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An Exploration of the Adaptive Capacity of Community-Based Organizations in Northern Botswana in Response to a Hunting Ban

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AN EXPLORATION OF THE ADAPTIVE CAPACITY OF COMMUNITY-

BASED ORGANIZATIONS IN NORTHERN BOTSWANA IN RESPONSE TO

A HUNTING BAN

By

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ABSTRACT

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   Trophy hunting serves as a large economic sector in several African countries and has been considered important for wildlife conservation and local rural development. In many parts of Africa, local communities' attitudes and decisions can affect the fate of conservation efforts outside of protected areas and it is thought that benefits from trophy hunting tourism can influence pro-conservation behavior at local scales. In Botswana, recent mandates, such as a 2014 nation-wide hunting ban and a 2019 lifting of the ban, have disrupted the relationships between wildlife conservation and rural livelihoods, resulting in adverse economic, social, and ecological impacts at various scales. I applied the adaptive cycle model, which tracks changes in social-ecological systems over-time, to better understand how trophy hunting tourism and its absence influence communities' perception of wildlife conservation, their use of natural resources, and their overall capacity to function and thrive. I assessed Botswana's trophy hunting system through the adaptive cycle model's four phases of growth (r), conservation (k), release (Ω), and reorganization (α). This study conducted 54 semi-structured interviews to assess how a ban on hunting has shaped the adaptive capacity of three community-based organizations (CBOs). Key factors outlining the communities' adaptive capacities emerged. The lifting of the hunting ban in 2019 presents an opportunity for a system-wide transformation if the state government chooses to incorporate communities' critiques on hunting, such as the lack of community-based ownership in the trophy hunting industry and implementing strategies to allocate greater funds to local economic diversification. This study improves policy and decision makers' foundational and conceptual understanding of adaptive capacity of Northern Botswana's community-based organizations and the role that trophy hunting tourism plays in fostering or inhibiting those qualities. Results can help decision makers create policies or processes that support the adaptive capacity of CBOs in future times of crisis.

ACKNOWLEDGEMENTS

I tried my best to stay grounded in the data through conducting systematic data collection and analysis, practicing self-reflexivity, and remaining true to the voices and experiences of the participants. However, I cannot ignore the role that my identity may have played in the various phases of this work and how it may have affected the outcomes. Characteristics like whiteness, womxnness, and American-ness carry different meanings across space and time. In Maun, Botswana, my whiteness, womxnness, and alone-ness could spark reactions of intrigue and importance; to some of the villagers, my identity symbolized distrust, fear, and they did not want to engage with me because they made assumptions that I held an anti-trophy hunting position. I do believe that my outside perspective was beneficial, though, in that it allowed me to listen to, synthesize, and analyze participants' perspectives in a unique way. I hope this work will result in contributions to the wellbeing of the villages and the trophy hunting literature. This clarification of positionality is not meant to discredit this work nor is it a call for sympathy regarding the cross-cultural research process: it is simply something for readers to keep in mind as they consider this study.

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CHAPTER 1. INTRODUCTION

Introduction

Trophy hunting is one of the largest economic sectors in many African countries and has been considered essential for providing economic incentives to conserve wildlife (Dickson et al., 2009) and to support the sustainability of local communities experiencing economic and social challenges (Gunn, 2001). To make scientifically sound decisions regarding trophy hunting management and policy, there is a critical need to understand the social and economic constructs associated with trophy hunting and how these constructs relate to conservation and local livelihoods (Mbaiwa, 2018). Yet, there has been a lack of studies that provide systematic and empirical data on trophy hunting and in-depth analyses among differing stakeholders (Marshall et al., 2007). To better understand the socio-economic impacts and governance of trophy hunting, the perspectives of the local communities in the hunting areas must be examined in tandem with the ecological and conservation components. Additionally, research is warranted on the implications for local communities and wildlife if hunting is banned in particular contexts (Lindsey et al., 2012).

While science can drive policy for trophy hunting, human dimensions are often underestimated for their integral influence on decision-making (Nelson et al., 2013). More recently, there have been strict international policies or bans on trophy hunting; yet, this strategy could have extreme detrimental impacts for species conservation and the local communities without other realistic alternatives (Lindsey et al., 2014; Lindsey et al., 2015; Di Minin et al., 2016; Naidoo et al., 2016). The ban on hunting has not proven to provide any positive impacts to wildlife populations as evidenced from continuous declines of wildlife populations in Kenya

(Nelson et al., 2013). In addition, many of these countries are limited in the financial resources they can dedicate to conservation and other forms of tourism are not a viable option in most of the regions where trophy hunting occurs (Lindsey et. al 2006; Lindsey et al., 2014; Lindsey et al., 2015; Di Minin et al., 2016; Naidoo et al., 2016). These other forms of tourism can also require more infrastructure and have greater collective environmental impacts than trophy hunting (Di Minin et al., 2016).

Restrictions or banning trophy hunting can result in frustration among local communities that are dependent on the revenues generated from trophy hunting and can rapidly deteriorate the local support for conservation (Lindsey et al., 2012; Naidoo et al.,, 2016). Many of the communities adjacent to previous trophy hunting sites have been alienated from a lucrative economic activity, creating resentment among local residents and increasing demand for wildlife-based livelihoods (Lewis & Jackson, 2005). In addition, it has been indicated that local stakeholders are not actively engaged in trophy hunting management and policy decisions (Nelson et al., 2013), which can contribute to operations' weak governance. In order to improve the governance of trophy hunting and better integrate it into the system of the communities, it is imperative that local communities are allocated more control and ownership (Nelson et al., 2013; Lindsey et al., 2014; Di Minin et al., 2016).

Need for Study and Research Questions

The impacts of trophy hunting governance in relation to wildlife conservation and livelihood goals have been studied extensively in sub-Saharan Africa (Baker, 1997, Nelson et al., 2013, Naidoo et al., 2016, Marshall et al., 2007). The various social, ecological and economic impacts of trophy hunting tourism, like inequitable and insufficient revenue distribution and lack

of community-initiated development, can be traced back to weaknesses in governance and can undermine the potential of hunting and encourage overharvesting (Marshall et al., 2007; Nelson et al., 2013). These weaknesses stem from centralized control over resources that do not promote community participation in decision making over the rules of management and result in policies that foster limited ownership, participation, and collective action at the community level (Nelson et al., 2013; di Minin et al., 2016).

Trophy hunting has been claimed to be the most beneficial to wildlife conservation where the central government chooses to devolve revenues and user rights over wildlife, making sure that benefits from hunting compensate for its costs to local people and where hunting is managed through long-term and competitively divided concession systems (Lindsey et al., 2014; di Minin et al., 2016). If community support and participation are deemed as essential components to making a particular trophy hunting governance regime an effective and well managed conservation tool, it is necessary to seek and represent community perceptions on this topic. However, systematic and empirical studies on community perceptions of trophy hunting governance are underrepresented in the academic literature and policy documents (Angula et al., 2018). The studies that do explore community perceptions on rural livelihoods, hunting tourism, and wildlife conservation could benefit from a qualitative approach, which can provide a richness and complexity to these topics (Charmaz, 2014).

There is a lack of studies that present systematic and empirical data on the impacts of trophy hunting in tandem with in-depth analyses among different stakeholders involved in trophy hunting operations. By conducting 17 interviews with diverse stakeholders and 54 interviews with community members, this research project studied community perceptions on the impacts of trophy hunting tourism and a trophy hunting ban to understand how those perceptions might

illuminate the relationship between stakeholder groups and wildlife conservation. Through community based participatory methods and a social-ecological systems approach, this research explored how trophy hunting tourism and a trophy hunting ban impacts the adaptive capacity, or social resilience, of community-based organizations. Specifically, this study sought to understand how trophy hunting tourism contributes to conservation through exploring the following questions:

Main Question:

How does trophy hunting tourism and its ban influence the adaptive capacity of the social-ecological Trophy hunting system in Botswana?

Sub Questions:

1) How do trophy hunting tourism and a hunting ban impact local communities?
2) How does trophy hunting tourism impact local perceptions of wildlife and wildlife management?
3) What are the factors that influence trophy hunting governance in Botswana?
4) How did local communities respond to the ban on trophy hunting through changes in livelihoods, resource use, and their perception of and attitude towards wildlife conservation?
5) How could lifting the ban impact communities?

By addressing these questions, we gained a greater understanding of how trophy hunting and a ban on trophy hunting impacted local communities and wildlife management. Responses provided insight on the various strengths and weaknesses of different trophy hunting governance structures. The findings reveal guiding principles for how to adjust or improve trophy hunting

governance to better support local communities and wildlife conservation in the Northern

Botswana region.

Background on Trophy Hunting Tourism in Botswana

Community-Based Natural Resource Management

Prior to independence in 1966, Botswana was a British protectorate and its natural

resources were managed by the British Crown (Campbell, 1973). When newly sovereign,

Botswana approached the management of its protected areas by implementing severe regulations

that restricted use of natural resources, like cattle grazing, within the park boundaries (Twyman,

2000). As a response to this style of governance, local communities became alienated from

resource management (Mbaiwa, 2012). Influenced by the emerging sustainable development

movement of the 1980s and 1990s, which promoted governance structures that linked

community development to wildlife management, Botswana began to implement decentralizing

policies and allocated 20% of its land to a new management regime called Community Based

Natural Resource Management (CBNRM) (Twyman, 2000). Community Based Natural

Resource Management is a natural resource management approach that is especially popular in

sub-Saharan Africa; CBNRM mandates the devolution of natural resources to a local scale of

governance. It is considered a conservation strategy by repurposing land around designated

protected areas in ways so that people living with wildlife might derive greater benefits from it

and develop a different appreciation of it (Lepetu et al., 2008).

The state's 1986 Wildlife Conservation Policy (WCP) introduced a new land category,

called Wildlife Management Areas, which converted land formerly dedicated to grazing to areas

in which natural resource (both consumptive and non-consumptive) would be the primary economic activity (GoB, 2007). Wildlife is a state resource in Botswana and hunting within the WMAs is restricted; citizens are only allowed to hunt if they have licenses secured through the Department of Wildlife and National Parks (DWNP), which is the government body with overall responsibility for wildlife resources. In order to accommodate community-controlled hunting (for tourism, commercial, or subsistence natural resource use) and commercial hunting and photographic safaris, WCP called for the subdivision of the WMAs into smaller units referred to as controlled hunting areas (CHAs).

Both the WMAs and CHAs are multiple use areas in which sustainable utilization of natural and cultural resources are emphasized, where sustainable use means the appropriate consumption of these resources to make sure they are not depleted (GoB, 2007). Per this model, controlled tourism activities are allowed in WMAs, but agricultural practices with vast pastoral and arable farming are not permitted (Mbaiwa, 2004). Various land uses and wildlife activities that are allowed include photographic safaris, film production, game ranching and viewing, and controlled trophy hunting (ibid). The hunting quota license provides the communities the right to use wildlife in their CHAs. Wildlife resources are, in a way, managed under a common property resource management regime in community CHAs; if CHAs are under multi-purpose management, communities have no control over the use of non-wildlife resources and cannot restrict others from harvesting them (Rozemeijer and Van der Jagt, 2002).

Community-Based Organizations and Joint Venture Partnerships

In 1990, the adoption of Botswana's Tourism Policy and the CBNRM program involved local communities, NGOs, and development agencies in the planning and implementing of

trophy hunting activities in several of the community-controlled hunting areas (USAID, 2016).

Through these changes, villages formed a Quota Management Committee and obtained wildlife

quotas from the federal government. Communities could use quotas for citizen hunting or lease

all or part of it to a safari company (Twyman, 2000). If villages chose to get involved with safari

companies, they had to come together and establish themselves as a legal entity in the form of a

community-based organization (CBO); after gaining federal recognition as a CBO, the

organization then formed a joint venture partnership or association with a safari company (Stone,

2015). The establishment as a CBO was also supposed to solidify the community's

accountability to DWNP, enabling it to gain greater ownership over wildlife resources and

establish enterprises that could provide greater social and economic benefits and enhance their

livelihood options.

      The community-based organization (CBO), which is also referred to as a 'trust', was

designed to empower communities to benefit through CBNRM and also provide input in certain

decisions regarding natural resource management. The structures of each CBO differ, but usually

include a manager, several employees and community escort guides, and the Board of Trustees

(BOT), which is a group elected biannually by the village. The BOT is the executive authority

within the CBNRM organization. BOT is responsible for policy formulation and overall

administration and direction within the designated management area. The income generated by

the CBOs are provided by the BOT to the Village Development Committee (VDC), and these

groups work in tandem to select and pursue development projects on behalf of the villages

(Stone, 2015). The members of the VDC are elected at the kgotla (indigenous public assembly),

and two members of the VDC become members of the Board of Trustees. The kgosis, who are

the chiefs of the villages and usually inherit this position through familial connections, are also

included in the operations of the BOT, but they do not have a vote when the group is making decisions (Stone, 2015). The BOT is the supreme decision-making body, but both the BOT and VDC have the authority to make regulations, approve developments, initiate partnerships with the private sector, collect revenues, and decide on benefit distribution (Mbaiwa, 2012).

Trophy hunting tourism has influenced the model of partnerships between CBOs and tourism ventures. There are three joint venture options for CBNRM in Botswana (Van der Jagt et al., 2002), which include joint venture agreements with the private sector, joint venture partnership with the private sector, and a set of various arrangements where different parties take on responsibilities over certain activities. These agreements differ in the extent to which the CBO and private sector company merge assets (i.e. financial, labor, natural resources, capital), the sharing of profits, and combined management or control of operations (Lepetu et al., 2008.) Under the partnership framework, there is more of an emphasis on a transfer of entrepreneurship and managerial skills in tourism business from companies to local communities (Mbawia, 2012). Most CBOS in Botswana have opted for Joint Venture Partnerships (JVPs), which end up being more similar to joint venture agreements, because they serve more as lease contracts (Mbaiwa, 2012). Limited training and experience of the leaders of the community trusts serves as a barrier for CBOs to form JVPs with safari companies (Kgathi and Ngwenya, 2005).

Currently, there are about 147 community-based organizations (CBOs) throughout the 9 districts in Botswana. Of these CBOs, 94 are registered, 16 not registered, and 37 have unknown statuses (USAID, 2016). Figure 1 illustrates the different districts in Botswana. CBOs are spread throughout Botswana, but the most high-revenue CBOs are found in Ngamiland and Chobe Districts because they are located close to protected areas with good tourism opportunities (ibid). CBOs are important for rural development as they cover 61% of the rural population. Poverty in

CBO villages (27%) is above the national average (19.3%) and that of rural villages (24.3%).

Thus, livelihood enhancement and poverty reduction should be important components of

CBNRM (ibid).

Administrative Districts

Figure 1. Map of Botswana by District. Source: U.S. Central Intelligence Agency.

The main natural resource management related activities that CBOs engage in are bird

counting, firefighting, and animal problem control. Livestock, crops, and informal employment

are most frequently cited as important sources of livelihoods (USAID, 2016). There are a number

of opportunity costs that are associated with living in these CBOs in such close proximity to

wildlife-rich areas, such as crop-raiding, livestock depredation, and wildlife-related injury and

fatality (Mbaiwa, 2012). Higher poaching rates are already an issue in non-CBNRM areas;

wildlife related living costs, like prohibiting livestock husbandry and wildlife hunting might

cause barriers for conservation efforts in CBNRM areas (ibid).

Elephant populations pose a specific source of human wildlife conflict in these CBOs in

Northern Botswana. Due to an increase in human land use and competition for resources (e.g.

water) in the Okavango Delta and Chobe regions, there has been an influx of elephants in these

areas, which have led to greater reports of human elephant conflicts in northern Botswana over

recent years (Mayberry et al., 2017). These conflicts manifest as crop/property damage,

injury/fatality and psychological trauma, such as emotional stress and restricted mobility (due to

food insecurity and reduced safety) (Khumalo and Yung, 2015). The impacts of human-wildlife

conflict can contribute to people's negative attitude towards the problem species and can counter

the intentions of CBNRM programs.

A Hunting Ban and the Lifting of the Ban in Botswana

Botswana has experienced two dramatic natural resource management mandates over the

past several years in relation to trophy hunting. The Botswana government cited a decline in

wildlife as the reason for a hunting ban in 2014 (Mbaiwa, 2015), claiming that the issuance of

hunting licenses had fueled poaching and the "catastrophic" declines in wildlife, while inhibiting

sustained growth in the tourism industry (Boyes, 2012). Upon announcing this decision, the

government also referenced a 2011 study conducted by scientist leaders of the international non-

profit organization, Elephants Without Borders. The study found that there had been a 61%

decline in 11 species. The authors of the study attributed this decline in wildlife populations to

several causes: poaching, human encroachment, habitat fragmentation, drought, hunting, and

veldt fires (Chase, 2011). Although not its exact message, the study is believed to have been influential in former President Khama's decision to ban hunting (Mbaiwa, 2018).

Botswana's decision to ban hunting contributed to African countries' frustration towards NGO and foreign aid organizations' management prescriptions and interventions, which at the time, had been advocating for stricter regulations of trophy hunting tourism and the illegal trade in bushmeat (Boyes, 2012). Yet, without local support and alternative livelihood strategies, hunting bans can contribute to further negative impacts to conservation (Naidoo et al., 2016; Angula et al., 2018). As a result of the ban, all Wildlife Management Areas and Controlled Hunting Areas became designated for non-consumptive tourism in Botswana, disrupting the economic and social benefits that CBOs received from their partnerships with trophy hunting operations (Mbaiwa, 2018). Sixty-eight community-managed concession areas that were involved in citizen hunting or private sport hunting were forced to transition to photographic tourism areas (Mbaiwa, 2018). Data from DWNP indicates that there were 23 villages with a total population of 11,850 people in the Okavango Delta and Chobe Districts that had nine concession areas covering 13,890 square kilometers shift from trophy hunting to photographic tourism. This transition was difficult for some communities because hunting was undertaken in peripheral areas that are not conducive for photographic tourism safaris and infrastructure. For example, the photographic tourism potential in the eastern marginal areas of Makgadikgadi Pans area is very low (ibid). However, some CBOs have been successful in diversifying their economies and transitioning into other revenue building tourism activities, whereas other communities remain static in their tourism development ventures (Mbaiwa, 2018; Blackie, 2019).

In the spring of 2019, the government of Botswana, under the new leadership of Mokgweetsi Masisi, announced plans to lift the hunting ban (Republic of Botswana, 2019). Trophy hunting tourism was reinstituted in two phases: the first taking place during the fall of 2019 and consisting of citizen hunting for elephants and the second phase was set for the fall of 2020, for international tourists (Government of Botswana, 2019), but may not happen due to the COVID-19 pandemic. Understanding how mandates on hunting relate to the adaptive capacity of the local communities can provide unique insight on the how the Trophy hunting system responds to changes over time and make inferences regarding the system's overall resilience and health.

Background on Study Sites: Chobe Enclave Community Trust, Sankuyo Tshwaragano Management Trust, and the Mababe Zokotsama Community Trust

This study investigated how CBOs in Northern Botswana responded to a hunting moratorium and the lifting of the moratorium. Northern Botswana consists of three districts (i.e. Ngamiland, Central, and Chobe) (see Figure 1). Specifically, this study's sample included three CBOs that are located within Botswana's northwestern district (Ngamiland) and Chobe District: the Sankuyo Tshwaragano Management Trust, the Mababe Zokotsama Community Trust, and the Chobe Enclave Conservation Trust (CECT). Figure 2 shows the geographic distribution of the three CBOs that participated in this study. CECT, Sankuyo, and Mababe were selected for this study because they were amongst the earliest villages to participate in CBNRM programs in Botswana; more importantly, they all had established trophy hunting as a form of tourism and were greatly impacted by the state mandate to ban trophy hunting in 2014 (Mbaiwa, 2015).

Figure 2. Map of Sankuyo, Mababe, and CECT CBOs in Northern Botswana (Source: Google Maps).

The Chobe Enclave Conservation Trust (CECT)

Key natural features of the Chobe District are Chobe National Park and the Chobe River, which support large wildlife populations and unique scenic beauty, attracting thousands of tourists every year. Kasane is the gateway tourism town in the Chobe region and provides access to Chobe National Park and Chobe's Forest Reserves. The wildlife-based tourism industry has led to the development of campsites, lodges, and camps that accommodate its clients (Mbaiwa, 2015).

The Chobe Enclave Conservation Trust (Figure 2) was the first community project in Botswana and is the exemplar for implementing CBNRM in Botswana (Stone, 2015). CECT is situated on land that is bordered by protected areas on the western and eastern sides (Chobe

Forest Reserve and Chobe National Park) and the Chobe river and Namibia on the northern side. Resource use is restricted to commercial purposes within these areas (Lepetu et al. 2008). A road passes through the Chobe National Park that goes through the villages. The estimated population of CECT is 7,500 (ibid). Kasane is about 50 km north of the Enclave and is the hub of the tourism industry in northern Botswana.

CECT consists of five villages, namely Mabele, Kavimba, Kachikau, Satau, and Parakarungu. The ethnic groups found in Chobe enclave include BaSubiya, BaTawana, and the !Xo (Lepetu et al. 2008). The enclave villages are located within two areas where trophy hunting used to be practiced through a JVP and currently, only photo tourism safaris take place (Stone, 2015). The main economic activities in CECT are crop production, livestock production, and formal employment, which are supplemented by small scale businesses like beer making and veld products (Jones, 2002). The CBNRM management structure in CECT consists of the Board of Trustees, a Manager, and employees. Each village chooses a Village Development Committee, which then sends two of its members to represent that village on the board of the Trust. The BOT is held by a Deed of Trust to divide 85% of its annual revenue between the five villages and the VDC is tasked with reinvesting the distributed revenue and guiding the development and implementation of village projects (Lepetu et al., 2008).

Sankuyo Tshwaragano Management Trust (Sankuyo)

The Sankuyo Trust represents the Sankuyo village (Figure 2), which is located in the northeastern fringes of Okavango Delta within Batawana Tribal Territory in the northwestern part of Botswana. The village has a population 372 people (GoB, 2002). It is mostly a Bayei (Wayei) community with Basubiya tribe forming a significant minority (Thakadu et al., 2005).

It's about 80 km from the town of Maun and is just south of the Mababe Trust, on the outskirts of Chobe National Park and the Moremi Game Reserve.

The main economic activities of Sankuyo residents are arable agriculture and collecting of veld products. People in Mababe also use livestock, like cattle, as an agricultural asset to help with food production efficiency (Lepetu et al., 2008). When the government designated controlled hunting areas near Sankuyo for community management, the village registered as a CBO and became the Sankuyo Tshwaragano Management Trust in 1995. The CHAs NG33 and NG34 have high concentrations of wildlife and were managed by STMT for photographic and hunting purposes. Sankuyo Village was the first village in Ngamiland to coordinate community-based tourism activities. It is also recognized as one of the villages where CBNRM has a significant impact on livelihoods (Arntzen 2003; Thakadu et al., 2005).

Trophy hunting through the CBNRM program at Sankuyo Village was conducted through a joint venture arrangement. The joint venture arrangement served as the main source of socio-economic benefits that accrued within the village (Mbaiwa, 2005).

Mababe Zokotsama Community Trust

The Mababe Zokotsama Community Trust (Mababe) (see Figure 2) represents the Mababe village, which is located along the southeastern fringes of Okavango Delta, between the Moremi Game Reserve and Chobe National Park. It is situated about 120 km of the town of Maun and is north of Sankuyo Trust. It has a population of about 500 people. The main ethnic group in Mababe are the indigenous San (or so called "Bushmen"), who lived nomadic lives of hunting and gathering until last two or three decades (Segadimo, 2018). The San are the largest indigenous community in Botswana, comprised of small tribes that speak different languages;

they are officially recognized internationally as indigenous people, but not nationally by the

Botswanan government. They are considered politically and economically marginalized and

vulnerable to exploitation by other ethnic groups; because of their history with hunting and

nomadic lifestyle, they have been greatly impacted by the government's hunting restrictions and

strict land policies (ibid). Mababe became a CBO in 1998. The main activities in Mababe are

crop and livestock production and employment through the tourism business in mostly unskilled

jobs. There has also been out-migration from the village to bigger cities to search for other

employment opportunities (ibid).

Both Sankuyo and Mababe are located in Ngamiland District, which is known for popular

tourist destinations like the Okavango Delta and Moremi Game Reserve. The Delta is a natural

wetland that covers 16,000 square kilometers (Mbwaia, 2015) and the Game Reserve has large

bodies of open water and grasslands sustain plants, mammals, birds, insects, and other

organisms. Over 150,000 people live in the Okavango Delta region of which more than 95%

depend directly or indirectly on natural resources in the Okavango to sustain their livelihoods

(NWDC, 2003).

Thesis Chapters

This thesis is presented in seven chapters. Chapter 1 provides an introduction and need

for this research. Chapter 2 provides context for the body of literature that shaped this study's

research questions and the analysis. Chapter 3 explains the methodology and analysis used in this

research. Chapter 4, 5, and 6 consist of the results and discussion. Chapter 4 provides an

overview of the impacts of trophy hunting tourism on rural livelihoods and wildlife conservation

and describes the locals' experience of the ban; Chapter 5 explores the impacts of the hunting

ban and the corresponding responses of the CBOs; lastly, Chapter 6 provides a synthesis of

locals' responses to the lifting of the ban and describes future potential paths for the trophy

hunting system that are based on participant feedback. The thesis concludes with Chapter 7,

which provides an overview of the findings, recommendations for policy and decision makers,

and reflections for future research. The appendices and bibliography are included after the main

chapters.

CHAPTER 2. LITERATURE REVIEW

Community Based Natural Resource Management

Since the 1990s, Southern Africa has become an important international tourist destination and international tourist trends suggest that Africa is currently one of the fastest growing tourist destinations in the world (UNWTO, 2019). As a prominent foreign exchange earner in several countries, like Botswana (Mbaiwa, 2018) and Namibia (Mcnamara, Desubes, & Claasen, 2015), visiting wildlife tourist attractions is a major tourist motivation (Higginbottom, 2004). African countries have developed both consumptive and non-consumptive forms of wildlife tourism through trophy hunting and photographic safaris; both activities are responsible for a significant portion of the countries' GDP (Lindsey et al., 2007). However, the rapid growth of tourism in developing countries has raised issues about the industry's sustainability, especially in regards to its access and economic benefits to local economies (Mbaiwa, 2005).

As sub-Saharan Africa experienced this exponential growth in international tourism, several African countries were under severe criticism due to diminishing wildlife populations and evidence of increased poaching (Twyman, 2000; Swatuk, 2005). Critics charged government departments with deficiency in the proper management of ecosystems and wildlife populations, arguing that the state government was not able to sufficiently provide the resources that a protectionist, top-down approach requires (Twyman, 2000). Community based natural resource management (CBNRM) approaches to natural resource management were born out of these criticisms and proliferated across the Global South in the 1980s as a method to improve conservation and alleviate poverty through the inclusion of communities in natural resource governance (Swatuk, 2005). CBNRM programs became recognized as a sustainable development

tool that could link socio-economic growth with biodiversity conservation (Blaikie, 2006; Rapley, 2007; Ribot et al., 2010).

The institution of CBNRM in sub-Saharan Africa called for a shift from state mandated natural resource management regimes to a system of governance that devolved certain rights of objective setting and policy making to non-state actors, and more specifically, local communities (Swatuk, 2005). This "community based" approach to natural resource management (CBNRM) intended to involve communities more in decisions regarding land use, inspire collaborative partnerships with private tourism companies, and generate economic benefits at a local level. These programs were thought of as a way to improve natural resource conservation, rural livelihoods, and reduce human wildlife conflicts and alleviate poverty (Twyman, 2000; Swatuk, 2005; USAID, 2016).

There are mixed reviews regarding CBNRM's successes in improving rural livelihoods and biodiversity conservation. Studies demonstrate that communities have benefitted from CBNRM projects, strengthening local resource management institutions and boosting local people's skills at negotiating control over resources (Hulme & Murphee, 1999; Mbaiwa, 2004; Kgathi & Ngwenya, 2005). Conversely, there has also been research documenting significant problems in the implementation and management of CBNRM, which has resulted in failure to bring significant benefits to rural communities even when conservation goals are achieved (Blaikie, 2006: Khumalo & Yung, 2015). Critics of CBNRM largely attribute its failure in empowering communities in natural resource management to poor implementation of policy or legislative reforms that have not sufficiently or properly transferred control over natural resources to community (Twyman, 2000; Blaikie, 2006; Dressler et al., 2010; Ribot et al., 2010). Trophy hunting tourism became a critical CBNRM activity, and the rise and industrialization of

trophy hunting occurred alongside the gradual popularization and institutionalization of CBNRM.

Trophy Hunting Tourism in Sub-Saharan Africa

In the 1990s, trophy hunting tourism became a key vehicle for devolving certain natural resource and wildlife management responsibilities to communities and generating revenue at a local level in sub-Saharan African countries (Van der Heiden, 1991; Twyman, 2000; Van der Jagt & Rozemeijer, 2002). Throughout the world, hunting can be performed for sport, subsistence, and to control population size (Coltman et al., 2003). Many countries practice trophy hunting tourism; the Inuit in the Canadian Artic hold hunts for polar bears (*Ursus maritimus)* (Freeman & Wenzel, 2006) and the ibex (*Capra sibirica*) has become a popular trophy animal in northern Pakistan (Rashid et al., 2020).

Sport hunting and nature conservation have been linked together from early times, but the origins of the contemporary conservation agenda have roots in nineteenth century colonial sport hunting. In government documents, scientific studies, and media publications, trophy hunting tourism has also been referred to as 'safari hunting tourism,' 'conservation hunting,' and 'sustainable hunting' (Lindsey, 2008; Lendelvo et al., 2020). Trophy hunting can be defined as a practice that "…entails a hunter paying a fee to kill an animal and claim its body or body parts as a trophy of conquest" (Batavia et al., 2018, p. 1). It has also been defined as "an activity where wildlife is hunted by means of a rifle, bow, or similar weapon primarily for their horns...and/or the skin in order to be displayed as trophies" (Van der Merwe et al., 2014, p. 1). For this study, the working definition of trophy hunting tourism is: sport hunting that is conducted on state

lands, not private game farms or reserves, and is undertaken for subsistence purposes, but for recreation, in which hunters pay a large fee to hunt an animal to secure a physical attribute.

Under certain governance regimes, trophy hunting tourism can provide opportunities that include local communities in its management and operation, enhance communities' decision-making powers, and result in benefits that can sustain and diversify livelihoods for local communities (Kgathi and Ngwenya, 2005; Mbaiwa, 2015; Naidoo et al., 2016).

Trophy hunting tourism is a major contributor to wildlife tourism in Africa (Lindsey et al., 2006; Saaymen et al., 2018). Along with 22 sub-Saharan African countries, Western, Eastern and Central African countries, like Mozambique, Zambia, Tanzania, and Ethiopia, participate in the trophy hunting industry (Lindsey et al., 2006; Lindsey et al., 2007). The trophy hunting industry is growing rapidly: approximately 18,500 foreign hunting clients visit sub-Saharan Africa each year, compared to 8,000 in 1990 (Lindsey et al., 2007). Furthermore, the industry has estimated to generate up to US$200 million each year (sans economic multipliers) (ibid). Trophy hunting operators hold at least 1.4 million km^2 of land in sub-Saharan African countries that practice trophy hunting, which represents 22% more land than that encompassed by national parks (Lindsey et al., 2007). The main species involved in trophy hunting change depending on the host country; the most hunted species in southern Africa are kudu, gemsbok, warthog, impala, lechwe, steenbok, and zebra (ibid). In Botswana and Zimbabwe, trophy hunting generated most of its income from elephants (56% and 27% respectively) (Botswana Wildlife Management Association, 2001).

The southern African trophy hunting industry has grown substantially during the past decade; this growth can be attributed partly to the closure of hunting in other countries (e.g. Kenya and Botswana), the loss of wildlife in other African regions (e.g. Sudan, Democratic

Republic of Congo)**,** and successful conservation outside of protected areas (Lindsey et al., 2007). Countries that participate in trophy hunting tourism subscribe to different land regime schemes, which changes the various decision-making powers of the network of state and non-state actors involved in the hunting management and operation (Lindsey et al., 2006). For example, Namibia passed legislation in the 1990s and early 2000s that devolved user rights over wildlife, tourism, and forest resources over to landowners (Mcnamara et al., 2015). The CBNRM system in Namibia encourages communities to form land management units called conservancies, which act as common property resource management systems for wildlife and tourism (Naidoo et al., 2016).

Despite countless studies on the economic contributions and conservation benefits of hunting in sub-Saharan African countries (Lindsey et al., 2007; Nelson et al., 2013; Mbaiwa, 2015; Naidoo et al., 2016;), trophy hunting tourism and its associated benefits and challenges serve as a controversial topic. There is a polarizing academic and public debate that revolves around trophy hunting tourism, involving a diverse group of players, from animal welfare groups to international conservation organizations (Angula et al., 2018; Batavia et al., 2018). The debate about trophy hunting has also gained traction in recent years after the ban on trophy hunting tourism in Botswana in 2014, and two contentious hunts in 2015 of the Zimbabwean lion Cecil and a rhino in Namibia (Macdonald et al., 2016, Batavia et al., 2018). Research on trophy hunting tourism has evolved from investigating the extent to which it actually serves as a conservation and community development tool to discussing its ethical foundations (Macdonald et al., 2016). The following section reviews the trophy hunting industry's ecological, socio-cultural, and economic impacts and how those effects shape the industry's various opportunities and challenges.

Benefits and Challenges of Trophy Hunting Tourism

Trophy hunting can serve as a tool for conservation and sustainable development for many reasons. Its characteristics have been studied extensively in different countries and can result in various ecological, social, and economic impacts that depend on the country's history with natural resource management policies, local livelihood practices, wildlife populations, and political circumstances. Table 1 provides a list of the various ecological, socio-economic, and governance components of trophy hunting.

Ecological Benefits and Challenges

The hunting revenues from trophy hunting tourism can support conservation of wildlife in areas where there might be a desire for wildlife to pay for itself and contribute to the economy (Lindsey et al., 2006); for example, trophy hunting funds have been considered instrumental in the recovery of white rhinoceros (*Ceratotherium sinum)* populations in South Africa (Leader-Williams & Hutton, 2005).

Local communities' use of natural resources may be restricted due to trophy hunting activity, but trophy hunting proponents tout the industry's ability to create economic benefits for local communities, through jobs, and food security, through access to bushmeat from hunts. Hunting can also support the operational costs of community based natural resource management (Naidoo et al., 2016). The income that trophy hunting generates creates financial incentives to promote "wildlife" as a more competitive land use option over agriculture or farming or photographic tourism, which might have more "environmentally degrading" impacts (Baker, 1997; di Minin et al., 2016). Due to the nature of safari hunter clientele and the higher amount of

income generated per client, trophy hunting can be a less environmentally impactful and more economically rewarding form of tourism than photographic safari tourism (Baker, 1997; Leader-Williams & Hutton, 2005; di Minin et al., 2016). In certain areas, photographic tourism has proven to outcompete hunting as a revenue generator. However, mass market tourism is unpredictable and if a country undergoes political instability, mass tourism can quickly dissipate; in these circumstances, hunting tourism has proven to persevere (Martin, 1996).

Although trophy hunting has proven to provide impressive financial and socio cultural gains and does seem to be more sustainable in certain ways over other tourism or land use options, the ecological and economic long term sustainability is uncertain. The impact of hunting on population dynamics can be complex and hard to quantify (Milner et al., 2006; Sellier et al., 2016). Habitat loss and retaliatory killings are typically considered the main threats to wildlife across Africa, but hunting can also deplete animal populations (Packer et al 2009). According to Packer et al 2009, excessive trophy hunting seems to have caused large scale declines in African lions, American cougars and possibly African leopards. One way towards establishing sustainable management strategies is using population demographic analyses in conjunction with harvest trends to limit annual hunting quotas; this can be a difficult strategy to develop and implement because some species are difficult to monitor, resulting in a skewed perception of population size. Quotas will also have to take into consideration the demands for predator control by livestock producers and local communities (ibid). However, these management strategies require considerable cross-scale communication, role defining, and accountability, which can be challenging to achieve in the context of several trophy hunting nations' CBNRM approaches (Ribot et al., 2010).

There is a lack of research that has been done on how trait based selective harvests might change trophy size or quality in particular species over time, which is a concern that has been expressed for trophy hunting in Africa. It is unknown how these changes might result in deleterious genetic changes within targeted populations (Coltman et al., 2003; Crosmary et al., 2013). There is evidence that the decline in trophy quality could be genetic, which might not be reversible with a simple change in hunting quota, ultimately jeopardizing the genetic integrity of certain hunted populations and the overall conservation potential of hunting areas if hunters choose to travel to places where sizes of trophies are still attractive (Crosmary et al., 2013). Furthermore, trophy hunting tourism usually selectively harvests older males, whose removal can represent a loss of healthy individuals that are key for reproduction and social cohesion in certain wildlife populations; these demographic changes that can have a direct effect on reducing population size and in some extreme cases, can even cause total reproductive collapse (Milner et al., 2006; Packer et al., 2009; Selier et al., 2013). However, it's important to note that these studies on the demographic changes in populations targeted by trophy hunting tourism have been experimental and not observational. The relationship between harvesting of individuals and certain deleterious demographic side effects is not yet understood. There is a need for research that clarifies the mechanisms of the relationship between population demographics and trophy hunting tourism so that wildlife managers, policy makers, and governments can better understand how the expression of demographic effects change across mating systems, habitats and with population density (Milner et al., 2006).

Trophy hunting tourism can generate income for participating communities, food as game meat, and provide opportunities to develop certain skills that might empower communities to take a more active role in the marketing and management of the partnerships with safari companies (Kgathi and Ngwenya, 2004; Naidoo et al., 2016). The common practice of trophy hunting is for the tourist hunting companies to pay a fee to the state or local government in order to use a tract of land; the client hunters pay for the permits to hunt and shoot certain species. Outside of the cash that is paid to lease concessions of land and pay for the hunting license, there are other benefits from hunting tourism, like skins that are sometimes retrieved and sold by governmental agencies and meat that can be sold or distributed to local people to contribute to their household economies (Baker, 1997; Swatuk, 2005; Mbaiwa, 2012).

Although CBNRM and trophy hunting tourism's contribution to livelihoods might be small in global terms, incomes from these activities can make a significant difference in households. For example, the CAMPFIRE program in Zimbabwe demonstrated that in some areas, dividends surpassed income from agriculture (Bond et al., 2004). However, these benefits do not necessarily mean that communities participating in CBNRM are willing to give up other livelihood options, which utilize the land, in order to accommodate trophy hunting tourism operations. The income from trophy hunting is essential for the management of the area as it is used to support CBNRM operating costs; Naidoo et al 2016 predict that if communities were unable to cover operating costs, the community would likely no longer pursue conservation as a viable land use. They cite the inability of organizations to pay game guards, develop and implement management and monitoring plans, and feel a sense of ownership over natural resources, as potential reasons that could lead to the increased poaching and over-harvesting of

wildlife (Naidoo et al., 2016). Respondents in Naidoo et al's 2016 study consider the reasons for poaching and over-harvesting of wildlife simply as ways to manage the many opportunity costs that are incurred by living adjacent to wildlife rich and regulated areas.

Trophy hunting tourism in sub-Saharan Arica was intended to serve as a mitigation strategy for human wildlife conflict, by placing an economic value on certain species and connecting the communities to the benefits that the tourism generates (Lindsey et al 2013; Mbaiwa, 2015; Naidoo et al., 2016). Despite its ability to generate revenue for communities, the opportunity costs of living near wildlife and being restricted in wildlife management decisions, may not represent enough of a motivation to promote "pro-conservation" behavior within communities.

In the human dimensions of wildlife management literature, there has been emphasis towards using the more encompassing term of "human wildlife interaction," to understand conflict between humans and wildlife, which includes both positive and negative interactions (Nyhus, 2016). This change in rhetoric acknowledges that humans have lived with wildlife for generations (ibid); however, as the human population has exploded and wild habitat continues to be transformed to satisfy the demands of that growth, human-wildlife interactions become more frequent, wildlife populations face greater threats, and regulations and changing social norms force humans to relate, interact, and respond to wildlife in more positive ways (Dickman, 2010). In the context of trophy hunting tourism, a few strategies which have encouraged human-wildlife co-existence include increased usage of fortified kraals to protect livestock at night (Weise et al, 2018) and the implementation of wildlife corridors to accommodate both human and wildlife land use preferences (Adams et al, 2017). Although international organizations and state and local government officials in sub-Saharan Africa have developed a multitude of strategies to

promote positive local human wildlife interactions, trophy hunting tourism remains a controversial option not only at the local and state levels, as aforementioned in this review, but at the international scale, as well.

Trophy hunting tourism faces backlash and public disapproval from the Western conservation community (Macdonald et al., 2016; Batavia et al., 2018). Scrutiny is often for unspecified reasons that have to do with ethics (ibid). International scrutiny against trophy hunting tourism may have contributed to certain national changes in policies, like a ban in the 1970s in Kenya and a ban in 2014 in Botswana (which both cited wildlife population declines as the main incentives). Policy changes that are informed more by international attitude, rather than an understanding of how trophy hunting of wildlife and its benefits and costs are perceived by local communities, might achieve the exact opposite of the intended effect, like a reduction in biodiversity and in the amount of area under wildlife management (di Minin et al., 2016; Naidoo et al 2016; Macdonald et al., 2016). In CBNRM programs that participate in hunting, a majority of the benefits can be delivered by a few species; therefore, a targeted hunting ban on these species or an import ban, could have a negative effect on the recipient country's CBNRM program by undermining CBNRM governance structures and deflating incentives for conservation (Naidoo et al., 2016).

Trophy Hunting Governance Benefits and Challenges

Trophy hunting happens under a diverse range of governance regimes with variable impacts and outcomes (Dickson et al., 2009). The growth of wildlife-based land uses during the past several decades originates from governance reforms that devolve user rights over wildlife to landowners, allowing them to benefit financially from recreational hunting (Bond et al., 2004).

However, the extent of the devolution of rights differs according to land tenure regime, which results in variable trophy hunting practices that shape community-wildlife relationships and wildlife conservation differently. For instance, several Southern African nations, like Namibia, Tanzania, Botswana, and Zambia, have experimented with reforms that facilitate community based natural resource management and accordingly, devolve significant control over wildlife use and benefits to people living adjacent to wildlife on communal lands. Within these CBNRM subscribers, Namibia seems to be the only nation that has been able to fully realize and implement the promises of CBNRM (Nelson et al., 2013; Naidoo et al., 2016). But even with a successful reputation in their execution of CBNRM, Namibian conservancies still harbor grievances about trophy hunting's operation, especially, in regards to benefit distribution and strict regulations of their traditional practices on hunting grounds (Thomsen et al. 2020, in review). In Namibia, hunting is a key component of revenues to community conservancies, whereas in Tanzania, there are weak links between hunting revenue generated on community lands and local communities because communities do not have rights over revenue or hunting concession allocation (ibid).

The various social, ecological and economic impacts of trophy hunting tourism, like inequitable and insufficient revenue distribution and lack of community-initiated development, can be traced back to weaknesses in governance and can undermine the potential of hunting and encourage overharvesting (Nelson et al., 2013; Marshall et al., 2007**)**. These weaknesses stem from governance centralized control over resources that do not promote community participation in decision making over rules of management and result in policies that foster limited ownership, participation, and collective action at the community level (Nelson et al., 2013; di Minin et al., 2016).

Trophy hunting governance also involves major international cooperation and communication because migrating wildlife populations do not conform to political and social boundaries imposed by humans (Duffy, 2006). Maintaining sustainable wildlife populations is one of many environmental issues that have become increasingly subject to transboundary management (ibid).

Despite all the challenges to trophy hunting governance, in situations where the central government devolves revenues and user rights over wildlife and there is a long-term and competitively divided concession system, benefits from hunting are more likely to reach local communities and compensate for wildlife-related costs (Lindsey et al., 2014; di Minin et al., 2016). Lindsey et al 2014 claims that the key governance factors that promote sustainable use and foster positive links between trophy hunting and wildlife (specifically, lion) conservation are 1) revenues from trophy hunting accrue directly to local landholders where hunting takes place; 2) hunting concessions are granted for at least ten years and ideally longer; and 3) hunting concessions are allocated through competitive and transparent bidding process (Lindsey et al 2014). Although these factors are contextual and refer to specific national situations, Lindsey et al suggest that trophy hunting can provide conservation benefits for wildlife where it is well managed and conversely, can pose a significant threat where the governance of the industry is poor (ibid). In general, the literature consistently claims that community support and participation are essential components to making a particular trophy hunting governance regime an effective and well managed conservation tool (Lindsey et al. 2007; Naidoo et al. 2016; Angula et al. 2018).

Table 1.Components of Trophy Hunting Tourism

Ecological Aspects

	Findings	Authors
Benefits	Supports operational costs of CBNRM	Naidoo et al., 2016
	Financial incentives to promote wildlife as a more competitive land use option and discourage other uses of wildlife like poaching and over-harvesting	Baker 1997; di Minin et al., 2016; Naidoo et al., 2016
	Supports small overall tourist population for less environmentally impactful form of tourism than photographic safari tourism	Baker 1997; Leader-Williams & Hutton 2005; di Minin et al., 2016
Challenges	Impact on wildlife is complex and hard to quantify	Milner et al., 2006; Selier et al., 2016
	Excessive quotas do not include the demands for predator control	Packer et al., 2009
	Trait based harvests may jeopardize the genetic integrity of populations and effect population size	Coltman et al., 2003; Crosmary et al., 2013

Socio-Economic Aspects

	Findings	Authors
Benefits	Generate game meat and provide opportunities for skill development	Kgathi 2005; Naidoo et al. 2016
	Creates jobs to work in lodges or as guides and trackers	Naidoo et al. 2016
	Mitigates opportunity costs of living in close proximity with wildlife	Lindsey et al., 2012; Mbaiwa, 2015
Challenges	Not sufficient in addressing human wildlife conflict and could limit community support for conservation	Leader-Williams & Hutton, 2005
	International disapproval influences national hunting governance and undermines local perspectives	Macdonald et al., 2016; Batvia et al., 2018

Governance Aspects

	Findings	Authors
Benefits	Diverse governance regimes provide opportunities to compare and learn from each approach	Dickson et al. 2009
	Generates local support for conservation through devolution of revenues and user rights over wildlife through long term and competitive concession systems	Lindsey et al. 2014, di Minin et al. 2016
Challenges	Transboundary management strategies require cross-scale communication and accountability	Swatuk, 2005; Ribot et al. 2010

	Inequitable and insufficient revenue distribution and lack of community-initiated decisions	Nelson 2013; Fisher et al. 2013;
	Promoting community participation in decision making and encourage ownership at the community level	Nelson et al. 2013; di Minin et al. 2016

Conceptual Framework

Social-Ecological Systems Approach

The growth of trophy hunting tourism in sub-Saharan Africa has expanded the network of actors and interests involved in natural resource governance, amplifying the complexity of the political landscape (Swatuk, 2005; Blaikie, 2006). For local communities in Botswana, hunting tourism had become a key driver of social, economic, and ecological change and a main fixture in the social-ecological system of community-based organizations (CBOs). Socio ecological systems (SES) are systems that include societal (human) and ecological (biophysical) agents that interact with one another in unique ways (Holling, 2001). The social-ecological framework attempts to study how social, political, and economic components inform and are informed by biophysical processes (ibid).

SES can be challenging to define, as they are composed of ecological and societal aspects that operate at various scales. For the sake of this study, the SES system is the trophy hunting system; its physical boundaries included the geographic areas of Sankuyo, Mababe, and CECT trusts and its ecological components include wildlife that are hunted as trophies, such as elephants, buffalo, and leopards. The social system in this study's trophy hunting SES includes the communities that have trophy hunting, specifically CECT, Mababe, and Sankuyo, and encompasses the interactions between their village communities, traditional governments, and CBO governments. Although this study focuses on the community scale of the trophy hunting SES, it is important to acknowledge that these smaller scale processes are nested within socio-

political and ecological structures like, shifts in international approval of trophy hunting and global climate change, that operate at a greater scale and influence the functioning of the local SES. Figure 3 shows an overview of the trophy hunting SES and clarifies which aspects and their interactions are the focuses of this particular study. This depiction is not inclusive of all components of the greater SES at the local scale.

Figure 3. Detailed visual overview of Botswana's Trophy Hunting system as a Social-Ecological System (SES). The overlapping of the circle represents the interactions between the social and ecological aspects that compose the trophy hunting SES.
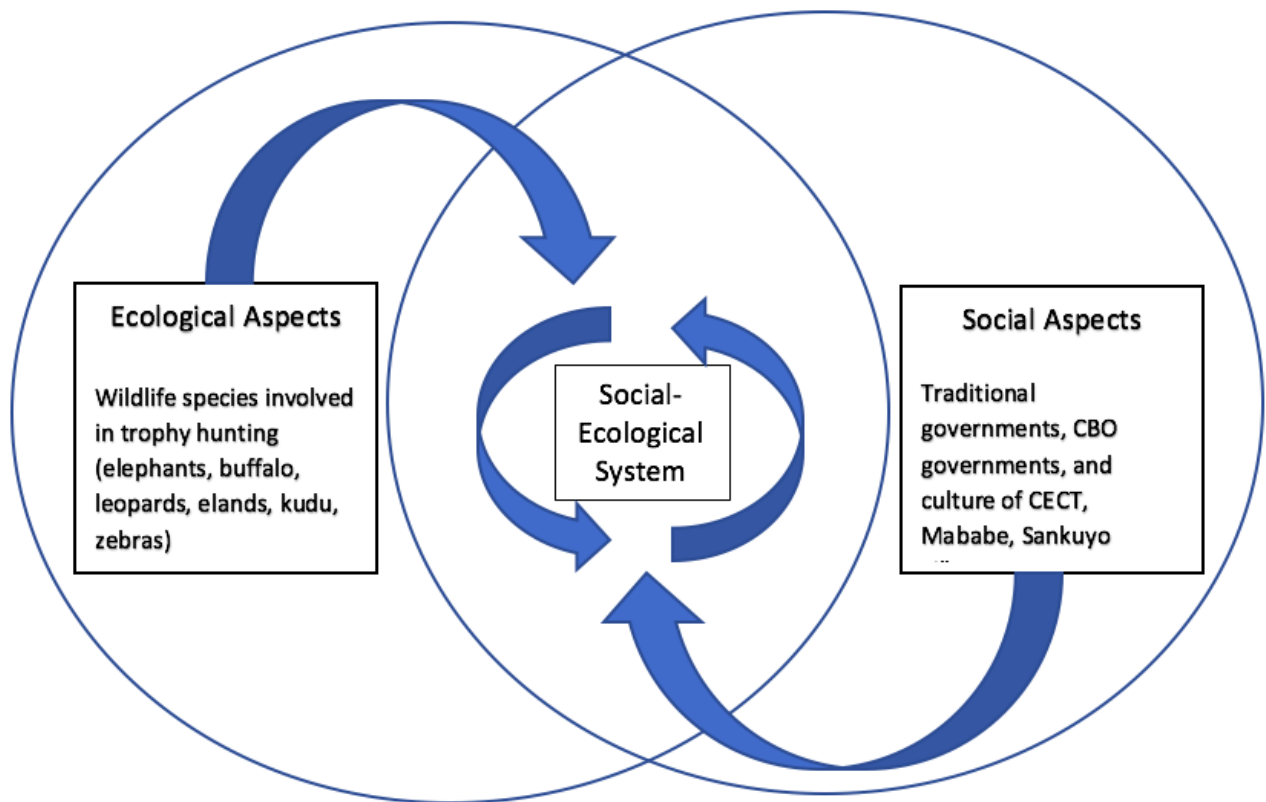
A systems perspective generates a more comprehensive picture of the Trophy hunting system, building on evaluations of previous studies that have focused on socio-economic and ecological impacts of trophy hunting tourism on the participating social-ecological system.

Viewing trophy hunting tourism as a system acknowledges its complexities, moves beyond simple linear and reductionist dynamics, and can ultimately provide a more holistic interpretation of how the Trophy hunting system to inform management and policy of trophy hunting. As complex systems, they have inherent features that are subject to change and uncertainty and will experience "disturbances" which release the system into a period of instability (Gunderson, 2000).

Although disturbances are often associated with negative or undesirable states, the adaptive cycle model and resilience literature generally describes a disturbance as an unusual event that causes a shift in a system from its equilibrium, where the controlling social and ecological variables had become too densely connected to one another (Holling & Gunderson, 2002). A disturbance causes instability in one of these components and triggers the system to re-organize, possibly growing into an overall more resilient and less rigid system (Scheffer et al., 2002). Social-ecological systems can experience external disturbances, such as natural disasters that disrupt social and ecological function (e.g. floods or earthquakes) or internal crises, like a social protest to resolve resource conflict (Chaffin et al., 2014). Although often represented as acute events in the literature, disturbances can also result of interactions between asynchronous cross-scale influences. Cross-scale interactions occur irrespective of time, and thus a system can alter between periods of stability and instability rather than follow a linear trajectory of growth, conservation, disturbance, release, and renewal (ibid).

There is a lot of variation within what might qualify an event as a disturbance and this study is focusing on how Botswana's hunting policies have dictated changes within social-ecological systems. It is critical to acknowledge that there most likely are other cross-scale interactions (especially those of a bio-physical nature), other than state interventions in hunting

practices, that have taken place or are taking place; however, in this study, the 2014 hunting ban and 2019 lifting of the ban are treated as the primary disturbances that initiated change within the Trophy hunting system and more specifically, the SES of Mababe, CECT, and Sankuyo in Northern Botswana. In addition to defining the terms of a "disturbance" for this study, it is necessary to clarify the boundaries of Botswana's trophy hunting system as a social-ecological system.

Adaptive Cycle Model

Holling and Gunderson (2002) proposed the adaptive cycle model to conceptualize how a system changes over time. Figure 6 shows the adaptive cycle model, which can be used to describe the dynamic process of how a system responds to an external disturbance and show the unknowable uncertainty in a system (Holling and Gunderson, 2002). According to adaptive cycle models, systems experience four stages of growth: release, re-organization, remembrance and revolt (Folke, 2006). As the system passes through these sequences, it experiences changes in its internal structural connectedness, resilience, and potential. The adaptive cycle model and resilience theory claim that uncertainty is inherent in systems and thus, systems go through this cycle regularly (Gunderson, 2000; Holling, 2001). Holling (1973) suggested that by studying enough systems through this model, it is possible to organize specific groups of indicators/attributes that help us evaluate the sustainability of a certain system, eventually informing models that will manage these systems from an adaptive intention.
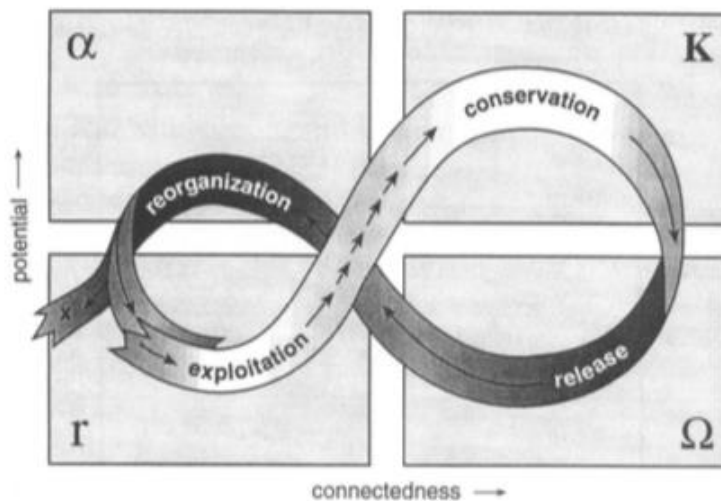
Figure 6. The Adaptive Cycle Model. (Adapted from Holling & Gunderson, 2002).

As a concept, adaptive capacity has been brought into social sciences/transdisciplinary social-ecological research (Gunderson, 2000) and its exact definition varies depending on the context and system (Armitage, 2005). Tompkins & Adger, 2004 defines 'adaptive capacity' as the "…ability of a system to evolve in order to accommodate perturbations or to expand the range of variability within which it can cope" (p. 32). It can also represent the function of social and institutional relationships in a system, demonstrating how capable social actors are of mediating among different interests to overcome negative collective action outcomes and of experimenting and adopting novel solutions (Walker et al., 2002; Armitage, 2005). Resilience is not necessarily a positive attribute because a resilient government can withstand great change, but that government may also be rigid and oppressive (Holling, 1973). Thus, adaptive capacity is often thought of as the positive version of resilience (Gallopín, 2006) and can be thought of as broad participation, encouraging learning and experimentation, maintaining diversity and redundancy, and promoting polycentric governance systems that support local livelihoods (Biggs et al., 2012; Linstadter et al., 2016).

By applying the adaptive cycle model, it's possible to interpret the 2014 hunting ban and the 2019 lifting of the ban as a types of disturbances/stressors to the trophy hunting system, which influence the nature of the relationship between the inherent social and bio-physical processes and resulted in a transformation in the systems' structure, function, identity, and feedbacks (Gunderson, 2000). Figure 4 and 5 show how the adaptive cycle model was applied to study the evolution of trophy hunting policy in Botswana. The beginnings of the trophy hunting tourism industry in the 1980s marks the start of this adaptive cycle model and the growth phase (r) of the trophy hunting system. The system continues to grow as villages conglomerate into CBOs and become financial beneficiaries of commercial wildlife tourism. Trophy hunting tourism becomes a stabilizing feature in Botswana's economic, political, and social landscape, the system transitions into the conservation phase (k), before it is banned in 2014. After the disturbance of the ban, the system passes through the release and reorganization phases of the adaptive cycle model, during which the communities experience and respond to the impacts of the hunting ban.

Figure 4. Chronological application of adaptive cycle model to Botswana's trophy hunting system.
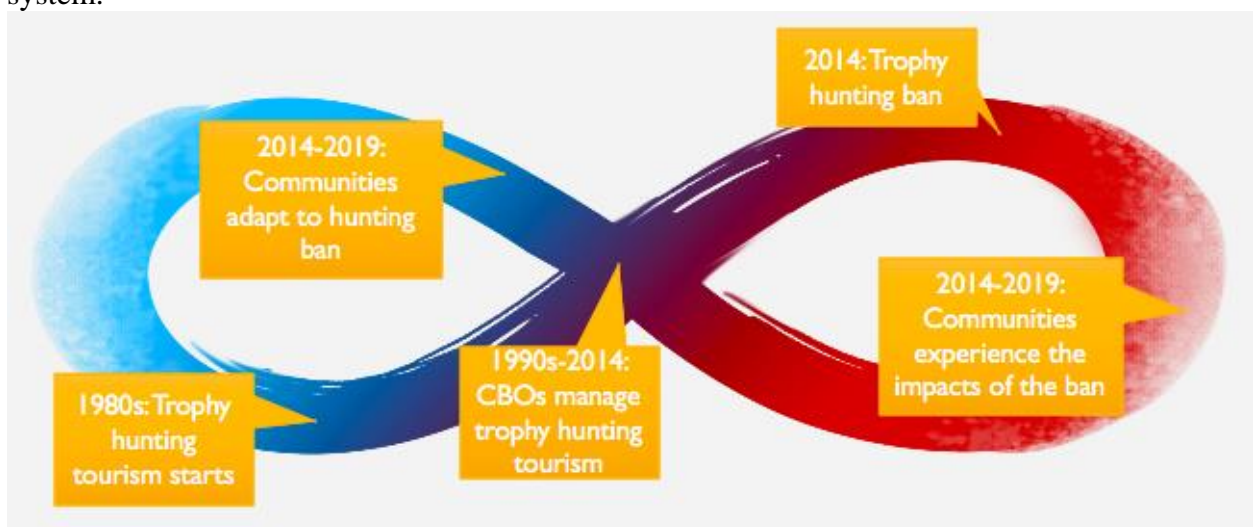
According to the adaptive cycle model, Botswana's trophy hunting system responds to the hunting ban by adapting into a new system without trophy hunting (new r and k phases). This system is disrupted by the lifting of the trophy hunting ban in 2019, ushering the trophy hunting system into new phases of release and reorganization (See Figure 5).

Figure 5. Chronological application of adaptive cycle model to Botswana's trophy hunting system.

There is a lack of research describing how a hunting ban has changed the relationship between communities and wildlife, how communities have adapted to these changes, and what factors facilitate communities' capacity to adapt. By exploring how communities have responded and adapted to a hunting ban, there is an opportunity to gain a better understanding of the nature of the linkages between community livelihoods, wildlife-based tourism, and wildlife conservation to inform trophy hunting governance in the future.

Using the adaptive cycle model within depth qualitative methods provides space for individuals in Botswana's CBOs to share certain factors or strategies that have allowed them to move through the hunting ban. Conversely, there may be certain positive qualities of the communities' social-ecological systems that were lost or enervated due to the ban on trophy hunting tourism. By using the adaptive cycle framework to interpret these findings, the

communities' reserve greater power in imagining what a resilient and adaptive community social-ecological system looks like, rather than using prescribed ideas about what resilience should look like solely based on an ex situ analysis of costs and benefits of trophy hunting tourism.

CHAPTER 3. METHODOLOGY

Research Design

This study employed qualitative research methods to explore the perceptions of local communities on trophy hunting tourism in Northern Botswana and the adaptive capacity of the CBOs after experiencing a ban in trophy hunting and a subsequent lifting of the ban. Specifically, semi-structured interviews, were used to enable the researcher to develop a more in-depth understanding of respondents' experiences, perceptions, and local knowledge (Creswell, 2014). A sample of three CBOs, including seven villages, were selected based on their previous involvement in trophy hunting tourism and their participation in previous scientific studies. CECT, Sankuyo, and Mababe were amongst the earliest villages to participate in community based natural resource management programs and trophy hunting tourism in Botswana (Stone, 2015). Furthermore, it was important to work with organizations that had a long-term ethnographic data set was available. These CBOs have participated in trophy hunting since the late 1990s and early 2000s and have been included in studies dating as far back as 1998, permitting a more holistic understanding of how trophy hunting tourism affected livelihood options and local attitudes towards conservation and tourism development (Mbaiwa, 2004). Sankuyo and Mababe CBO each consist of one village (Sankuyo and Mababe) and the CECT CBO consists of five villages (Mabele, Muchenje, Kavimb, Kachikau, and Parakrungu). Satau, a village in the Chobe Enclave, was excluded from the sample because of challenges with travel logistics.

Study Participants and Data Collection

A sample of participants were selected using a stratified and systematic sampling procedure (Noy, 2006), based on the geographic and cultural delineation of social groups represented in communities. Key informants were identified through a review of the literature and conversations with experts who have a track record of doing research with the CBOs. A snowball sampling method was used in order to select other participants. Interviews were conducted with community members, CBO staff, board members, and community leaders (village chiefs, village development committee chairpersons, farmers' association chairpersons, lodge managers, tourism and wildlife district officers) that have been directly or indirectly involved with trophy hunting tourism in the CBOs. Interviews were also conducted with local leaders of nongovernmental organizations that support wildlife conservation, governmental officials responsible for wildlife conservation and trophy hunting, and private sector leaders involved in trophy hunting operations in the region.

Out of the 71 interviews, the 54 interviews that were conducted with community members were selected for analysis. This decision was made in order to preserve the community perspective in the findings and to better comply with thesis deadlines. However, it is possible to analyze the remaining 17 interviews that took place with non-community members for another publication in the future. Table 2 shows a breakdown of the participants by stakeholder role according to CBO. Table 3 provides a breakdown of characteristics and representation of study participants. A total of 54 interviews were conducted across the three CBOs. Gender and a rough estimate of age were recorded during the interviews.

Table 2. Stakeholder Role of In-depth Interviews with CBOs. Excludes 17 non-CBO interviews.

	Sankuyo	*Mababe*	*CECT*
Local Economic Venture Employee	0	2	1
Private Tourism Company Employee	1	1	6
Former Hunting Employee	0	0	5
Village Development Committee	2	2	3
Kgosi	1	0	1
Villager	8	3	3
Commercial Farmer	0	0	2
Non-Governmental Organization	0	0	1
Trust Leaders (Managers and Board of Trustees)	2	4	3
Community Escort Guide	2	1	0

Table 3. Gender, Age and Stakeholder Group of Study Participants of In-depth Interviews.

Gender	Number of Participants
Female	18
Male	32
Mixed	4
Age	
Youth	19
Middle Age	24
Elders	11
Stakeholder Group	
Sankuyo Community Trust	16
Mababe Community Trust	13
Chobe Enclave Community Trust	25
Tourism sector	7
NGO	5
Government officials	5

The interview guide was developed using Whitney et al. 2017's framework for identifying adaptive capacity in social-ecological systems. Literature on Botswana's Trophy hunting system and recent policy changes helped inform the specifics of the questions. Topics of the interviews for the community members included: the perceived impacts of trophy hunting tourism and a ban on hunting on livelihoods and relations with wildlife, how certain decisions are made regarding trophy hunting governance, and how CBOs responded to and grew in the face of the hunting ban. Topics of the interviews for other stakeholder groups included: the perceived impacts of trophy hunting tourism and a hunting ban on communities' livelihoods and relations with wildlife, CBOs' roles in trophy hunting governance, and how trophy hunting

governance could be changed to improve the relationship between wildlife conservation and community development. In depth interviews were conducted with the Interview Guide (see Appendix 2), which was revised twice (once after the first two short interviews) and was slightly adjusted depending on the participant main identifying stakeholder group.

When the participant did not speak English, data collection was conducted with translators, who were members of the village. All interviews were recorded and transcribed from the recordings. Casual conversations with residents were captured in field notes to be analyzed using the same method. The method of constant comparison ensures that data are constantly analyzed and coded. During this step of the process, preliminary thoughts and possible codes were recorded, in the form of memos (Charmaz, 2014).

Data Analysis

Interviews were transcribed from audio-recordings using a qualitative data analysis program (NVivo) to rigorously and systematically identify codes or thematic categories of the interview data. Transcripts were closely analyzed and compared to one another. The coding techniques used during the analysis can be described as "classifying or categorizing individual pieces of data coupled with some kind of retrieval system" (Babbie, 2012, p. 376).

The codes were based off of recurring and broader themes that related to the research objective and research questions. The conceptual framework of the adaptive cycle model informed predetermined codes and space was also provided for the emergence of codes that were not predetermined and originated from recurring themes in the data. The first round of coding involved assigning words, phrases, and interview excerpts to the broad categories, then, axial coding was used to categorize themes from the interviews into sub-codes (Allen, 2017). When codes had a substantial number of references, an additional round of coding was conducted in

order to determine sub-codes. A codebook was developed to keep track of code categories, which were given dimensions in order to help consistently and systematically code all transcripts (Denzin & Lincoln, 2011). Dr. Thomsen and I also spent several sessions discussing data themes; during these meetings, data and themes were reorganized in order to assure themes and concepts of analysis were similar and consistent (Babbie, 2016). Lastly, to support intercoder reliability and limit the biases from one researcher, multiple colleagues were enlisted to review the transcripts, produce their own codes, and discuss any differences that emerged in the coding process (Huberman & Miles, 2002). One limitation to the data analysis was the inability to cross-check the themes, linkages, and trends that emerged from the data with participants to assure accuracy and reliability.

CHAPTER 4. THE GROWTH OF A TROPHY HUNTING SYSTEM & THE BAN: AN EXTERNAL DISTURBANCE

The R and K Phases: Growth of a Trophy hunting Tourism System [1986-2013]

The relationship between people and wildlife in Botswana has experienced many changes; one of the systematic characteristics that defines this relationship is the Trophy hunting system. The adaptive cycle is a useful model to describe and track social-ecological systems through dynamic changes (Holling & Gunderson, 2001; Pelling & Manuel-Navarrete, 2011). The model frames systems according to four major periods of institutional stability, challenge, crisis, and reorganization, with the chance of social systems becoming frozen within any of those stages (ibid). This chapter focuses on the "growth" (r) and "conservation" (k) phases of the Trophy hunting system in Northern Botswana. Figure 7 shows the dates and key aspects of these phases. The growth (r) phase is the first phase of the adaptive cycle model and the social structures and components that define this system begin to take shape (Figure 7). Throughout this phase, the system is resilient and less stable, so different paths forward remain possible (Scheffer et al., 2002). During, the conservation (k) phase, dominant structures and social agency begin to build, align, and reinforce one another and the system enters a state of highly institutionalized stability (Figure 7). As a system transitions from the r phase into the k phase, it begins to accumulate assets (whether that be natural or economic capital) that become more connected to one another and the system loses resilience (ibid). The results include participants' perceptions of the ecological, economic, and sociocultural impacts of this system.

Adaptive Cycle

Stabilization phase [2002-2013]
- Increase in communal funds
- Greater employment opportunities
- Villages adopt protectionist conservation ethic
- Decrease in illegal wildlife activity
- Greater tolerance of wildlife

External Disturbance: The Hunting Ban [2014]
- Decrease in wildlife populations
- International anti-hunting influence
- President's personal politics

Exploitation phase [1986-2002]
- Wildlife tourism becomes an official activity of Botswana
- New land tenure system introduced
- Citizen hunting more tightly regulated
- Commercialization of wildlife is prioritized
- CBOS are formed and begin to accumulate monetary wealth and benefits from hunts

Figure 7. Key Aspects of the Growth Phase, Stabilization Phase, and Ban Disturbance of the Botswana Trophy hunting system.

Most participants discussed the ecological impacts of hunting tourism in two main ways: (1) the mitigation of human wildlife conflicts and (2) protection of wildlife from illegal harvesting. Alternatively, a few participants shared a relationship between hunting tourism and poaching activity, claiming that the industry actually fueled and promoted the demand for the illegal wildlife trade.

Mitigation of Human-Wildlife Conflicts

Most participants reflected positively on hunting tourism's capacity to induce fear in wildlife and keep them away from the villages to preserve their livelihoods and general safety. One person explained: "Animals are afraid of guns [and] will not come around." Another individual shared that this relationship was especially evident with elephants, saying that elephants know that bullets are "…falling this side. So they run away from this." One participant shared that trophy hunting was used as a wildlife management strategy: "…in this area, we will hunt close to the village. By doing that, we know elephants would move out. They would still come, but not in such a big number because they are clever."

Some participants felt the hunting outfits specifically targeted the animals that were causing conflict in the villages. This concept of the hunter providing protection of the village is expressed by an interviewee as:

> "… if you check that stats of how many people were killed in the years that hunting was being done, the numbers were very minimal because elephants were pushed away. Remember, the hunters will patrol behind the village where you find the herds of elephants. For example, if you find a breeding herd of elephants, you scare it and push it back. But if you find a bull elephant with the right tusks, you shoot him, and if he is in a group, that group will move out."

A few participants deviated from the popular opinion that hunting tourism induced fear in wildlife, and rather, that hunting caused wildlife to become more aggressive. Most people believed that hunting and provoking aggression in wildlife was still another effective strategy to mitigate human wildlife interactions. One individual shared that when animals are hunted, "…they don't come back…they don't go through that area, they use a different area, because they have learned that they have been shot. There is a belief that when you shoot animals, they become more aggressive. Obviously, they have to do that, but they become aggressive and then they get pushed out." Sometimes the aggressive response of wildlife to hunting can be a result of the malpractice of the hunter as one participant shared: "Not everybody who hunts has the skills. Sometimes they don't do it direct or in a good way."

Others did not share an exact mechanism for how hunting helped control wildlife and reduce human-wildlife conflict, but knew this relationship to be true. With hunting tourism, participants viewed wildlife as "controlled," because the hunts managed to reduce human wildlife interaction; Hunting "reduced the number of animals- the animals [that] used to roam around the village" and "…minimize[d] population[s] in the area." Villagers felt "…we were safe because the number of animals were controlled…there were no more animals roaming around the village."

Protection of Wildlife and Relationship with Poaching

There were mixed responses amongst participants regarding the relationship between trophy hunting tourism and wildlife protection. Most participants shared that trophy hunting tourism helped reduce the illegal harvest and trade of wildlife. Trophy hunting tourism catalyzed the creation of a group of local community escort guides, whom were tasked with multiple responsibilities. They ensured that hunting operations upheld quota and ethical regulations,

monitored and recorded wildlife population abundance estimates, reported human wildlife incidents, and patrolled the villages' concessions for illegal tourist and poaching activity.

One individual described the guides' role as "recording all activities that they come across within our concession area, should it be a lion coming to the village killing either a goat or….when they found that some people, they suspect that had been poaching…in the area, they report with the Department of Wildlife." Sometimes, the escort guides were the first to observe and record any poaching incident, as one individual said "…we were 99.9% witnessing the poaching event before any DWNP and other military." One participant shared that if a tourist hunter encountered an animal that was not included in their assigned quota and an escort guide was not present during that hunt, that animal may be killed illegally: "…and those people [trophy hunters]…find an elephant here, they kill it. But if an escort is there, this animal cannot be killed."

In addition to monitoring potential illegal activity of outsiders, the community escort guides also police the village for any signs of law-breaking, a role that was revealed in one individual's shares:

> "When the CBNRM program came, the main issue was trying to solve this issue of human wildlife conflict and also create conservation and create employment… So in the community we had the attitude change…We kill with control and then we get benefits that are coming directly to the village. So the community has to set community escort guides and that is the group that are patrolling the area to see if there is any illegal activity. We can even report their own community member to the Wildlife [Authority] or to the police."

One of the benefits of trophy hunting tourism is that it supported local conservation through an increased willingness to report any localized illegal wildlife activity. One participant reinforced this point, saying that:

> "The local people- when they are up in the forest…they are able to report to law enforcers [and say] 'we see some tracks here that we suspect. We found an elephant here

that is dead, but it looks like it has bullet holes. We see here that there is a carcass, but it looks like it was skinned and not eaten by carnivores.' They have been doing that."

However, it is notable to mention that these statements about the reduction of local illegal harvesting came from local government leaders and not individuals in the community, which suggests that these sentiments may not be as widespread at a community level. One individual directly refuted the assumption that locals even poach by saying, "Sankuyo people do not do poaching; poaching is mostly done by those people who are in power. Mostly based on trophy hunting, the people in power, they can hire a person…They can come and kill an elephant because they know their channel of communication."

Participants shared how trophy hunting tourism acted as a de facto anti-poaching unit whose physical presence in the bush was effective at deterring illegal harvesting of wildlife. For instance, one participant expressed that, "…[the poachers] realize- no in this area there is hunting...How will you poach when everyone is looking at you?" Additionally, hunters provide monitoring of remote areas that are more vulnerable to poaching: "…poaching happens in areas where they don't have any activity. Like very inaccessible areas, where photographic guys don't reach. But we as hunters, we reach those areas…where poaching will take place." However, this belief of hunting operations as benevolent and essential overseers of wildlife is challenged by others' perceptions of hunting malpractice.

When participants spoke of any negative ecological impacts of hunting tourism, they voiced concern about outfits exceeding quotas and the different conservation ethic when hunting is done for "business" and not "consumption." Within these sparse voices, the major concern was how hunting tourism might have led to a decrease in wildlife species. Only one participant shared that "the numbers were dwindling." Another participant who echoed this concern qualified it by saying there was a decrease in some wildlife species "…but not elephants.

Elephants were still in large numbers." Alternatively, one participant shared that the arrival of hunting tourism made it more difficult to detect illegal activity in the landscape: "Maybe they were competing because they know that there is hunting. Maybe some people here, they hear the sound of the gun and say maybe they are hunters even though they are poaching."

Hunting tourism malpractice could manifest as hunting too many animals, hunting the wrong individuals of the species, or hunting a different species, all of which locals recognize as having negative implications for the populations. One participant said that "…There is a procedure whereby you have to shoot the old, but some [of the trophy hunters] don't want to shoot the old. They will shoot even the young ones or the females who are going to give birth." In addition, locals may find a way to hunt an animal that is not included in their assigned quota. As one participant elaborated "…sometimes we just open hunting for the birds. But these guys [locals] don't hunt the birds, like guinea fowl. These guys are hunting the springbok and the antelope. When they go to Wildlife [DWNP], they just want the permit for the birds. But they don't shoot the birds. They just shoot the antelope."

A few individuals expressed that hunting tourism fueled a market for the illegal harvest of wildlife. One participant shared that with "…hunting comes very serious repercussions- including poaching, including trafficking." Another individual suggested that non-Batswana guides are more likely to get involved in illegal trade schemes and are also less likely to report illegal activity to the authorities: "When you take Batswana only, it's good. Because Batswana cannot go and collect and do anything. I trust Batswana." One person shared that any individual who works in hunting tourism, Motswana or not, is susceptible to getting lured into the illegal trade market. He shared that anyone working in the hunting operations do have a unique understanding of the routine movements of anti-poaching units, making it easier for them to execute inconspicuous illegal

operations. For example, "I will know that the soldiers are stopping this side, wildlife is stopping this side, I can use the way to shoot. To be a poacher, it's not the people who don't understand that bush- to be a poacher is the one who knows that bush, they are the one who is going to destroy that things." These statements challenge, albeit weakly (due to their sparse representation within the greater sample size), others' more prominent claims that hunting tourism solely contributes to monitoring and protecting wildlife.

Economic Impacts

The arrival of trophy hunting tourism had mostly positive economic impacts by providing jobs, supporting extant livelihoods, and creating a substantial source of income for the communities. There are also some challenges within these changes associated with the type of benefits accrued and their distribution within the villages and amongst stakeholders.

<u>Employment</u>

More than half of the participants shared that hunting tourism generated positive employment opportunities for members of the communities. Interviewees shared that "…people were benefitting from hunting…because there [were] some businesses with the hunting…And the joint venture hired a large percentage of the village." One individual who worked as an escort guide reflected on self-sufficiency and pride that came with his job: "Because I was working and having something at the end of the day, I was helping myself." Additionally, locals felt these jobs with hunting outfits were well paid: "People were being paid extra money than in photographic." Locals became "regular" hires for the hunting outfits, creating the sense of job security within the villages: "…And after six months, when the hunting season starts, they will come back and rehire those people again. That is one of the advantages of hunting that we saw when it comes to sustainable employment. And it paid better."

Hunting tourism provided jobs through the outfits in skinning, tracking, serving, cooking, guarding, and guiding. Participants felt that these jobs properly aligned with their skillsets and provided equal opportunities: "In hunting, all households, they were equal. People were just taken equal." Another individual further endorsed hunting tourism for its economic impacts because: "…the hunting department was employing more employees- you have the experience and the qualifications- it was taking more people, those who are not educated and everybody was very happy. That's why it was good."

Despite these benefits, participants also recognized that trophy hunting failed to provide enough jobs and sometimes chose to hire people from beyond the communities. An individual revealed that: "The hunting camp was employing only …12 people and it was seasonal." And another person shared that many companies were outsourcing hunting jobs to foreigners: "What I hated most about hunting was that most of the companies here were outside professional hunters, foreigners. They were not locals." This person emphasized that hunting's "high" employment statistics could have actually been a result of foreign hires: "They were mainly foreigners, which means that they increased unemployment in Botswana. Because if Batswana were given the opportunity to conduct hunting, then there would be more employment."

In regards to professional development, participants mentioned that there were few ways to accelerate and advance into other higher paying positions with greater responsibilities. One individual spoke of the requirements to become a professional hunting guide, comparing the process to the arduous one that a photographic safari guide endures: "…you have to know the animal tracks, the direction they are traveling- all this information that the hunter needs is the same that the photographic guide will use. The only difference is the use of weapon." However, costs for certifications were an inhibiting factor as one local said, "Locals were only hired mainly

as trackers. But the training for you to have a PH [professional hunter] license, you have to go

through the DWNP, which means that most of the Batswana don't have that access to train

because they don't have money to do the training."

Community Benefits

        Individuals expressed how income from hunting tourism provided benefits to the entire

community. One individual explained that before CBNRM's creation of trusts, people used to

buy licenses from the government to hunt in a "raffle system." However, this system was

ineffective because people were over-hunting and "…arguing about not getting their license." He

shared that the government resolved these issues by starting CBNRM and the trusts "…so that

everyone could benefit." Another individual shared that in the old system "….not everyone was

benefitting…[the CBNRM policy] was geared towards spreading the money or the benefits

equally...when the money is given to a trust ,that money is divided amongst the villages." This

distribution of funds from hunting tourism engendered a feeling of equity within the villages:

"….the lifestyle was much better because everyone had income."

        Interviewees described how the funding from hunting supported opportunities for

community projects. One person explained this process: "When there was hunting, this trust got

money from hunting and then there is a committee [VDC] that runs the development for the

village. That committee asks for the money from the trust to make some developments for the

village." Some of these developments have brought amenities like a health clinic or improved

water access, reducing their need to travel distances and decreasing interactions with wildlife.

        With trophy hunting, many participants grew to appreciate wildlife as the harbingers of

income into their communities, whether that be through hunting quotas or land rentals. One

individual said that receiving these monetary benefits from wildlife has become somewhat of a

right, in exchange for the sacrifices they have made to their livelihoods: "We have spent money on the protection of animals for the last three decades. The country should begin to reap where it has sowed. Tourism as the second biggest foreign currency after mining will even become bigger and better and better with hunting."

Collective funds from trophy hunting tourism were used to help diversify the economy and provide professional opportunities. One participant, who lived in CECT, shared that their trust "…managed to build Ngoma Safari Lodge. That was an initiative of the CECT because of the proceeds of hunting." In addition, if the trust had more income, they were able to "employ more kids to the campsites, to look after the campsite, to look after the clients" and also "…send people to school to training institutions."

Few participants expressed negative aspects of how the funds were distributed from hunting. For example, the income created an even greater economic divide between the elite and others in the communities: "…those who say that the hunting was good…are the ones that got something. Rich people are getting something [from hunting]- they are using the poor people." One person referred to economic inequity between the communities and the hunting outfits, claiming that "…most of the owners of those hunting safaris had banks outside of Botswana. So, they are paying less tax here and benefitting more for their countries." Withstanding these individuals, most of the comments about the collective economic benefits of trophy hunting tourism were positive.

Meat from Hunting

During hunting tourism, there was an increased sense of food security within the community through the distribution of meat. Individuals stated "We were eating a lot of food" and "I can say maybe that I just like hunting. It can just feed the community." When citizens

could no longer traditionally hunt, hunting outfits were tasked with the responsibility of providing meat for the villages. One person described the benefit of meat to the community: "When it is hunting season, those communities living in the wildlife areas normally have improved nutrition. The carcass of the slaughtered animals provide so much meat proteins. They are bread and butter for the communities affected for the high-end tourism." Meat was something that everyone could benefit from: "Hunting [tourism] was very good. When they killed the animal, that animal was brought to the community. Those who were destitute and other people who could not give themselves anything, they were just given the meat for themselves to cook."

One person remarked on the irony of only being able to eat elephant meat if it is killed by a foreign hunter instead of traditional hunting. They expressed gratitude and then dependence: "It is not allowed for you- only yourself to kill an elephant for survival, as a person in the village to kill an elephant for survival. But during hunting time, when guests come and kill the elephant, then they will take it to the community for survival meat. It benefitted us more than I can believe." According to one individual, the provision of meat supports their belief that the communities are the true owners and stewards of the wildlife: "…these white people- they take the skin of the elephant and then me, myself- as the owner of the elephant- they give me the meat."

Governance

CBNRM and the trusts prioritized leadership skills that differed to the traditional government. According to a few participants, these new skills included reading, writing, English fluency, and business acumen. One interviewee spoke of this transition as a "problem" for their village:

"…They [the government] was just sitting and tell us we want people, people who can read and write…We have one madala- he was an old man- he didn't know about trade, he didn't know about write. He was the one, he was a chairperson when our trust was starting…he tried to pick up our community, so our community was having money by that time. But…the man said, we want the people [who] can read and write, then."

Even amongst these institutional changes, some traditional political structures remained intact. For example, the kgotla, which the official meeting area for the villages, has served and continues to serve as a mechanism for public assembly and deliberation of new ideas. The Kgosi may not retain the sole power to manage wildlife, but they still play a role in local governance.

Inter-governmental Collaboration
Based on participants' reflections regarding the efficacy of the CBO, it is difficult to deduce whether or not this change from traditional structures to CBNRM achieved the goal of involving communities in natural resource management. Several participants embraced the CBO and CBNRM, expressing improved collaboration between the communities and the state. After the institution of trophy hunting tourism and the trusts, the state government and communities began to establish hunting quotas together. One person shared how this collaboration is now considered essential to the proper management of wildlife: "…here in Botswana, for decisions [on quotas] to be made, it is made by the government. They will decide that motion and then it will be done in the Parliament whereby there will be a debate, then after that, it is said that the whole nation will make an agreement on that issue. We cannot make that decision on our own." To mediate potential power imbalances, one former BOT member explained that although "…the [federal] government is the mother board," there are members of the government departments that serve on an expert "Technical Advisory Committee (TAC)" that works directly with the BOT to negotiate mutually beneficial agreements with tendering safari companies.

Economic benefits from CBNRM agreements with the trophy hunting and photo tourism companies provided traditional village bodies with a renewed sense of responsibility in governance. For instance, the Village Development Committee, which is an elected group of villagers that "protect[s] the life of the community or the life of the people [in the village].… the ones who are assessing what people need and their living style" was able to be more proactive in village development projects with the increased influx of CBNRM funds. In some cases, this increased productivity translated into greater collaboration and communication with the state government. One person claimed, "When the government brings the development, they go to the VDC office. They talk about developing the village, how people live in the village, what they need, and what they need." When asked if they thought if the collaboration between the VDC, the state, and the CBO was effective, one individual responded affirmatively,

> "For now people are happy with it, because each village and community decide how they want to use the money. It is not any individual who is benefitting, but the community at large. The VDC will call for a committee meeting today and will give them the report that you have this amount at [X]. Each time they give the reports, that money will stay at [X]. Every time that the community wants to use that money, they will write a letter to get that money…"

Most participants spoke fondly of the CBO's community escort guides, which became a key part in maintaining the villages' presence in and connection to the land and wildlife. The guides were responsible for "taking care of the environment", doing "animal counts," and "making sure there is no poaching." These communities utilized the community escort guides as a way to reduce wildlife conflict: "…whereby they would suspect that the lion had been coming to the village during the night, they alert the community members… at the same time, doing some night patrol around the village, so that if any chance they can see the lion, just try to scare it away from the village."

Sociocultural Impacts

Trophy hunting tourism prompted significant sociocultural change within the communities, such as a rapid dissolution of cultural identity founded in hunting traditions and the problematic integration of subsistence and market-oriented perceptions of wildlife**.**

A Different Conservation Ethic

Hunting tourism and CBNRM changed local communities' relationship with the natural world. One individual shared that they "…grew up being encouraged to do conservation at school…some years back there used to be no controlled hunting, but people were hunters and gatherers. But when this CBNRM policy came, it changed my mind. When I look at an animal, I think of conservation and not killing. Even I will teach my kids that now. You must conserve this. They mean something important to our country." This repackaging of subsistence hunting for meat as "anti-conservation" was contradictory to the communities' traditional conservation ethic. An elder and member of the San tribe in Mababe described this change as:

> "They [the communities] used to manage hunting during the [traditional] hunting. People used to know which kind of wild animals they have to eat so that it cannot get eliminated or get finished. They have that experience with how to manage their lives with eating this beast. The government now has stopped this hunting for the Bushmen now. The Bushpeople now are not living their good life."

Participants described how practicing their traditional hunting skills was a way to commune with and promote healthy ecosystems. One person shared: "Hunting was for us, was very important for our land. Because we got a lot of animals in the land. Rich of animals." Hunting was a way for villagers to embody the vision that they have for conservation and sustainability as described by one interviewee: "Our ancestors and grandparents valued, respected wildlife…they hunted for future use." The arrival of hunting tourism shifted the

responsibility of the villages as stewards of wildlife and the land to the state government and in some cases, to the hunting operations.

The implementation of CBNRM was intended to empower rural communities in natural resource management and although it certainly has its challenges, most people recognize its symbolism of reclamation and its collaborative intentions. One individual perceived trophy hunting tourism and CBRNM as a way to build on the communities' management knowledge and skills: "CBNRM is just a product of tomorrow. For it to come is because our natural resources were visible to the government. Then they thought to improve upon our traditional skills of taking care of our resources."

Greater Tolerance of Wildlife

One individual shared that tourism's strong monetary value of natural resources has changed the meaning of their village, claiming that there is "…no more a community village- it is a community business area…everything you see is money to us. The tree you see is money. Everything you see, you see it is money, because it is a business area." Another participant perceived this capitalist appropriation of wildlife to be problematic when superimposed with the subsistence conservation ethic of the villages: "if I am given the chance to kill an impala, I will sell the whole impala and because where I live, maybe there is nothing because I sold the whole impala, so I am forced to go and hunt again. If you kill animals for selling, it causes more damage than killing animals for consumption." This person is suggesting that the market-oriented perception of wildlife may ultimately place extra pressure on wildlife.

The practice of hunting tourism generated perceptions of wildlife as being harbingers of benefits and in turn, communities became more comfortable accepting certain costs from wildlife, like crop raiding and fence destruction. Trophy hunting promoted a sense of ownership

and greater tolerance for wildlife:

> "…take for example, you know that an elephant is destroying your field. You know we have also something, in return, maybe in the form of something like a house built for you- not directly from that particular elephant, but as proceedings from the elephant being hunted. So I think that hunting helped our community alter their perceptions in a right position, even if maybe they say, an elephant destroyed my house today- I might not get compensated directly by the Wildlife department- but maybe in a way, Botswana there will be hunting somewhere, an elephant will be hunted there. Hunting helped bring a good perspective to the community members in regard to that."

When asked if there were any negative aspects about trophy hunting, some individuals could not think of any examples, asserting that "there were no negative things" and "no challenges." People reiterated that "life was much better", "hunting was good for us," and "everything" was better. Despite this support, in the mid 2010s, a state mandate calling for a nation-wide hunting ban served as a disruption to the Trophy hunting system and the old ways of functioning within the system were no longer viable.

As most of the reflections on the hunting system focus on the 'k' phase and are positive, most negative feedback are attributed to CBNRM and the photo tourism industry. When referring to negative changes, like the dissolution of cultural identity founded in hunting traditions and local or state capture of benefits, many participants did not blame trophy hunting tourism. Instead, they associated these changes with the more encompassing structure of CBNRM which facilitated hunting. For example, some people took issue with the integration of the traditional and the state sponsored CBO governments, pointing out problematic power dynamics and divisiveness within the communities regarding their level of trust for the CBO governments. Another individual claimed that the gradual dispossession of his tribe's traditional lands "started around the same time as the trust thing started." Both of these critiques focus on

CBNRM and do not acknowledge the fundamental role that trophy hunting tourism played in catalyzing CBNRM (Campbell, 1973).

The Ban: An External Disturbance [2014]

In the fall of 2012, the former President of Botswana, Lieutenant General Ian Khama, announced at a public meeting in Maun, that no hunting licenses would be issued after 2013 and that all hunting in Botswana would be banned by 2014 (Boyes, 2012). The Botswana government cited a decline in wildlife as the main reason for the ban (Mbaiwa, 2015; Blackie, 2019), which covered both subsistence and commercial practices (excluding those done on privately held, independent game farms, which are found in Western Botswana) (LaRocco, 2016). Upon announcing this decision, the government referenced a 2011 study conducted by scientist leaders of the international non-profit organization, Elephants Without Borders, which attributed this decline in wildlife populations to hunting, poaching, human encroachment, habitat fragmentation, drought, and veldt fires (Chase, 2011).

The government initiated workshops to discuss potential impacts of a moratorium on hunting. The exact agenda and types of discussions that took place throughout these workshops is unclear, but it is notable that most respondents in this study did not acknowledge that the workshops took place. Some participants involved in these sessions (i.e. academics, communities living in wildlife areas, conservationists, scientists, the Botswana Wildlife Management Association, and NGOs) opposed the hunting ban. In addition to local and regional opposition, there is marginal scientific evidence directly linking Botswana's trophy hunting industry to declines in wildlife populations (Mbaiwa, 2015). However, the government followed through with the ban, stating that the issuance of hunting licenses had encouraged poaching and the

declines in wildlife, while inhibiting the sustained growth in the photo tourism industry (Boyes, 2012).

In the adaptive cycle model, the 2014 hunting ban serves as a disturbance to Botswana's Trophy hunting system. The impacts of the ban across the nation, especially on the CBNRM regime, are complex and unequal. The ban placed novel external pressure on the dominant institutions that had formed to support the trophy hunting industry, rural development, and wildlife conservation. The Trophy hunting system entered a phase of "release" (Ω) whereby certain resources and capital that had reinforced those dominant institutions "scattered" (Holling & Gunderson, 2001; Sheffer et al., 2002). During this 'Ω' phase, the system experienced profound stress; the rigidity that had allowed the system to institutionalize dissipates, creating space for internal and latent diverse components to take root and express themselves in the next phase of "reorganization" (α).

Wildlife Population Estimates
Community members attributed the government's rationale for the hunting ban to declining wildlife populations. For example, several respondents echoed one person's belief that: "the reason that prompted the government to do the hunting ban was because the numbers were dwindling. The numbers were going down." Another individual commented: "it didn't take long for government to reverse hunting and say that hunting should stop because conservationists thought number of animals going down and needed to allow wildlife to regrow." Some interviewees shared the concern about changing wildlife numbers as: "I think the hunting was dropped because the numbers of wild animals. It seems like it was dropping down." Similarly, there was sentiment that the government was assessing the situation: "It was another move which the government saw fit- let's stop the hunting for now, let's check these numbers. Let's allow

them to multiply." One individual reflected on personal observations of wildlife declines as "The government stopped the hunting because they said that the number of animals are going down, like lions…because there was a shortage of lions in our area." It is important to note that lion hunting was banned in 2001 and lions were not amongst the animals included in hunting tourism before the 2014 ban.

When asked about the reasons for the ban, many respondents indicated that they were not well informed about the decision. One individual shared, "We were just told [the] hunting ban [is] in place because the numbers of animals have gone down. And which animals, how and why, was it hunting? Some of us are not very well informed about that." Another participant felt that the investigations did not properly address the specific ecological and social aspects of their village: "you can't use the same decision that you can decide for Maun to [X] because they are two different places." This person indicated that a decline in wildlife may not have been a universal problem; therefore, a universal hunting ban may not have been the most effective solution.

Others expressed distrust with population data that have been used to inform the decision for the hunting ban. For instance, one person shared that the experience of the animals on the ground did not match the science that they believed informed the ban: "…scientists are saying the number of animals are going down, while on the ground, it shows that the number of animals are almost growing daily. We used to have elephants in the northern and northeastern sides of the country, but as we speak, we have elephants as far as the southern part. Back in the day, it was very rare to find an elephant near the capital city." One participant indicated that many species being hunted, like elephants and buffaloes, still have healthy populations: "Most of the animals that were interested by the hunters were elephants, buffaloes, which according to that research,

we had still had good numbers. Yes, there wasn't any clear reason why simply hunting has to stop."

However, when explaining how and why the ban happened, there were also respondents whom called into question the raw data in the research. For example, one interviewee expressed the connection to personal interests:

> "We have elephants- which in Botswana, they say that we have around 150,000 to 200,000. I'm not sure…the numbers keep changing. According to your interests, I can put the number to my interests. Because the researcher, I think put the number to 100,000 who advises the president and said that the number of elephants was reducing and things like that. So that is how the decision came to be."

Lack of Community Consultation

In addition to declining wildlife numbers, participants associated the hunting ban with lack of consultation between the state government and the local communities, which may explain why there was such diversity in perceptions of the government's rationale for banning hunting. The majority of individuals felt that the communities were excluded and not properly consulted. People shared their shock with the news as: "And it never came in a proper way in 'how is hunting? Should we stop it?' so we can throw ideas. It just came from the Parliament saying there is no hunting anymore. So what can we do? Just accept this situation." Another participant shared how quickly the news of the ban unfolded: "When the ban was announced, it was just announced. They never came and consulted anyone about it" and "It was very hard because they didn't even come to us and tell us that the hunting will stop."

Several participants called the ban "…a personal decision by the president" because "…maybe the top guy didn't want animals to be killed." Some individuals were not surprised by this decision: "mostly what I have observed is that whoever gets into power, they have their own

agenda, like elsewhere in the world… our former president was very much interested in animals

and conservation, so hunting for him maybe was a bad thing."

An individual spoke to the invaluable importance of consultation in making sustainable

and inclusive decisions:

"If you don't consult, you say I am not part of you. You consult me because you appreciate and know that I am a shareholder. And if you are a shareholder, that means there is ownership…So it means that you recognize that I own that product or that natural resource…the fact that you don't consult me is showing that you know that I don't own that. It means that the sense of ownership has been insulted by not consulting…It happens everywhere."

There was only one individual who believed that the trusts and communities were

properly included in the decision to ban trophy hunting tourism:

"When people are saying President Khama is taking uninformed decisions, I was very touched because I was saying this is not right…Because I was part of the board... In 2008 when this tourism meetings started, when they were discussing the hunting ban…for...five years, every year, there was a tourism meeting…." After these meetings, "…they got back to their homes, they reported to their communities saying that this is what is going to happen with the hunting ban…it was a process…not something that was a decision that was just made then and there."

This apparent oversight of the government clearly left an indelible impact on people

within these communities, as, years later, they were "…still wondering why they were not

consulted." With little consultation, the government seemed unaware of the needs of the villages

related to trophy hunting tourism: "When the ban was instilled, the community complained.

They said, but why do you stop the hunting now? How will the community survive?"

Many shared that the government failed to promote the growth of the photo-tourism

industry as an alternative type of tourism in the areas that were to be most affected by the

hunting ban. For example, "There was nothing that had been coming in from the government

side to cover that hunting ban assertion….Just dropped there. Just a hunting ban. and then the

government went away from us…The government would have promoted lodges or photographic by their decision. So it sounds like a negligence during that period." In addition, the state's ignorance regarding communities' various dependencies on hunting tourism created new issues over access to resources that persisted at the local level.

This decision to ban hunting contradicted community involvement as the basic principle of CBNRM. One individual reflected:

> "…when CBNRM was introduced on the early '90s, the policy states clearly that it was established to try and uplift the lives of people living around the animals, the communities living around animals. The better way of improving their lives is to listen to them, maybe get some advice from them, engage them before you can make any decision of such kind. They should be engaged, maybe have part on how best they can be done or just being controlled, you're just doing some new policies, whereby they haven't been engage. Some policies work against them."

The international community was also mentioned as a group that influenced the hunting ban decision. One respondent shared: "Other countries say, how can country like Botswana be slaughtering animals? It's not good for us who want to see them!" When other individuals placed the international community at the center of the ban, they spoke with chagrin, acknowledging that the nation financially depends on other countries, but frustrated that their values should play such a great role in the nation's wildlife management decisions:

> "Nowadays, the government is controlled by foreigners- somebody overseas in Britain, America- who is saying that if you kill them, we are not going to buy your diamond… That somebody is the one who is regulating. That is why things are like this. Because now we depend on somebody who is overseas. I don't know who is this somebody."

When talking about the international community in the context of the hunting ban, one participant referenced specific entities: "….[the hunting ban] was just a personal interest by the sitting president of the time… all the guys that I know who are really close friends of him who

were now pushing for photographic tourism. So those guys sit on one of the boards of Nat Geo [National Geographic]. So when Nat Geo says something- the whole world answers."

Amongst the participants, there was limited agreement in the government's rationale for the hunting ban, suggesting that most community members and leaders were not properly consulted in the making of the decision. These mixed responses support participants' feelings that the ban happened abruptly and unexpectedly. The communities did not feel included in the decision and that those that were involved in the decision were "outsiders" who do not live with the day-to-day impacts.

Discussion

Key Aspects of Growth [1986-2002]

"Growth" or "exploitation" (r) is the first stage that a social-ecological system experiences (Gunderson, 2000; Holling & Gunderson, 2001; Scheffer et al., 2002). The colonial rationalization and motivations for trophy hunting, which best suited the interests of the British Crown, provided the institutions and norms that dictated the growth of the modern Trophy hunting system (Adams, 2004). Specifically, imperial trophy hunts, the beginnings of a colonial game reserve system, and strict citizen hunting regulations of the 1880s-1960s provided new institutions of conservation and protectionism that informed natural resource access and management in late 20th and early 21st centuries in Botswana (MacKenzie, 1988; Adams, 2004). The Trophy hunting system began to experience growth in the 1990s, under the guidance of the CBNRM regime. The late 20th century adoption of CBNRM in Botswana increased the expansion of commercial wildlife markets into rural villages (the 'r' phase), which led to the formation and distinction of economic and social structures that promoted the exploitation of wildlife and the growth of consumptive and non-consumptive wildlife-based tourism industries.

When Botswana became an independent country in 1966, it inherited a centralized wildlife governance system and the national government was concerned that conflict of land use would contribute to declines in wildlife populations (Kelly & Gupta, 2016). In response, Botswana gradually adopted the CBNRM program and made wildlife tourism an official activity in 1986; within this CBNRM program, landholders were granted user rights to wildlife and commercial uses of wildlife were encouraged and regulated (Child et al., 2002). An increasing global demand for wildlife-based tourism and a new community-based governance framework marked the "exploitation" or "growth" phases that eventually led to a trophy hunting institution. Through CBNRM, rural communities can financially benefit from the hunting tourism sector; this connection is one of the more powerful arguments in the pro-hunting discourse, which has helped justify the trophy hunting tourism industry and allowed it to become a key fixture in stabilizing and defining Botswana's Trophy hunting system (Mbaiwa, 2004; Swatuk, 2005).

Key Aspects of Stabilization [2003-2013]

During the period of 'stability' (k), trophy hunting tourism is at its greatest potential (Holling et al., 2002). In this phase of the adaptive cycle model, dominant social structures gradually build, align, and reinforce one another in a system as the system enters into a state of highly institutionalized stability (k) (Pelling & Manuel-Navarrete, 2011; Scheffer et al. 2002; Walker et al. 2002). CBNRM was the dominant institutional structure, the trophy hunting and photo-tourism industries thrived, and wildlife-based tourism became the second greatest economic sector in Botswana.

The Trophy hunting system played a significant role in initiating CBNRM in sub-Saharan African countries (Kelly & Gupta, 2016); when it came time for the national government to devolve user rights to rural villages and facilitate community ownership over these resources, the

trophy hunting companies were already viable and attractive potential partners to help facilitate this transfer. Most of the participants' perceptions of the Trophy hunting system reflect the system's 'k phase', when it was at its highest potential, had become a stabilizing element of people's lives, and was generating significant benefits for the communities.

According to this study's participants, the certain aspects that defined the stabilization phase of the hunting system were an increase in communal funds, greater employment opportunities, an increase in social welfare projects, more viable crop farms, and less conflict with wildlife. It is difficult to pin-point the exact time when the system transitioned from the growth to conservation phase based solely on this study's participant data; to create more of a specific timeline, it is helpful to bring in secondary data from the government's records. The number of villages registered with CBNRM and the number of hunting quotas issued can be both symbols and drivers of the growth and institutionalization of the Trophy hunting system.

Two main aspects of the stabilization phase were an increase in the number of villages participating in CBNRM in Botswana and multi-year consistency in the number of hunting quotas issued by the government. According to the National CBNRM Forum, the number of registered CBOs has vacillated between 67 CBOs in 2003, to 106 in 2012, to 94 in 2015 (USAID, 2016). However, only 12% of the total registered CBOs in all of Botswana were participating in trophy hunting tourism during its last year in 2012 (Mbaiwa, 2012). Even though trophy hunting tourism was directly benefitting only 13 registered CBOs, it was still considered an invaluable contributor to the economy and status of wildlife conservation both at local and national scales in Botswana (Masisi, 2019).

According to participants, their experiences of the stable phase of the hunting system was most defined by the wealth it accumulated for their communities. This accumulation of monetary

wealth can be observed through statistics that describe the amount of economic loss the CBOs incur after hunting was banned. For example, CECT experienced an annual income dropping from P6.5 million to P3.5 million in 2014 and lost about 15 jobs within its community (USAID, 2016). Income generated from tourism in Sankuyo Village dropped from P3.5 million to P1.8 million and the Trust experienced 35 job losses and Mababe adopted their economic activities from handicraft and hunting to ecotourism and lost a considerable amount of income from this transition (ibid).

If the number of quotas issued to CBOs is a valid indicator of the stability of the Trophy hunting system, then it seems that the system reached its zenith in the mid 2000s. Upon closer look at the number of quotas issued in the Ngamiland District, it appears that the trophy hunting industry may have stabilized and reached its "peak" phase during the mid 2000s (see Figure 5), at license totals of 1,079 and 1,049. In the last few years before the hunting ban, the number of quotas decreased significantly each year. These numbers do not include the number of quotas issued in the Chobe District, which is Botswana's other popular area for trophy hunts.

Figure 5. Annual Wildlife Quota in Ngamiland District 2000-2012. Missing data from 2012, which is the last year in which hunting licenses were issued.

Table 12 Annual Wildlife Quota in Ngamiland District 2000-2012

SPECIES	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Baboon	20	20	20	80	80	74	56	28	28	28	25	12	
Buffalo	12	40	12	40	38	38	38	38	37	29	38	20	
Elephant	24	78	24	78	78	86	94	94	101	109	132	103	
Gemsbok	0	60	3	26	26	26	26	26	24	28	25	0	
Hyaena spotted	20	80	6	13	11	9	11	12	11	10	4	3	
Impala	110	274	90	223	219	219	219	219	217	171	168	40	
Kudu	30	195	20	58	58	58	58	58	55	29	20	10	
Lechwe	40	272	60	93	93	93	85	85	53	48	43	10	
Leopard	7	20	4	9	9	8	8	8	7	5	0	0	
Lion	2	6	0	0	0	8	8	7	0	0	0	0	
Ostrich	6	65	7	52	50	50	50	51	43	22	15	0	
Reedbuck	4	0	0	0	0	0	0	0	0	0	0	0	
Sable antelope	1	4	0	0	0	0	0	0	0	0	0	0	
Steenbok	15	525	45	198	198	167	129	133	140	69	55	0	
Tsessebe	40	113	45	103	102	99	80	80	51	31	26	0	
Warthog	15	207	20	74	74	71	74	74	70	37	31	10	
Wildebeest	9	35	9	29	29	29	30	29	30	18	13	10	
Zebra	2	13	4	14	14	14	14	14	14	12	10	10	
Totals	357	2007	369	1090	1079	1049	980	956	881	646	605	228	

Source: DWNP Annual Report (2011)

Lack of Stakeholder Engagement for the Ban

In general, communities did not feel that they were adequately consulted on the decision for the ban and the decision to ban hunting served as a disturbance that left the communities' economically, politically, and culturally vulnerable. Blackie 2019 found that 66.3% of the households surveyed in their study on the impacts of the hunting ban in CBOs in the Ngamiland and Chobe Districts, felt that they were "merely informed" that the ban was happening and only 5.9% agreed that they were properly consulted regarding the decision to ban. There were many speculations about the reasons for the ban, which included a decrease in wildlife populations, the influence of an anti-hunting international conservation ethic, and personal politics of the president. Consultation of the communities may have provided authorities more of a comprehensive evaluation of hunting tourism. Studies (Manfredo et al., 2004; Treves et al., 2006) have noted the importance of community engagement in addressing natural resource

issues, and specifically, those that involve human wildlife conflicts. Dickman (2010) suggests that one way to address social factors that contribute to human wildlife conflict and achieve long lasting conflict resolution is to broaden the study approach from species-specific conflicts to looking at the wider socio-economic, cultural, economic conditions under which these conflicts happen. A few practical solutions to engage communities in the process of resolving natural resource issues are: initiating and supporting local task forces to represent community needs in decision-making processes (McKinney & Harmon, 2007), integrating workshops to educate community members on the dimensions of an issue and utilizing innovative learning tools (Lee, 2013), and initiating joint fact-finding missions to integrate the community's knowledge and experience of the issue in higher level decision-making processes (Bingham, 2003).

The presence and integration of diverse stakeholder perspectives in governance can be an indicator of a resilient and adaptive system that has greater capacity to function in the face of disturbance (Folke et al., 2002; Ballard & Belsky, 2010). Stakeholder consultation can prevent the implementation of detrimental and unsustainable resource management decisions (McKinney & Harmon, 2007). Naidoo et al., 2016's study simulated a trophy hunting ban in Namibian conservancies; the simulated ban significantly reduced the number of conservancies that could cover their operating costs, possibly negatively affecting incentives for conservation on communal lands (Naidoo et al., 2016). Blackie's 2019 study on the impact of a hunting ban on rural livelihoods found that the hunting ban in Botswana resulted in less local enthusiasm and participation in conservation. As a result of the lack of stakeholder engagement in Botswana's hunting ban, the state suffered a loss in local support and the system experienced a crisis in structure.

Despite its claim to being "community-based," CBNRM opened new political spaces through which a variety of non-state actors (i.e. private sector, civil society) can articulate and assert rights over land and resources (Twyman, 2000). To maintain this new network of stakeholders, CBNRM often neglects the social, political, and geographical differences within and between rural communities that may challenge CBNRMs' goals (ibid). Although CBNRM intends to democratize decision-making within communities and may amplify historically marginalized groups, it can also empower the local elite as the sole representatives of the community (Mosimane & Silva, 2014). In Botswana, there is a difference between the more thorough and gradual consultation process that community members expected and the type of consultation process for the hunting ban that actually took place, which sometimes are needed to make more rapid changes within communities. CBNRM ushered in a shift from a traditional governance style to a fast-paced, globalized and connected approach is sometimes necessary to see change happen quickly (Hulme & Murphee, 1999; Ribot et al., 2010). There is a tension between community members' desire to reach goals like economic prosperity, cultural recognition, infrastructure improvement, and technological access more immediately, while also wanting to maintain traditional governance practices, like a thorough and representative consultation.

The catastrophic collapse of the hunting system in response to the ban indicates a lack of resilience and the expression of vulnerability within the system (Gunderson, 2000; Pelling and Manuel-Navarrete, 2011). This lack of adaptive capacity can be attributed to top-down governance structures that excluded communities and other stakeholders (i.e. hunting operations) from the decision-making processes that led to the ban. While it is tempting to interpret the ban as a negative disturbance, a disturbance is technically an unusual event that causes a shift in the

system from its equilibrium (Scheffer et al., 2002) with no normative assignment. The ban disturbed a Trophy hunting system at equilibrium; the system's response to the ban can illuminate the adaptive capacity of the system and opportunities can be created during the "reorganization" phase. The following chapter will discuss how the community-based organizations responded to the disturbance of the ban.

CHAPTER 5. RELEASE AND REORGANIZATION AFTER THE BAN [2014-2019]

Release and Reorganization After the Ban

After the hunting ban was imposed in 2014, Botswana's CBNRM and hunting system experienced many drastic changes and challenges to their operation and growth. Figure 6 shows the dates and key events that describe the release (Ω) and reorganization (α) phases of the Trophy hunting system. According to the adaptive cycle model, when a system experiences a shock, participants' social behavior may begin to diverge and challenge the established dominant institutions that once held that system in place. In response, the system can either suppress that divergence and maintain those old institutions or release into a new phase of generation (Holling & Gunderson, 2001; Scheffer et al., 2002). If it enters into a release (see "Ω" in Figure 8), it will experience a period of re-organization or mobilization (see "α" in Figure 8), when the expression of diverse social action leads to new internal structures. In this phase of reorganization, groups with similar interests form bonds, organize social capital, and have different levels of tolerance for extant or emergent institutions (Pelling & Manuel-Navarrete, 2011). The hunting ban served as a shock to the hunting tourism system in Botswana. Exploring how the rural communities of Mababe, Sankuyo, and CECT were impacted by and responded to the ban can illuminate the hunting system's resilience. The following sections outline the respondents' perceptions of the ecological, economic, and sociocultural impacts of the 2014 ban on trophy hunting tourism followed by how the communities adapted to the ban and what social and political structures might cultivate or inhibit the communities' adaptive capacity.

Adaptive Cycle

The Reorganization Phase [2014-2019]
- More photo tourism partnerships
- Develop local tourism ventures and projects
- Increase in state sponsored welfare programs
- CBO 'bench-marking' workshops
- Cultural willingness to try new economic activities and transition livelihoods

The Release Phase [2014-2019]
- Delay in turning leases over from hunting to photo
- Loss of jobs and communal funds
- No access to game meat
- Greater conflict and less tolerance with wildlife
- Distrust towards state and other gov't institutions

Figure 8. Key Aspects and Dates of the Release and Reorganization Phases of Botswana's Trophy hunting system.

Ecological Impacts and Responses

<u>Increased Human-Wildlife Conflicts</u>

Respondents noted an increase in human-wildlife conflict as a result of the hunting ban. Many respondents believed that the practice of trophy hunting tourism caused wildlife species to fear humans, thereby mitigating human-wildlife conflict. One community member saw the ban as an essential period that changed relationships between villagers and wildlife:

> "Batswana are very peaceful people. The Bantu, or the people who live within the Chobe region, have co-existed with animals. They have been doing their best in the hunting era. After hunting, they survived with animals still. But it became now a provocation when elephants were now killing people left right and center. Not killing them out there in the wilderness, but killing them within the streets. When they went to the plowing fields, elephants were attacking them in the fields. When they fenced their fields, elephants came and wrecked the fences. When they made small gardens behind their yard, elephants came there and damaged them."

According to participants, there was a distinct difference in their daily lives before and after the ban: "The difference is that nowadays, we can compare with the time when hunting was there. The animals…are getting aggressive to people. They are killing people. There are many in the village. They are roaming around…our lives are in danger." Similarly, another respondent reflected "…our lives were better because the animals were afraid of hunters". In the face of the ban, one person shared, "they [wildlife]…know that they are not being shot at. They are protected. Maybe some of them don't even know the sound of the gun, they just move freely. They don't know anything about death." Similar to humans, wildlife adapt to change as described by an individual: " as time changes, animals change, just as people change…They can think to do this, try to avoid this, they are always evolving their mindset."

Others shared that the hunting ban led to an increase of wildlife numbers because hunting tourism was an important population control measure. Respondents described the situation as "There are many elephants now because they are not being killed" and "…the number of animals

have exceeded the limit." Increased wildlife numbers heightened competition for wildlife's access to water and crops especially during the dry season. For example, when there is "…no water along the river…animals are coming into…homes." One person shared, "When they come, they harvest crops by themselves…It [the fence] does not stop elephants. They step over, they come in, they destroy everything."

One of the government's main strategies to address human wildlife issues is through compensation. Most villagers found compensation strategies ineffective, reporting that the money is not sufficient to cover for infrastructure and crop damage or livestock loss. One individual remarked: "It takes someone who has money in his bank to rear crops in his field. For someone like me, who doesn't have money or fences, you just do it in Jesus' name." One participant insisted that compensation will never work, because to some people, money is less valuable or useful that the food that they believe they could grow in a "wildlife-free" environment. In addition, some argue that there will never be compensation justifiable for a human death: "…losing a life, you never recover that. If someone gets killed by an elephant, whether there is or is not compensation, you never get the person back and that is the most painful part."

Many of the grievances regarding the state's management of wildlife were present when hunting was in place, but the ban seemed to serve as a turning point for exacerbating the local frustration. Some locals shared "…it's more like those animals are controlling our lives now", and "before [the ban] these animals were not killing people. Now they are killing people." The introduction of the hunting ban might have made communities even more vulnerable to the misgivings of the state's ineffective compensation and prevention program for human wildlife

interactions; these challenges may have limited the breadth of the villages' adaptive capacity to respond to the hunting ban.

<u>Reduced Protection of Wildlife</u>

When hunting was banned, locals perceived a change in the community and state's capacities to protect wildlife from illegal activity. Some respondents attribute this increase in illegal activity with animals to changes from the ban like increased unemployment, food insecurity, and an overall loss of benefits from CBNRM. One individual reported how the economic losses from the ban drive locals to hunt: "I just think that if you get hunger, [you] think about poaching now. When you have money, you can't poach…[Now] there is nothing. There are too many people who aren't working. They will go and poach." Another individual shared how communities began to poach in response to the ban because they felt as if they "…don't own these animals…they are taken back to those periods before CBNRM where communities only knew wildlife when conservation was the mandate by the government." According to this individual, hunting tourism provided a relevant context for wildlife conservation that had a value independent of governmental imposition. Other participants argued that cultural norms prevent locals from poaching wildlife, indicating that, in general, the presence of hunting tourism does not have much of an impact in affecting locals' involvement in illegal wildlife activity. One person explained that villagers are never the ones poaching: "….I think poaching is high. And as a local who grew up here and loves their home, how does that make you feel when you hear about higher poaching? I don't feel well. This poaching is not done by locals."

The ban also impacted local reporting of illegal activity. Participants shared that community members were less likely to report illegal activity because they did not feel as if they benefitted sufficiently from wildlife without hunting tourism. Some people also felt that they

may be blamed if they report a poached animal to state authorities: "…if you report it, they will ask you so many questions. You were trying to help, but now they are putting the blame on you. That is why when people see things, they don't do anything." In addition, all the CBOs experienced a substantial decrease in the number of guides that were supported by hunting revenue, inhibiting the communities' capacity to monitor wildlife numbers and observe and report illegal activity to government officials. One individual noticed: "…when they stopped hunting, all of a sudden, there was poaching happening in those areas, so they recruited most of the guys from BDF [Botswana Defense Force] to patrol those areas."

Hunting outfits provided presence in remote areas that deterred poaching especially since photo tourism does not operate in many of these areas. They said, "poaching is high now because when hunting was there, people were going around in the hunting area. They [trophy hunters] will see some footsteps…that these footsteps are for poachers or something. But after the ban, it is only photographers- they are on the road." Conversely, one person noted that after the ban, it was actually easier to recognize when illegal activity was occurring: "it was easier to see if there was poaching when the hunting was banned. The government could hear the rifle when it would go off and know it was poaching."

Economic Impacts and Responses
Limitations to Traditional Livelihoods and Reduced Tourism Employment

Many communities rely on farming, ranching, or harvesting practices to feed and generate income for their families. After the hunting ban, many individuals reported that without the control on wildlife populations, wildlife interfered more with crop production and harvesting. One individual remarked how farming, after the ban, has become unprofitable: "as a farmer…we don't get much profit due to the animals damages." The ban also threatened other ways of life,

such as harvesting grasses due to increased dangers of wildlife as one person explained: "some people cut grass and sell for money- now [they] cannot make a profit. [They] go back home when [they] see [an] elephant, can't cut, nothing to do." Despite these challenges, villagers demonstrated persistence: "you can have it [profit from harvest] if the elephants will not raid your field. But if this year, they went through, you will go home with empty hands."

The hunting ban also resulted in villagers losing employment associated with the hunting industry. Many participants emphasized that hunting tourism was the only viable industry supporting the villages and that once it disappeared, there were no other options. Respondents described the situation as "there is nothing to do in village" and "there is nothing to rely on." Many shared deep emotions like, "Now we are suffering. People are not working."

A few individuals were hopeful that the photo-tourism industry could fill the employment void from the hunting ban. These jobs were sometimes perceived as more favorable than those offered by the hunting outfits: "The hunting camp was employing only- I think it was- 12 people and it was seasonal…but the photographic…you see that employment is permanent…double of what was being employed during hunting." However, many people did not believe there were sufficient employment options to support livelihoods. One individual explained: "Now a lot of people are sitting around. They can't farm, they can't do anything, they can't rear anything because of the way it is. Because most of their income is through tourism."

The ban reduced the trust's income and as a result, the trust was not able to offer as many jobs to villagers. One respondent shared how "…they [the community] was making more money [during hunting]. They was making a million Pula- half a million Pula [43,000 USD]. But now they are not…photographic is not enough money." One leader shared that in order for the trust to survive the ban, they had to "…cut down the amount of money we are filtering down to the

people, so that at least the trust can move on." Without hunting tourism, there was also a decrease in demand for certain positions, like the community escort guides, whom used to play an integral role in escorting commercial hunts. Without the additional income from hunting tourism, some trust positions became completely voluntary. However, individuals working in the trust as guides or as trustees expected the trust to eventually provide compensation; this decision placed the trust in a vulnerable political position, as it was not able to compensate for some of these employees who continued working during the years after the ban.

Reduced Community Benefits

The trusts that participated in hunting tourism came to rely heavily on the industry's profits; when hunting was banned, the trusts suffered a huge cut in income. As a result, the trust had to reduce certain social benefit programs and infrastructure development. The sudden drop in income as a result of the ban was so significant to the communities that one individual described the situation as: "…the money stops and everything stops."

In addition to infrastructure projects, the efficacy and breadth of social welfare programs, which relied on hunting tourism income, suffered in the face of the ban. For instance, one person shared that during hunting, the communities would "…have allocations for student scholarships…the trust also has logistics for the funerals and everything. So all those things could not be supported well in that period [of the ban]." As one person claimed, during the hunting ban, the community struggled: "They were struggling- our mothers, our fathers have too many children, they can't provide for them. Some leave schools. Some are depressed."

Respondents did not hold the photo-tourism industry in a favorable light, perhaps due to the misalignment between the non-consumptive motivations of the participating tourists and locals' hunting traditions or to the lack of the industry's direct economic benefits to the villages.

Although the subject of criticism, many participants recognized the essential supportive role that the photo-tourism industry played in their villages' survival of the hunting ban. One individual put it bluntly: "So, this is one of the reasons we survived. Because we had two baskets [before the hunting ban]: non-consumptive and consumptive." Some people shared that the photo tourism companies rose to the occasion, taking on social welfare responsibilities that hunting outfits had championed: "…Those people [the tourism companies] are trying to develop our village. Right now, when you go inside this hall, you will see the clothes that they donate to the village…They are helping our village.**"** Participants praised these companies as donating to support their primary schools, purchasing school buses to safely transport children, and bringing basic items to villagers, like toiletries and clothing.

CBOs reassessed their connections with one another and realized that a stronger network was helpful in creating a unified voice to respond to post-ban challenges. One individual shared how helpful communication with other CBOs were in formulating strategies to bring the hunting back: "There have been numerous meetings- trusts and other NGOs- and other interested parties, meeting up and making a lot of noise about this hunting ban…It has been very clear from the second day after we heard that the ban shall be introduced the following day. People made it very clear that this will not work." Another person explained the importance in strategizing amongst domestic and international CBOs for a future without hunting: "We have been together lately. There has been a lot of benchmarking that has happened within trusts. Even far beyond Botswana and across the country…We share information about how we have survived, a lot of things about natural resources, monitoring."

<u>Absence of Meat from Hunting and Food Security</u>

The ban on hunting revealed the villages' dependence on tourist hunts for meat and highlighted vulnerabilities within the local food systems. Extensive social dynamics of families further complicated the impacts of the hunting ban on food security. Extended families tend to meet the household demand for food through a combination of subsistence, commercial, and purchasing practices. According to participants, the ban carried ecological and socio-economic consequences that either completely prevented or greatly challenged these practices.

One of these issues is the inconvenience of purchasing food, whether that is meat or other products, when it is not sourced or grown locally: "…you can't plow here, you can't have any veggies. So you always have to go back to Maun to do your groceries and bank. And there's no public transport, so you just hitch hike back and forth." One individual explained this situation: "…to buy from shops, you have to have money. And if you do additional research around here, not every household has got someone working…We tend to be big in number in a household, so life is expensive."

For the villages, bushmeat is a culturally important food and provided food security: "…old people who know that- this hunting, it was six months hunting, then get six months for the animals to recover- so the villages know that in this six months we had something to eat." One elder shared that both the insufficient crops and lack of bushmeat brought malnutrition to the villages: "It [the ban] affected our mental health….because we don't have enough to eat. In our culture, we are living in extended families, so it's difficult to bring food on the table."

Sociocultural Impacts and Responses

<u>Reduced Tolerance of Wildlife</u>

As a result of the hunting ban, respondents perceived increased wildlife activity within or close to the villages resulting in increased conflicts and sometimes death. One community member explained "…the hunting ban was bad. It was bad for our lives…the freedom movement of the human being in this area was bad. You can't understand why. You would be attacked by elephants. That is why most of us have a lot of injuries from being attacked by elephants." This perceived increase in wildlife attacks has created an atmosphere of helplessness within the villages. Upon arrival at one of the villages to conduct interviews for this study, a child had been attacked by a buffalo earlier that day: "A school child was attacked by the buffalo, which means that there is nothing that we can do compared to when hunting was there." When asked if farmers ever were allowed to retaliate with guns, one farmer answered affirmatively: "You know, in the past, it was. People were allowed to shoot and kill." When prompted for clarification on when "the past" was, this person said "before the hunting ban…people were given authority [to shoot and kill nuisance wildlife]."

People shared sentiments of the hardships of living close to wildlife as "all those animals-we are the ones who are cushioning them…the land here is mostly for these wild animals. and they just want us to be squeezed like this." Others amplified the stressful conditions as feeling as if they "…are just this thing within the house" and that "they [the animals] are now the villagers and we visitors in this world because they are everywhere."

One person enumerates all the types of human suffering that they see as consequences of the ban on hunting:

"…the hunting ban brought challenges to the livelihood of the people. As I've indicated, because these animals have multiplied in numbers, they have gotten used to going through the settlements. Not only did they damage or threaten the crops, but they killed human beings… Starvation arrived in the households, people became destitute, people became fatherless, because the people that are taking care of households are fathers of the house."

According to this individual, the hunting ban is responsible for more than an increase in wildlife attacks and damage to crops, but accredits wildlife with starvation, destitution, and "fatherless" children.

Feeling more threatened by wildlife after the ban has contributed to a culture of fear within these communities. One person explained, "Elephants used to get inside the village so during the evening, you can't go outside…" Another respondent shared sentiment about the elephants in the village as: "We have a situation. And it needs to be attended to." After the ban, some people report that it became more difficult to go into the bush: "Back in the old days, we used to thatch grass everywhere. but nowadays, we couldn't even manage. You couldn't do that. Now people die each and every year being killed by elephants."

Lastly, the hunting ban contributed to a loss in communities' sense of ownership of wildlife. This difference in ownership before and after the ban was very clear when one individual claimed: "The beneficiaries of these elephants are our neighboring countries. We are raising elephants here. When they mature, they cross over to the neighboring countries and those countries harvest them. Logically, it now says to the local community that you do not have ownership of these animals because you are not beneficiaries to these animals." According to many participants, being an owner of wildlife is one in the same with being considered or trusted as a conservationist; one person shared that the practice of hunting tourism solidified this analogy: "[with hunting], they are part of the owners [of wildlife], part of the conservationists."

Thus, if community members feel as if they do not benefit or own the wildlife, they do not feel recognized as conservationists and effective stewards of the land and wildlife.

Governance Responses

Expanse in Partnerships with Photo Tourism

During the ban, CBOs reassessed their partnerships with photographic companies, looking for various ways to generate greater benefits for the villages. A respondent emphasized how ventures with photo tourism lodges were the piece that either ensured a CBO's failure or survival after the hunting ban: "…it was a good time [the hunting ban] to be able to review some of these things…Because when the hunting [ban] was introduced a lot of trusts did close down. Only a few survived. We are one of those that survived. The reason why we survived is because I'm not sure- if by the grace or what- because we had two lodges." One leader described how after the ban, CBOs were encouraged to reassess the benefits they received from their photo partnerships: "…[the trusts] became very aggressive in addressing the investors and lodge owners- really saying- please look into promoting cultures…we have associations that came out and [are] focusing on craft making and you know, weaving…and they came out only during this time [of the ban]. People are now appreciating that culture and selling it as a product." Leaders' intention of making partnerships more beneficial to the communities was indoctrinated into the villagers, as one person admitted: "We are always told that we have to stand on our feet to create jobs for ourselves, so that we can't suffer for a long time because the hunting is not open..." Several individuals credited the CBOs' increased involvement and benefit from photo tourism to the economic stimulus of hunting tourism. As one person shared: "…in the era of hunting time, the community of [X] were able to build a lodge called [X]/ They have another Lodge which is

[X]. That was money that was driven out from hunting and they were able to use it to build this business facilities."

After the hunting ban, CBOs leaned into developing their own photo tourism camps and ventures, which allowed them to continue to generate income after the ban. One community leader described how having a diverse and flexible approach to land management and development was key to making this transition to photo tourism ventures: "we had our own campsite which is still operating today…so it's one of the things that has kept us going during the hunting ban issues." A leader of one CBO shared that the trust is currently working on diversifying their campsites to offer certain tourism activities like Mokoro rides (boat rides).

In principle, the government had encouraged the cultivation of deeper partnerships between villages and photo-tourism companies to soften the impact of the ban. Although the photo-tourism outfits were able to provide employment and continue to pay the CBOs for land rentals, these benefits were not sufficient to cushion the economic hardship initiated by the hunting ban. One person lamented: "It [the campsite] is owned by the community… so the money that they got from those campsites, they managed to survive even though it was little. It was very little." In general, participants believed that CBNRM funds from land rentals amounted to much less than the cost of hunting quotas; it was an unrealistic expectation for the photo companies to compensate for the economic loss of the quotas, at least for the first few years. To one individual, it was very clear from the beginning that this "transition plan" of the government's would not work, because the tourism industry had yet to succeed in improving livelihoods of the rural communities (at least enough improvement): "The Ngamiland and Okavango areas have whole communities living in abject poverty. And yet, these are mainstay areas of tourism. It shows the evidence that tourism has, in the past, been… wrong." In addition

to expanding extant relationships between photo tourism companies and the trust, the state hoped CBOs would begin to develop their own tourism ventures after the ban. However, this expectation overlooked failure in the CBNRM model to effectively transfer skills to villager employees and build local capacity.

There were also a number of cultural and institutional barriers that prevented villagers from participating in the photographic tourism job market such as fluency in English and literacy and certain costly certifications. In general, the barriers that prohibited certain individuals from participating in the photographic industry contributed to this local belief that only certain individuals could qualify for the industry's position. As one person shared, "in photographic it's different. They just take those who have qualifications, papers, are educated- any experience that they have." One participant clarified that the demographic most affected by the hunting ban were the elders: "Most people who are affected during this hunting ban are the older people. The older people are mainly the ones who lost their jobs." Due to their set of skills and experience that were specialized for hunting, it became difficult for elders to find opportunities within other fields; most people who lost their jobs in hunting found it difficult to transition into other lines of work. This person's reflection, along with others' commentary on photographic qualifications, suggests that there was a feeling within the villages that households might be benefitting more from the photographic industry, while the villages as a whole benefitted more from the hunting industry, because there were less barriers to participate as an employee.

In general, there was local resistance to a complete transition to photo tourism. Photo tourism was described as a "last resort" and villagers found the move difficult, saying they "didn't know much about ecotourism" and that, after the ban, they are "still learning how photo-tourism works…big change." Many participants said the government's plan to transition CBOs

to photo tourism was unrealistic due to logistical and structural problems. One individual did not believe that the photo tourism industry held much of a solution for the CBOSs because industry "…has been designed in such a way that it bring(s) minimum benefits to the country." Another respondent explained that the CBOs are "…beholden by those photographic camps who are still there." Another individual shared how the photographic companies are a temporary relationship: "For now, the money comes from that lodge and [X] lodge only so they pay the community. Those people are renting the community."

Conversely, some villagers, in particular the youth, adopted an open-minded attitude when thinking about how their communities will recover from the hunting ban. One individual described this approach: "Development kept growing slowly by slowly until it stopped, and everybody collapsed. Like something froze. All we can do is start from the beginning and come up with new plans."

Reliance on State Welfare

The state government provided support to communities after the hunting ban through a drought relief program and other social welfare assistance. Former hunting employees found work in the government welfare program, Ipelegeng, which organizes and implements development projects within the villages and pays workers monthly salaries.

Government sponsored rural development programs were overwhelmed with addressing the villages' economic loss experienced during the hunting ban. Even though Ipelegeng was able to curtail some of the ban's negative impacts on village employment and poverty, many participants criticized it for its inefficacy and stigmatization of those working in the program, calling them "helpless." One person remarked how working for Ipelegeng during the hunting ban has somewhat tranquilized the villagers, keeping them complacent: "As for now, they have just

given up. They have told themselves that they will live through Ipelegeng." Ipelegeng had a quota for the number of villagers it could employ, leaving some former hunting employees without work. One person shared: "since hunting was stopped, it is very difficult for us, because there is a problem called Ipelegeng. That program takes only 55 people, which means most of us stay within our homes without doing anything. that is why we say hunting is very important for our life." One participant shared that the geographic distance between the villages and decision-makers caused the misallocation of resources: "If you look at the people who make decisions in this village, people who are sitting in towns and offices that have never been here…These people have never come to see how these people are doing. They just went and made that decision."

Some people faulted a lack of regulations and government incentives for photo tourism and CBOs' inability to cover the costs of the hunting ban. Specifically, when explaining the challenges that CBOs faced in collaborating with photo companies, several participants mentioned the Land Bank Policy (LBP). The LBP was enacted in 2014 as a directive that designated portions of villages' concession areas for tourism activities and transferred ownership of these areas from the Land Board to the Ministry of Environment, Wildlife, and Tourism (Mbaiwa and Hambira, 2019). One person described how CBOs felt a loss of ownership over their concession areas as a result of the passing of the LBP: "Government changed rights from community to government." When talking about the policy, participants mainly grieved the disappearance of the consultation process and the reduction in CBOs' capacity to make decisions in CBNRM partnerships. One person described the situation as "…it was not only hunting that stopped. There were a lot of decisions that were now moved from the people to somewhere. Some of these decisions about our own natural resources, people were unable to make. Where now is ownership there?"

<u>Fearless Leadership Style from CBOs</u>

Some leaders of the villages' traditional and CBO governments perceived the ban as a period of hardship that offered an opportunity to explore diverse strategies. One leader called the ban a reflective time which "…opened our eyes…[and so] we ventured into diversity and other things." Another individual from a different CBO shared that this invitation towards open-minded leadership was intentional and "…to broaden the product base so that we diversify our income generation." Leaders spoke of the ban as a time of great self-awareness for the trusts: "…hunting was primarily done by CBOs…really suffered a big blow, but we are smarter now." These leaders were instrumental in guiding the villages through the ban through their willingness to try other economic ventures may have inspired the villagers to adopt a similar mindset.

Despite leaders willing to take risks and diversify away from hunting tourism, the CBOs still experienced governance issues, which challenged their capacity to prepare and respond to the hunting ban. These governance issues were reported as occurring at the regional and national levels. All three of the CBOs shared how there was a delay in turning over the leases from hunting to photo tourism, thus stalling the potential flow of benefits from new partnerships with photo companies. This issue was especially poignant in Mababe, as one person shared: "…There was a delay in turning over their leases from hunting to photo. Not sure why…maybe Land Board could have caused the delay or could have been chief. But, yes there was a delay, which probably cost Mababe some years of income." Leaders suggested that they are not in the habit of saving to invest in future projects. One person attributed explained: "…you are allowed to make sure all the money is given to the people to use. It is meant for that…So, for some trusts, when the news [of the hunting ban] came- it meant all the money, the source, got cut…you don't have

any money to invest." Some leaders shared that it was challenging to mobilize village populations to move forward and accept a life without hunting tourism.

CBOs adapted in several different ways in response to the hunting ban. However, because the ban was a moratorium, they were still hopeful that hunting would return. As one person shared: "People made it very clear that this [ban] will not work. If you say it is a moratorium, [this] means temporary. Now you are giving us hope that you are reviewing something. At some point you are going to reintroduce it. And we are just glad the new regime, they have just done that."

Discussion

Key Aspects of the Ban: Release Phase [2014-2019]

The speed and cohesiveness of a system's transition from being "scattered" after a disturbance to mobilizing and ultimately, settling into a new system, is a sign of the system's resilience (Holling and Gunderson, 2002). During the "release" phase, the system needs guidance as certain influential ideas take hold and it may enter a potentially undesirable structure. According to the literature, this phase has been characterized as "relatively short" (Walker et al., 2002, p. 7) and rapid. However, CBO members consistently describe the "release" phase as a period of great suffering. Eventually the Botswana Trophy hunting system transitioned from being one in "release" after the ban to beginning to "reorganize" and grow into a stable system without trophy hunting.

The negative impacts initiated by the ban indicates that hunting tourism was a foundational element of the system and when it was taken away, the Trophy hunting system experienced a profound disturbance. The impacts of the hunting ban on the Trophy hunting system included a decrease in income for local development projects, the loss of access to meat,

and less funding for conservation efforts, which are consistent with other studies (Onishi, 2015; LaRocco, 2016; Mbaiwa, 2018). Many respondents also perceived an increase in human-wildlife conflicts, and more specifically, wildlife-related injuries and deaths. This fear towards wildlife and concerns about survival was exacerbated as the locals felt a loss in ownership of animals, because the ban had resulted in the generation of less economic benefits and the complete cancellation of their traditional hunting culture.

It is important to recall the timing of this study, immediately after the lifting of the hunting ban, and acknowledge that participants' grievances about the state of the CBO system may have existed prior to the hunting ban and that the ban simply catalyzed their expression. For example, the Land Bank Policy ceded villagers' autonomy over the land to the Botswana Tourism Organization (BTO). The Policy's overlap with the hunting ban, which reduced benefits from wildlife, may have created a negative perception about wildlife and protected areas, making it difficult to correlate any subsequent behavior with a specific policy change (Leader-Williams and Hutton, 2005). Thus, participants' grievances may be related to the villages' tumultuous relationship with the state or villages' perception of international involvement in state policies.

It is unclear exactly when the Trophy hunting system transitioned from the release to reorganization phase. When asking respondents when their lives started to improve after the ban, they were not able to provide exact dates, mostly because many had not experienced much improvement. Secondary data on the economic recovery of the CBOs after the ban was not available to provide further context. In a 2016 report on CBNRM in Botswana, USAID investigated how different CBOs had navigated the economic turbulence incurred by the hunting ban. Information regarding CECT's financial status after the trophy hunting ban was not made available, so it is unclear how they have fared financially since the trophy hunting ban in terms

of diversification of economic activities (USAID, 2016). Two years after the ban on hunting, CBNRM benefits were considered important in less than 15% of CBOs (USAID, 2016) which suggests that the revenue and social programs from the hunting tourism industry had been responsible for a substantial portion of CBNRM benefits for the majority of CBOs. The dramatic decrease in CBOs benefitting from CBNRM after the hunting ban suggests that CBNRM projects had begun to emerge as supplementary sources of livelihoods and revamping CBNRM might not even be an effective strategy for reorganizing the Trophy hunting system.

Key Aspects of Responses to the Ban: Reorganization Phase [2014-2019]

Many individuals referred to the hunting ban as a period of learning and reflection, which indicates the presence of adaptive capacity in the Trophy hunting system. Walker et al., (2002) expound on how learning is an important aspect of resilience, including "..the flexibility to experiment and adopt novel solutions, and development of generalized responses to broad classes of challenges" (p. 7). Adaptations to diversify their economies and reduce their dependency on hunting indicates that they are taking the opportunity to learn from this ban. In addition, CBOs' efforts to expand partnerships and grow local economic ventures demonstrate social cohesion and the capacity to self-organize (see Figure 6), which are recognized as factors of positive adaptive capacity (Osbahr et al., 2008; Onyx et al., 2014).

Participants expressed that funds from previous hunts had been used to develop community-based projects, like a sorghum mill in CECT and a photo tourism venture in Mababe. The influence of hunting tourism is present in many of the CBOs' adaptive measures, which puts into question CBOs' true capacity to grow in more of an independent direction from hunting tourism, if its adaptations directly rely on hunting's funds. CBOs' capacity to combat increased human-wildlife conflict and food insecurity and to revitalize local economies through

partnerships with photo lodges and local projects is dependent on the accumulation and investment of hunting funds (Batavia et al. 2018).

When a system is undergoing change, there are certain adaptations that are going to preserve the system and others that amplify resilience (Scheffer et al., 2002; Whitney et al., 2017). As the CBOs adapted towards a system without trophy hunting tourism, they also needed to rely on relationships with the photo tourism industry, the state government, and the trust government. Both of these growth and survival adaptations, which manage for production and sustainability are important objectives (Walker et al., 2002) and are characteristics of the reorganization phase. As the CBOs and the national government work to build resilience in a system, both of these phases experience their own costs and benefits and it is important to understand their trade-offs and synergies. For example, in addition to relying on funds from hunting tourism to adapt, CBOs were also dependent on welfare and support from other political entities, which enabled the system to cope with uncertainties. The existence of certain "survival structures," like state sponsored poverty reduction programs and welfare through the private sector, afforded the CBOs time to reflect, consider their strengths, and plan how to move forward through the hunting ban. However, the politics and economics of the CBNRM program had become dependent on the function or role of trophy hunting tourism, undermining the system's capacity to recover from the ban.

Certain structures, like weak rural development and human wildlife mitigation programs and changes to the concession bidding process, limited CBOs' capacity to adapt and change in the face of the hunting ban. In addition, certain adaptations that might have facilitated a quicker recovery received cultural resistance from within the communities. Deep rooted beliefs, like an aversion and deep distrust of the photo-tourism industry, served as overlooked challenges in the

implementation of particular adaptive strategies (Gupta, 2013). The reasons that certain communities resist change differs depending on context; for example, religious beliefs influenced adaptations to climate change in two rural communities in Malawi and Zambia (Murphy et al., 2015) and in Rural Appalachia in the United States, core values, like respect for privacy, was responsible for cultivating cultural resistance to technology in rural, low income communities (Hamby, et al 2018). In the Botswana CBOs, this resistance to change post-ban reveals that while the strategies may have been economically helpful to the CBOs, they were not socially responsive.

Hunting Tourism as an Incentive for Local Wildlife Conservation

One salient social-ecological impact of the hunting ban was the change in community perception of an increase in human wildlife conflicts (HWC). Many participants believed that trophy hunting tourism was responsible for instilling a sense of fear within wildlife and in its absence, wildlife became more aggressive towards humans. Conflicts with wildlife ranged from the raiding of crops to the destruction of infrastructure, but also included less direct impacts, like reduced access to meat and employment opportunities. There was a tendency to blame the ban on this perceived rise in conflicts and not consider how other factors, like a historical lack of viable HWC mitigation options and support for these options, might contribute to a rise in these conflicts (Gupta, 2013). While rural communities in other sub-Saharan countries' affirmation of trophy hunting's role in their protection from wildlife (Lindsey et al., 2007; Dickson et al., 2009; Naidoo et al., 2016) is consistent with these associations between hunting and conflicts, there is limited data on HWC. For instance, the yearly number of reported elephant-related raid incidents in the state's records does not begin until 2008 and is inconsistent, making it difficult to identify potential trends in the relations between HWC and the 2014 hunting ban (Pozo et al., 2017).

A primary justification to continue practicing hunting tourism is that it impacts wildlife behavior and local economies in ways that engender rural communities' support of wildlife conservation efforts (Lindsey et al., 2013; Naidoo et al., 2016). Support for activities that encourage conservation grows in lieu of other potential economically attractive avenues of resource use like the illegal trade of wildlife (Mbaiwa, 2018). Sufficient benefits to villages is, in theory, supposed to mitigate negative local interactions with wildlife, like retaliative killings and contributing intelligence to poaching operations (Mbaiwa, 2015).

In the absence of hunting tourism and certain benefits, findings suggest that locals developed negative perceptions of wildlife, but exactly how their behavior changed based on these new perceptions is unclear. Participants associated an increase in illegal activity post-ban (Schlossberg et al. 2019) with the absence of hunting outfits that used to patrol the landscape. Thus, a greater level of wildlife poaching may be due to a change at a larger scale in the system, rather than a result of a change in local attitudes towards wildlife and the subsequent increase in local involvement in poaching regimes. However, some individuals did share that a greater level of food insecurity post-ban may have motivated some community members to engage in "poaching for the pot," which involves targeting certain ungulates and ground-dwelling birds. Motivations for locals to engage in poaching may be more related to food security rather than other measures of economic poverty (Duffy et al., 2015). Therefore, trophy hunting tourism may be one effective way to mitigate poaching and reduce human wildlife conflict; however, to specifically address the locals' influence in anti-conservation behavior towards wildlife, the state can focus on implementing measures to increase access to meat for locals. To potentially address the more high-level drivers of illegal wildlife activity, the state may want to allocate more funds towards anti-poaching operations and the lobby for greater restrictions on wildlife trade.

Lack of Alternative Stable States

One of the limitations in the interpretation of the adaptive cycle model is that a system's survival and continued functioning throughout a time of disturbance can actually be maladaptive: some systems are lauded for their ability to resist crisis or recover quickly from a disturbance, but oppression and rigidity may be concealed in the system (Holling and Gunderson, 2002). A maladaptive system is one that appears functional, but maintains certain unhealthy dependencies, disparities, and inequities (Gunderson, 2000; Holling and Gunderson, 2002). Walker et al., (2002) claims that if the system does retain a sufficient amount of old components through the release and reorganization phase, "…it [the system] can reorganize to remain within the same configuration as before" (p. 7). Even if this same configuration is retained, novelty can still emerge during this phase, whether it be "…new institutions, ideas, policies, and industries" (ibid).

Botswana's Trophy hunting system was drastically affected by the hunting ban and did not experience a smooth recovery. As the Trophy hunting system was reorganizing after the release phase, new components, like diversification in economic activities and a willingness to support new ideas emerged. The introduction of new components, whether in the same or different configuration, can build resilience (Scheffer et al., 2002; Pelling and Manuel-Navarrete, 2011). For the CBOs that were able to survive the ban, their capacity to adapt challenged widespread community assumptions that hunting tourism was essential to their continued operation.

However, most members of the communities still rejected this "more resilient and diversified" system because it did not have hunting tourism. This new Trophy hunting system without hunting was very rigid and did not allow for the emergence of new components. Tension

between different levels of governance and stakeholders in addition to structures that legitimated "old" power players like the tourism industry (photo-tourism operators replacing hunting operators) complicated any collaborative opportunities for conflict resolution and recovery. Additionally, failure of the new system to function could be attributed to a resurgence in certain dominant social structures, like the state's encouragement of partnerships between CBOs and photo tourism companies, which provided insufficient benefits for most CBOs and prioritized international tourism companies and investors (Mbaiwa, 2018). Botswana's reliance on welfare programs to address systemic issues like poverty, income inequality, and unemployment could be another social structure to inhibit the new system's success (Botlhale and Molokwane, 2019). These social structures negatively impacted the viability of a system without trophy hunting tourism.

A "waiting" attitude that was prevalent within the communities during the reorganization phase may have supported the revival of these structures. Gunderson (2000) recognizes this response in "waiting" as one of the possible reactions when shifting stability domains and crises: "The first thing [in response to a crisis] is to do nothing and wait to see if the system will return to some acceptable state. One consequence of this option is that the social benefits of the desired state are foregone while waiting to see if the system will return to the desired state" (p. 432). The post-ban system failed to renegotiate a new social agreement or expectations, and people were left wanting the social and economic benefits that only hunting could legally provide (access to sufficient bush meat, continued practice of hunting traditions and knowledge, sufficient funds for development projects).

A combination of the marginalization of alternative discourses and a "waiting" attitude caused the system without hunting to pass through the reorganization phase quickly and stabilize

into a new system. This quick maturation into a "failed" alternative state may reveal a lack of proper structural guidance during this period that, if applied, may have resulted in a more successful and resilient system without hunting tourism (Walker et al., 2002). Perhaps through certain interventions, like a reversal of the Land Bank Policy to empower CBOs more in their JVPs with photo tourism companies or a crisis management plan to address socio-economic deficiencies that a hunting ban would create, stakeholders would have experienced a different system without hunting tourism. Their experience with the ban would still have been challenging, but it may have been less difficult. In addition, they may have been convinced that there could be an alternate stable state without hunting. However, previous institutions that prioritized private sector interests and protectionist conservation efforts (DeMotts and Hoon, 2010) continued to dominate the "new" system. After the ban, the photo tourism industry thrived (Kane, 2015) and the community members reported feeling excluded from its success and disenfranchised through the hunting ban; in conclusion, they failed to experience an alternate stable state without hunting.

The challenges that the trophy hunting system faced in adapting to the ban exposed vulnerabilities related to trophy hunting. As the CBOs experienced the impacts of the ban and the system began to reorganize, communities could become more aware of how different components of the system were dependent on hunting tourism to operate and continue to grow. The lifting of the ban in 2019 seems to have been a response to community perceptions of the hunting ban's role in an increase in HWCs and decrease in socio-economic CBNRM benefits (LaRocco, 2016; Mbaiwa, 2018). The government's decision to reverse the moratorium could be interpreted as a response to the community feedback and indicate a growth in adaptive capacity;

how the new trophy hunting system grows from the lifting of the ban will reveal if the system

has become more adaptive or not.

CHAPTER 6. LIFTING OF THE BAN: ANOTHER DISTURBANCE [2019-present]

Lifting of the Ban: Another Disturbance

In 2014, the president at the time, Ian Khama, cited wildlife populations' decline as the reason for banning hunting tourism. In 2018, A Nationwide Presidential Cabinet Sub Committee was set up to review the hunting ban, which involved a nationwide process including kgotla meetings and consultations with local authorities and other stakeholders (Elephants without Borders, community trusts, the NGO council, and Botswana Wildlife Producers Association, amongst others) (Republic of Botswana, 2018). Ultimately, the Sub Committee recommended the ban's lifting. On May 23, 2019, the Ministry of Environment, Natural Resources and Tourism (MENT) made an announcement to officially lift the hunting moratorium of all species, including elephant, buffalo, leopard, large antelopes, kudu, zebra, and others (Republic of Botswana, 2019). The incumbent president, Mokgweetsi Masisi, announced a decline in local support and an increase in human wildlife conflicts as the reason for lifting the ban five years later.

Most interviewees claimed how adequate consultation with communities about human-wildlife conflict contributed to the lifting of the ban. They described these consultations as: "…the community trusts were called together to discuss the issues and explain why they think that hunting should come back. We were extensively consulted. And farmers were consulted. Researchers were consulted in Botswana…including other stakeholders." One person emphasized people's concern about the increase in human injuries and deaths related to wildlife: "The predators and the elephants, especially the elephants, are killing a lot of people here. Every month a person is killed by an elephant." According to government reports, seventeen people were killed by elephants across Botswana between August 2018 and 2019; during that year in the

Chobe District, seven elephants were shot in self-defense and five people were killed (Mahr, 2019). Data on wildlife related deaths and human related deaths before the hunting ban were not included in Mahr's report, which demonstrates the empirical gap in relating real human wildlife conflict to the practice of hunting tourism.

Although most participants viewed the lifting of the ban as a response to an increase in human wildlife conflict, other people saw the lift as a political strategy to mobilize rural support for the upcoming presidential election, which was scheduled five months after the lift of the ban. One person was critical that the new presidency would actually implement the lifting of the ban, citing his experience with Botswana politics: "…with the new president, with the politics- there are promises, promises, and then they get their vote and forget about you." Furthermore, some people attributed the lifting of the ban to the incoming president's sustainable-use approach to resource management in comparison to the previous president's protectionist, "pro-photographic" approach.

The lifting of the hunting ban is yet another disturbance to the Trophy hunting system. After the ban, a system without hunting tourism began to take shape. As the system underwent the release phase (α), most stakeholders moved into polarized positions; these views were fairly extreme (pro-hunting, anti-hunting) and often related to one's stakeholder identity (i.e. tourism industry, village leaders, government officials). During the reorganization phase (Ω), opinions and responsibilities solidified and coalitions emerged, which were mostly defined by one's position on the ban. Stakeholder divisiveness on the reasons for and implications of the hunting ban proved to be a great challenge in cultivating social cohesion and collective learning, which are indicators of a system's adaptive capacity (Walker et al., 2002). According to the community perspective, the post-ban system had transitioned into an undesirable state; in short, they

believed that they had struggled to function and grow without hunting tourism. Through the participants' eyes, the government recognized and addressed this failure through the lifting of the ban, which would release the Trophy hunting system into another period of release and renewal.

This chapter explores the diverse community responses to the lifting of the ban. These responses are types of system "feedback," which describes how humans perceive their impact on ecosystems and change their behavior in response to those perceptions (Scheffer et al., 2002). Based on the adaptive cycle and resilience literature (Gunderson, 2000; Pelling and Manuel-Navarrete2011), there are multiple possible paths forward for this hunting system in Botswana. Since it has been only a short amount of time since the last disturbance event, it is unclear at point which path the system will take. These next chapters will attribute key governance characteristics to each path which may help inform which "feedback" the system experiences since the lifting of the ban and going forward.

Adaptive Cycle

Another External Disturbance: The Lifting of the Hunting Ban [2019]
- Response to increase in human wildlife conflict
- Political strategy to win election

Growth and stabilization of new system without hunting [2014-2019]
- Emphasis on photo tourism
- Polarized society: anti-hunting vs pro hunting
- Lack of social cohesion and collective learning
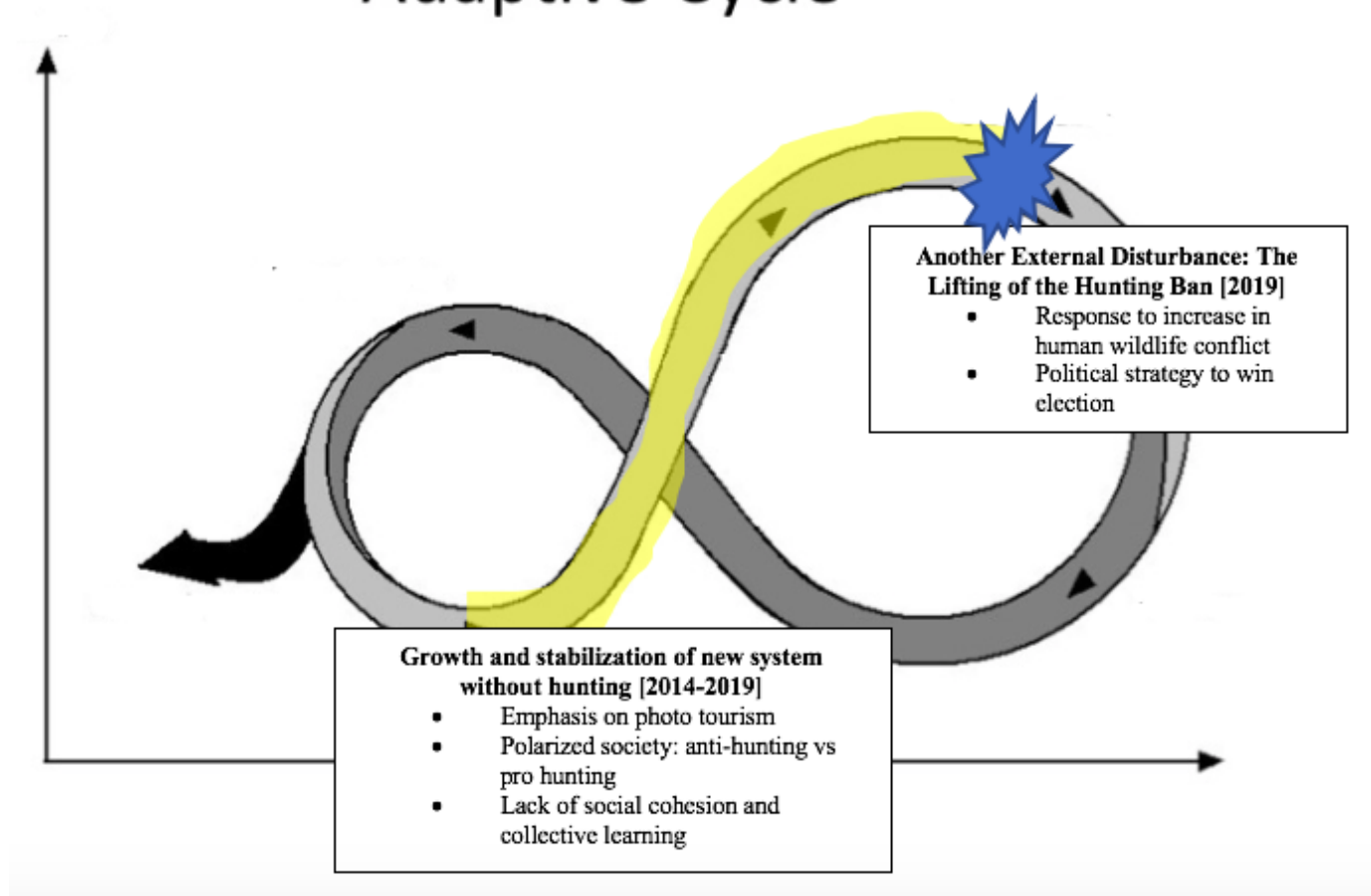
Figure 9. Key Aspects and Dates leading up to the Lifting of the Hunting Ban in Botswana's Trophy hunting system.

Positive Feedback: A Return to the Old System

Many participants responded positively to the news of the reintroduction of hunting tourism and insisted that hunting tourism operate in a similar state upon its return. For example, one participant stated: "I want it [hunting] to be done like it was done in the past. Everything the same" and "nothing change[s] when [it] comes back." Participants mostly associated hunting tourism with community benefits and less human wildlife interactions. One person shared that most people were overjoyed at the news: "I am telling you that people are wallowing in glee…People are in a dancing mode. You know, if you have an opportunity to talk to the kgosis [chiefs]- you will see that there is no song, but people are dancing to the news." Another participant shared: "We think about big things when hunting is coming." Positive reactions to the lift not only expressed great expectations as they waited for hunting tourism to return since the ban was implemented.

In this "positive feedback" of the adaptive cycle, participants projected their past perspectives of hunting tourism on their expectations for a return to "normal" as hunting returned. However, these expectations do not acknowledge changes that have occurred in the system after the ban such as changes in stakeholder relationships and the diversification of CBO economic activities. Yet, there remains a prominent belief that things will return to the phase prior to the ban, as one person claimed: "That is why we are willing for the hunting to come back again so we can get back to our normal life."

Reduced Human-Wildlife Conflict

Many participants believed that a return to hunting tourism will result in less human-wildlife conflict. By reducing the wildlife populations and targeting problem animals, people

believe that the return of hunting tourism will allow them to farm safely and they will be able to "live free of animal threats" because "…nothing disturbs us, [our] lifestyle is quiet and okay." Participants believed that once hunting returned, wildlife will move into the safer areas, like national parks, and keep away from villages. One individual described this change in wildlife movement as: "…the hunting will be done close to the village up to a certain distance towards the photographic zone. When you do that, elephant are very clever. They will move towards the photographic area where there is no hunting. By doing that, you reduce the conflict, the fight in the village, the danger of the elephants raiding people's fields."

Many people perceived the return of hunting tourism as the only solution to human-wildlife conflict. When asked if there was any other way of co-existing with wildlife that didn't involve hunting tourism, one participant responded: "Nothing except the hunting. Hunting is the key…all of the people in [X] are waiting for the hunting."

Improved Community Benefits

With the return of hunting tourism, communities also expected to receive the same types of benefits as before the ban such as an increase in employment opportunities, growth in local businesses, and greater food security. Participants advocated for return of the status quo: "I don't want anything to change. In terms of benefits, we want to have some benefits like we used to have when we last had hunting." The state government's promises to re-purpose CBNRM to empower communities might be partially responsible for participants' expectations for an increase in community benefits once hunting is reinstated. One person revealed the government's promises: "Because [of] the CBNRM program, we are told by the Minister that it [the benefits from hunting tourism] will come in full force back to us."

One way that the government might reinvigorate CBNRM is through the lifting of the

Land Bank Policy (LBP). According to participants, the LBP inhibited communities from developing productive relationships with the private sector and served as an obstacle in adapting to the hunting ban. The government's promise to lift the LBP in tandem with the hunting ban inspired a sense of hope that CBNRM will return "in full force" and better support communities. With the lifting of LBP, the communities expect to be able to hold tenders for their concession areas and selection of operators. This change provides a foundation for the community-operator partnership. One individual expected that his village will work with the same hunting operators as before the ban: "if you take another one [hunting operator] who you have never operated with, you start off fresh. You will not understand. It is better to take somebody who has been doing that before."

Regulated Hunting Operators

When endorsing the return to hunting, participants often refer to it as "controlled," reinforcing this image of hunting outfits that wholly adhere to ethical and environmental regulations. Several participants insisted that if reinstituted, hunting outfits would not endanger fragile wildlife populations: "Because they are not just going to kill an elephant randomly. They don't do that. They kill the biggest one." They also shared that hunters were an integral piece in the maintenance of a safe landscape for wildlife: "When hunting comes back, the poaching will go down because they [the poachers] will realize there is hunting. You go poaching, the hunters who are hunting will catch you." This connection between trusting the outfits is clear when people talk about how the hunting is "controlled:" "The controlled hunting, whereby there are a certain number of species which is given to be hunted so we don't exceed that number."

These reflections on hunting tourism's contributions to human-wildlife conflict and community benefits emphasize hunting tourism as overall very positive. These assumptions

neglect the certain changes that have occurred during the ban and the role these changes may play in the return of hunting tourism. Just as there were those who advocated the return of hunting, there were also participants who voiced concerns about the lifting of the ban. For example, one villager shared that hunting tourism would not mitigate human-wildlife conflicts because it does not target the problematic animals:

> "I believe that it is something that is in their minds that hunting will reduce. They don't even know that it's not each and every animal that will be hunted. And I believe that although it might come or it's coming, I don't believe lions- like for the lion population is very low- so I don't think they will be on that list. So it is something in our minds that hunting will reduce [the conflict]."

Several individuals echo this participant's reservations about the promises of hunting tourism, suggesting pre-existing negative impacts of hunting tourism that will return or worsen with the lifting of the ban. These perceptions will be explored in the next sub-section.

Dissenting Feedback: A Future Without Hunting
Several participants challenged the reinstitution of hunting; these dissenting perspectives demonstrate a certain level of diversity in social attitudes that may not have existed before the implementation of the ban. Some of these perspectives originate from the perceived negative impacts of hunting tourism, but some of them are simply fundamental. For example, one person expressed that they just "dislike hunting": "[Hunting is] not a part of the solution, but some will say it is the part of the solution. But even though wildlife is destroying people's properties, I dislike hunting. They can hunt, but I don't like hunting." Some villagers disagree that the return of hunting tourism will improve and progress rural development, ecological health, and stakeholder relationships.

Disruption of Ecological Balance

One of participants' concerns regarding the return of hunting tourism is that it will disrupt

ecological balance by introducing unnecessary pressure on wildlife populations. Some

participants expressed a general sense of distrust towards the hunting outfits, viewing their

impact on population demographics as much greater than the kill included in their quota. One

person expressed that the hunting outfits cannot be trusted to operate within the bounds of the

government regulations: "…every time that they [hunters] move out there with hunting, they are

there with the wildlife. But we as villagers can't trust something that you can't see there. So we

don't put too much trust on them because we don't know what they are doing out there." A few

participants believed that hunting employees, who are not locals, even assist in poaching

operations. Due to this perceived relationship between hunting tourism and poaching, one person

predicted that illegal trade of wildlife will increase with the return of hunting. They explained the

situation as:

> "[Hunting] will be another problem….If you employ me [for the hunting outfits] to be the
> witness for hunting…I will know that the soldiers are stopping this side, wildlife is
> stopping this side, I can use the way to shoot. To be a poacher, it's not the people who
> don't understand that bush- to be a poacher is the one who knows that bush, they are the
> one who is going to destroy those things."

This perception that hunting is linked to poaching may also impact tourism. One tourism

employee recalled a conversation about the lifting of the ban with a group of tourists: "Some

people are concerned specifically about the operation of the hunts. They say that hunting will

stop us from coming here because we know that you [hunters] will mix with poachers on the

way."

Insufficient Community Benefits

Certain individuals felt that their communities did not benefit sufficiently from their

partnerships with hunting outfits and were skeptical about the lifting of the ban providing a better

future. Some concerns focused on how the reintroduction of hunting would exacerbate extant

economic inequality within the villages and between regions. Villagers complained that, "…if

this money is coming for the community, we just hear…those who are rich are the ones who get

something. But poor people don't see anything." One person indicated that no matter the benefits

that the communities received from their partnerships with hunting outfits, unequal power

dynamics remain an issue. This person boldly exclaimed:

> "We have practiced hunting for over 20 years- what souvenir do we have from hunting?
> … do we truly know how much it costs? So the operator was even boasting for the people
> who work for him, '…you guys are very stupid. I am running away with a profit that I am
> making from only one elephant.' I believe that this cheating is still going to happen
> again."

In addition, hunting outfits' tendency to out-source labor aggravated locals that were not

benefitting enough in terms of direct employment opportunities.

Some participants believed that the photo-tourism industry provides more long-term

sustainable benefits than the hunting tourism industry. Once hunting was reintroduced, there was

fear that the operation and reputation of hunting outfits would stifle the growth of photo tourism.

As one person shared, "…if you come here for photographic [safari], definitely you don't want

to see an animal killed." Another feared that with hunting, wildlife would move away and

become less interactive with tourists during photo safaris: "…now if we have somebody saying

that we should be introducing [hunting] here, what is going to happen to our elephant

population? Tourists are coming for those elephants."

Distrust Among Stakeholders

The villages' perceptions of trust towards the CBO government, the photo tourism

industry, and the state government that were already fragile due to histories of mistreatment and

suppression, were further exacerbated by the hunting ban and the lack of proper response on behalf of the villages. According to some participants, the photo tourism industry's position against hunting tourism demonstrated their lack of support for local community empowerment and development. The tension between the photo and hunting tourism industries may challenge their capacity to collaborate together in the future. For instance, one person interpreted the "photographers" anti-hunting position as an attack on the village way of life: "…they [photographers] don't want guns to be shot. They want to preserve wild animals. they don't want to take care of our [village] life. They want us to move from our culture to where they want us to live."

Throughout the ban, the villagers also lost trust in the CBO's leadership capacity resulting in critiques of the return of hunting and its ability to benefit the communities. For example, one person shared that the management of the trust has become less transparent and their decision-making processes do not properly include the diverse village voices:

> "But I feel that we do not benefit equally as community members because there are some changes on…like in our way of operation. So normally when it comes to decision making, we vote through majority. That's how we used to operate. But now, I feel like it is not like that now. Now the decisions are taken only by the management."

Another individual referred to this change in local governance as a "gap" between leadership and community: "When you look at it right now, it seems like there is that gap, but once that gap can be closed, I think it will lead into some development." Others are certain that leaders' lack of transparency regarding CBNRM funds will persist with the reintroduction of hunting: "…we will be told that there is somebody who has paid some money for a lion or buffalo, and we are not gaining anything."

Lastly, the state government's lack of guidance and planning to prepare the communities for the hunting ban generated distrust between the two entities, which may provide a challenge

when responding to the lifting of the ban. The communities' distrust of the state during the hunting ban was often attributed to geographic distance and a lack of local context in the state's decisions. For example, one individual stated: "…most of the people who are in the capitol town, they are educated people, and also they are free from the kind of life that we are living here. So they can make some points and do what [they want]." People expressed uncertainty about future plans doubted that they are going to be included in the process of defining the hunting management plans: "I don't know the model [for hunting] that they are going to use. They are figuring out how it should be done without consulting us here- the people who are really on the ground."

In addition to those community members that fully endorsed and rejected the reintroduction of hunting, there are individuals who advocated for a return to hunting on the condition that it be new and improved.

Critical Feedback: Hopeful for A New Hunting System

Although there are many participants that are looking forward to the reintroduction of hunting tourism, they also seek several changes to the operation and management of the hunting system that will better reflect community interests. Whether or not these opinions will be addressed and executed through the final hunting management plan remains to be seen. One of the call for improvements included a community-based economic plan that is less dependent on hunting tourism and structural changes to empower communities in CBNRM. One community leader shared how the hunting ban served as a critical period that allowed individuals to reflect on the local socio-economic and ecological impacts of hunting tourism and generate their own critiques of the hunting system. This person explained:

"…[the ban] helped us. Yes, it opened our eyes because after the ban, we were thinking- for over ten years that we've been hunting. What did we do? What we can look back and say, for ten years, with these hunters, we did this. So, we used to use the money [from hunting] in the village for some development. Not doing something which will come in place of hunting if hunting will stop. When the money comes for hunting, we will invest this money in other things that will bring money into the village so that if after five years, ten years, the government thinks we will stop hunting again- we are not hard hit like we were, because we learned."

Economic Diversification

After the hunting ban, communities realized that they could not be as dependent on hunting tourism for economic stability. Photo-tourism and heritage tourism projects, like cultural villages, offered an opportunity for economic diversification. One person expressed their desire to develop a village in ways that would interest more tourists in their culture: "we need to work here…and develop…So that people [tourists] can, maybe when they pass here, they can find it interesting…We must make it so our village can interact with other people when they pass here." One person noted that ideas for this kind of local development did not exist when hunting outfits were operating: "[Now] they are making baskets, beads…they are making profit for the community. But when there was hunting, people were not thinking about this. They were just killing animals. After hunting, they opened…and this means that they have the vision to do things." Funds from hunting can be used to initiate these development projects until they become self-sustaining.

In addition to developing a diverse economic portfolio that is less dependent on hunting tourism, some participants saw how hunting can help them achieve personal goals. For instance, one woman shared that she plans to use employment for the hunting outfits as a financial stepping-stone to attend business school. She stated that before the hunting ban, she was content with her life working for the outfits and didn't think about going to school. But after the ban, she realized that "…education is the most important thing…I needed a better job instead of staying."

Diversification of Strategies for Human-Wildlife Conflict

After the hunting ban, some community members became more open to diverse and new solutions to address human-wildlife conflict. One participant asserted "I believe hunting or no hunting- we can control the animals. We can make good corridors for them. It's just managing them." Possible strategies to alleviate human wildlife issues include methods like the use of chili peppers, DWNP patrols, and wildlife corridors that been effective at times, but need to receive more support in order to improve in efficacy. For instance, farmers report that the smell of 'peri peri' or chili peppers aggravates elephants and the plant can be hung on fences to deter elephant travel through their fields. However, one farmer shared that there are challenges to its implementation: "…it's a lot of work to do it" and sometimes supplies run out. In addition, one person shared that if DWNP hired more personnel and constructed stations more evenly throughout the remote areas, they could respond to complaints more quickly and prevent more conflicts. Opening boreholes to attract wildlife away from human settlements, translocating problematic wildlife, and building electric fences to encircle the villages were mentioned as other possible strategies.

Operation of the Hunting Outfits

In general, participants that advocated for a return to hunting tourism want the operations to be more ethical and sustainable such as tightening quotas to be stricter about which species are included. One person suggested that the hunting quotas solely include elephants: "They have to specialize on the elephants and not the cats because the cats' numbers are very low." Another person echoed this sentiment: "There are those animals that I feel shouldn't even be touched. There is only one species that I feel should be dealt with, which is the elephant." Some of these

requests are less feasible than others, like one person demanded that hunters pay for each bullet they shoot until their targeted animal is effectively killed: "one elephant, one bullet, have to pay again, just shoot once, don't shoot twice."

In concert with stricter regulations, some participants want to adopt a more adaptive management approach to the hunting operations. One person shared that "I know for sure that at some point, the hunting ban will come. It is a sustainable tool. We want it that way. At some point it will come, stop for a while, we review our things, are we still okay? Then we come back again, introduce it." Some people envision that hunting should be cyclical and that hunting tourism should operate as long enough for sufficient funds to be channeled into conservation and be banned when wildlife populations show signs of diminishing. Allocating funds to conservation efforts and rural development projects need not be separate objectives, as one individual noted: "…we can [use the hunting money] to pay compensation for our villagers so that they feel that our resources are looking after them as well. The board will do that through their managers- not the government." One individual shared that adopting an adaptive approach for hunting tourism will be challenging and stakeholders need to be very careful because "…at the end you could end up having nothing to hunt."

Re-Structuring Community Based Natural Resource Management

Many participants' recommendations to improve hunting tourism included redefining the terms of joint venture partnerships so that communities might receive more benefits. An integral part of the CBNRM program, joint venture partnerships are any arrangement between the private sector and the communities who have rights over natural resources (DWNP, 1999). According to a 2001 report, although the partnership could lead to the co-development and management of a lodge, most JVPs in CBOs take the form of sub-lease agreements where a safari company just

pays a community for its use of the quota and land for tourist hunts (Gujadhur, 2001).

There has been a call to reform JVPs so that communities are not just involved in a formal agreement, but they actively participate in its formation and implementation (ibid). A few of these demands are greater pensions for elders, more expensive quotas and land rentals, and requirements to hire locals. One person shared that these changes would ensure that "…everything would be more citizen empowerment centered." Another community leader advocated including lawyers and a government appointed advisory committee in the crafting of contracts between the private sector and the communities. The inclusion of these external parties may provide villages with the proper information and legitimacy they need to make agreements that reflect community values. One person shared that developing better agreements can be achieved through "…the proper alignment of government and trust rules and policies….once they are put in as requirements, any hunter who is hunting will know, looking at that, whether or not they are fitting or not."

While it's clear some participants' recommendations explicitly concern the terms of the joint venture partnerships, some individuals' demands require restructuring CBNRM. Participants would like to see the villages gradually adopt some of the responsibilities that are usually reserved for the hunting safari companies, such as the advertisement and sale of quotas to interested tourists. One person shared, "the community should sell the quota, not to the JVP, but sell it directly overseas because they…can have the travel agent there who can help them market their quota. I think the community can earn more than the JVP." Individuals would not only like to see the villages market quotas to potential tourists, but want the ownership of lodges and campsites to gradually transfer to the CBOs.

Another way that participants believed the hunting system could be more community-centric would be to institute a citizen hunting initiative, whereby individuals could qualify for rare quotas and exercise traditional hunting practices on their land. One former hunter claimed that the raffle system was better because "rich or poor", one could be granted a quota and access to meat; he believed that a lottery would increase the community's sense of ownership, because if you won an animal "It was yours. You could sell it and do something with your life with that money." According to the new management plan (DWNP, 2019), a citizen hunting permit cost 8,000P ($696 USD); knowledge of this high price during these interviews may have reduced expectations about their capacity to participate in a hunting raffle system. Another individual shared that quotas should only be given out to professional hunters to ensure that regulations are followed more tightly, which could be challenging in a new lottery system.

In general, respondents envision new social structures that prioritize accountability between representatives and constituents. They want to see more regular in-person communication between government officials and villagers regarding the action or lack of action on their recommended changes to the system. One person shared that these two groups will only achieve this level of communication if the government is "…close to the community and engages with them [the communities] on almost everything [policies] that the government wants to change or wants to implement." Community members also would like their CBO leaders to have experience in business and be a diverse group in age: "…we have to take maybe five youth and five elders so that maybe if the youth didn't get things right, the old people will say "no, we will do it this way, not that way." By having a board that is diverse in age, recommendations and proposals might be more reflective of the wide spectrum of community needs.

Whether or not participants believe that these changes will be enacted is unclear. One person frankly stated "And I'm not sure what is going to happen." However, participants do articulate a number of structural adjustments that need to be made in order to make these changes feasible.

Discussion

Key Aspects of the Lifting of the Ban: Future Scenarios and Adaptive Capacity

Both the ban in 2014 and its lifting of the ban in 2019 serve as disturbances to the Trophy hunting system. Some CBOs were able to survive without hunting tourism; however, the capacity to adapt was limited. Adaptive capacity is understood as the "….ability of a system to evolve in order to accommodate perturbations or to expand the range of variability within which it can cope (Adger, 2004, p.32) and an increased agency among stakeholders to negotiate among different interests to overcome negative collective action outcomes (Armitage, 2005). Thus, adaptive capacity is related largely to a system's ability to allow for diverse thought and accommodate unexpected change. One of the major indicators of adaptive capacity in the revived Botswana hunting system is how the state incorporates community feedback in the planning and implementation of the hunting operations. The lifting of the ban seemed to be in response to the negative local feedback to the hunting moratorium; however, the decision to lift the ban could have been political strategizing. Thus, the adaptive or mal-adaptive nature of the system will be revealed in how the new hunting system is implemented and specifically, how community feedback is incorporate in policies and planning.

The return of hunting could signify a system transformation or the persistence of an old, mal-adjusted system. Transformability is the capacity to create a new system in the face of a disturbance, which can include shifts in norms or values, patterns of interactions among network

members, patterns of use or consumption, and shift in organizational and political relationships (Carpenter et al. 2001). According to Gunderson (2000), after a disturbance, the management actions are: to do nothing and wait for the system to return to its desired state, to "…actively manage the system and try to return [it] to a desirable stability domain, or to "…admit that the system is irreversibly changed and…to adapt to the new altered system" (Gunderson, 2000, p. 432). Because this research took place after the lifting of the ban and before the re-implementation of hunting, it is unclear whether the system will return to the original state, adopt a more balanced state, or attempt an entirely new configuration. To inform resilience of this Trophy hunting system, it is helpful to envision different future scenarios, discuss ways that they might be reached, and make inferences about each scenarios' adaptive capacity (Folke et al., 2002). Figure 10 shows three potential future scenarios for how the new trophy hunting system in Botswana will proceed.

Adaptive Cycle

Scenario A: Old Hunting System
- Top-down governance structures
- Lack of coordination and communication between different levels of governance and sectors
- CBOs continue to be hyper-dependent on hunting tourism for economic prosperity and protection from wildlife

Scenario B: More Community-Centric
- Some community recommendations are incorporated in new hunting system
- Land Bank Policy is reversed
- Consistent consultation between different levels of governance
- Development of livelihood options alternate to trophy hunting tourism

Scenario C: An Adaptive Hunting System
- Formation of hunting working group that includes representatives from all stakeholder groups
- Management plan developed to conduct trophy hunting on an alternate yearly cycle
- CBOs continue to invest hunting funds into diverse economic ventures and projects

Another External Disturbance: The Lifting of the Hunting Ban [2019]

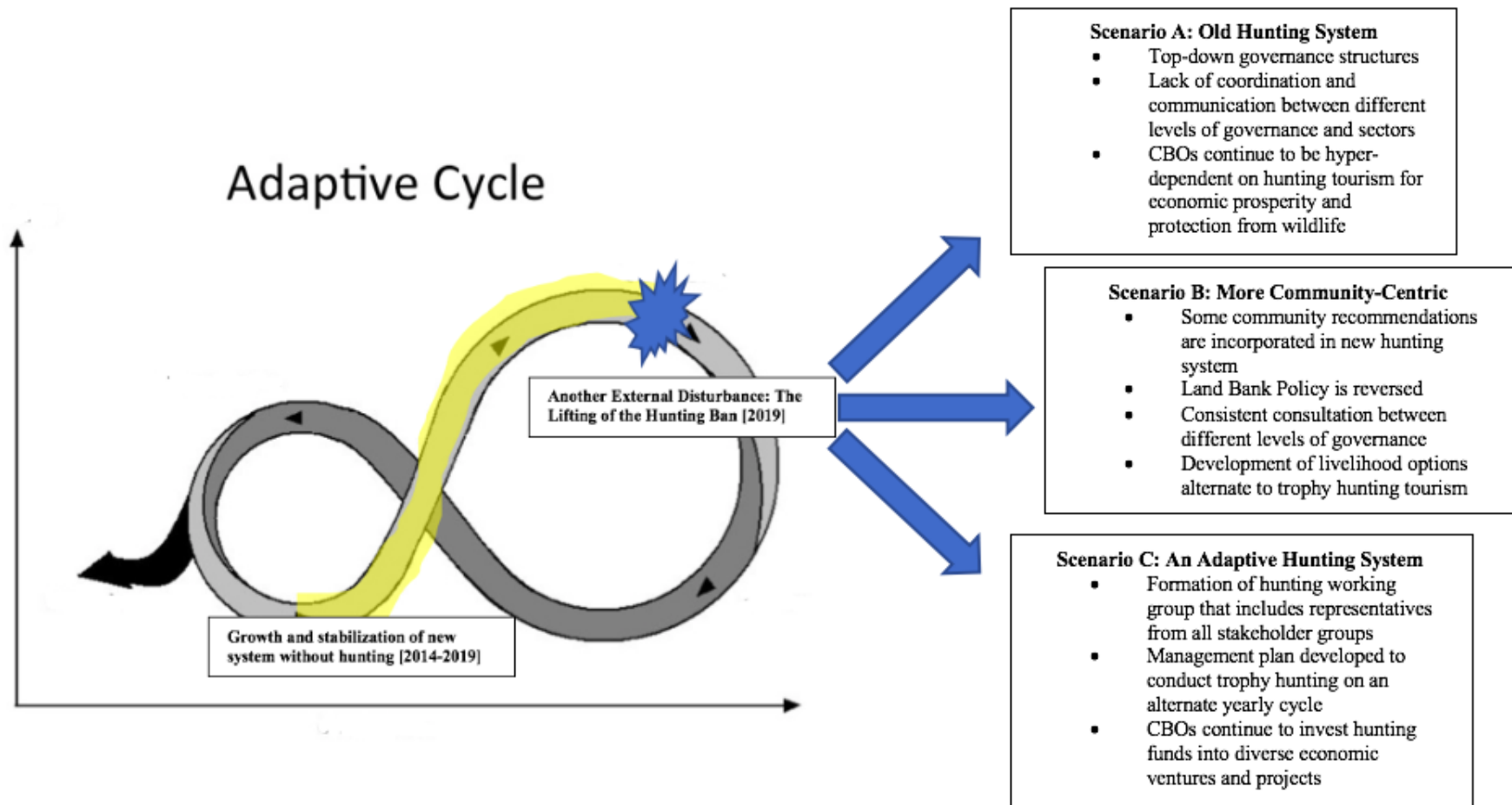Growth and stabilization of new system without hunting [2014-2019]

Figure 10. Key Aspects and Dates of Possible Future Scenarios for a new Trophy hunting system in Botswana.

Scenario A: A Return to Old Hunting Tourism

Although it is impossible to completely return to a pre-ban Trophy hunting system, one potential future scenario is to adopt a configuration that is very similar to the "old" system in function and structure. The ringing endorsement of the lifting of the ban may prevent certain critiques with the old hunting system from being addressed (see "Positive Feedback") and these conservative attitudes can reinforce the dominant social structures, stifling the growth of new institutions. One individual shared the predominance of this perspective: "Most people will say that we want hunting to go back like they said it used to be." In times of crisis, this local-level desire to return to the old state or "way of doing things" is well documented (Inglehart and Baker, 2000); especially within impoverished communities that live under more stressful conditions. Although a return to the old hunting tourism system might be embraced by most of the rural communities, a move like this could risk ignoring the power of other drivers in the system.

The revival of certain dominant structures which excluded local knowledge from higher-level decision making and a lack of accountability and transparency will indicate a return to the old system. Although communities have generated many recommendations since the ban, they lack certain information that would help clarify the feasibility of these recommendations and shape their expected outcomes. There is a lack of awareness regarding the types and amount of resources that might be required to enact their demands, like an increase in personnel to enforce stricter regulations on hunts and timely evaluations of wildlife populations. The perceived population of elephants in Botswana provided a key piece of information to decisions regarding the hunting system and it is a prime example of how misinformation can generate polarized

perceptions about resource management and stifle the growth of adaptive capacity (Tiam Fook, 2015).

The political realities of a lack of local awareness of decision-making, governance, and communication are all signs of decreased agency in social actors that may predict a return to the old system and a reduced adaptive capacity (Armitage, 2005; Ballard and Belsky, 2010). With its low diversity and rigid structures that are resistant to change, a return to the "old system" may be more politically acceptable and may be interpreted as more desirable. However, the system's return to normal can be a 'rigidity trap,' where uncritical consensus or suppression of alternatives leads to an excessively stable institutionalized regime (Scheffer et al., 2002). If hunting tourism succeeds in asserting its dominancy in the Trophy hunting system, it is very possible that the system will, once again become vulnerable to change and at greater risk of catastrophic collapse (Pelling and Manuel-Navarrete, 2011).

Scenario B: A More Community-Centric Hunting System

Old structures have begun to emerge in this transition period after the lifting of the ban and participants are providing critical feedback that could re-shape these structures in ways that represent a more diverse group of stakeholders and build resilience in the new hunting system (Folke, 2006). This critical feedback includes the reversal of the Land Bank Policy, more accountable leadership in the trust, and greater community benefits from partnerships with hunting outfits. According to the adaptive cycle model, the implementation of participants' recommendations to the new hunting system is dependent on strong social capital and the emergence of complementary social structures (Scheffer et al., 2002; Pelling and Manuel-Navarrete, 2011). Thus, many of these changes that participants would like to see are only

possible with robust and transparent communication and consultation between the state government, CBO government, and the villages.

Disturbance events and crises can provide opportunities for learning and innovation and diversify adaptive responses, like the improved knowledge of risk among those affected and increased awareness of vulnerability (Pelling and Manuel-Navarrete, 2011). Critical responses that encourage the conditional return of hunting demonstrate that respondents have learned about how hunting tourism can rigidify and monopolize the Trophy hunting system in negative ways. These responses qualify as the type of systematic "remembering" that happens in response to a shock (Folke, 2006). Participants' comments on the inequity of benefit distribution and their interest in cultivating local economies that focus more on photo and cultural tourism reveal unpleasant memories of the communities' dependencies on tourist hunts for economic, cultural, and political sustenance. This "remembering" of the negatives of hunting tourism could combat a certain attitude that might encourage the suppression of these negative memories in favor of a system that upholds the powerful (in this case, the tourism industry and the state). The incorporation of this critical feedback in the new system may improve adaptive capacity and help build resilience (ibid). In the trophy hunting literature, there are many studies that have assessed community feedback and provided recommendations for how to incorporate this feedback to improve hunting planning and management (Jew and Bonnington, 2011; Garvin, 2017). However, whether or not these recommendations are pursued in Botswana remains unknown. The incorporation of community feedback into the new hunting system could set a precedent for the village and state institutions to develop creative livelihood options and improved accountability mechanisms (Speranza et al., 2014; Whitney et al., 2017).

Scenario C: An Adaptive Hunting System

After the lifting of the ban, one possible future scenario for the Trophy hunting system is to adopt a more adaptive management approach to hunting. In this approach, trophy hunting tourism is not a permanent fixture in the system's structure, but an activity that is brought in and put on pause based on the system's diverse social and ecological feedback. Adaptive management "assumes surprises are inevitable…knowledge will always be incomplete, and human interaction with ecosystems will always be evolving" (Gunderson, 2000, p. 433). In adaptive management governance, the system utilizes a knowledge base that has accumulated over time to respond and conform to changes in natural resources and encourages a diversity of resources for livelihood security to keep options open and minimize risk; these characteristics of governance are very similar to management approaches informed by traditional knowledge (Berkes et al., 2000). With an adaptive management approach, the Trophy hunting system will be designed for more gradual responses to changes in policy and the system will decrease its dependency on trophy hunting.

The hunting system is dictated by social and ecological interactions and dynamic feedbacks. For instance, the pressure to hunt increases when HWC appears to increase; however, problematically, the return of hunting may not address these conflicts (Blackie, 2019). In an adaptive system, these types of social and ecological feedback would still inform management actions, but the system would build greater resilience through the diversification and innovation necessary to function through periods of non-hunting.

In order to create an adaptive management system, Gunderson (2000) suggests "1) highlight uncertainties 2) develop/evaluate hypothesis (policies) around set of desired system

outcomes 3) structure actions to evaluate or test these policies, to see if they result in action" (p. 434). Key indicators that the system has the ability to try an adaptive approach include structures that incorporate diverse stakeholder feedback and an emphasis on risk management, and operate in a more flexible and uncertain space (Gunderson, 2000; Scheffer and Westley, 2007). Stakeholders may feel uncomfortable with the risks and short-term costs that come with an enhanced flexibility. An adaptive system might embody what Pelling and Manuel-Navarrete (2011) poses as the "ideal state of resilience," (p. 10) where the function and structure of the system takes place across the four phases (stabilization, release, reorganization, growth). In this context, the characteristics of each phase balance each other with enough rigidity for the system to continue to function and opportunity for the exploration of diverse, novel elements.

These three scenarios are not all inclusive, nor should they be; one way to practice and build resilience is facilitating a social environment that creates opportunities to learn and increase adaptive capacity "…without foreclosing future development options" (Folke et al., 2002, p.437). There may be adaptations and challenges that seem one way now and actually turn out to being integral in building resilience within the system. Thus, it may take years for lessons harvested from the hunting ban to reveal themselves and prove useful, and if this does happen, it will be difficult to link these lessons to the ban. In general, resilience theory and the adaptive cycle model advocate for the creation of space within and between processes and structures to allow new components and ideas to be seen (Pelling and Manuel-Navarrete, 2011).

After the lifting of the ban, the Trophy hunting system is operating in a period of "reorganization," where hopefully, social institutions adjust to incorporate the lessons that the system has learned from the initial disturbance of the hunting ban. Whether or not the new

system incorporates participants' feedback will illuminate our understanding of the resilience of Botswana's Trophy hunting system.

CHAPTER 7. CONCLUSION

Summary of Findings

This study provides an in-depth understanding of how livelihoods and perceptions of wildlife throughout Botswana's CBOs have responded to and changed in the face of drastic shifts in national hunting policies (the 2014 hunting ban and the 2019 lifting of the ban). By applying the adaptive cycle model to Botswana's Trophy hunting system, it is possible to view the ban as a disturbance that disrupted a stable system (k) and initiated phases of release (Ω) and reorganization (α). Figure 11 shows the key aspects and dates of all of the adaptive cycle phases of Botswana's trophy hunting system, leading up to the 2014 ban and the 2019 lifting of the ban. The ban provoked a system-wide collapse: old structures that had become fixtures and stabilized the Trophy hunting system failed and space for new ideas and institution to take hold opened (Figure 9). Figure 10 shows three potential future scenarios for how the new trophy hunting system in Botswana will proceed.

Adaptive Cycle

2 **Stabilization phase [2002-2013]**
- Increase in communal funds
- Greater employment opportunities
- Villages adopt protectionist conservation ethic
- Decrease in illegal wildlife activity
- Greater tolerance of wildlife

5 **The Reorganization Phase [2014-2019]**
- More photo tourism partnerships
- Develop local tourism ventures and projects
- Increase in state sponsored welfare programs
- CBO 'bench-marking' workshops
- Cultural willingness to try new economic activities and transition livelihoods

External Disturbance: The Hunting Ban [2014]
- Decrease in wildlife populations
- International anti-hunting influence
- President's personal politics

3

1 **Exploitation phase [1986-2002]**
- Wildlife tourism becomes an official activity of Botswana
- New land tenure system introduced
- Citizen hunting more tightly regulated
- Commercialization of wildlife is prioritized
- CBOS are formed and begin to accumulate monetary wealth and benefits from hunts

4 **The Release Phase [2014-2019]**
- Delay in turning leases over from hunting to photo
- Loss of jobs and communal funds
- No access to game meat
- Greater conflict and less tolerance with wildlife
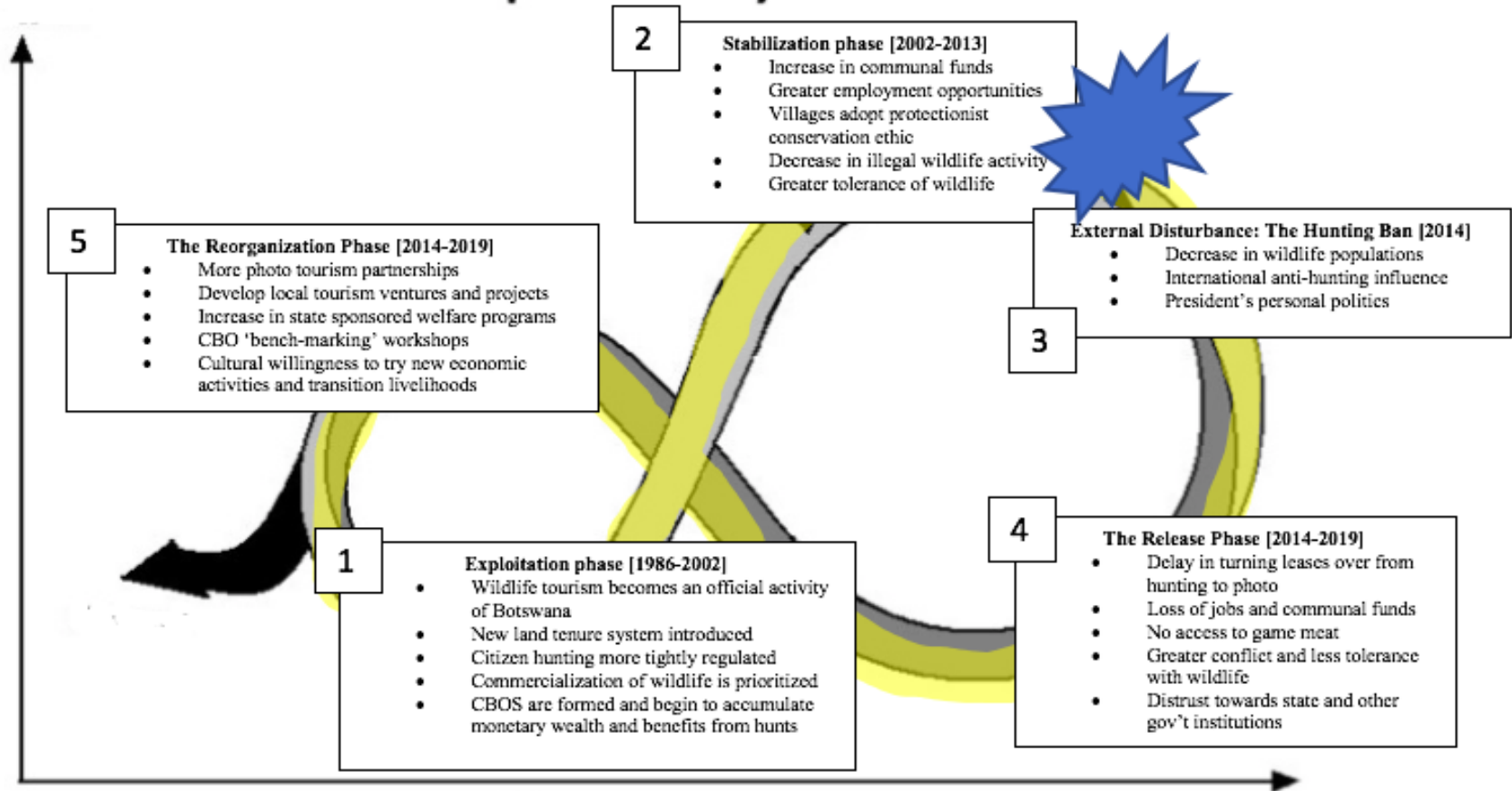- Distrust towards state and other gov't institutions

Figure 11. All the Key Aspects and Dates of Botswana's Trophy hunting system.

The majority of CBO members perceived the new system without hunting as unstable and inconducive to their livelihoods, their culture, and wildlife conservation. Their feedback suggests that there was tension between the communities and wildlife and that hunting tourism was the stabilizing factor that kept this relationship functioning. In general, communities considered a system without hunting as undesirable; however, a "desirable" system is not always the most resilient and can be the result of a maladaptive system (Holling, 2001). Thus, even though a system with hunting tourism seems to be the most desirable (at least according to most community members), it may not be the most resilient system and its principles and structures may not adapt to crises or translate well into alternate states.

This study's findings support previous research that has explored the role of trophy hunting tourism in human wildlife conflict mitigation and community perception of wildlife and protected areas; however, this study also acknowledges the unique aspects of Northern Botswana's local social-ecological system and the evolution of this system over time through the application of the adaptive cycle model. Various studies associate perceived benefits from trophy hunting tourism with a positive local attitude towards wildlife conservation (Mbaiwa, 2004; Nelson et al., 2013) and state that if hunting were banned, local communities would respond by rejecting protectionist conservation principles and engaging in activities that exploit wildlife or compete with wildlife for land (Naidoo et al., 2016). The impacts of the Botswana hunting ban on the Trophy hunting system are well documented; these changes include a decrease in income for local development projects, the loss of access to meat, and less funding for conservation efforts (Onishi, 2015; LaRocco, 2016; Mbaiwa, 2018; Blackie, 2019). These studies illuminated how both the protection and sustainability of rural livelihoods had become dependent on the practice of trophy hunting tourism. However, this research lacked a more holistic perspective

that would acknowledge rural communities' agency and capacity to respond to the ban and the power structures that might empower or inhibit their responses. If some CBOs were able to survive and even, grow, during the system's release and reorganization phases after the ban, decision-makers can create policies or processes that make it possible for other CBOS to adopt similar strategies.

Although the ban created severe challenges for hunting CBOs and challenged societal resilience, results from this study also indicate that the ban provided opportunity for learning and innovative responses. One salient response was communities' realization that they cannot rely so heavily on hunting tourism as their main economic activity. Learning and innovation were inhibited by lack of economic diversification and a reliance on government aid, suggesting that certain structures that dominated the "old" Trophy hunting system (pre-ban) were still influential and prevented the post-ban system from growing or evolving into a more stable system that functioned without hunting tourism. Even though the lifting of the ban was considered a response to community struggles, the lifting of ban also served as another disturbance to the Trophy hunting system. How the system incorporates stakeholder feedback, especially in regards to rural dependency on trophy hunting, can provide insight on the system's overall adaptive capacity.

Outlines for the 2019 New Hunting Management Plan

The government of Botswana has moved forward with a hunting management plan and the new plan does consider some of the recommendations and feedback of various stakeholders, especially the CBOs. In a recent government publication that outlined the new hunting and escort guidelines for the 2019 season (Republic of Botswana, 2019), the guiding principles appear to integrate community members' critical feedback. Some of the most community-centric guiding

principles that determine the location of the hunting concessions were where: "1) Problem

Animal Control (PAC) and Human Wildlife Conflict (HWC) is high, 2) CBOs have lost

significant revenue due to the hunting moratorium, provision of employment and protein, 3)

poaching incidents have been consistently reported" (p. 6). While these guidelines seem to have

incorporated the lessons and recommendations that community members developed from their

experience of the hunting ban, the ambiguity of some of the language in the recommendations

and the selection of the locations for hunting concessions allows for alternative interpretations

that may disempower communities. It is also important to acknowledge that, in the aftermath of

the lifting of the ban, the government of Botswana has opted to refer to the 'hunting ban' as a

'suspension' or 'moratorium' in official publications regarding trophy hunting policy (ibid,

2019). Framing the hunting ban as a calculated suspension could risk diminishing the

stakeholders', and especially the CBOs', traumatic experiences of the hunting ban. It is necessary

to give notice to this change in rhetoric around the evolution of trophy hunting policy in

Botswana in order to preserve the community experience of the ban as a 'ban' for future

interpretations of hunting policy by the national government or outsiders.

In some ways, the new guidelines completely counteract certain CBOs' expectations and

demands for the new hunting system. Firstly, in the map displaying the new controlled hunting

areas (See Appendix 3), the CBOs of Mababe and Sankuyo are not granted hunting concessions

and instead, their areas (NG/41, NG/42, NG/43, and NG/34) are allocated for "maximizing

benefits through non consumptive utilization". The Chobe Enclave will receive one hunting

concession on the Western End (CH/1) and the other concession (CH/2) will remain as a

protected area in the Chobe National Park. Therefore, although all three CBOs were planning on

the return of hunting tourism to their lands and communities, the new hunting management plan

will only meet the expectations and demands of CECT. CECT has the opportunity to experience Scenarios A, B, or C as discussed above (Figure 10). Mababe and Sankuyo will continue growing towards a system without hunting tourism and will most likely benefit from a system that is adaptive (Scenario C), where the priorities of all stakeholders of the Trophy hunting system are taken into consideration and hunting tourism adapts to the social/ecological feedback of wildlife population numbers and local perceptions of human wildlife conflict.

The current management plan does acknowledge a few pieces of feedback, like the allocation of lands to citizen hunting raffles and the mandatory increase in partnerships with Batswana owned/based operators. However, the raffle quotas are expensive (8,000 Pula or $800 USD) and require the winners to travel to certain regions of the country to use the licenses. Furthermore, some participants argued during interviews that whether or not a company is "Batswana-owned or based" will not explicitly address the systemic racism that extends into the national tourism industry and often favors White Batswana (both ex-pats with Botswana citizenship and White native Batswana) over Black Botswana**.** This lack of clear language may fail to address concerns about the hunting industry's economic leakage and perpetuate feelings of a lack of locally derived benefits.

In general, this management plan does not trend towards adopting an adaptive management approach for hunting tourism. The plan does seem to have incorporated various stakeholders' recommendations for how hunts are to be operated and managed (Scenario B), which indicates a certain level of adaptive capacity that could be valuable when experiencing future ecological or political disturbances. The plan neglects some of the CBOs' obvious demands and it is unclear how the state plans on supporting the CBOs (Mababe and Sankuyo) that were relying on the return of hunting and are excluded from the new plan.

Overall, it seems like the system is leaning towards a Scenario B, where some feedback is incorporated and some of the top-down, exclusive structures still dominate the system. However, with the recent development of COVID-19, which will decrease international travel for tourism in the 2020 and 2021 seasons, Botswana may have to develop an interim management plan to support hunting CBOs when the demand for hunts is low or non-existent. Perhaps the development of an interim plan could be an adaptation that may be the beginning of a more flexible and uncertain, yet resilient, Trophy hunting system.

Recommendations

Within scope of the study, there are multiple recommendations for maximizing benefits and minimizing challenges of trophy hunting tourism development in Northern Botswana.

Convene a trophy hunting working group to develop a shared vision.

If Botswana desires an approach that has the potential to produce long term, inclusive, sustainable human-environment relationships, it's worth considering the formation of a multi-stakeholder working group. This collaborative would be inclusive, involving representatives of each stakeholder group (e.g. village traditional government, tourism employees from the village, representatives of cultural tourism in villages, photo-tourism industry, hunting industry, international animal welfare groups, wildlife biologists). A tentative list could include: various hunting and non-hunting CBOs, government officials, conservation biologists of NGOs, representatives of KAZA-TFCA, and private tourism business owners. It might be most useful if the collaborative remain district specific, as each district has its own challenges and opportunities in terms of natural resource management. The intention behind the working group would be to

create "an even playing field" where traditional power dynamics are mediated and group-thinking is employed to frame problems, create objectives and solutions. A multi-party collaboration might be especially helpful in the villages of Mababe and CECT, which struggle with contentious relations between the traditional government, the CBO government, and the villages.

Before a working group can even be formed, a stakeholder assessment analysis would need to be conducted to evaluate which parties would be capable and interested in participating. In order to maintain the impartiality of the process, the national government would need to hire a facilitator to conduct the stakeholder assessment and eventually, facilitate the formation of the working group. By viewing and discussing the interests as a group of stakeholders, there is also the potential to generate a greater sense of compassion between traditionally polarized groups, which could lead to stronger relationships down the road and open the door to potential collaborative efforts in the future. Ultimately, the working group would communicate problems and potential solutions to managers and politicians.

Move towards a more adaptive hunting management system through reflection of lessons learned from the ban.

The Trophy hunting system is a system that seeks to stabilize wildlife populations and trophy hunts, which is an approach that increases vulnerability of the system to unexpected change. The system would benefit from a gradual shift to an adaptive management system. Adaptive management governance involves a flexible structure and set of policies that can deal with uncertainty and change. To achieve this, it is necessary to change how we relate to and govern social-ecological systems.

One of the lessons learned from the hunting ban is that trophy hunting tourism serves as a key component in stabilizing rural livelihoods and sustaining local support for conservation. Change within and towards systems is inevitable; as an economic activity and social custom, trophy hunting is particularly susceptible to changes in international attitudes and can affect national leaders' politics. Thus, learning how to live and thrive without trophy hunting is a useful practice. The exploration of an adaptive management approach to trophy hunting tourism is especially relevant in the wake of the COVID-19 pandemic, which will undoubtedly reduce the international demand for hunting this fall and present a "ban-like" situation for sub-Saharan nations with trophy hunting.

Strategies to transform governance for improved management in response to crisis include:

- Convening a voluntary hunting working group, which would create a network that connects individuals, organizations, agencies and institutions at multiple organizational levels and increase the Trophy hunting system's capacity to learn from, respond to, and manage change.

- Create a portfolio of projects that could be launched whenever there is an opening and the time is right, whether that be dependent on political climate or funding.

- Create accountability systems that ensure local, regional, and national leaders uphold certain adaptive management principles, like: generating and integrating diversity of ideas, viewpoints, and solutions; communicating and engaging with key individuals in different sectors; promoting and stewarding experimentation at smaller scales

- Create a monitoring system that will continuously test and reflect on the knowledge that is being used to inform Natural Resource Management decisions

- Practice patience. The time horizon for effect and assessment is at least 30-50 years; building resilience is all about slow dynamics

Primary recommendations at the CBO level include:

- Continue to "bench-mark" amongst CBOs (domestic and international, i.e. Namibia) to create stronger network through which problems and solutions can be discussed. A CBO network could also be helpful in creating a unified voice to continue to express post-ban challenges and advocate for hunting policies that better benefit the communities.

- Despite a fragile relationship due to a history of broken or transient promises, CBOs became more open to collaborating with NGOs during the ban. Continue strengthening partnerships with NGOs and engage in smaller scale experiments to address local problems, especially around human wildlife conflict.

- Encourage the use of technology to monitor human wildlife conflicts within CBOs. Participants shared that Facebook or WhatsApp were useful tools to announce local wildlife sightings to other villagers. Updates on wildlife through social media helped prepare villagers for potential encounters.

- Continue to develop community-based economic ventures external to photo tourism, which provided relief to the communities by localizing certain essential services and providing employment opportunities.

- Lobby for stricter regulations that dictate the terms of JVPs with hunting and photo-tourism companies to ensure a transfer of business and marketing-based skills to locals as well as a gradual increase in CBO ownership of assets over time (perhaps this is achieved through the achievement of specific goals).

- Demand more frequent in person visits from government officials, especially those working in Gabarone's CBNRM and Rural Development and Improvement units. The geographic distance between the villages and permanent residences of the decision makers can cause improper distribution of resources. More visitations from government officials to evaluate the community's specific social, environmental, and economic needs can lead to more appropriate and effective allocation of resources.

- Challenge adopted practices related to achieving food security. In most CBOs, agricultural production is not a viable option and will only become less effective with climate change and threats from wildlife.

Limitations of Research

As with all research, there are limitations to this study. There are a number of

methodological limitations and research biases that are inherent to conducting qualitative cross-

cultural research (Chilisa, 2012). The qualitative methods of semi-structured interviews

permitted a more in-depth understanding on the topic, but also limited the sample size of the

interviews. This study sampled a subset of community-based organizations in Botswana and

thus, it may not be possible to extrapolate the results and implications to the greater network of the nation's CBOs. Furthermore, I spent one to two weeks in each village and worked with a few escorts, whom served as community guardians (Tosun, 2000) and orchestrated a substantial portion of the interviews; their guidance, while helpful and essential to respect community expectations for outsiders, may have influenced which individuals participated in the study and ultimately, over-represented certain perspectives in the findings. For example, one of the escorts who considered themselves "pro-hunting" may have introduced me to other community members that shared the same point of view, in order to cultivate the impression of a village united in their full endorsement of trophy hunting tourism.

When reviewing this study, it is prudent to consider the limitations of the adaptive capacity model. Firstly, this study focuses on the "local" level and social aspects of the Trophy hunting system; it neglects to observe the interaction between the system's longer term and shorter term ecological and biophysical components and how these interactions change our understanding of the system's resilience and adaptive capacity. Additionally, an Afro-centric understanding of a resilient and adaptive system can be entirely different than a Western-European conceptualization (Theron et al. 2012), which might influence this study's interpretation of the adaptive capacity of the CBOs in the Trophy hunting system. Policies based only on local scale dynamics can lead to an inaccurate understanding about the state of a larger system and consequently, misinform management actions, and vice versa (Linstadter et al., 2016). This study focuses on the regulatory environment, framing the hunting ban and lifting of the ban as the major disturbances that dictate the function and structure of the social-ecological system. However, this framing excludes other potential disturbances that may have occurred at different levels throughout the system.

Adaptive capacity is difficult to generalize across time and space, so factors like economic diversification and a cultural willingness, that enhanced CBOs' adaptation post hunting ban may not hold true for crisis-stricken communities in other nations that also heavily depend on some form of tourism (Ostrom et al., 2007). There is a latency issue when studying adaptive capacity in systems (Engle, 2011) and knowing what circumstances were essential to fostering specific adaptations is difficult to ascertain. Thus, it's challenging to operationalize adaptive capacity, especially because its determinants of are not independent of one another and the way they interact to create adaptive capacity varies in space and time (Tompkins and Adger, 2004).

Future Research

There is a need for future research on the linkages between trophy hunting tourism, rural livelihoods, and wildlife conservation in addition to how this research translates into action. Some topics for future research include:

- Perceptions of trust between stakeholders and the relationship to challenges, opportunities, and strategies that exist in building a collaborative trophy hunting network.

- Connection between social and cultural histories across villages and how these differences and how these influence CBNRM governance.

- Relationship between trophy hunting tourism, poaching, and local motivations to participate in the illegal wildlife trade.

- Analysis of "adaptive capacity" through a critical theory lens and exploring the relationship between gender and community action in an indigenous and colonial context.

Theoretical and Practical Contributions

This study has both theoretical and practical contributions. In terms of practical aspects, it contributes to the understanding of adaptive capacity of Northern Botswana's Trophy hunting

system in response to two key policy changes, the ban on hunting in 2014 and the lifting of the ban in 2019. The collapse of many of Botswana's CBOs in the face of the hunting ban proved that these communities had become extremely dependent on hunting tourism to survive. However, some hunting CBOs were able to adapt to the ban as a result of several factors and strategies including strong communication across levels of government which cultivated a sense of inclusion around decision-making; a cultural willingness to diversify economic activities, and the establishment of public-private partnerships. These adaptive qualities can be summarized as: diversity, transparency, innovation, risk-taking, and flexibility.

This study offers two main theoretical contributions. One challenge in this study was relying on community perceptions as the main component of the Botswana Trophy hunting system in the adaptive cycle model. Besides 2014, which was the year of the hunting ban, many participants did not offer specific dates or years to describe the different events that defined the phases of the system (growth, conservation, release, reorganization). This lack of information made it challenging to pin-point what key aspects pushed the system from one phase into the other, ultimately questioning this study's adaptive cycle modelling of Botswana's Trophy hunting system. It is important to consider how differences in cultures' experiences of time and space might impact the capacity of the Euro-centric adaptive cycle model to describe how a specific SES changes over-time.

The second theoretical contribution is how this study helps further conceptualize adaptive management, by comparing the ban to accepted adaptive governance qualities. It is tempting to think about the hunting ban as an adaptive management policy: a five-year experiment on life in Botswana without hunting or hunting tourism. However, the ban was not adaptive management because it was not intended to be a "learning" experience. Acknowledging that the ban would be

a "learning experience" would have entailed proper evaluation of the risks involved and plans to address those risks, especially at the local level in regards to human wildlife conflict and food security. Furthermore, the ban was not an adaptive management policy because there was no real effort to monitor and evaluate the system's feedback in response to the ban; data about human wildlife conflict post-ban is scarce and data regarding CBOs economic recovery is also challenging to find. If the government chooses to construct management institutions and processes that learn from the lessons of the ban, the ban may have had some adaptive qualities.

GLOSSARY

Batswana: several citizens of Botswana

BOT: Board of Trustees; group of villagers elected to serve as officials for the Community Based Organization

CBNRM: Community Based Natural Resource Management

CBO: Community Based Organization

DWNP: Department of Wildlife and National Parks

Ipelegeng: a rural development and drought relief program funded by the Botswana state government that offers work opportunities and monthly stipends for unemployed citizens

Kgotla: building that hosts important public assemblies; public assembly whereby important governance decisions are made

Kgosi: chief or "traditional leader" of the village

Motswana: individual citizen of Botswana

VDC: Village Development Committee

APPENCIDES

Appendix 1

The beginnings of the project started to come together in August 2018, when I began my graduate education in International Conservation and Development at the University of Montana. My advisor, Jenn Thomsen, had been working on a project with a colleague from the University of Namibia, Dr. Selma Lendevlo, on conservancy perspectives of trophy hunting tourism and governance in Namibia's Bwabwata National Park. Jenn saw the potential to extend this research to other sub-Saharan African countries involved in the KAZA Trans-frontier Conservation Area, informing their trophy hunting governance and practices. Studying the benefits and challenges of trophy hunting tourism in Botswana proved especially interesting and useful, as they were experiencing what had turned into a five-year ban on trophy and subsistence hunting in their country. Jenn and I connected with University of Botswana's Dr. Joe Mbaiwa, an expert in human dimensions of parks, recreation, and tourism, and listened to his take on research needs regarding sustainable livelihoods and wildlife conservation in Botswana. We thought it might be interesting to pursue the topic of community-based organizations' (CBOs) experience of the hunting ban, but rather than looking at it through a vulnerability framework "impact analysis," we advocated for a resilience oriented approach, exploring CBOs' capacity to respond and adapt to the ban.

Jenn and I began to articulate the study's research questions and conceptual framework after many informative sessions with Dr. Mbaiwa and a review of the relevant literature. Before conducting fieldwork, the proposal for the research was shared with Committee members and feedback was incorporated into the final research plan. Shortly after the defense, Jenn and I headed to Botswana to begin the fieldwork. This study focused on CBOs in Botswana's northwestern district (Ngamiland) and Chobe District: The Chobe Enclave Conservation Trust, Sankuyo Tshwaragano Management Trust, and Mababe Trust. I was lucky enough to spend two months in the towns of Kasane and Maun, travelling every couple of weeks to visit and interview the villages of Sankuyo, Mababe, and the Chobe Enclave (Muchenje, Mabele, Kachikau, Kavimba, and Parakurungu). Over these two months, I completed 71 interviews with members of the CBOs and other stakeholder groups. Before and after each visit with the villages, I

interviewed leaders of the traditional government (i.e. kgosis, Village Development Committee) and the CBO (i.e Board of Trustee, manager, assistant manager, escort guides), who spent most of their time in the CBOs' main offices, which were located in Maun or Kasane. During this "bookend" time, I also interviewed individuals from other stakeholder groups to gather a diversity of perspectives. These participants included: conservation biologists, former trophy hunting operators, photo-tourism community outreach coordinators, and safari guides (27% of the interviews).

During the fall of 2019, I worked to transcribe the interviews and began analyzing and coding the interview data during the winter of 2019. The spring and summer of 2020 consisted of writing up the results and discussing how the findings related to other literature and how they further improved our understanding of CBOs' adaptive capacity and the resilience of the greater social-ecological system. During the spring, grants were received to return to the villages with the plan of sharing the study's preliminary results and providing the opportunity for participants to challenge or support the conclusions. However, due to travel complications from the onset of the COV-ID 19 pandemic, these plans were put on hold. I hope to revive these plans to share this study with participants at a future date, where international travel is safer.

Appendix 2

Introduction Questions:

   1. What is your occupation in this community?

   2. How are you involved in the trust?

   3. Can you describe hunting tourism in the trust?

   4. What are some benefits that hunting tourism has brought to community?

   How are these benefits distributed to the community?

In depth Questions:

Question	Research Sub-Question	Justification	Supporting literature
In your community, what have been the main events and factors that led to the hunting ban?	Sub Question 1	Finding out what stage adaptive cycle is at now…does the ban fit the "disturbance" role?	Thomsen, 2018; Holling, 1973
In your view, what are the top three negative changes from a ban in your community? Any benefits from a hunting ban?	Sub Question 1	Have to know what it was like before ban in order to know what changes have occurred after the ban; can better direct questions.	Thomsen, 2018; Holling, 1973
Describe any conflicts between wildlife and the community. a. Was there a species that was the source of most conflict within your community? b. How did trophy hunting tourism influence community wildlife interactions? c. How have wildlife	Sub Question 1/Sub Question 3	How socio-cultural institutions (norms, behaviors) adapt to hunting ban; access to assets	Whitney et al 2017 Speranza, et al. 2014

encounters changed since the ban on trophy hunting?			
How has the way the community values wildlife changed since the hunting ban?	Sub Question	How socio-cultural institutions adapt to hunting ban; how they relate to livelihoods	
Did trophy hunting tourism provide opportunities for the community to manage wildlife? a. How have these opportunities changed since the ban?	All Sub Questions	How access to knowledge changes, knowledge sharing institutions; access to assets	Whitney et al 2017
How were decisions about trophy hunting tourism made within the community? a. Was this effective? Explain.	Sub Question 2	Governance and Institutions; accountability mechanisms	Swatuk, 2005; Blaikie, 2005; Whitney et al 2017
How are decisions about wildlife made within the community now? b. Was this effective? Explain. How does the community choose those individuals to represent them?	Sub Question 2	Governance and Institutions; learning and adaptation; accountability mechanisms	Swatuk, 2005; Blaikie, 2005; Whitney et al 2017
Do you think the community perspective is important to trophy hunting policies and management in Botswana?	Sub Question 2	Governance and institutions; accountability mechanisms	Swatuk, 2005; Blaikie, 2005; Whitney et al 2017
Describe the relationship between safari companies and	Sub Question 2	Governance and institutions; knowledge sharing, learning and adaptation	Whitney et al 2017

community leaders after the hunting ban. a. Has this relationship changed? Please provide an example.			
How did trophy hunting tourism impact the financial well-being of the community?	Sub Question 3	Diversity and Flexibility of livelihoods (relate to wildlife differently, how)	Whitney et al 2017
Has the community changed ways to make income since the hunting ban? Please provide an example.	Sub Question 3	Diversity and Flexibility of livelihoods (relate to wildlife differently, how)	Whitney et al 2017
Is there anything else that I didn't ask that you would like to share before we finish up of our conversation?			

Map of Controlled Hunting Areas in Hunting and Escort Guidelines 2019. Source: Government
of Botswana.
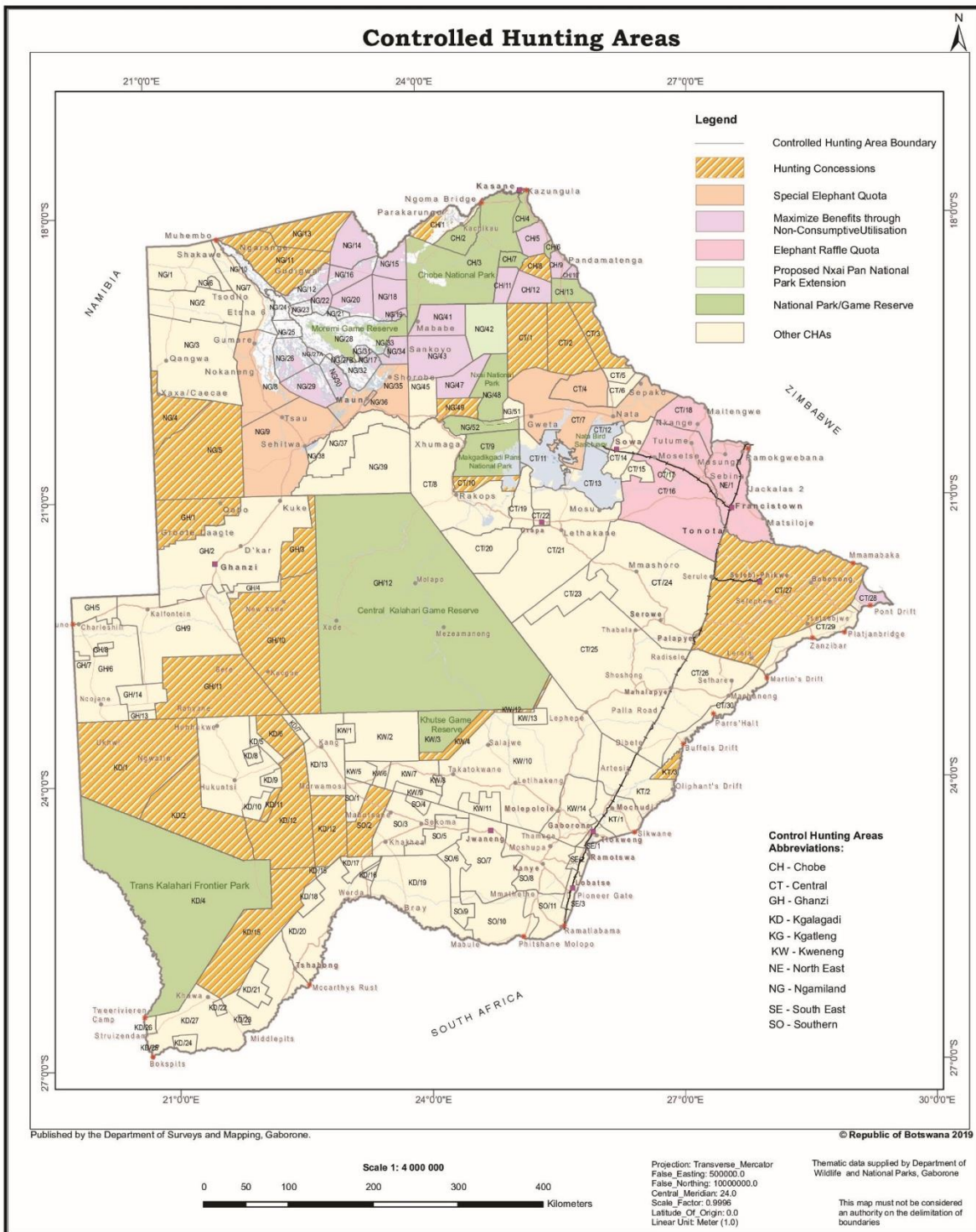
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