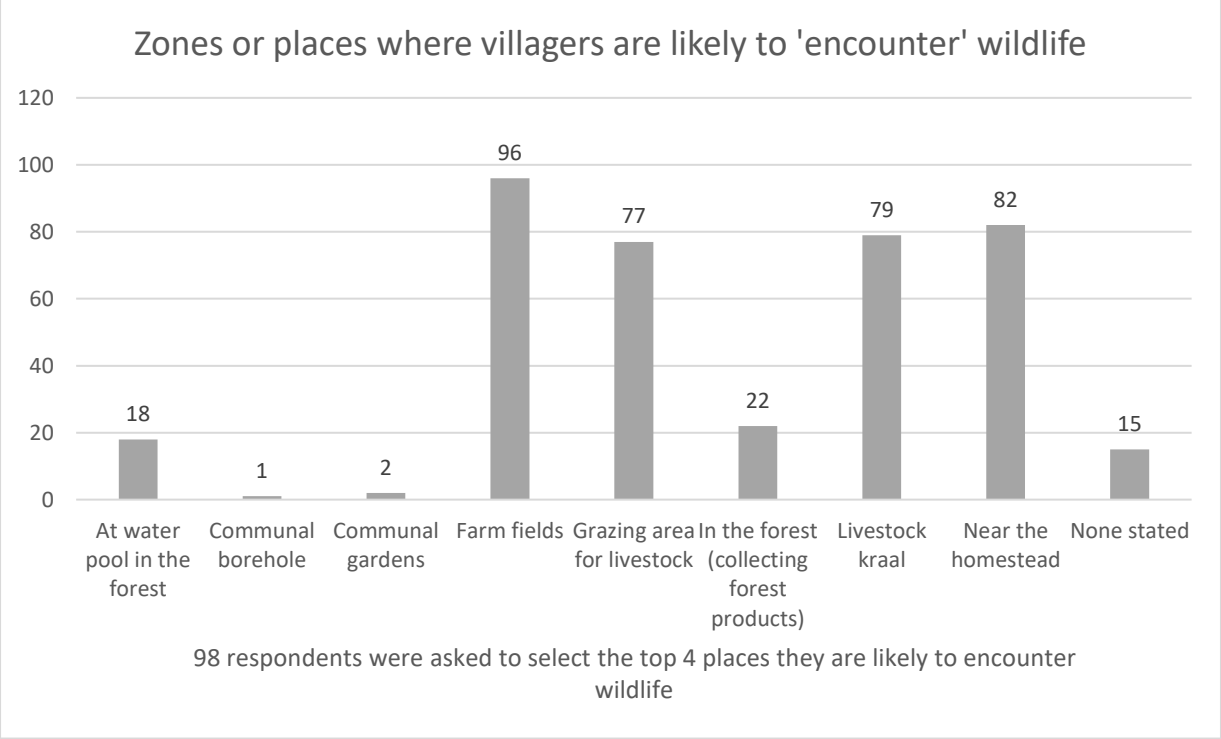


Figure 19 Where villagers are likely to encounter wildlife[50]

[50]Question asked: Please list the top 4 places you are likely to encounter wildlife?

According to the survey results, villagers reported that they encountered wildlife in different places close to the village. Figure 19 illustrates the survey results from all ninety-eight participants when asked about the top four places they are likely to encounter wildlife. This question was asked in general and did not refer to any specific animal. Based on the responses, the most mentioned areas are Farm fields (96 responses), Near the Homestead (82 responses), Near the Livestock Enclosure (79 responses), and Grazing area for livestock (77 responses). There are also areas that received less mention, such as water pool in the forest, communal borehole, and in the forest (while collecting forest products). The data in the graph provides a starting point on the matter of places of encounter because the question was asked so as to provide an overview of the places where humans, their livestock, and wildlife are likely to meet. The four areas frequently mentioned by respondents are, either the dwelling areas, or sources of sustenance for humans and/or their livestock. The respondents, however, make fewer references to sightings of wildlife at the different water points around the village, even though there is often a lack of sufficient water supply during the dry season and there is the problem of the prolonged drought. I conducted the survey during the dry season, and it is possible that there would be less mention of meeting wildlife in those places since most of the pools are usually dry during that time.

Farm fields

The farm fields are located not too far away from the homesteads. They are large tracts of land enclosed within fences that are made up of severed thorn bushes and tree branches. The distance between the farm fields and the national park fence is worth making note of to assess the extent of the accessibility of the land to wildlife. As a general overview: 54 HH's have farmland that is estimated to be 2 km or less away from the national park fence; 31 HH's have land that is 2.5-4 km from the fence; and 11 HH's have land that is 5-6 km from the

fence (Only 2 HH's from Nganyana did not answer this question). This shows that, like the homesteads, the farming fields are very close to the national park fence.

Table 7 Distance of farm fields from the park

Distance	2 km or less	2.5- 4 km	5-6 km	Not stated	Total
No. of HH	54	31	11	2	98

Picture 14 The fence of a Farm field made from tree branches and thorn shrubs to protect the field from livestock and wild animals.

The destruction of crops by elephants is the biggest and most frequent problem that villagers face in the farm fields, and it is a problem that villagers complain about the most. Ninety of

the ninety-eight respondents claim they encounter elephants at farm fields,[51] especially during the rainy season. The villagers reported that it is mainly during the planting and harvesting time that they have frequent encounters with wildlife, such as elephants. According to one respondent:

> *'Elephants come during the time of ploughing and tilling the fields; if they find nothing in the fields they go back. But they will return and, if they find something, they go and call others and come back again in groups. For example, two may come today and then, a few days later, more than two will come'* (Interviewee #1 on August 27, 2019).

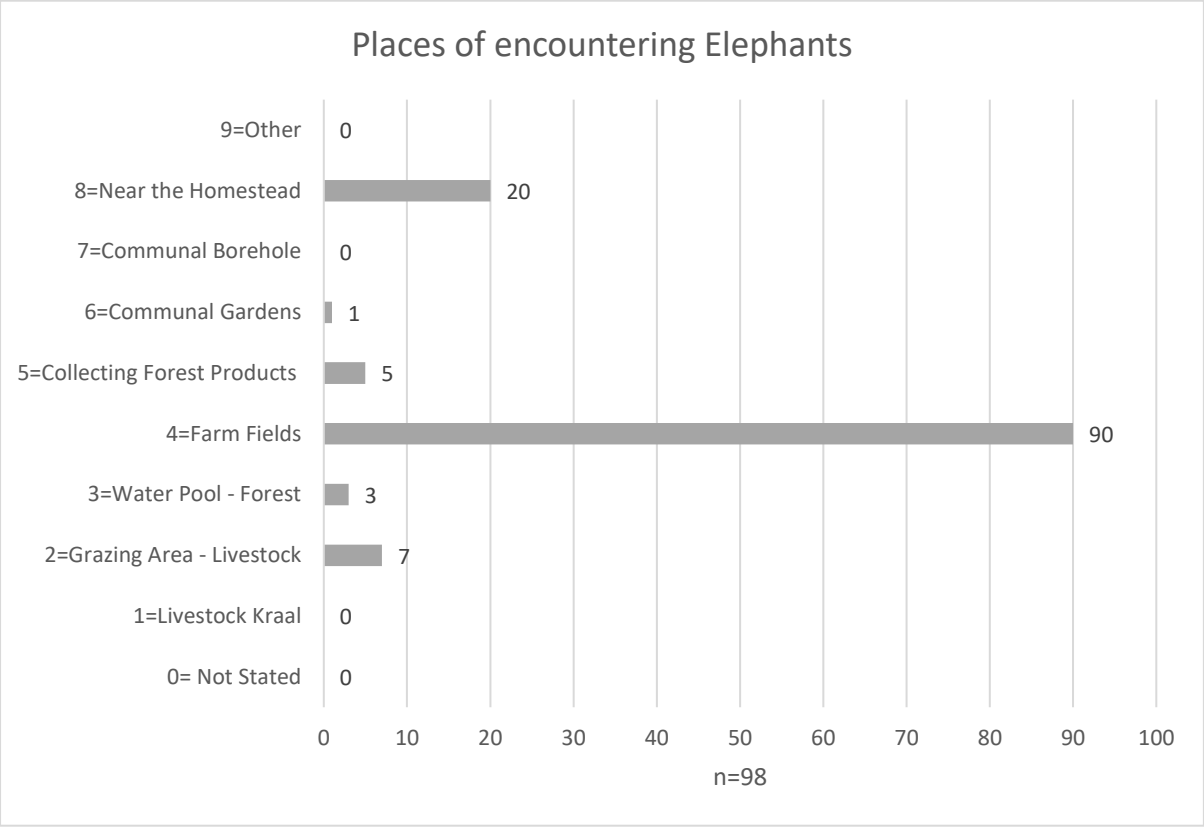


Figure 20 Places of encountering elephants

[51] 98 Respondents were asked- Where are you likely to encounter this animal? Livestock Enclosure; Grazing Area; At Water Pool in the forest; Farm fields; In the Forest collecting forest products; Communal Gardens; Communal Borehole; Near the Homestead; Other.

In addition, these elephants mostly cross into the communal areas at night, regardless of the season. According to 69% of the respondents, they encounter elephants daily.[52] Some villagers attest that even during the dry season, the elephants also cross over into communal areas in search of water and certain trees or plants to browse. *'We see elephants throughout the year. There is nothing in the fields now, but they eat the grass that is meant for cattle daily'* (Interviewee #5 on August 27, 2019). By virtue of their height and physical characteristics, elephants can easily jump over the fence. Furthermore, they can travel long distances in a short space of time. During my stay in the village, I never saw an elephant during the day. However, we would often hear them at night passing through the homestead or when we walked through the village during the day; we often encountered signs of their presence in the form of their large spoors, the wreckage of vegetation, and the elephant dung that they left behind during the night. This situation to some extent alludes to the temporal nature of the contact that occurs between elephants and humans.

When respondents were asked if their crops have been destroyed by wildlife in the past, seventy-seven out of ninety-eight of them confirmed that their crops have been destroyed by wildlife, while only twenty-one respondents revealed that their crops have never been destroyed by wildlife. Whenever their crops are at risk of damage from wildlife, villagers have taken different actions in response to, or to prevent destruction of their crops by wildlife. The most common action taken by villagers is to report the incidents. Twenty One respondents reported to CAMPFIRE - two of these respondents expressed that, even though they reported the incident, they did not receive any help. Thirteen villagers said that they had reported incidents to the council authorities. Four respondents had also reported to Problem Animal Control (PAC), and four other respondents reported the incident to Zimbabwe Parks

[52] The question asked: What is the number of times you encounter the animal? Daily, Two or more days a week; Once a week; Never

and Wildlife Authority (ZimParks). However, only one respondent mentioned that an elephant was shot after reporting the incident to ZimParks. Overall, the villagers claim that, even if they report the matter to the authorities, they do not receive any substantial help or compensation regarding the destroyed crops.

Picture 15 A tree blocking the road next to a farm field after elephants damaged it, at night, in the dry season.

However, some villagers acknowledge that these officials may have challenges responding to the complaints because of lack of resources, such as transportation or guns.

> *"I cannot say that there is any improvement because if you can call them, they can tell you that 'our vehicle has no fuel, our vehicle is out of order, there are no guns, our guns are all out of order.' These challenges started when the CAMPFIRE was*

introduced because, long back, we used to report these animal attacks to the national park, and they could come earlier and rescue us… Yes, parks and wildlife were very active; if you would report today, maybe the next day they would be around. But with CAMPFIRE officials, if you report today, it could take you a week or more without any response. "Our recent report was last year March when two elephants came to our fields and devoured our crops and they normally come at night or early hours of the morning, and we deterred them by playing drums and making noise." (Interview with 23-year-old female on 23 February 2022).

When I visited the village in February 2022, an elephant destroyed the fields of one of the villagers at night. CAMPFIRE officials came the following morning. They were able to track down the animal and shoot it, however, they only managed to wound it. They were tracking it down to kill it because it can be very dangerous to have a wounded elephant moving around.

Many villagers spoke about the need to guard their land from destruction caused by elephants. They would guard *"every night until you harvest and remove everything from the fields. If you do not do that you get nothing."* (Male 90 years old). One of the most common solutions entails making noise to scare away the elephants. This has proven to be effective and is a practise often conducted during all night vigils. When I asked my host father about his experience, he explained that when it is planting season, men go to fields at night to protect the crops from elephants, this is usually done individually or in groups of two. The number of people available to guard the fields is also dependent on the number of men available at a household. If there is only one man at that HH it is likely that they will guard their field alone. My host father usually does so alone.

"What we usually do to guard against the elephants is to sit by the fields all night, occasionally walking through the fields. We also make bonfires. Most of the time, you

will guard the field by yourself without anyone else to accompany you. This is a difficult method, I cannot say that it is an easy method as a way of life, as a way of doing things, because you go there at 8pm in the evening and only come back home in the morning at 3 am to sleep. So, yes, this way of doing things is difficult. It is rare for you to guard the fields as a pair or as a group. A lot of the times you guard the fields by yourself. If you are lucky, there can be two of you, but we have never had more than two people guard the field together."

They make use of different instruments to chase away elephants intent on destroying their crops, for example: whips can be used to mimic the sound of a gun, and metal drums can be beaten. They *"just gather firewood, make a large fire, call the dogs to the mealie lands, get a whip or a big drum and put it near the fire. When you notice that there are elephants moving around you get a stick and beat the metal drum harder and if it hears the sound, it runs away."* One of the men told me that when an elephant hears the crackling of a whip it will think that there is a gun, and it goes away. The purpose of the whip is not to whip the animal but to imitate the sound of a gun and scare it away.

According to one lady, in the past some villagers were allowed to own guns for the purpose of protecting themselves from wildlife attacks, but today none of them is allowed to use a gun for the purpose of scaring away wildlife or defending themselves from it. The family of a 74-year-old woman moved to this place from Nyamandlovu in the 1940s. She remembers that in the beginning the animals did not "*harass them*", they could leave their cattle to roam around, and the wild animals stayed in the park, they did not cross into the village. But this is not the case nowadays, and she thinks that it is not a good situation. According to her, she started noticing the frequent visits from wildlife just before the war in the late 1970s (1975-76). She also mentions that, during that time, there were people selected to use guns on wildlife. When

they captured the wild animal and killed it, they would bring it to the villagers and show them the animal that was giving them problems, and then they would call people from Tsholotsho to come and collect it.

> *"At that time there were people assigned to kill the animals on the spot if there was a breach, he was called Zebhuku. Zebhuku was given a gun by the government and permission to kill the animal on the spot. If there were reports that there is a breach of a hyena, they would spend the entire day hunting it down to kill it. Then, soon after independence, this stopped and they were not given the gun anymore, not even the ammunition. Now the wild animals are like goats, they just roam around in the village, freely."*

Although she does not remember the exact year that these representatives from the village stopped receiving guns, the example highlights how the use of a gun in the past or the imitation of the sound of a gun in the present-day situation are tactics used to scare away wildlife, such as elephants, from farm fields.

Livestock Enclosure and Homestead

My host father wakes up early every morning and goes to his livestock enclosure a few meters away from his homestead. In rural communities in Zimbabwe, the livestock enclosure is often constructed using wooden poles that serve to protect the livestock from external attacks and theft in the evenings. My host family has many livestock compared to other villagers and, although the cattle, goats, and donkeys are kept close to each other, each one has its own compartment. When he enters the enclosure, he spends some time inspecting his livestock and praying for them. Inspecting livestock early in the morning before releasing them from the enclosure is an activity that many of the villagers attest to practicing. This involves listening carefully to check if any of the livestock is breathing abnormally and

looking for signs of illness by observing body parts, such as the ears and nose. It is also the time to check whether any of the livestock has been attacked by wild animals during the night. This early morning practice of care brings to the fore the aspect that contact among humans and their livestock occurs not only in physical spaces, but also temporal spaces. This case highlights an intimate practice in the relationship between humans and their domesticated animals, further asserting the value of livestock for the villagers over and against their relationship with wildlife. Much time and care is spent looking after livestock, making sure it receives adequate water, and that it is protected from diseases and attacks from wild animals. During the group discussion, when I asked about the time and care spent on looking after their livestock, one woman said: "*It takes the whole day (to care for livestock); as you can see the men have left in the morning (to go to the dip) and they will return in the evening with the cattle, so sometimes it takes almost the whole day to look after the livestock."*

When the day is over and the sun starts to set, my host father begins to swiftly round up the livestock back into the enclosure; he does this with the help of his dogs before it gets dark. Most of the villagers own two or more dogs. My host family, for example, owns 5 dogs. When villagers talk about their experiences guarding their fields or going to look for lost livestock, most of them talk about how they take their dogs along with them. It is clear therefore, that dogs also play a vital role in helping villagers provide security for their livestock and their homesteads in the event of an attack by wildlife. These examples of the relationship among domestic animals, such as dogs and livestock, show the other non-human encounters that occur in the shared spaces among humans and animals. Domestic animals interact together in spaces that humans have created, such as the homestead and livestock enclosure, to help protect from wild animals.

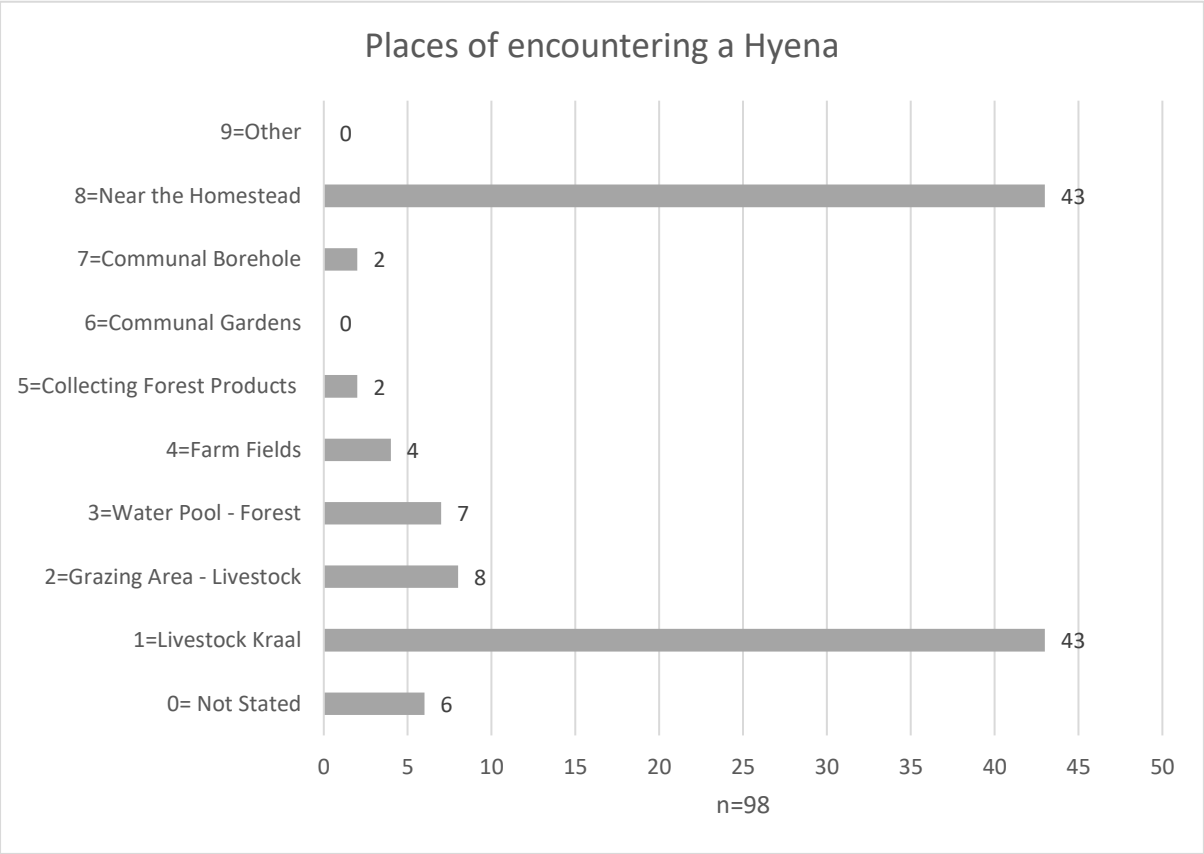


Figure 21 Places of encountering Hyena[53]

My host father also takes care to count all his livestock as they return from the grazing fields or from drinking water, making sure they are all accounted for as they enter the livestock enclosure. Enclosing their livestock is meant to keep them safe from thieves and from attacks from wildlife, such as hyenas and jackals. Hyenas and jackals have a bad reputation attacking livestock in the village. As shown in Figure 21 and 22, forty-three respondents and thirty-five respondents out of ninety-eight claim that they are likely to encounter Hyena's and Jackal's, respectively, at the livestock enclosure. These animals are accustomed to visiting the livestock enclosure to prey on livestock, especially during the night or early mornings, as

[53]98 Respondents were asked - Where are you likely to encounter this animal? Livestock Enclosure; Grazing Area; At Water Pool in the forest; Farm Fields; In the Forest collecting forest products; Communal Gardens; Communal Borehole; Near the Homestead; Other

explained by one villager. *'Hyenas come at sunset and start hunting. So, livestock should not be in the bush in the evening.' (Interviewee # 1 on August 27, 2019).* This explains why my host father and other villagers take swift action in putting the livestock back into the enclosure at sunset.

These animals also come close to the homestead. This is not surprising because the homesteads and livestock enclosures are usually located close to each other. This explains why forty-three and twenty-one respondents reported that they are likely to encounter a hyena or jackal near the homestead. According to five respondents, in addition to hyenas and jackals, wild dogs also attack livestock at the enclose. Four other respondents report this same activity from wild dogs, as happening at the Homestead.

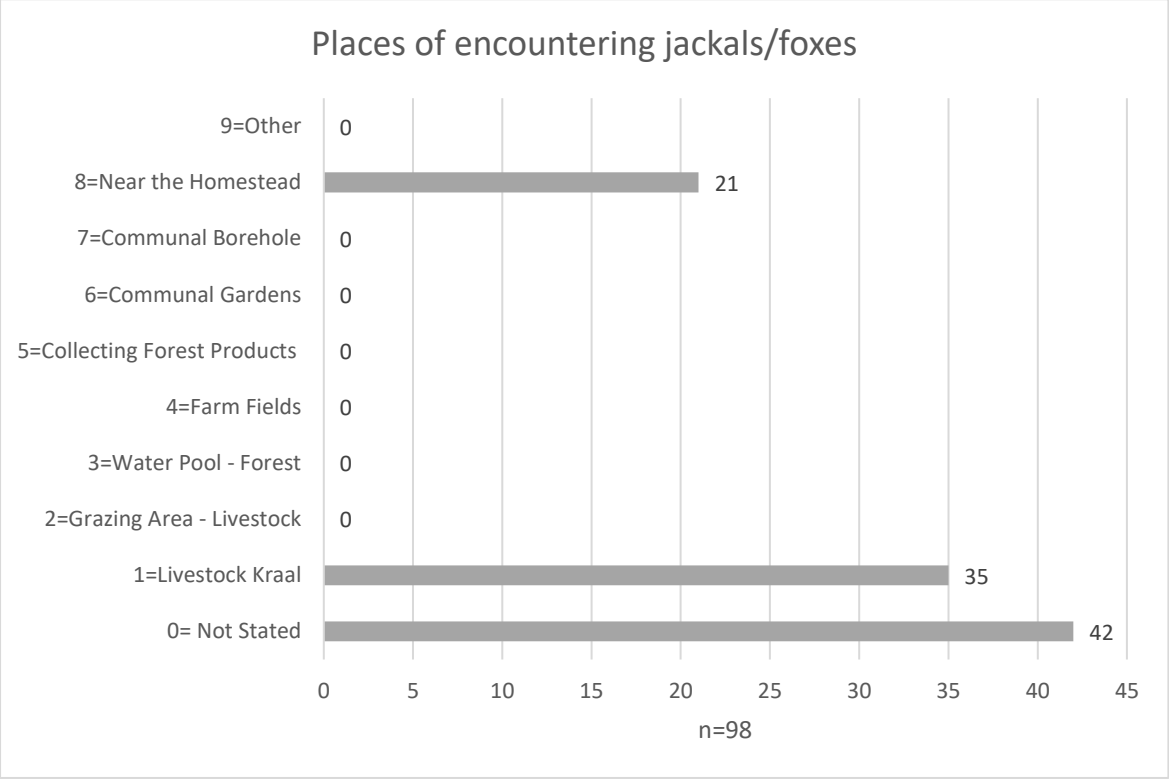


Figure 22 Places of encountering jackals/ foxes[54]

[54] 98 Respondents were asked; Where are you likely to encounter this animal? Livestock Enclosure; Grazing Area; At Water Pool in the forest; Farm Fields; In the Forest collecting forest products; Communal Gardens; Communal Borehole; Near the Homestead; Other.

Grazing area for livestock

The next zone of encounter is that of the grazing areas; respondents indicated that their livestock is likely to encounter lions and buffalo in the grazing areas (Figure 23 and 24). Both lions and hyenas' prey on livestock, but most encounters between lions and livestock occur at the grazing areas. This is largely due to the close proximity of homesteads to boundaries of wildlife areas, and the significant reduction of the size of grazing land. Because pastureland for grazing is so reduced, livestock is constantly under threat of wildlife; there is a strong sense that they are sharing the same space. This contrasts with the areas that hyenas mostly frequent, near the homestead. There are also strong opinions among villagers about the lack of adequate grazing space for livestock. One day, when driving to Nganyana, I sat at the back of an open truck with one villager who was going to Nganyana. When we reached a series of wooden poles demarking the boundary between homestead and wildlife, the man exclaimed *"Can you see how close the fence is to the homesteads! There is no space. There is no space for our cattle to graze… If the government could help push back the fence 5 km from where it is now, we would not have many problems for grazing space and poaching will also be reduced."* Along the way we could spot cattle scattered around grazing inside a nearby field or in the bushes near the fence.

Grazing during the dry season, further highlights the issues raised by reduced pastureland. The villagers let their cattle graze differently depending on the season. During the dry season when there is rarely green grass, villagers often release the cattle from the enclosure and let them wander around on their own. However, during the rainy season, they herd the cattle and lead them to available pastures away from the farm fields. One villager expressed his opinion about how terrifying it must be for livestock to go out to graze, by exclaiming that *'if our livestock could talk, they would tell us 'Today we do not want to go to the bush!'* to graze.

The villager explained that …*´livestock do not feel free because they know that wild animals can attack them at any time. Even sudden movements by other animals such as hares or buck, while grazing, can scare our cattle into thinking that lions are coming.'* These statements show how much he empathizes with his livestock and considers that his cattle may be frightened of wildlife attacking them while grazing. On the other hand, the villager may also be projecting his own fears about wildlife, because he cannot know the true thoughts and feelings of the cattle.

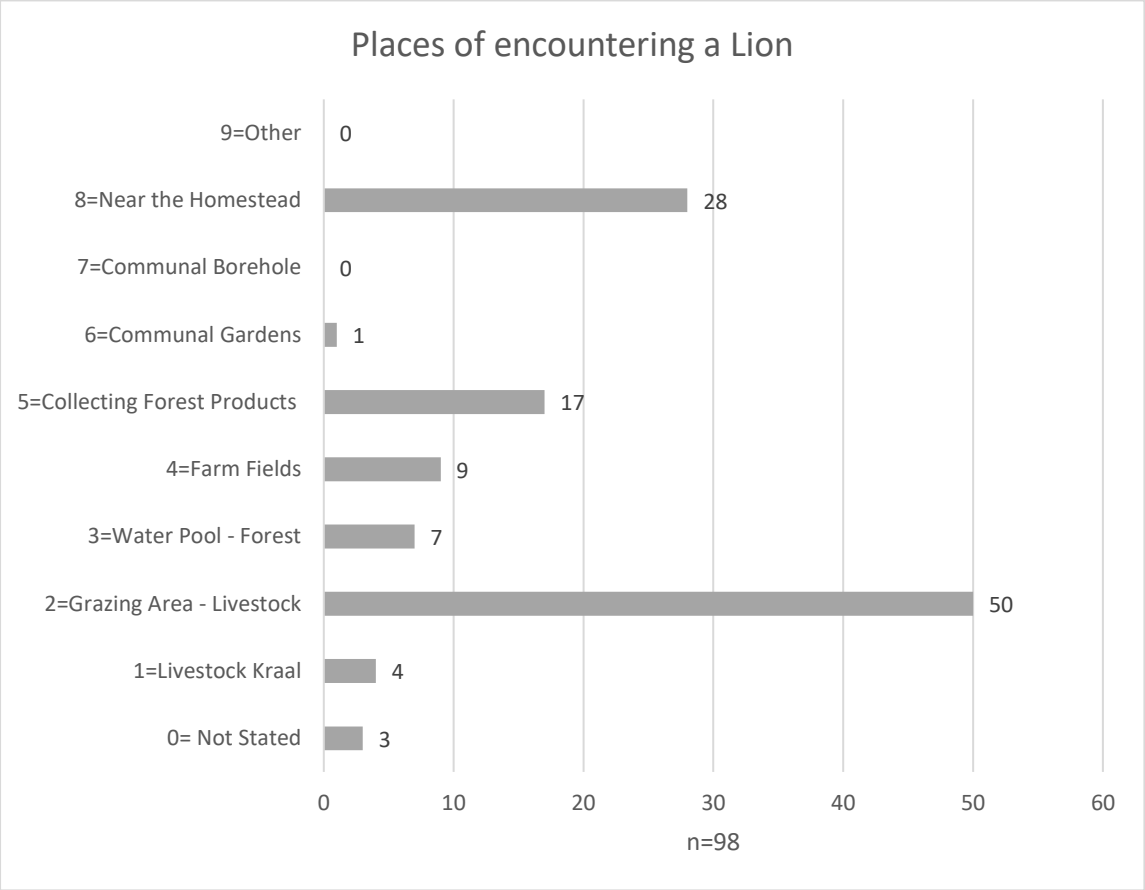


Figure 23 Places of encountering a lion[55]

[55] 98 Respondents were asked- Where are you likely to encounter this animal? Livestock Enclosure; Grazing Area; At Water Pool in the forest; Farm Fields; In the Forest collecting forest products; Communal Gardens; Communal Borehole; Near the Homestead; Other.

Unfortunately, lions also attack livestock near the homestead, as shown in Figure 23. *"We have problems with lions when they come near the village, they attack the livestock"* one respondent said, and "*when they are near [the homestead] the boys are afraid of going into the bush"* to herd cattle. Twenty-eight of the respondents have encountered lions near their homestead. During fieldwork in 2020, one respondent mentioned that they had seen a lion near their homestead the previous week. At times, the lions attack livestock while enclosed in the livestock enclosure, as narrated by another respondent:

> *In 2010, lions jumped inside the kraal. They killed one of the donkeys at night. I heard the donkey crying at night and I woke up to check on the donkey. Standing at a distance, I made noise and the lions jumped out of the kraal and they slept behind the kraal. When I woke up in the morning the lions were gone. I managed to carry the donkey and I threw it in the bush. Those who were supposed to come and help me chase away the lions did not come to see the lion and they did not take any action. They only came to see where the donkey was thrown in the bush…* (Interview #9 on September 3, 2019)

I asked the villager to further explain which people she was expecting to come and help her chase away the lion. She responded by saying *"the research people for the lions."* In another case a villager reported the lion attack to the people who are doing research on lions in the area. The research project tracks the movements of lions with collar tags. When the lions are near the village, the people who are part of the research team can alert people about the presence of lions in the area. One respondent remembers that one afternoon in 2017, lions attacked their livestock in the bush. One cow was eaten and the other one was wounded. The respondent recalls that the lion that attacked their cattle had a collar and they went to tell the researchers about the incident.

The question of whether wildlife has ever attacked one's livestock was posed to the ninety-eight respondents of the survey[56]. Sixty-seven of the respondents said yes, their livestock had been attacked by wildlife in the past, and thirty-one respondents answered no, none of their livestock were attacked by wildlife. The responses show that at some point, wildlife has attacked the livestock belonging to a majority of villagers and, as shown by the vivid memories of some of these villagers, having their livestock attacked even once is already once too many. Apart from lions frequenting the grazing areas of livestock, villagers also mentioned other wild animals. Nine respondents mentioned the presence of cheetahs, and thirteen respondents mentioned that vultures also prey on livestock in the grazing area.

The stories recounted by respondents about their experiences with lions attacking livestock are often very vivid. So too, are the accounts of the actions that they took. They often describe feelings of aggression as they react to these events, expressing how they quickly responded to the attacks by making noise to scare away the lions. They also spend considerable time searching for their missing cattle in the bush until they find either the livestock or its remains.

> *"One afternoon two years ago lions attacked my cattle, while they were grazing, but they did not kill them. I chased them away, calling others to come and assist me. Six lions attacked two cows. The lions were also attacking me, and I screamed and called others to come and help me. It made me angry because I was not expecting that such a thing would happen" (Interviewee #15 on September 5, 2019)*

Another example is that of my host father who went in search of his cattle when he realised that they went missing; he later found that they had been attacked while grazing in the bush. Although the incident occurred almost ten years ago, he remembered it vividly and recounted

[56] The question asked; Have your livestock ever been attacked by wildlife?

the story to me with much vigour. This highlights that although it occurred a long time ago, they have vivid memories about incidences, and these shape their fear of being attacked and of losing their livestock. The vividness of the incident in the memory of my host father illustrates how profoundly serious occurrences leave such strong impressions.

> *In 2012/2013, lions attacked my cattle in the afternoon. Three of them were killed. One female and two males. I was at home, the boys who were herding cattle in the bush returned without three of the cattle. I told them, 'you left the cattle in the bush!' I woke up early the next morning to go to the field and I came back around 9am, but the cattle were still not home. I told the two young men that we should go to the bush to look for the cattle. I went in front of the boys and the rest of the cattle. On my way I saw the paw prints of lions and I followed them until I found one cow already eaten, only the head was left. I continued to follow the paw prints and I found the other two, they were both dead, one with the ear already eaten. It was late, around 4pm, and we were far from home. I went back home to ask for help from my neighbours, but I got home late, and I could not find many people. When we went back it was already late night and we could not find the place even with torches. At 10pm we decided to go back home with the donkey cart since we could not see. We arrived after 11pm and slept. It was a Friday night, and we woke up early on Saturday morning to go back. We found the other cow already eaten. We counted the paw prints and determined that there must have been 14 lions. We carried back the partially eaten cow (only the chest was left) because it was very painful for me to leave it in the bush'(Interviewee #11 on September 5, 2019)*

Actions taken against attacks on livestock by predators.

In terms of reaction to or retaliation against wildlife attacking livestock, twenty-eight of the villagers claim that they did not take any action when predators attacked their livestock. The commonly cited reason for not taking any form of action was the belief or knowledge that *"there is no longer any compensation"* being given to villagers when their livestock is attacked and, secondly, some of those who did not take any action, believed the "*local authorities [are] unresponsive,"* hence the villagers lack the motivation to even report the matters. On the other hand, thirty-nine of the villagers took different forms of action when wildlife attacked their livestock. Ten out of ninety-eight respondents are likely to report to the people who are currently conducting research about lions in the area. While nine are likely to report to the nearby safari operators. Six respondents mentioned that they would report to CAMPFIRE authorities, and seven respondents mentioned that they would group together to chase away wildlife.

The respondents who reported incidences to CAMPFIRE officials mentioned that the officials would use their guns to shoot the problem animals. According to one respondent, lions attacked their cattle, and they called CAMPFIRE officials to assist them:

> *'In 2009/10, Lions attacked five cattle one time during the day. We went to the bush looking for the livestock that were missing and we found that the lions were still there. We met CAMPFIRE people and told them about the incident but people from CAMPFIRE did not have guns, so they had to go back and fetch their guns. The CAMPFIRE people went to the scene but only made noise with their guns but did not shoot the lions'* (Interviewee #1 on August 27, 2019)

A 74-year-old woman lost a bull and a cow in March last year (2021). The day she realised that her cattle were missing she searched for them, but she did not find them. Then she went to the headman and told him about her situation. The headman went to look for the cattle in the forest. He found only the hoofs of the cow and the head of the bull left. She now has eight cattle left. The woman said that she reported the incident to the local authorities responsible for wildlife but did not receive a response. She said that *"they come here, and they do every process but when they leave, they never come back with any answer. They come with their books and pens, and they write down things such as the history of the cow, if its male or female, how old was it, how big it was?"* She said she describes everything about the cattle, even the colour. But, after providing all that information, she does not receive any feedback that can help her to improve the security of her livestock. Therefore, she says she is concerned about "*what happens over there in the offices in Tsholotsho after they have taken down all that information onto paper. Do they tear the paper, leave them like that, or just neglect them?*" Although some of the villager's act in the form of reporting these matters, their expectations are rarely fulfilled. When they report such matters, they expect to receive some form of compensation or replacement for their loss, or information on how such attacks can be prevented.

Lastly, another response against lion attacks is that villager's group together to chase away the predators, the same way they respond to elephants destroying their crops. The villagers also demonstrate own initiative and responsibility by securing and regularly maintaining the livestock enclosures. This is what many feel is within their power to do because they cannot control when or where wildlife predators will come into their community to attack their livestock.

> *"Actually, I cannot say if there is a way we can secure ourselves because long back when parks (ZimParks) was run by the whites, they would say that if a lion comes over to this side, we allow you to kill it and when you have killed it you take the skin to the Tsholotsho Rural District administrator. But these days if you can kill a lion and take the skin to the TRDA that is the way of being arrested. So, the only thing which I see being good for you to do is just to go behind your cattle in the evening, drive them into the kraal, close the kraal gates and see that all the kraals are secure"* (Interview with 69-year-old man on 24 February 2022).

Wildlife related diseases

Buffaloes are not as frequently encountered as the animals discussed previously. When they do appear, livestock often encounter buffalo at the grazing area. Although buffalo are not encountered as regularly as lions, elephants, or hyena's, many villagers say that if they spot a buffalo in their area, they will report it to the authorities because they know that this animal can spread disease to their livestock. The African Buffalo is specifically known to be a carrier of Foot and Mouth Disease (FMD) and villagers are aware of this threat. The sentiments expressed about the buffalo opens the discussion on the potential of wildlife to spread diseases and ushers in this section, which explores wildlife related diseases in relation to livestock in the village. Diseases such as rabies, heartwater, and lumpy skin are also a concern for villagers. Wildlife and livestock can pass other sickness or disease to each other (including ticks/ insects). The perceptions of the villagers, in relation to their experiences with the spread of wildlife related diseases and livestock, are discussed in this section.

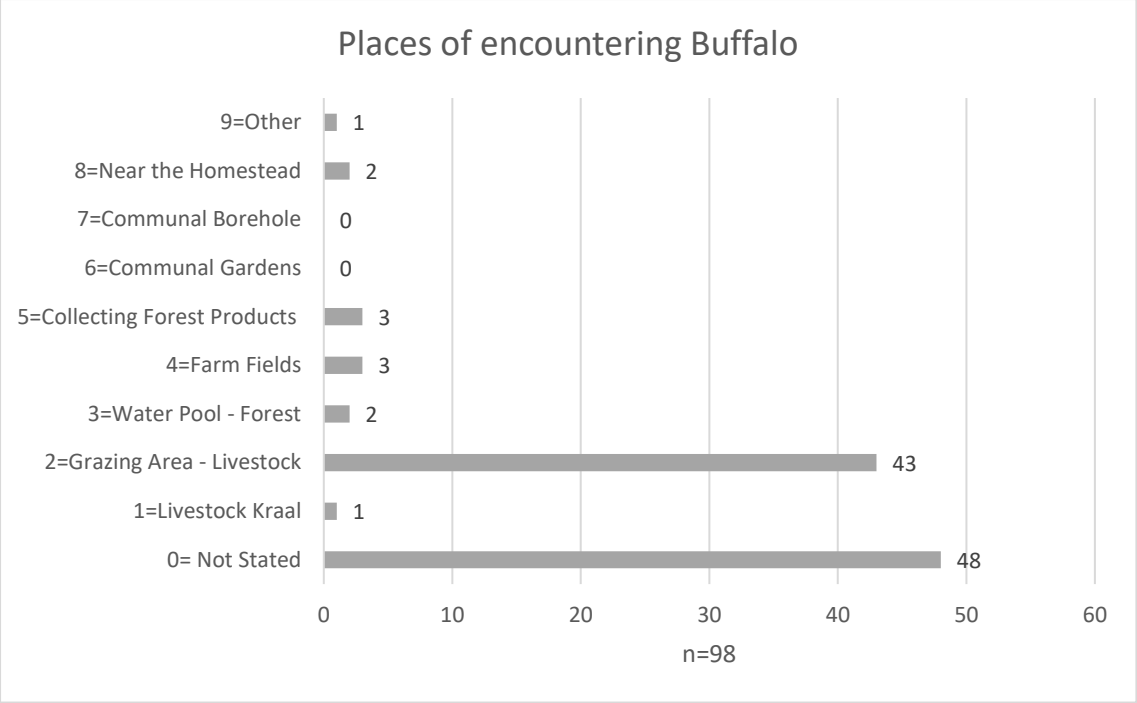


Figure 24 Places of encountering buffalo57

Villager perceptions of diseases

I asked villagers questions about their perceptions and experiences with wildlife-related diseases that may affect their livestock by virtue of living near wildlife. To begin with, I was keen to know their level of awareness or knowledge of livestock diseases because of their unique location at the edge of a national park. The initial findings of the free listing exercise showed a uniform knowledge about livestock diseases; respondents were asked to make a list of all the livestock diseases that they know. Foot and Mouth Disease ranked as the most frequently mentioned disease, with 15 out of 17 respondents listing Foot and Mouth Disease. The respondents also mentioned Anthrax 11 times, Blackleg 10 times, Lumpy Skin 8 times, Heartwater 7 times, Red-water and Rabies 1 time.

[57] 98 Respondents were asked- Where are you likely to encounter this animal? Livestock Enclosure; Grazing Area; At Water Pool in the forest; Farm Fields; In the Forest collecting forest products; Communal Gardens; Communal Borehole; Near the Homestead; Other.

I was also interested to know how many of the respondent's livestock had been infected by or had suffered from any of these diseases. Information from the household survey, which I conducted a year after the free listing exercise, showed that out of the 98 HH's, 14 Households indicated that Foot and Mouth Disease had once infected their livestock some years ago, 10 of the households indicated that Blackleg once infected their livestock. Blackleg is a major problem for this community and the villagers believe that it is very dangerous because it comes from eating certain type of grass that is found in some parts of the village. The livestock from four households has at one point been infected by Heartwater and only one household indicated that their livestock was once infected by Anthrax. The survey also showed that five other diseases have affected some of their livestock in the past, however, the respondents and I (including my research assistants) could not establish the names of the diseases that they described.

Foot and Mouth Disease is perceived as the most dangerous disease in comparison to other diseases by villagers. However, by conducting informal interviews, free listing, and pile sorting exercises with the villagers - as well as informal interviews with officials from the Zimbabwe Parks and Wildlife Authority and the Veterinary Services Department - I understood that Foot and Mouth Disease is not perceived as a serious challenge for communities in this area in comparison to the problem of predators, such as lions attacking livestock, or elephants destroying crops. During the free listing exercises that I conducted with some of the villagers, they did not list buffaloes as a problem, but villagers listed wildlife, such as elephants, hyenas, lions, jackals, and foxes to be among the problems they faced, because these animals frequently attack livestock and destroy crops. However, one villager explained that when they see any buffalo near their homes, they make efforts to chase them away and to quickly report to the veterinary services, because they know that buffaloes carry many diseases that can spread to their livestock. Officials from the Veterinary Services

Department, as well as the Parks and Wildlife, also had similar opinions that villagers do not perceive Foot and Mouth Disease as a major problem when compared to the problem of wildlife attacking livestock and destroying crops.

How diseases spread

During the survey, fifty-two of the respondents answered Yes and forty-six answered No when asked if they thought that wildlife spread diseases to their livestock. Furthermore, forty-eight of those that answered yes, cited that buffalos are likely to spread diseases to livestock. Four and three other respondents mentioned other wild animals, such as elephants and wildebeest, respectively. Wild dogs, hyenas, and jackals were each cited by two respondents, and kudu's and giraffe were cited by one respondent each.

A few of the villagers believe that predators such as hyena's and wild dogs, are also responsible for spreading diseases. Two respondents revealed that the bites from hyenas can cause the spread of diseases such as rabies. Furthermore, when hyena's attack and feed upon livestock, at times domestic dogs find and eat the leftovers resulting in domestic dogs catching rabies.

Some of the villagers also identified places of encounter that I explained earlier as areas that facilitate the spreading of diseases. Thirty-nine and twelve of the villagers say that the sharing of grazing land and sharing of water sources, respectively, causes the spread of diseases among wildlife and livestock. Sixteen respondents went further to say that ticks and flies also contribute to the spread of diseases among animals. Ticks and flies can attach themselves to the animals as well as to the grass in the grazing area. According to three villagers, diseases can also be spread from one animal to another through spoor tracks. They are of the opinion that if an uninfected animal walks on the same tracks of another infected, the disease or virus is likely to spread from one animal to the other.

Coping with the threat of diseases

In response to the opinions and experiences with the spread of wildlife diseases, I focused on investigating how villagers cope with the threat of diseases that affect their livestock. During an interview, one respondent made the following remark when asked about how the threat of wildlife affects the wellbeing of livestock:

> *'… they affect our animals by transporting diseases such as Anthrax, Rabies, and Foot and Mouth Disease to our livestock because they share the same pools with wildlife during the rainy season. In this season (dry season), our livestock drink from the borehole. Although these pools are outside the boundary of the park, they are near the game park. During the regime, before independence, the fence was well and there were [patrol]guards and now that the fence is destroyed there are no guards. During the regime all was well… During the colonial regime there was culling but there is no longer culling, but we need this programme because they [wildlife] have become too many for this place' (Respondent #16, interview on 5 September 2019).*

When asked about whether any virus or disease has ever infected his livestock, he responded by saying no, because he buys medicine to protect them from infection; *'I always treat my livestock. Every year I buy medicine because I know that I live in an area where my livestock are prone to these diseases.' (Respondent #16, interview on 5 September 2019).*

His remarks shed light on some of the past and present actions that help him cope with the threat of wildlife related diseases upon his livestock. Firstly, the remark highlights water pools as zones of encounter among livestock and wildlife. The interaction of wildlife and livestock may occur during certain seasons of the year, such as the rainy season when most of the pans have water. Only eighteen respondents of the survey acknowledge water pans in the forest as places where they and their livestock are likely to encounter wildlife. It is likely that

many respondents of the survey did not select the water pools because encounters at pools mainly occur during the rainy season when cattle are led to drink from the pools instead of the borehole.

The remark about the colonial regime providing a better mode of protection against wildlife crossing into the villages, puts attention on past measures of conservation and protection. He also mentions how effective the fence was during the colonial era and the effectiveness of regularly patrolling game rangers to prevent wildlife from crossing into communal areas. He also includes the discontinued culling of wildlife, such as overabundant elephant populations. In accord with the above remarks, many other villagers expressed their desire to have the fence mended and maintained. Furthermore, sixteen respondents mentioned that shifting the game fence far from people and making sure that it is maintained will help them cope with the threat of wildlife diseases.

Lastly, the respondent made an ardent assertion that he regularly buys medicine for his livestock because he knows that he lives in an area where his livestock are prone to these diseases. When asked, during the survey, about the actions that they take to cope with the diseases that affect their livestock, thirty-four of the respondents mentioned that the Veterinary Services Department assists them with what products to buy. This brings to light the role of the veterinary services and access to medicine in helping villagers cope with the threat of diseases. The nearest veterinary office is in Sipepa, which is about 20 km from the village. There is also a (former) veterinary officer, as well as an Agritex officer with knowledge on livestock diseases, who live in the village; whom some of the residents consult them when their livestock fall sick. The Veterinary Service Department has also contributed to the fight against wildlife disease by conducting screenings, vaccinations, and dipping livestock. Although several respondents mentioned that they are most likely to seek the help

of the Veterinary Service Department when their livestock fall sick, my findings during interviews revealed that they are more likely to ask for help or borrow from their neighbour the medicine to treat their cattle before seeking help from the veterinary offices. '*If my livestock falls sick, I will go to my neighbour to seek help. If she has an injection, we will use it and we will inject my livestock, if she does not, we must run around and find money. If the disease persists, we call the veterinary services.' (Respondent #6, interview on 27 August 2019).* Some respondents mentioned that they always have medicine readily available at home to treat any signs of sickness that may occur. The injections mentioned by villagers are "Terramycin" and "Hitet". These are often bought from the veterinary services.

The fight against livestock disease is also made more difficult by lack of sufficient money. Sometimes respondents do not have money when their livestock falls sick, and they must borrow money from their neighbours, or borrow money to buy medicine. Thus, the availability and accessibility of this medication at home is pertinent because they prefer to always have it on hand in case any of their livestock falls sick. They do however, prefer to buy the medicine either in Bulawayo or at Tsholotsho Rural District Business Centre, where they believe it is much cheaper than at the nearest veterinary office in Sipepa. A few respondents mentioned other actions to cure illnesses affecting livestock that include the use of traditional medicine.

The villagers are, therefore, aware of the challenges and the threat of diseases associated with living near wildlife. With the threat of wildlife diseases upon the community, one's ability to recognize signs of ailment among their livestock is important. According to most respondents they check for different signs that can indicate whether their cattle is ill. For example, they check to see whether their ears are pointing downwards, and they check whether the cow is chewing the cud in the morning.

> ‘*Early in the morning, when we are moving them out of the kraal, is the time I observe the movements of my livestock. When we are giving them water, I also check to see if it is drinking properly or not. The movement of the mouth and tongue also shows if the cow is sick. The skin of the cattle is raised if it is not feeling well*’ *(Respondent #15, interview on 5 September 2019).*

The process of attending to the livestock and observing them early in the morning, checking to see if they are ill or hurt, shows that it is not only the spaces of encounter but also the times of encounter that exist in the relationship between humans and their livestock.

Conclusion

The chapter presented the different contact zones that are found in the relationship between humans, their livestock, and wildlife in the village. Places such as the farm fields, the livestock enclosure and the grazing area are some of the main places where the encounters occur. The results show that different wildlife stand out in different spaces of encounter, for example: elephants in the farm fields, lions in the grazing area and hyenas near the homestead and livestock enclosure. These encounters are violent, with predators such as lions and hyenas harming livestock, and destructive with elephants destroying farm fields and crops. None of the villagers’ descriptions of the encounters within these contact zones are positive, and they present more of an antagonistic and contentious relationship rather than one of coexistence. These encounters overshadow the presence and purpose of a boundary. The idea that wild animals and livestock can cross into the village obscures the objective of the boundary as a means of separation. This challenges the separation of humans and wildlife and presents the area as a shared biophysical environment, where the binary separation for a human and non-human space is blurred (Münster, 2016; Haraway, 2008).

The temporal characteristics of these contact zones also came up as the study showed that contact zones are not just about the space or places that encounters occur, but are also temporal, involving the time or seasons that encounters occur as well as the amount of time spent with the animals. The villagers, for example, place importance on observing their livestock early in the morning to check for any signs of sickness and harm. At sundown, they also take great care to make sure that their livestock is accounted for and securely enclosed in the livestock enclosure. Wild animals also attack livestock and crops at different times of the day and in different seasons of the year. Elephants, for example, frequent the farm fields at night during the farming season however, elephants are also common visitors to the village in the dry season - seeking out certain trees and fruits. Hyena´s, on the other hand, commonly attack livestock during sundown.

The chapter showed that the villagers are struggling to protect their resources from wildlife. It is an inconvenient situation since the keeping of livestock and farming are part of their source of livelihood. The villagers split their time and attention between either chasing away elephants that destroy their crops or searching for their livestock that has been attacked by predators. As one villager explained that she feels that the wild animals come to the village in cycles. When she is chasing away elephants from her field, lions can come on the other side and eat her livestock, so she feels she needs to be watchful for elephants, lions, and hyenas at any given time. This is because the wild animal's interchange; one can have problems with elephants today and, when the elephants go away, lions may come, and when the lions are gone the hyenas come. Hence, wildlife is not in the background of the lives of the villagers and their livestock, but all three are in recurring association with each other. Wildlife is also not just an abstract being kept in the national park, but a being whose re-occurring presence encroaches onto their livelihoods. This may influence villager perspectives about living at the edge of the national park and the significance of the fence.

6. Perspectives about living on the edge of the national park.

Andersson et al., 2013, refer to communities living on the fringes or borders of transfrontier conservation areas as ‘people living on the edge.’ The phrase has more than one meaning; one meaning is that people are actually living at the boundary of a conservation area and, a second meaning is that people are living with many risks and uncertainty. In this chapter I describe the perceptions that villagers have about living at the edge of Hwange National Park. When I was at the village and saw the fence, I could identify the physical boundary that separates the village from the park. However, my interviews and discussions with villagers led me to think that this boundary does not necessarily separate the inhabitants of national park and the village. This showed me that these edges are fluid or permeable and that most villagers did not favour the permeability of the boundary because of the destruction of crops and attacks on livestock.

As mentioned earlier, the border that separates Hwange National Park and Tsholotsho communal lands is about 140 km long and, it is the largest interface separating humans and wildlife in the KAZA region. I include the National Park fence as a starting point in my discussion about villagers’ perceptions about living on the edge because of the role of the fence as the physical boundary that is supposed to separate the areas and as a marker of the edge. As discussed in the historical chapter, animals sought water sources found outside artificial boundaries. Diseases such as Foot and Mouth Disease also crossed from the game park to neighbouring native reserves and farms, and the initial purpose of the fence was to separate wildlife from livestock and prevent the spread of diseases. However, maintaining absolute stringent separation of wild animals from the communal area and vice versa, is difficult, as shown in the chapter about contact zones. The fence is permeable due to its design and due to damage. Although I did not witness where the fence is damaged,

information from villagers as well as other authorities confirmed that there are parts of the fence that are damaged.

The distance of the fence from households

Picture 16 Wooden poles found along the road used to access villages. The poles are a barrier to stop megaherbivores, such as elephants, that may have broken through the park boundary that is less than 1km from this road.

On my first visit to Zandile and Nganyani, we asked both village heads for permission to conduct interviews and the survey with villagers in their villages. Along the way to Nganyana from Zandile, we passed through a broken-down fence, made from wooden poles, that runs along the side of the road that goes to and from the villages (See picture 16). These poles are about 50 meters away from the actual National Park fence. They are not the National Park fence and I later learnt that the Veterinary Services Department and villagers had installed the poles in the past as an attempt to keep away wildlife, such as elephants, from the village.

However, when residents were asked in the survey questionnaire about the measures they have taken to protect against wildlife attacks, they did not mention these wooden poles.

Picture 17 A picture showing a section of the boundary fence that separates National Park and the Tsholotsho communal lands. The park staff use the sandy road adjacent to the fence to patrol and monitor from outside the park.

I sat at the back of the pickup truck watching as we swiftly drove past the wooden poles. The car suddenly stopped and my host father who was sitting in the front with the driver stepped out and said, “Tanya, I want to show you something; when we say we are close to the fence, I want to show you what I mean, I want to show you the park fence.” I jumped out from the back of the truck, and the driver and I started to follow my host father. We crossed through the wooden poles, leaving them behind us, and entered the thicket of bushes. In less than 50 metres we came upon a dried-up pool with mud in the centre. Less than 50 metres from the

pool, right in front of us was the National Park fence. There was also another road that ran along the outside of the fence that the park rangers use for patrolling (Picture 17).

The first time I saw the fence it was during the dry season when most of the tall perennial grass species are dry and have fallen over or have been burnt to the ground. This contrasts with what it looks like during the farming, rainy season (Picture 18), when visibility is low because of grass stems that grow up to two meters in height (Fish et al., 2015). Fear of being attacked by a lion was never far from me and, at this moment, seeing how close the park fence was to the homesteads and the road that we travelled daily, only increased my fear. I often calmed my fears by recalling that during the dry season there were few cases of lion attacks in the area, and elephants normally crossed to the village at night, at which time we would already be indoors or on the road back to Tsholotsho Centre. Furthermore, the thought that people live here, are born and raised in this area, gave me a different perspective of the situation, and instilled in me some courage.

In terms of the distance of the households from the National Park fence, there are homesteads that are slightly further from the National Park fence than the others. However, according to the estimates supplied by the villagers, all the homesteads in the village are less than 6km away from the fence, with some being located less than 1 km away from the fence, as shown in the table below[58].

[58] The respondents were asked during the HH Survey to estimate what is distance of your homestead from the National Park?

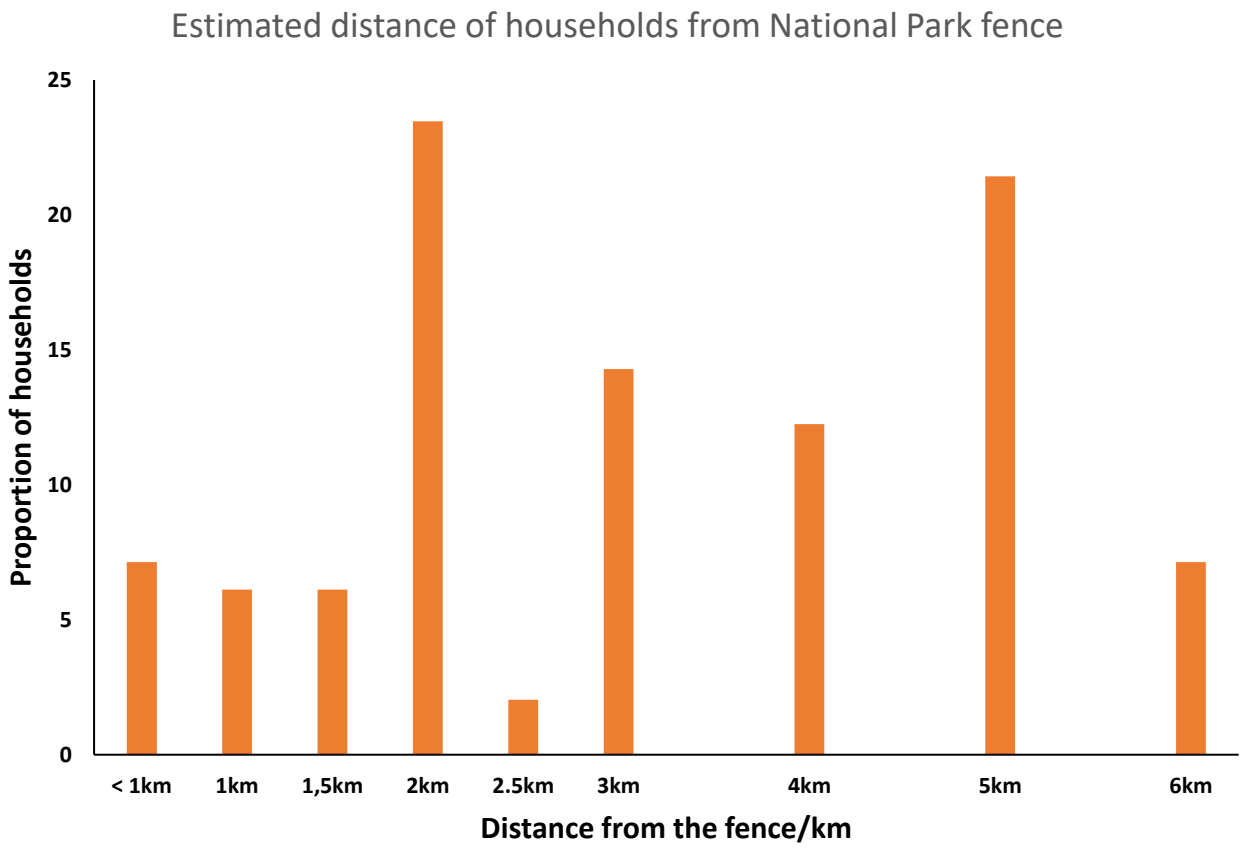


Figure 25 Estimated distance of HH from National Park fence

My impression about villager perceptions regarding the proximity of the fence to the village was that, although there is a fence that separates them from the park, the fear about the presence of wildlife comes to mind in relation to their livelihoods or assets. When I compare the proximity of the fence to the homesteads with the proximity of the boreholes to the homesteads, I observed that the villager perceptions about the distance differed. For example, the villagers described the fence as being too close to the village however, villagers complained that the boreholes are too far away. The estimated average distance of the boreholes to the homesteads is about 3 km and the fence to the homes is between 2 to 6 km. I believe that this difference in perception is because they perceive that the park fence is too close to the households because of the risk of crop damage or attacks on livestock. However,

the sources of water are perceived to be too far from the households because of the labour that they incur to pump and transport the water daily. Furthermore, when I observed the daily activities of the villagers, such as walking to the clinic to receive medical attention, to receive food donations, or to attend meetings, they walked to and from the various places (others at long distances) because of the lack of transportation. This suggests that the distance of the park fence to the homestead is also subject to how much the villagers encounter wildlife and the extent of the damage caused.

As an outsider, I thought that living this close to the fence makes this a dangerous area to live in. However, two occasions made me question or re-evaluate my perception of the severity of the danger. The first occasion was one day when we arrived at the fence and saw two young men (teenagers) sitting on the road near the park fence where park officials patrol. It appeared as if they were simply hanging out. We asked them if they knew where the elephants were, and they pointed to the direction of the park and said that they were on the other side. What struck me was how casually they were sitting next to the fence along the roadside, something that I do not think I would have done. On another occasion, I met three little girls walking along the road near their homesteads; my research assistant asked them whether they were afraid of elephants attacking them, and they giggled and said no, they were not. In my opinion, these incidents indicated villagers' spatial and temporal familiarity of the area and the wild animals, that I as a visitor lacked. This familiarity does not necessarily mean that they have good relations with wildlife. During interviews, I noted how other villagers vividly spoke about their past experiences with wildlife attacking humans, their livestock, or destroying their crops. These negative experiences evoked feelings of anger and disappointment towards wildlife, and I understood that one attack from wildlife is one too many for them. The incident with the boys sitting along the road; the giggling girls and other

villagers feelings of anger towards wildlife also shows how different villagers and age groups may perceive wildlife and its dangers differently.

According to one of the villagers, when the fence was first installed life started to change. One of the male villagers remembers that, prior to the installation of the fence and the movement of the boundary, it was possible to hunt in the area where the park is today. The male villager further attested that the location of the park was not this close to the village and when the fence was installed during the colonial period it was moved closer to the communal area. The possibility that the boundary of the fence was shifted is likely, as discussed in the chapter on the historical background, as colonial officials often shifted the boundaries of game, native, and forest reserves to suit different goals.

> *"Yes, life started to change. What I realised is long back people could go and hunt down there where the park is now, and nobody would arrest them, but when the fence was put up there were some guards who were moving around looking for the footprints of everyone who gets in, tracing them, then they arrest him, and he could be imprisoned. But now no one is ever hunting because everyone knows that if you hunt you are going to be arrested…they said that the fence was to control the animals from mixing together with the livestock. But they cheated people, instead of putting the wire away from the people it was brought next to the people. People could not say anything because if a white man decided that this should be done nobody could say this is wrong... I cannot remember the year in which the park was created, but I understand that by the early 40´s it was already there but it was not here in this place, it was far away. When they started to install the fence that is when they moved the position where the park was, and they came to where the people are. If you go straight to*

Nganyana, you can see that the fence is about 500m away from the villages."

(Interview with 69-year-old man on 24 February 2022).

When the game reserve was created in the 1920´s, people could no longer go inside that area to hunt or gather resources. The fence was later installed in the 1960´s and its installation made it more difficult for people to enter inside the park area. As a consequence, apart from separating wildlife from livestock, the introduction of the fence made it more difficult for people to hunt and the villager's access to space that they had at the beginning was reduced.

The value and significance of the fence to villagers

Table 8 Examples of how villagers describe the national park fence.

Examples of how villagers describe the value and significance of the fence[59]	
Not secure and neglected. (8/17 responses)	Separates from wildlife. (9/17 responses)
• It keeps away some of the animals although elephants easily go through. • Not really helpful as it is always poached by other people. • it's a constant reminder that we are not safe. • very significant but not being serviced. • least significant as the fence is not serviced. • it does not add any value since animals easily go in and out of it • the fence is too close to where people reside. • too close to the community	• it helps to separate residents from predators. • it is of great value because it protects us from wild animals. • it helps to keep away wild animals. • to some extent it prevents wild animals from coming to our homes • the fence is very important as it protects us and our animals. • very important as it divides the animals that are dangerous to people's livestock • it is the boundary and keeps us safe.

[59]Seventeen respondents were asked during a structured interview; *In your opinion, what is the value and significance of the National Park fence?*

During individual structured interviews, seventeen of the villagers were asked their opinions about the value they place upon the National Park fence. I analysed the responses and determined that two categories about the perceptions of the villagers on the importance of the fence came out of these interviews. As shown in the table above, the categories are (1) the "fence is neglected and unsecure," and (2) the "fence separates from wildlife." The category "fence separates from wildlife" is based on responses from villagers who view the fence as something that provides a form of boundary to keep wild animals away from humans and livestock. Although there are concerns that parts of the fence are damaged, nine out of the seventeen villagers interviewed still view it as an important boundary marker that separates. These responses, however, are more about what the villagers expect the fence to do rather than what it does, because amongst the respondents' there are others who clearly stress concerns that the fence is unsecure and neglected. Their responses also referred to the fence's proximity to the village and how wildlife can cross it. One of the villagers exclaimed that the fence 'is a constant reminder that we are not safe' and another revealed that people steal (poach) the material used for the fence, leaving parts of the fence open. In addition, the fence is unsecure because of neglect in maintenance and servicing. The elder villagers that I spoke to believe that the government is at fault because they compare the present state of the fence with what it was like during the colonial period, when they had a fence that was very secure and maintained. *"This started just before independence, but there was the liberation war and then after independence the government took care of the fences, there were veterinary fence guards, these people were specifically tasked with servicing the fence and making sure that it was always intact. These days nobody is servicing the fence."* (Interview with 69-year-old man on 22 February 2022).

Another villager questions the existence of the fence and its ability to keep away wildlife. He revealed that he does not think that the fence is important at all and to him it is as good as if it does not exist.

> *"The fence is there, the boundary is there but it is not secure enough because there are spaces in between the fence where animals like lions and hyenas can just go through the fence and come and prey upon the livestock, even big elephants' trespass into the village, so it is as good as if the fence does not exist."* (Interview with 71-year-old man on 24 February 2022).

Thus, the damaged state of the fence means it is unable to completely keep away wildlife. This makes one young man believe that the villagers are as good as living inside the National Park because he thinks there is no separation between the two places. He said that.

> "*The fence is just there for decoration, it does not serve any purpose because the fence is now gone; before it was electric, now it is no longer working so there is no more boundaries; it is just the same. Animals are getting in and out. Recently, one week ago, there was a wildebeest standing behind our hut, right next to the window, it was inside our homestead. So, with that you can see that there is no difference, there is no boundary, there is nothing. It is just one and the same thing; we are just living with the animals that live in the park. The dogs were attacking the wildebeest while it was looking for water, so it came here to the homestead to take refuge. To have a wild animal hiding in your homestead shows that it is just the same as living in the park, there is no boundary, there is nothing."* (Male Group discussion on 23 February 2022).

The fence is also not good enough to keep livestock from crossing into the park. One 39-year-old female villager believes the fence is not important at all because it does not stop the

animals from coming in or out of the village. To her it is just a marking that shows this is the park and this is the village, but it has no significance to her because her goats sometimes go through the fence. She notes that it is much easier for goats to go through the fence, unlike larger livestock, however she says that even cattle can go through in places where the fence is damaged. When the goats cross through the fence, the chances of predators attacking them is high. *"Even if you say I have ten goats, when they cross that side only two may return"* (Interview with 39-year-old female on 25 February 2022). She claimed that this is a common occurrence and, at the time of the interview, she had nine goats left. She also claimed that at one point she lost eight goats when they were all eaten by a leopard.

Picture 18 During the rainy season the vegetation is dense and thicker than during the dry season. The grass can be tempting for livestock to graze. There are large gaps in the fence that livestock, such as goats, can pass through. The fences are less than two meters high and consist of poles with three wires that run along the perimeter.

One of the villagers also expressed that the boundary is meant for protecting both humans and wildlife. He however, also expressed concerns that wildlife crossing into the village was deliberately being left unchecked by authorities in a conspiracy to push them out and relocate away from the village. He said *"there needs to be a clear understanding that the boundary is to protect not only the wild animals but also us the inhabitants of the village. It now feels like this is done deliberately for us to voluntarily be displaced"* (Interview with 65-year-old male on 24 February 2022). I also heard a few other villagers make similar comments during informal talks, expressing their concern that this lack of action is a passive aggressive attempt to displace them from the area so that wildlife can use it and thus increase tourism ventures in the area. Their concerns about being displaced and relocation are not surprising given the history of how some of their forefathers came to live in this area during the colonial period. These concerns about being involuntarily pushed out of the area due to unchecked wildlife management, are a small indication of the uncertainties people may feel about living near wildlife, and that can become a problem in the future if not clarified.

Therefore, the study has shown that the villagers have different opinions about the significance of the fence. They are divided, with one group thinking that the fence helps keep away wildlife and another strongly thinking that the fence does not serve any purpose. The positive views about the fence refer to its purpose to separate wildlife from people or to keep away wildlife from entering. This is a positive perspective that some people have because not all wildlife crosses through the fence. However, the negative views about the fence reveal a deeper context where most members of the community know that the fence is supposed to serve a specific purpose, but they are not experiencing its full benefits due to shortcomings in its design and maintenance. This makes a number of villagers feel as though the fence does not serve its purpose, and that wildlife can easily encroach into their community.

Perspectives about wildlife and conservation

Whether perceived positively or negatively, the National Park fence represents the boundary of Hwange National Park, a wildlife enclosure. The proximity of the village to the park and the effectiveness of the fence has an influence on how people living there may view wildlife and conservation.

Wildlife/ Inyamazana zeganga

The word *inyamazana* is the Ndebele word that refers to animals. In Shona the word *mhuka* refers to animals. Both languages then define wildlife based on whether the animal lives in the wild or lives with people. In Ndebele, wildlife is referred to as *inyamazana (*animals) *zeganga* (of the wild). In the Shona language, wildlife is referred to as *mhuka* (animals) *dzesango* (of the wild). The phrases *zeganga* and *dzesango* refer to the wild, the place where the animal lives. These animals are unlike livestock that people own and look after at home. Livestock are referred to as i*zifuyo* in Ndebele and *zvipfuyo* in Shona. During in-depth interviews I asked respondents about how they define wildlife. In response the villagers gave different and broader explanations of how they define wildlife, apart from it being an animal that lives in the wild. The different responses included views that wildlife are animals that other people are tasked to care for and do not belong to them, a source of income, and a destructive animal. The responses also show that there are villagers that do not view all wild animals in the same way but assess them differently according to their size, economic value, and the destruction they cause.

One man views wildlife as any animal that lives in the wild without an owner to take care of it. *"It is those animals that are found in the wild which no one takes care of, they live alone. There are people tasked with taking care of the wildlife"* (Interview with 19-year-old male on 23 February 2022). These animals that are found in the wild are the responsibility of specific people who have been tasked to take care of them because that is their job. His view reflects

how the care for wildlife differs from that of domestic livestock. To him, wild animals live alone without personal care takers, in comparison to domestically owned livestock that villagers care for.

Wildlife is also viewed as animals that bring an income and tourists. One of the young men said that, to him, *"wildlife is the Big Five,"* the animals that attract attention and money. His opinion suggest that certain kind of animals are wildlife because they attract outsiders, like tourists, and bring in some income. Another villager has similar thoughts about wildlife being a source of money, especially for the country, and says that:

> *"To me wildlife is money because I have seen a lot of Safari operators have grown, they are now rich because of the animals. It is very important for us to keep the animals to protect them so that visitors from overseas can travel here and see the animals. Keeping them is better than killing the animal and selling the ivory, for example. If a lion is alive, it can generate millions of dollars while it is alive, but once you sell it, it can go for 50 000 dollars and that 50 000 cannot cover the whole of Zimbabwe. When it is alive it gives more money, so I think to me wildlife is money."* (Interview with 50-year-old male on 24 February 2022).

Wildlife is also viewed as dangerous and destructive animals. According to a 37-year-old man (interviewed on 24 February 2022), wildlife is something dangerous that must stay in the wild. He believes that wildlife "is *not supposed to be around people"* or livestock because is not treated/ vaccinated and it brings many challenges, such as diseases and damage crops. *"They bring those diseases over here and the challenge that we face is that when they come this side, bringing diseases, we cannot control them. Our livestock are just dying…"* He does not want wildlife to mix with people and livestock because he is afraid that wildlife will spread diseases to their livestock.

The villagers also have different views about smaller animals, such as monkeys and baboons. In the survey questionnaire, I asked them if they have problems with baboons or monkeys, but most of their responses did not include baboons or monkeys. During my time at the village, I never came across any baboons or monkeys. Some respondents mentioned that animals such as Bucks, Kudu, Hares, and Guinea Fowl occasionally give them problems, but in a follow up question one respondent explained that these animals are better than animals such as elephants and lions, because they do not eat their crops or kill their livestock. They mentioned that even if baboons or monkeys do eat their crops, they can be easily chased away, and they do not have an enormous impact upon the crops, as compared to elephants (Interview with 80-year-old female on 23 February 2022). Another mentioned that, although birds disturb their crops when they are about to harvest, this is not a frequent occurrence and during some seasons the birds do not even disturb their crops. One respondent had a slightly positive view of small animals like baboons. He believes that *"animals such as baboons, monkeys, and bush pigs are part of wildlife. If someone comes from overseas, he is here to see all the animals that are in the Hwange National Park, including the smallest animal, the tortoise."* (Interview with 50-year-old male on 24 February 2022).

Not all wildlife is perceived the same. One female villager explained that there are two kinds of wild animals. She believes that there are wild animals that are friendly to humans, such as rabbits and kudus, and then there are others that she doesn't like, which are lions, buffaloes, and rhinos. Both categories are wildlife to her, but she categorises them according to the ones that she likes and the ones that she dislikes based on the ones that cause destruction and the ones that do not cause destruction (Interview with 80-year-old female on 23 February 2022). In this case she does not see wildlife as a homogeneous group of animals, but rather evaluates them according to whether they cause her harm or not. In addition, she was the only respondent who mentioned that not all wildlife is destructive. Her response highlights that

there are some wild animals that villagers may overlook because their presence or impact upon their livelihoods is minimally experienced.

Conservation

When I spoke to the villagers during interviews, there were different perspectives that came up about the meaning of conservation. Firstly, to one villager conservation means the separation of wildlife from humans. Conservation is *"to make sure that the animals stay where they belong, they must make sure that the fence is able to keep the animals in the park."* (Interview 39-year-old female on 25 February 2022). Separating wildlife from the village is also a way of protecting the villagers from wildlife attacks. One villager noted that in the past they had the possibility to protect themselves from wildlife, however, they can no longer do this because of the current regulations. *"Before (conservation) it was ok but now we have been restricted from culling the elephants; before we were given permission to control them but now, we are not"* (Interview with 37-year-old Male on 24 February 2022). To this respondent conservation also means having the ability to control wildlife when it comes into their village, to be able to protect themselves and their livestock from wildlife attacks. Having guidelines about how to protect themselves from attacks when a wild animal comes to their village is important.

Secondly, conservation involves wildlife´s ability to earn money for the country and not for individuals from the village. One man explained that:

> *"Conservation is the keeping of animals by the state because the animals belong to the government and not to us. The government is the one that benefits from the animals, but we do not benefit. There is no compensation even if wildlife attacked your cow. It is important to the government because it raises the standards of the*

country. It gives the country a source of income because it is important to conserve wildlife" (Interview with 90-year-old male on 23 February 2022).

In his opinion wildlife belongs to the government and its conservation earns the government money for the country. His opinion detaches conservation from the ideal that it is something that benefits the local community, but rather views it as something that benefits at that national level.

On the other hand, one villager who has worked in the city believes that conservation is something that can benefit the villagers. He gave an example of other places he knew that were conserving wildlife in a way that benefited surrounding villages.

> *"It is very important to conserve wildlife as long as people are benefiting; I have seen areas where people are doing this conservation and they are benefiting a lot. For example, there is a man in Bulawayo who is running a lodge; there are animals inside there that he is looking after, and people from Bulawayo and overseas come and watch the animals. There are people from nearby villages who are employed there, so it is benefiting the villagers, it is benefiting him, and the animals are well looked after… It is a bit different from this side. Yes, the animals are being looked after, but the villagers are not benefiting anything in terms of employment. I would say that since we have CAMPFIRE yes, we are benefiting here and there, it is only CAMPFIRE, but the Parks itself we are not benefiting."* (Interview with 50-year-old male on 24 February 2022).

The villagers living near the edge of the park thus have different views about wildlife and its conservation. Their views show that they do not perceive wildlife equally. Some animals are seen as destructive and carry diseases that can transmit to livestock. Other wild animals are viewed as income earners and are prestigious, like the big five. While animals such as

baboons and monkeys are sometimes overlooked when compared to larger and more destructive animals, such as elephants and lions. The conservation of wildlife is also something that most villagers associate with the separation of wildlife from people and livestock. Conservation is also viewed as the keeping of wild animals to earn money for the country or a community. Lastly, some villagers mentioned that the ownership and care of wildlife is in the hands of the state or people who have been tasked with the job.

Table 9 Examples of how villagers describe living near the park

Examples of how villagers describe the significance of living near the park[60]	
Not significant 11/17 respondents	Significance 6/17 respondents
1. "it's not important although sometimes we sell some of our things in foreign currency". 2. "It is not important because we lose crops and livestock most of the time". 3. "No importance just plenty of land" 4. "Resettlement was forced so there is no significance to be near the park". 5. "Not important as we were resettled"	6. "The lands are fertile". 7. "The soils are fertile, and we sell our product to the tourist." 8. "The soils are fertile and there is enough grazing land for domestic animals". 9. "It is important because there are wild animals that attract tourists". 10. "it's of great importance because we get jobs"

When I asked the villagers about the importance that they place upon living near the National Park, three of the respondents mentioned that the land is fertile, a point that was discussed in chapter four about the value of land. However, eleven out of seventeen people said that there is no importance associated with living near the park because the losses are high. One

[60] Seventeen respondents were asked during a structured interview; What significance or importance do you place on living near the National Park?

respondent indicated that *'it is not important because we lose most of the time, especially our crops and livestock.'* Three of them do not see the importance of living near the park because they are living here due to resettlement. The impact of the history of resettlement was brought up when some of the respondents alluded to the fact that there is no importance attached to living near the park and they are only living here because of the forced resettlement process that occurred during the colonial period. The history of land resettlement, especially during the colonial period, is an issue that I discussed in an earlier chapter of this thesis. Although most of the villagers recall that their forebears started living here in the 1940's, forced relocation into other parts of what is today known as Tsholotsho Rural District, had already occurred with the establishment of the first Native Reserves in the early 1900´s. This is an important part of the history of this area and its people because it explains that for some, the choice of residence was involuntary. In the section about future aspirations, I also discuss how other villagers continue to live in this area because they believe this is the place where they feel they belong and have made a home.

The reoccurring complaint about the destruction of crops by wildlife and attack of livestock by wildlife was also one of the frequently stated reasons why some villagers do not attach any importance to living near the edge of the national park. This is because their crops and livestock have become food supply for wildlife. This view expresses how they feel they have become part of the park, and are living with the wild animals. In the opinion of one of the men, he explained that the park benefits from them as wildlife eats livestock or eats crops, but the village does not benefit from the park.

> *"As we are along the buffer zone, we are facing a lot of problems especially from wildlife, but we are not benefiting from the parks. We have children here who completed their O-levels, A-Levels, but they are not even employed by the park yet the*

> *animals from the park are coming this side. In other words, I should say we should benefit from the park as the park is also benefiting from us. Because if you imagine that in a year we lose over 100 cattle from lions, yet we are not benefiting anything from the park, not even one of our children is working there while we are losing tonnes and tonnes of maize every season from animals like elephants, kudu, and waterbuck. This is the first thing that I would say, the park is near us, but we are not benefiting anything from the parks except from the safari operators that are surrounding the Hwange National Park, they are the ones helping the villagers - like sending children to school, paying school fees, looking after the old aged, and feeding the children at school. But from Hwange National Parks itself we are not benefiting…I will also say that we do not mind the animals coming this side as long as we are benefiting from the animals, as long as we have children working in the parks. But as it is like we do not see the use of the park being near us…."* (Interview with 50-year-old male on 24 February 2022).

Although the figures he gives about the number of cattle lost to lions, and the amount of maize lost to elephant are not verified, his perspective about the number of livestock and crops that they lose per year to wildlife helped me to understand their situation in a different light. Simply saying that wildlife is attacking livestock and destroying crops, is a watered-down expression of a situation where wildlife is feeding on their livestock and crops and they lack the adequate power to stop it. The villager also specifically mentions the lack of jobs available to them through the National Park, and thus reveals the expectation that he has that villagers should receive jobs that come specifically from the national park; to help quell the unemployment situation in the village.

The man also expressed some positive opinions about living near the edge of the park as a source of income through access to tourists who come to see the wild animals, and the possibilities of jobs from safari operators/ lodges.

> *"Living near wildlife as a source of income or livelihood is important because to me, I would say that tourism is the second largest industry in the world, and everyone comes here as a tourist to see the animals, so to me it is very important. In my village and other villages, most of the children are employed by the safari operators, so we are benefiting much from the jobs that people get from the safari operators. And the schools that we have here are because of the safari operators that are building classrooms, that are building clinics and sponsoring other things."* (Interview Male 50 years on 24 February2022).

In his opinion, having access to employment can be a positive factor for living near wildlife. However, as highlighted in a previous chapter, his positive opinions do not really match with the complaints that other villagers often had about the lack of sufficient jobs and how the sale of arts and crafts to tourists does not help them earn a lot of money. In addition, the man notes that employment opportunities often come from the neighbouring safari operators and not from the national park itself. His opinions show he sees the opportunities and benefits that come from the safari operators, but he does not see any job opportunities coming from the national park.

Female perspectives and experiences

During the group discussion, I asked the group of women about what, as women, they considered to be the advantages of living near wildlife. They unanimously said that there is nothing good or advantageous for them; the only thing that they experience is wild animals' preying on livestock and other problems that come with the wild animals. When I probed

further and asked about the sewing and weaving activities that they do and the products they later sell to tourists, they said that even if they were not living near wildlife, they would still have clubs for sewing and weaving, so for them whether they live near to wildlife or not, it is just the same. Their attitude about the sewing and weaving activities was a revelation to me because I thought that they performed the activities solely because of their proximity to a tourist area and wanted to earn money.

They spoke about how women have domestic chores that also require them to enter the bush, for example to fetch firewood, and that is where they meet wild animals. The night before I conducted the group discussion with the ladies, there was an elephant that came and destroyed one of the villager's crops. Authorities from CAMPFIRE came and shot the elephant, however, the animal did not die but was only wounded from the shot. During the group discussion the women mentioned that since there is a wounded elephant roaming around, they are now frightened to go and search for firewood because they never know if they may come across that elephant.

The women also expressed that their experiences with wildlife are not so different from that of men because they too are also responsible for livestock, such as goats and donkeys. When these livestock go missing, the women, are just as likely to search for them in the bush as the young boys. The challenge they face when they go looking for their livestock is the same. The women revealed that, just like the boys, they go into the bush, and come back between 10pm and midnight with scratches all over their bodies from the trees and shrubs. They stay out so late looking for their livestock because of the fear that if they leave their livestock in the bush, the wild animals will eat them. The experience of the women and their roles as caretakers of other livestock, such as goats and donkeys, challenged my assumption that it is only men that go looking for livestock in the bush.

Lastly, the women spoke about how they think the problem of wild animals attacking their livestock has caused them to be poor and they want change because this will be a challenge for their children in the future. They negatively foresee that if there are no changes in the rate of wildlife attacks, when they die their children will be left poorer than them.

> *"We are wondering if our children will stay here and be poor or whether they are going to run away, because this is just the beginning... Our fear is that our great grandchildren will end up going to other places just to see what a goat is, what is a cow, because at the end of the day we will not have any of these animals. The wild animals will eat everything"*. (Female Group Discussion on 25 February 2022).

Their concerns for their children and grandchildren reflect upon their concerns about the future. If things do not change, they foresee diminished numbers or the complete loss of their livestock and this is likely to increase the poverty levels as well as affect the relationships they have with livestock.

Male perspectives and experiences

During the group discussion with the young men, I also asked them to talk about what they think are some of the challenges that they face as young men due to living near wildlife. One young man, who is 18 years old, answered that his biggest challenge is fear, because *"when the cattle go missing the elders will want their cattle by the end of the day. So, when you go out into the bush to look for the cattle you do not know what you will find, you do not know what you will come across."* (Male Group discussion on 23 February 2022). This uncertainty about what wildlife you might come across while looking for lost cattle evokes fear. The others confirmed his opinion and further explained that this happens frequently. Based on their experience of searching for missing cattle, most of the time they know where to start searching for the cattle, but there are certain occasions when they do not find it where they

were suspecting to find it and that is when the challenges come. *"Now you would have to go directly into the bush, anywhere, that's when you start to have those kinds of fears that you do not know what you will come across, that you do not know where you are going and what you will meet because it is no longer a familiar place to you."* (Male Group discussion on 23 February 2022). When I asked them if they had ever crossed into the direction of the park while searching for the lost cattle, they responded that they have not because they are not allowed to go into the park.

One of the men, who was 32 years old, described the pressure of responsibility that he sometimes feels in situations when cattle get lost. As the oldest son in the family, when there is a missing cow or any problem, his parents come to him for solutions. According to the man, if cattle are missing, he gets torches and their dogs, and heads into the bush in the direction where he thinks the cows will be. However, he believes that he is supposed to be safe at home relaxing instead of searching for lost cattle at night. This is because the wild animals start coming out at night and yet, he is *"out there going into the same direction where the animals will be moving around."* Ever since he was 12 years old, he has been going to search for lost cattle, but he never knows what will happen to him; one day he could go out searching and never come back again. Although none of the men I spoke to during the group discussion have ever been attacked by wildlife while searching for their livestock in the bush, they know of people from other villages who have been attacked by buffalo, lions, and a leopard. According to the young man, this is not a good place for him and his brothers, but there is nothing that he can do because he was born here, this is where he comes from. His expectation is that since they are living on the edge of a national park, the game authorities must come and offer all his young brother's jobs. He believes that they should be working for the national parks, but there are no jobs, so to him the game animals do not bring any value to the village. (Male Group discussion on 23 February 2022).

Aspirations and visions of the future

In this section I discuss the aspirations and visions that some of the villagers expressed when asked about what they desire or envision for their life, their family, and their livestock. I also discuss some of the observations that I made that demonstrate some people´s aspirations. When I interviewed the villagers about their outlook for the future, they gave different responses. I observed how some villagers are planning for their future in the village in terms of staying and belonging in the village.

Staying and belonging

As I conducted my research and relayed my experiences and observations to friends and family, I received questions about why they choose to stay in that area. For example, questions such as 'if they are having trouble with wildlife why don't they just move away?' Or 'why would you follow your cattle into the bush to retrieve it from a lion or hyena attack?' I also had similar questions in mind, especially at the beginning of my fieldwork.

One of the reasons why some of them do not relocate from this place is because of the sense of belonging they attach to the area. When I asked one lady about what attachment she had to the area, she responded by saying that they stay because they found their elders here, so it is now normal that they stay here. She believes that they cannot change the place and move somewhere else. Therefore, the prospect of moving away from this place does not seem like an option for her because of the view of the past attachment to the history and their forebears. One older villager who spoke to me about his migration history expressed that, after being relocated and moved so many times by the colonial government, this is the place that they have managed to settle and make their homes without being forced to leave again.

> *"From the time that my grandfather was forced to move around and came to settle here, this was their final home. Therefore, I would like to keep on staying here and to*

have future generations stay here. This is where our history is because due to the forced removals in the past, we feel like a people that do not have a proper history but here we have established some history" (Interview with 69-year-old male on 22 February 2022).

However, when I asked the first of these two respondents what she desires for her future and the future of her livestock and family, she responded by saying that she does not expect anything good to happen in the future. She says that,

> *"There is nothing that you can do, even if you wish for something you always know what will happen because we are always at a loss; even if you plough something you know that the elephants will come and eat your crops, the only thing that you are left with is something just to pass the winter. Even if you keep the livestock, even if you have ten, you never know that the next day you could have five."* (Interview with 39-year-old Female on 25 February 2022).

Despite her attachment to the area, she has a negative vision of the future or has no expectation of positive change because of the reoccurring problems with wildlife. Her opinion shows that she believes their misfortune with wildlife is less likely to change in the future. She knows that there is a chance that wildlife can attack her crops or livestock, and this has resulted in feelings of disillusionment because she cannot imagine a positive change although she continues to plant crops and look after their livestock. Her response shows that her attachment to the area motivates her to stay and to farm even when she knows that elephants will destroy her crops, and predators will attack her livestock. She stays even though she is uncertain about the near future.

Their sentiments suggest that despite the challenges that they are having with wildlife, their place of residence is very important to them and their family history. These sentiments about the past demonstrate a sense of belonging that influences how they plan for their future in the

village, regardless of the challenges they face. At my host family, three generations of family live there. My host father lives in the same village that he grew up in. He lives with his wife and his mother and, although his daughter is married and lives in Bulawayo, his youngest son and daughter in law, and their infant boy, live at the homestead. This example shows the nature of family ties in the village. Although some people may choose to move away, many families live together or in nearby homesteads sharing everyday life and raising their families together. I point out my host father and his son and his grandson to reflect on the fact that there are villagers who stay in the village even though others leave to seek employment in other parts of the country, or in neighbouring countries. My host father used to work in a neighbouring town and, when he retired, he came back to live in his rural home.

I noticed, too, that there are other signs around the village that show how villagers are making plans for their future in the village. I came upon one homestead where the owner is building a modern house. The building material used on this house was different from the building material of plastered mud and wooden poles that you find on most of the huts around the village. The materials used to build the house included cement bricks, an aluminium roof, and a mesh wire fence going around the homestead. The owner was a young man who was working in South Africa, and who was sending money and building materials for the construction of this house. The fact that he is building a house, back home, is an indication of how he is planning for himself and his family. Even though he is working in South Africa, his actions demonstrate how he is trying to secure a place for himself and his family to live in his home country. The situation of absent homeowners, as mentioned in the methodology chapter and the data about migration discussed in chapter four, shows that a number of people choose to migrate out of the village to either neighbouring South Africa or to nearby towns and cities. This indicates that a significant number of people may not dwell in the village for longer periods of time. However, migration out of the village does not necessarily mean that

they will not return in the future at retirement, or if they fail to find work. For example, I met a number of older, retired villagers who used to work in the neighbouring towns/city, as well as younger people who had returned back home from South Africa because they were unable to find employment. Having a sense of belonging to a place plays a significant role in a person's expectations of the future, especially when planning to move away or return.

The future of livestock management and security

The residents would like the physical space of the village to change. A few villagers openly mentioned that due to living near the edge, and the location of the fence, their livestock sometimes goes inside the park to graze, but they often do not pursue the livestock because they know that they are not allowed to do so by the authorities. When livestock crosses into the game park, they are at risk of being shot by the authorities who believe that the livestock will contract diseases and they must not be brought back to mix with the rest of the livestock on this side of the village. According to one villager, the possibility that wildlife can cross into the village and livestock can cross into the park shows that there is no distinct separation of the village from the national park. This issue about livestock crossing into the park, seeking pasture, links to the problem about the lack of grazing land. The villager's desire is that the National Park fence is pushed back so that they can have more and better grazing land for their livestock. If the government could push back the fence another 5 km, as suggested by one man, it will give their cattle more grazing land. That is his biggest wish for the future of the village. According to him, this would be a substantial change for them because, as the population grows, there will be many people who will need land for their livestock. He said that having less grazing land for is not good because,

> "*Livestock is good as an asset, but if your asset is not of good quality because of scarce grazing land, it affects the price of that asset when it is being sold because*

> *people want quality. You cannot charge much money for a cow that is sickly looking because of the lack of grazing land. We have long said that the number of our livestock has been increasing, and the grazing land is not sufficient for a herd of 300 to 350 cattle that are in this village, the space is very small. So, if the amount of grazing land could be expanded, or shifting the park fence inwards of the park, maybe our livestock could have enough grazing land and change lives."* (Interview with 69-year-old male on 22 February 2022)

The availability of sufficient grazing lands would mean healthy livestock for the village. This is essential because villagers need strong and healthy livestock to pull the plough and, if they decide to sell their livestock, healthier livestock will be worth more money. Whether this would reduce the amount of wildlife crossing into the village is unlikely, but it would increase the distance between the location of the park fence and some of the households.

The villagers also spoke about how they want the fence to have mesh wire because the wire that is currently there, with the horizontal wires and vertical poles, does not help keep out wild animals and stop livestock from crossing into the park. In some areas around the village where the fence is damaged, villagers stated that they use tree branches just to repair the fence. This does not usually help because wildlife and livestock can still cross into the game park.

One of the villagers recommended setting aside a specific secure space with a fence for the purpose of livestock to graze, instead of it grazing in an open, unsecured area.

> *"… for our livestock, maybe if we can have a protected place to keep our animals so that lions and hyenas do not constantly attack them. For example, to have a protected place where our livestock can graze so that we can send them there and know that they are safe."* (Interview Male 50 years on 24 February 2022)

Opportunities to further education

Some of the villagers also foresee a situation where wildlife attacks will affect the education of their children. One older lady emphasized that their children *"will end up like people from long ago, from the time of Lobengula who did not go to school"* (Female Group Discussion on 25 February 2022). This is because wild animals kill their livestock, which is the source of income used to send their children to school. Protecting their livestock from wild animals is important therefore because it protects the future education prospects of their offspring. One older man further stated that *"education is key. It is the one thing that can really change the lives of the future generations. If resources can be invested in education, then everything can come out of that.*" (Interview with 71-year-old Male on 24 February 2022).

The young men also echoed the importance of education and training, during the group discussion. They revealed that they would like to have a vocational training centre in the village that will equip the youths with skills, such as carpentry and building, because they live in a poor area. *"People go to school from ECD (Early Childhood Development) up to form four (secondary school) and when they are done, they come home and sit. This increases the crime rate in the area. If you check, most of the court cases are from this side, where people are poor."* (Male Group discussion on 23 February 2022). The young men continued by saying that the wild animals affect them because the animals are violent, and they are concerned that this may influence them to become violent. They therefore want vocational training centres to help them to gain better skills instead of just spending time at home; they can have a better income and less chances of committing crimes. Some of them also believed that having a vocational training centre may reduce the number of people leaving their homes in search of work in neighbouring towns, and they can even develop their own village instead.

The issue about the value of education also arose at the end of the female group discussion. During an informal conversation, one of the older women commented about how she appreciates that young, educated women are interested in their life near wildlife. She believed that having more educated women in their village would help them get their grievances and opinions to reach people who work in the offices of Tsholotsho Centre, because they are unable to speak English well and articulate their concerns. Furthermore, they also mentioned that it is sometimes difficult for them as women in the village to make their concerns heard because, as women, they are not always able to openly speak up about their concerns.

Income generating opportunities.

Having the ability to pursue business ideas and opportunities is an aspiration that the group of young men mentioned. This includes support in promoting and expanding the economic activities that already exist. The young men explained that they have tried different business ideas in the past, which include wooden carvings that they sell to the tourists that come to stay at the nearby lodges.

Another example of a business is that of a cultural centre near Nganyana village. The owner of the centre is a young man, whose vision is to have a one-stop cultural centre, offering different services, such as music, dance, food, and folklore to visitors. At the time of my visit, he already had about three chalets, a bird bath, and an entertainment stage area. He plans to extend the centre by adding more chalets where people can sleep over, increase the number of visits, and build a fishpond. The setup and plan of the cultural centre showed how much thought and planning has gone into its creation. The owner mentioned that he offers different services that can appeal not only to tourists, but local members of the community, too. He wants the cultural centre to be a place where people can learn and experience the Ndebele culture, this includes traditional meals, entertainment, and information about the language. He expressed that his main clients are usually tourists from the nearby lodges, although

occasionally people from the neighbouring villages and towns come to this centre to attend a yearly cultural festival, for example.

The cultural centre is an example of some of the aspirations and ideas that people may have in the village. Furthermore, the desire to create a cultural centre shows how he takes pride in his language, cultural practices, and food. Unfortunately, the owner sadly expressed that they have few visitors coming to the centre and that he has challenges marketing his business. Although he once appeared on national television and has already registered the cultural centre with the relevant authorities, the number of people that visited the cultural centre is still low. When I visited the cultural centre during the corona pandemic, there was no activity that was happening there because of the lack of tourists visiting the area. The sudden global changes to travel and stay due to the Covid 19 pandemic affected his business and it is an important indication of the vulnerability of small local businesses or start-ups that rely on external visitors.

Picture 19 The sign showing directions to the cultural centre.

Increase in access to energy and water.

The villagers have low access to energy for several reasons, including the challenges that are associated with rural electrification programs. In this section I also present villagers' aspirations for improved energy access to help access water and increase security against wildlife attacks. During individual interviews, seventeen respondents were asked about how electricity access can be improved in their village. Four out of seventeen respondents recommended that the government should connect electricity to their village. Twelve of the seventeen respondents only mentioned the need for solar powered electricity either as solar tower lights or the distribution of solar panels among the households. These responses show that solar powered energy is desirable for many villagers. The villagers believe that many possibilities can come from solar powered infrastructure. This includes an increase in the amount of solar powered boreholes and the installation of solar powered tower lights to deter wild animals from crossing to the village at night.

According to one respondent, the lack of electricity *'affects us when it is pitch-black outside and predators can prey on livestock'*. At my host family's homestead, the only form of light you will see is the one emanating from the hearth outside the kitchen hut or the light from their daughter in law´s hut. A considerable number of the respondents believe that if they had more access to electricity and infrastructure, such as tower lights around the village, this could deter wildlife *'because wild animals are scared of light, and they would not attack people and livestock.*' The installation of tower lights around the village could also help to improve the quality of light when the villagers are guarding their farm fields from elephants, during farming season.

Some villagers also proposed the installation of an electric fence to keep wildlife from crossing into the village, and thus improve the security. They would also like an electric

fence to be put up because it would deter their livestock from entering the park. During the group discussion, I asked the young men whether they thought an electric fence would be dangerous and harm the animals. They said that the electric fence is not meant to kill the animals but just shock them so that the animals can run away from the boundary, like they did in the past when the fence was electric. *"If electricity shocked an elephant, it could run away from here to a distance such as Tsholotsho Centre – (it would be) running away from the shock. It (the electric fence) was helpful because it was keeping the (wild) animals from coming to the village and even (our own) cattle would be shocked, and they would come back to the village."* (Group discussion Male on 23 February 2022).

Many villagers also spoke about the need to increase access to water by the drilling of more boreholes, especially the solar powered ones. A man in Nganyana said that his only wish is to have more boreholes because in Nganyana there are more than 90 homesteads, and but they are all sharing one borehole. If this borehole breaks down, they will have problems and they will need to go to other villages, like Ngamo, which is far away, to fetch water. He does not think that the solar powered borehole that is near the dip tank is for their village because other villages come and use it to dip their cows in the dip tank there. (Interview Male 37 years on 24 February 2022).

Conclusion

In this chapter I highlighted villager perceptions about living on the edge of the National Park, and the significance of the fence. This included their views about the position of the fence and its purpose. It is clear from the above descriptions that villagers hold diverse opinions about the value and significance of the fence. The chapter also describes the aspirations and visions about the future that villagers have about their life in the village.

There are some villagers who have positive views about the fence. The fence is important to them because it demarcates the location of the two areas. The fence is seen as a marker of the boundary that separates the side of the park and the side of the community. According to Dallimer and Strange (2015), boundaries are "socially constructed and intended to reduce ambiguity regarding ownership of space and how order is maintained. Boundaries are, therefore, part of the practices and processes by which societies determine their territorial limits" (Dallimer and Strange, 2015:132). In social relationships boundaries show how far one can go or how much access one can have to someone. However, the opinions from other villagers indicate that there is little respect for boundaries in this relationship between wildlife, the villagers, and their livestock. The current position and design of the fence makes it possible for wildlife as well as livestock to cross to either side of the fence. This makes a large number of villagers feel as if they are living in the park and that there is no separation between the two locations. Hence there is a lack of clear boundaries in this human-animal relationship. Because of the damage that wild animals inflict on their crops and livestock, the distance between the national park fence and the village is seen as too close. This situation confirms the view that "human-animal encounters are about the breach of spatial and regulatory boundaries," as underscored by Wilson (2019: 717). In describing the significance of the fence as something to separate or keep away wildlife from people, these members of the community recognize the role of the fence in effecting boundaries in their relationship with wildlife.

Many of the villagers agree that the fence is too close to the village and that it should be pushed back into the direction of the park to make more space. The fence is also seen to be too close because it restricts adequate access of grazing area for their livestock. The problem about the location of the fence and the space between the village and the park invokes questions about the process of physical boundary formations and the state of current and

future livelihoods of the villagers. As shown in chapter five, the villagers, and their livestock encounter wildlife at different places and at different times. Encounters are central to the making and unmaking of borders, as discussed by Wilson (2019). This is because encounters among humans and animals have the capacity to both destroy physical borders and challenge conceptual or symbolic borders (ibid). The desire to reposition the fence for more grazing land and make it less permeable in the future is an example of unmaking and making a border because villagers are challenging the current position of the fence. However, whether it is possible to fulfil their aspirations is questionable given that the concept of the creation of transfrontier conservation areas is based on the removal of fences between the countries (Spierenburg and Wels, 2006). When one asks questions about the future of the fences that divide communal areas and conservation areas, it is thus important to consider that people living in communal areas found in TFCAs may value fences for the purpose of keeping away the unwanted intrusion of wildlife.

The villagers have different views about what they consider as wildlife. Although some may recognize wildlife as animals that cause destruction to their livestock and crops, other villagers recognize wildlife as the big five or famous animals that attract tourist attention and money. Either way, the definition of what is wildlife often relates to how the animal contributes to or destroys income and livelihoods. The idea of conservation of wildlife is viewed as more than just the caring for or keeping of the wild animals, it is also the obtaining of financial gain from wildlife. This is even though many villagers complained that they do not financially benefit from living near wildlife. Their perspectives about wildlife and conservation indicates that although they argue that they do not benefit directly from living near the National Park they are aware that wild animals are a valuable economic resource.

The chapter also describes other future aspirations and perspectives that villagers have expressed in relation to living near the national park. Many people have a negative outlook about their future in the village, especially if the location of the fence, access to water, access to jobs, and challenges with wildlife do not improve. However, I consider that actions such as building houses and establishing a cultural centre indicate their visions for the future. Putting money and effort into building a house or starting up a business enterprise show that there are still people who demonstrate commitment to living in the area long term. Although migration out of the village to look for opportunities is very common, this does not completely mean that these people are gone forever. Future research on the reasons why people migrate and whether this is related to their relationship with wildlife is important to help understand the economic and population dynamics of the village. This would also include an analysis of how age influences decisions to move away or stay. It is possible that younger people are more likely to migrate because of the expectation to improve their present and future economic status, while those who are older may not have many opportunities to move away because of old age. In addition, those who migrated out of the village and grew older are likely to plan for their retirement, which may include returning to the village in the future.

7. Conclusion

People living near the edge of Hwange National Park have a relationship with wildlife beyond ideals of conservation and tourism. This is because living at the edge of the national park means there are challenges that put villagers and their livestock in a position of vulnerability and uncertainty in regard to their future. These challenges include an unsecure fence, contentious encounters with wildlife at different places and at different times, cases of drought, inadequate sources of water, and the threat of diseases. The thesis discusses these different challenges by highlighting the experiences and different perspectives of the people living in Thokozani village and their livestock.

Tsholotsho Rural District and Hwange National Park have a shared history and experience, such as colonialism. The shared colonial history that they have also highlights the changes that have occurred in the landscape and land-use patterns. Although Africans had measures to use and manage wildlife prior to the colonial period these measures differed from what the colonial government later introduced. During colonialism, the landscape was divided into categories of communal area, private farms, game reserve, and forest reserve. This was a process that resulted in the commoditization of natural resources as industries such as timber, agriculture and mining were established. Wankie Game Reserve was created with the goal to protect wildlife but resulted in the displacement of people such as the San and Nambya, who were later settled in lands that were less favourable to their lifestyles. In this situation the value and identity of wildlife, natural resources, as well as African communities, shifted within the shared experience of being under the colonial administration. The social, cultural, and spiritual relationships that African communities had with the non-human beings around them was challenged and redesigned to suit a profit driven, exploitive and segregator relationship that characterized the colonial period. The historical background of the area is significant to this thesis because it describes how the National Park has “political and social

histories…needed to unpack not only the ways conservation has shaped local populations, but also to question why native peoples and wild animals are forced to compete for the last remaining wild spaces." (Wakild, 2014: 66).

The thesis shows that different wildlife can be encountered in different spaces within the village, for example elephants in the farm fields, lions in the grazing area, and hyenas near the homestead and livestock enclosure. None of the villagers' described these encounters in a positive way and it showed that a contentious relationship exists between humans and wildlife, rather than one of co-existence. Although these human-wildlife conflicts are not as intense as those described in other areas in Zimbabwe, they are yet another example of how persistent the problem of human-wildlife conflict continues to be in communities located near wildlife areas - such as Gonarezhou National Park (Masocha, 2022), Mbire District in North-East Zimbabwe (Musiwa and Mhlanga, 2020), and Tonga communities in north-western Zimbabwe (Matanzima and Marowa, 2022).

The temporal characteristics of these encounters also came up as the study showed that it is not just about the space or places that encounters occur, but the time or seasons that encounters occur, as well as the amount of time spent with the animals. The villagers, such as my host father, for example, place importance on observing their livestock early in the morning to check for any signs of sickness and harm. They also take great care at sundown, making sure that their livestock is accounted for and securely enclosed in the livestock enclosure. Wild animals attack livestock and crops at different times of the day and in different seasons of the year. Elephants, for example, frequent the farm fields at night during the farming season, and yet they are also regular visitors to the village in the dry season seeking out certain trees and fruits. Hyena´s on the other hand, commonly attack livestock during sundown. Attempts to solve or reduce the conflicts between humans and wildlife in

this area should, therefore, keep in mind that humans and their livestock encounter different wild animals at different times and different places. A study conducted in Botswana, in the eastern Okavango Delta Panhandle, also notes that communities living near these wildlife areas face different livelihood challenges from different animals at different times of the year, and suggest, that solutions should be tailored specifically according to when and where different wild animals are likely to be found (Pozo et.al., 2021).

These temporal and contentious encounters between the villagers and wildlife also highlight the dilemma faced by villagers who lack ownership and power to control wildlife when compared to the individual ownership and power they have over their livestock. As individuals, they have more power over what happens to their livestock than wildlife, and this affects the way they value livestock over wild animals. As an asset livestock has considerable sentimental value as well as monetary value and, as owners of their livestock, villagers have the power to dispose of their livestock as they wish. Usually, villagers sell livestock or exchange it for other goods or services during periods of hardship, and livestock can also be passed down as a family inheritance. However, villagers do not own wildlife and so are unable to pass it down to their descendants as an inheritance. This suggests that villagers have only limited individual power and ownership over wildlife and the measures used to control wildlife, in comparison to livestock.

Wildlife diseases had a significant influence on the history of the location of the park and the creation of the park fence. How past fears about Foot and Mouth Disease and tsetse fly compare to the present-day situation in the village is worthy of note. The fear of infection and the spread of wildlife diseases is indeed a threat that most villagers mentioned, however this research notes that the fear of wildlife diseases is not what is driving villager´s negative sentiments about encounters or conflicts with wildlife. The top issue they seek to be resolved

is the problem of wild animals crossing into the village and attacking their crops and livestock. Having a secure fence is, therefore, important.

The thesis shows how the fence is an important feature of the edge of the National Park and Tsholotsho communal areas. There are some villagers that have positive views about the fence because it demarcates the location of the two areas. They believe that the fence is a marker that separates the side of the park and the side of the community. However, there are many opposing opinions from other villagers that indicate that the fence is not effective in maintaining the separation of wildlife from the village. The current position and design of the fence that separates Hwange National Park and Tsholotsho communal areas is permeable and blurs the distinction between human space and wildlife space because wildlife and livestock can cross to either side of the fence. This makes a large number of villagers feel as if they are living in the park and that there is no separation between the two locations.

The desire for a secure fence is, therefore, strong among many villagers who believe that the community loses their crops and livestock to wildlife. Some of the villagers suggest pushing back the fence towards the direction of the National Park and to create more space for grazing. This is an example of villagers asserting their place of residence and the boundaries that they want in their relationship with wildlife. In a multispecies approach to human-wildlife relations in conservation areas, the role of 'boundaries' (both physical and personal) needs to be considered. Their desire for a secure fence and more space highlights the dual problem of sharing and accessing space that exists between humans and wildlife at the edge of this conservation area. In order to assert individual, communal, and physical boundaries in relation to each other, it is important to know how much power and resources villagers, or wildlife have. Improving and maintaining physical boundaries, such as a fence around conservation areas, is complex; Ferguson and Hanks (2012) note that fences have

multidimensional roles and impacts in conservation areas. Ferguson and Hanks (2012) also point out that fences differ according to their purposes, costs, and sources of financing. These factors can affect how much the fence that separates HNP, and communal areas can be improved and pushed back to a position that villagers desire.

The thesis also highlights how people in the village have different views about what they consider as wildlife. Some villagers view wildlife as animals that cause destruction to their livestock and crops, other villagers recognize wildlife as the big five or famous animals that attract tourist attention and money. The conservation of wildlife is also viewed as more than just the caring for or keeping of the wild animals, but also the obtaining of financial gain from wildlife. Hence, many villagers understand that wildlife has economic value. Many villagers explained that they do not directly financially benefit from living near wildlife as individuals but have received communal benefits such as the building of schools, food aid, and the installation of boreholes. They would however, like to directly benefit from such or, at the least, receive compensation for loss of livestock or crops. The villagers desire to economically benefit from living near wildlife, as mentioned in this paragraph, and their desire to be separate from wildlife by having a secure fence, as mentioned in the previous paragraph, highlights the paradox of human-wildlife relations at the edge of this conservation area. Benefits from wildlife have often been used to measure the success of community-based conservation initiatives and the advantages of living near a conservation area. This thesis highlights that community-based conservation initiatives should also be measured according to their ability to ensure the protection of livelihoods and place of residence of people living near wildlife.

Highlighting the income and livelihood sources of people living in Thokozani village shows the risky nature of their economic status. One of the key findings about their economic

situation is that the majority of households indicated that their main source of income and groceries comes from remittances. Migration, therefore, plays a key role in the economic background of many households. Whether or not migration out of the village to neighbouring towns or countries is due to a desire for better economic opportunities, the issue is significant enough that future research should seek to ask what role living near this wildlife area plays in people´s decisions to migrate. One might also want to ask how many leave and how many return to the village. This also includes future research that examines how age and gender influences decisions to move away or stay. There is definitely more that needs to be understood about the dynamic characteristics of choosing to migrate or choosing to stay in this village, especially given the impact that the decision has on livelihoods.

Lastly, the problem of drought that villagers face due to lack of adequate rains, challenges their food security. Water for both the villagers and their livestock is accessible through boreholes. Although some of the boreholes use solar energy and a diesel generator to pump water, challenges such as distance from homesteads, breakdowns, and the lack of manpower to pump water affect how they use them in their daily life. Now that the globe is in the Anthropocene period, having access to water is important in both the present and future context. It is vital to ensure that solutions are found in places where the effects of human activity have caused or is causing a process of biosocial destruction. When I think of communities such as Thokozani village, I ask what role have they played in the process of biosocial destruction and how their experiences and perspectives within the context of multi-species discourses can be heard? Studying their experiences and perspectives about living near the edge of a national park shows there is value in a human-centred focus in multi-species approaches, especially in the case of marginalized communities in conservation areas. Ozguc and Little (2022) also argue against limiting the voice of humans to create space for non-humans, as this can draw attention away from the social differences and unequal power

relations among different human individuals. Situations where both humans and animals share adversity and challenges, such as drought, are an important example that show that when faced with global problems, value or attention should be placed on both humans and wildlife to find suitable solutions for each group without compromising the life or livelihood of the other.

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