EXAMINING SUSTAINABLE PRACTICES AND OPPORTUNITIES FOR A SUSTAINABILITY CERTIFICATION SCHEME FOR TROPHY HUNTING IN SUB-SAHARAN AFRICA

A Capstone Project

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ABSTRACT

Trophy hunting is a niche, billion-dollar industry with particular conservation, economic, and development concerns for Sub-Saharan Africa. This study delves into the sport's benefits and drawbacks from a sustainability perspective by examining community-based natural resource management, attempts at trophy hunting sustainability certification schemes (SCSs), and best lessons learned from other sectors' SCSs. It concludes that introducing an SCS to trophy hunting may address many concerns in the industry if it were to include ethical (both animal and human), conservation, and community development components. Such a model would also benefit from incorporating rich stakeholder engagement, measurable objectives, and transparency and accountability mechanisms. More research is needed to understand the needs and preferences of the trophy hunting industry before proposing an in-depth SCS or alternative.

BIOGRAPHICAL SKETCH

Francine Barchett is an international development liaison as well as a graduate student and researcher. As the Humphrey Fellowship Graduate Assistant for the last 2 years, she has supported the Cornell Humphrey Program's mission of equipping professionals in the field of international development. As an MPS student in Global Development, Francine's studies hinge on the intersections of governance, sustainable development, and food security.

Francine completed her B.S. at Cornell in International Agriculture and Rural Development in 2019, concentrating in Economics and minoring in Southeast Asian Studies and Development Sociology. Her projects and studies led her across the US and to over 20 countries, from an index-based livestock insurance program evaluation Kenya to wild bird trafficking research in Indonesia. She received the World Food Prize Elaine Szymoniak Award for her work at ICRISAT in India, where she studied the nutritional outcomes of the Swacch Bharat sanitation campaigns. She was later recognized as a Rawlings Presidential Research Scholar.

During her time in the Cornell community, Francine has been active in youth engagement, food security, and prison reform. She founded its first student newsletter in Global Development and authored a healthcare journal article that became the basis for a law making menstrual hygiene products free-of-charge in prisons throughout New York State (Pads in Prisons: Addressing Gender Disparities in New York State). Her most rewarding experience has been serving as the World Food Prize New York Youth Institute's associate, where she is able to give back to the organization that ignited her passion for global development. She will commence her Ph.D. program in Natural Resources at Cornell in the fall of 2021.

Outside of school and work, Francine likes to speak Indonesian and Malay, train for her next ultramarathon, and try spicier foods than she thinks she can handle!

ACKNOWLEDGMENTS

About 3 years ago, I barely knew anything about the sport of trophy hunting. Now, I've not only written an MPS capstone project about it but am also committed to a PhD program to delve deeper into it. It's comical the direction life can take us! This work has never been my own undertaking, however. There are countless people to give kudos to. First and foremost is my family: Mom, Dad, Charlie, Aunt Peggy, and Uncle Bob. You all continue to inspire me with courage, tenacity, and passion to follow my interests and dreams, however wild or crazy they may be. Thank you for your unwavering support and love. Next is my academic family. To my advisor, Dr. Shorna Allred of the Cornell Department of Natural Resources: I am so grateful that you were willing to take me on as a student and lift me higher and higher in both personal and professional development. I look forward to our continued pathway together. To Dr. Jim Lassoie of Natural Resources, thank you for your friendship, mentorship, and more. To others who have directly and indirectly influenced this work – Dr. Peter Gregory of the Cornell Humphrey Fellows Program, Dr. Darragh Hare of the Oxford Wildlife Conservation Research Unit, Marline Barker of the Sunday Times of South Africa who first gave me exposure to the sport of trophy hunting, the directors of Global Development MPS program Dr. Terry Tucker and Dr. Maricelis Acevedo, and chair of the Department of Global Development Lori Leonard. Thank you one, thank you all. And to those I haven't included, I apologize and thank you too.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

ACE: After Common Era

BCE: Before Common Era

CAMPFIRE: Communal Areas Management Programme for Indigenous Resources (Zimbabwe)

CBNRM: Community-based Natural Resource Management

CIC: International Council for Game and Wildlife Conservation

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora (IUCN)

CSR Corporate Social Responsibility

FWS: Fish and Wildlife Service (US)

FSC: Forest Stewardship Council

HWC: Human-wildlife conflict

IUCN: International Union for the Conservation of Nature

MSC: Marine Stewardship Council

NEPA: National Environmental Policy Act (US)

NGO: Non-governmental organization

UN: United Nations

PETA: People for the Ethical Treatment of Animals

SCS: Sustainability Certification Scheme

SDGs: Sustainable Development Goals (UN)

SSA: Sub-Saharan Africa

SCI: Safari Club International

SFTZ: Savannas Forever Tanzania

WWF: World Wide Fund for Nature

I. RESEARCH QUESTIONS AND METHODS

Research Questions

This capstone project explores the intersections of trophy hunting and sustainability in Sub-Saharan Africa with the aim of helping reform the trophy hunting industry. Trophy hunting has been viewed negatively by the public and suffered economically due to unethical practices and a lack of transparency. However, it has the potential to meet broad ethical, conservation, and community development needs. Hence, this research seeks to answer the following questions:

- *What can be learned about sustainable trophy hunting from existing practices in the trophy hunting industry?*
- *What inspiration can be drawn from other sectors' sustainability certification schemes if the trophy hunting industry were to adopt a formal certification scheme?*

Methods

This paper encompasses a literature review of sustainable trophy hunting while drawing on conversations with industry insiders. It begins by sharing the context and rationale for studying sustainable trophy hunting in Sub-Saharan Africa (SSA) and then provides background on how the SSA trophy hunting industry developed. It also defines sustainable use in the conservation space, determining ways the trophy hunting industry seeks to meet sustainability objectives, including through a short-lived Tanzania NGO and the Craig Boddington seal (Packer, 2005; C. Evarts, personal communication, February 8, 2020). Finally, this paper explores sustainability certification schemes (SCSs) from other industries with the objective of determining best practices for a sustainable certification scheme applied to the SSA trophy hunting industry.

II. INTRODUCTION

Trophy Hunting Description and Context

Trophy hunting, also called safari or sport hunting, is a controversial yet far-reaching billion-dollar industry distributed throughout six of the world's seven continents (Sheikh & Bermejo, 2019). While recreational hunting broadly refers to killing wild game for human consumption and leisure, trophy hunting is distinguished by a predominantly Western, elite, and male clientele who pay high fees and often cross international borders to hunt animals for a carcass or key body part (e.g., head, hide, antlers), also known as a trophy (Sheikh & Bermejo, 2019; International Fund for Animal Welfare, 2016).

By far, the lion's share of trophy hunters are in the United States: in 2017, Americans brought back 650,000 trophies (Sheikh & Bermejo, 2019). That is ten times more than China, the world's next largest trophy importer. Additionally, the U.S. accounts for 71 percent of the world's aggregate trophy import demand (Sheikh & Bermejo, 2019; International Fund for Animal Welfare, 2016). Nevertheless, hunters constitute only four percent of the US population (USFWS, 2016). Trophy hunters account for an even smaller ratio of the overall hunting population as only 64% of hunters embark on out-of-state hunts, some of which could include international trophy hunting (USFWS, 2016).

A major reason many conservationists and organizations including the World Wildlife Fund (WWF), Wildlife Conservation Society, and the International Union for the Conservation of Nature (IUCN) have stood behind trophy hunting is the mantra "if it pays, it stays" (WWF, 2020; Pinnock, 2019). These organizations argue that through allowing a select few wild game to "pay their way" as prey of human-led hunts, parks and game mangers can earn tens or even hundreds of thousands of dollars from each individual kill, far exceeding the average income a single ecotourist would bring (International Fund for Animal Welfare, 2016). Especially in sub-

marginal lands where there are minimal roads and infrastructure, trophy hunting can be an economical land option compared to agriculture and livelihood alternatives (Lindsey et al., 2007).

While hailed as a stratagem in the natural resource management toolbox, the trophy hunting industry has not escaped controversy. A 2019 poll of the American public shows that only 29 percent approve of the practice of trophy hunting. Prominent news stories like the $50,000 hunt of Cecil the Lion in 20XX outside Hwange National Park in Zimbabwe and a Namibian rhino being killed for $350,000 in 20XX factored decisively in decisions by Delta, United, and numerous other international airlines to ban trophy shipments. Further, there was a renewed commitment by animal rights groups and many environmental advocacy organizations to outlaw trophy hunting altogether, with the assertion that ecotourism and other conservation methods are more effective and economically viable in achieving XX (Stack, 2015; Lindsey et al., 2007; (Duda et al.2019)).

Rationale

The idea for a SCS for trophy hunting is a relatively new one, having been ignited in a 2017 *Nature* journal article (Wanger et al., 2017), resurfaced as a recommendation to US Congress in a 2019 Congressional Research Service publication (Sheikh & Bermejo, 2019), and discussed in US Fish and Wildlife Service (FWS) and IUCN circles. Moreover, from interviews conducted by the author, the idea of an SCS has been met with enthusiastic interest of the leadership of the African Professional Hunters Association, Africa's largest professional hunting association (E. Fundira, personal communication, February 7, 2020). The *Nature* authors assert that a certification scheme is promising as trophy hunters are an elite clientele who would be willing to pay thousands of additional dollars if they had confirmation that their dollars were

channeled into the causes that they purportedly support: conservation and community development (Wanger et al., 2017). An additional benefit of a trophy hunting seal would be its ability to foster legitimacy and trust in an industry often notorious for corruption, mismanagement, and media outcry (de Waal, 2019).

Purpose

This research project seeks to answer some of the ensuing ethical, conservation, and community development limitations of the trophy hunting industry status quo, using those critiques to sketch a prospective SCS for SSA. Some of the limitations of trophy hunting that this research seeks to address are as follows:

- *An Ethical Hunting Framework*

Some animal and environmental non-governmental organizations (NGOs), including People for the Ethical Treatment of Animals (PETA), the Born Free Foundation, and Humane Society International, purport that the act of hunting itself violates an animal's right to life and causes unnecessary suffering and trauma (PETA, 2019; Humane Society, 2016). The question of whether hunting should ever be allowed will be explored, as will the best practice standards for hunting. Topics such as "fair chase," "canned hunting," and hunting animals according to age, sex, and physiological wellbeing will be introduced, as will the skillset and knowledge of the hunters themselves.

- *Tangible Conservation Benefits*

Conservation, a purported fulcrum of trophy hunting and the underpinning of massive American and Southern African wildlife rebounds in the twentieth century, has not always been achieved through trophy hunting practices (Flack, 2011). Wildlife experts have noted that trophy hunts typically target old males, whose bodies and appendages happen to be the largest and thus

most ideal for trophy mounts. This can reduce herd connectivity and resilience while also leading to major genetic consequences, such as the rise of "tuskless" elephants and the alarming decline of "super-tuskers" (Bauer et al., 2019; Pinnock, 2019). Thus, this research will shed light on the conservation strides made by the trophy hunting industry from an ecological and wildlife conservation perspective.

- *Trophy Hunting Impacts on Communities*

Trophy hunting differing impacts on local people, many of whom live at or near where trophy animals are hunted and live with human-wildlife conflict (HWC) on a regular basis (*Beauty and the Beef*, 2014). While communities are frequently given the meats from trophy hunts, they historically have been left out of natural resource management decision-making (Pinnock, 2019). One prominent study has noted that only three percent of trophy hunting fees end up in community hands (Campbell, 2013). Moreover, in the last century many such communities have been disenfranchised from what are now today's game reserves (Pinnock, 2019). Throughout this research paper, the ways in which the trophy hunting industry has both helped and hampered community resilience and prosperity will be shown.

Profile of Sub-Saharan Africa

While many of the findings of this project are broadly applicable to trophy hunting globally, it focuses specifically on SSA. SSA is the birthplace of humanity and a haven for wildlife and natural resources, boasting the greatest variety of large ungulates (hoofed mammals) and freshwater fish in the world. It is a mixture of tradition and modernity, still deeply embedded in agriculture, with sixty percent of Africans working in the sector, mostly at a subsistence level (Encyclopedia Britannica, 2021a).

A number of changes have defined SSA in the twenty-first century. Extreme poverty on the sub-continent has ebbed since 1999, while advances in agricultural, minerals, and telecommunications have supported economic expansion and development. Rapid democratic transitions have led to more accountable governments, many of whom have legislated policies to improve health and education services. Nevertheless, changes in the sub-continent vary greatly, with some countries achieving middle income status while others have fallen into conflict, chronic poverty, and low capacity. Additionally, economic growth has not benefited the poorest of people, while urban sprawl and youth unemployment pose further challenges to the future composition and capacity of the sub-continent. Climate change and man-made and natural disasters further exacerbate challenges to SSA and play into the importance of trophy hunting in the region.

This research project focuses on SSA for three chief reasons: 1) it is a top destination for trophy hunters, 2) trophy hunting in SSA is intertwined with its tourism industry, and 3) SSA stands a high risk of losing its wildlife and natural resources due to trophy hunting?.

- *Sub-Saharan Africa is a top destination for trophy hunters*

SSA is considered by many trophy hunters as the holy grail of their sport. Safari Club International (SCI), the world's largest trophy hunting organization, awards hunters a Grand Slam in its record book for successfully slaying all the Big Five animals (these include the lion, leopard, elephant, buffalo, and rhinoceros) (Humane Society, 2015). Moreover, at SCI's annual convention, "Your First African Safari" is the event's longest running seminar (it ran for its 26th time in 2020) (SCI, 2020b).

SSA is not only popular among trophy hunting organizations and within convention halls. The region has also become a welcoming space for the sport, with roughly half of Africa's 54

countries permitting trophy hunting. And though there are no definitive revenue numbers continent-wide, the developed hunting region of Southern Africa churns a minimum of $200 million annually in hunting revenues alone (in other words, this does not include travel, accommodations, taxidermy fees, etc.) (Lindsey et al., 2007).

- *Trophy hunting in Sub-Saharan Africa is intertwined with its tourism industry*

In SSA, wildlife and natural resources-based tourism is particularly large and promising. The sub-continent boasts 9.1 million jobs in the travel and tourism sector and earns more than through international aid donations (Signé, 2018). However, though the African Union prioritizes tourism in its development framework, SSA's tourism industry is still behind other emerging economies in terms of number of visitors and revenue per visitor (Signé, 2018). Throughout SSA, trophy hunting has served as one of several ploys in the tourism sector. Many game reserves are open to both ecotourists and trophy hunters since both experience nature and participate in cultural experiences (Parker et al., 2020; Weaver & Skyer, 2013).

Trophy hunting can be either as a rose or thorn for developing and strengthening the SSA tourism sector. Trophy hunters, on average, spend much more than the typical tourist and are willing to travel even when there are health or political risks involved (like the Arab Spring and Ebola). Nevertheless, political leaders fear that unethical and negatively portrayed hunts could taint tourism prospects (Leader-Williams and Hutton, 2005; Lindsey et al, 2006).

- *Sub-Saharan Africa stands a high risk of losing its wildlife and natural resources*

African wildlife and natural resources are increasingly threatened by population expansion and human and natural-caused events. SSA's population is set to double by 2050, more than twice as fast as South Asia and Latin America's projected rates (The Economist, 2020). An increase in population is tied to a need for more land and an uptake in urban sprawl,

both of which pose a threat to the future of parks and game reserves. With an increase in people comes more HWC as the human-wildlife interface narrows (Pinnock, 2019).

Climate change only exacerbates the challenges of population growth and development within SSA. In 2014, a group of academics from African, American, and European universities declared that the African continent could lose up to thirty percent of its animal and plant species by the end of the century (DW, 2014). Since African savannahs supports the world's largest concentration of large mammals, that loss would almost certainly lead to a major dip in iconic wildlife numbers continent-wide (Furman & Guertin, 2020).

Adding to natural and human constraints is the looming threat of poaching. Increasingly transnational, the poaching industry is estimated to be worth $7-23 billion and relies heavily on sophisticated networks of small-scale and regional syndicates who collude with local communities and government officials (TRAFFIC, 2020). Poaching is fueled partly by community poverty but more broadly feeds into East and Southeast Asia demand (TRAFFIC, 2020). Consumers in Asia locales use trafficked products as treatments for various illnesses via Traditional Chinese Medicine as well as ornaments and accessories to solidify or project social status (TRAFFIC, 2020).

III. TROPHY HUNTING BACKGROUND

Trophy hunting has had a long and contested history from colonial times up until the present. To better inform the thrust of this paper—trophy hunting as a tool for sustainability in Sub-Saharan Africa—this section will describe the developments of the hunting industry from ancient to modern times. The intention of this section is to highlight where the trophy hunting industry stands within the general hunting and conservation narrative.

A Brief History of Hunting

Encyclopedia Britannica (2020) defines hunting as follows:

Sport that involves the seeking, pursuing, and killing of wild animals and birds, called game and game birds, primarily in modern times with firearms but also with bow and arrow.

Simply put, hunting is going after wild animals and birds with guns and other weaponry, usually with the intent to kill. The practice of hunting, unlike trophy hunting, is a universal phenomenon, having existed on every continent except Antarctica for millennia.

Hunting in ancient times began as a necessity, fostering ingenuity among indigenous people. Ancient hunters utilized nearly all parts of the animals they killed: the meat could provide food, hides could be sewn into clothing, and other body parts were used for making tools. Some anthropologists argue that humanity evolved into the sophisticated, intelligent *homo sapiens* they are today in large part due to developing advanced weaponry for hunts (Siegel, 2019).

As people learned to control the environment around them through agriculture, hunting became less necessary. Agriculture spelled the transition into modern-day settlements, beginning in the Fertile Crescent around 10,000 BCE (History Channel, 2018). Thereafter, hunting adapted to people's needs and interests. Hobby hunting, where animals were hunted not solely for their meat or functional use but for the thrill of the chase and to put parts of the animal on display, first occurred in ancient Egypt. Between 700 and 400 BCE, hobby hunting was also established in many Asian and European societies (Encyclopedia Britannica, 2020).

During feudal times, European and Asian elites grew particularly fond of hobby hunting. Consequently, they made the right to hunt concomitant with the ownership of land. In the eleventh century ACE, William the Conqueror created several protected areas for himself, in part to maintain his and his sons' hunting passions (Encyclopedia Britannica, 2020). The

maharashtras of India also set aside large swaths of land for their tiger hobby hunts, with their parcels forming the basis for many of India's current national parks (Harris, 2017).

It was no coincidence that hunting and conservation went hand-in-hand for wealthy landholders. Realizing that wildlife numbers were limited, landowners restricted hunting on their own land, while "poachers"—or those they pegged as not allowed to hunt—could face harsh punishments (Hebinck, 2018). However, it was not until the nineteenth and beginning of the twentieth century that the conservation movement fully took hold (Encyclopedia Britannica, 2020).

The Industrial Revolution vastly altered people's relationship with the environment. It made it quicker, easier, and cheaper to use guns to kill large quantities of game at once. In areas yet-to-be-explored like the American West and African savannah, game initially seemed unlimited. However, the nineteenth century extinction of America's passenger pigeon, near extinction of buffalo, and dwindling numbers of wildlife species across Africa proved that this was indeed not the case (Encyclopedia Britannica, 2020).

Eventually hunters adopted conventions, often unwritten but sometimes in game laws, to limit their destruction of nature (Encyclopedia Britannica, 2020). The hunting conservation movement began in America when the US introduced legislation protecting game through local, state, and national protected areas, formalized hunting licenses, and restrictions on which and how many animals could be hunted (Encyclopedia Britannica, 2020). In 1937, the US passed one of the most influential conservation laws in history: the Pittman Robertson Act. This act directs that a portion of taxes from guns and ammunition be used to provide funds to state wildlife programs (NRA, 2001).

Though it originated in the US, the conservation movement has since become global. Protected areas—practically non-existent in the eighteenth century—sprouted up across the globe to cover nearly fifteen percent of the earth's land by the end of the twentieth century (Pinnock, 2019; US Department of Interior, 2018). In addition to being a hobby, hunting persists in many forms today. Farmers hunt to protect their livestock and crops, while ethnic groups hunt to maintain integral values and traditions (Encyclopedia Britannica, 2020). For some, hunting continues to provide subsistence, as evinced many of Alaska's cultural groups, the Malaysian Borneo Penan hunter gatherers, and other indigenous peoples across the world (Alaska Department of Fish and Game, 2020; Eede, 2014).

History of the Trophy Hunting Industry

Trophy hunting, which in this paper focuses solely on the Sub-Saharan Africa context, has its own history within the overarching hunting narrative. Yet this sub-category of hunting distinguishes itself through its strong European colonial roots. Before European colonists settled Africa, hunting was an important part of many indigenous African cultures. In his book "Without Chiefs There Would Be No Game: Customary Law and Nature Conservation," Hinge (2003) shows the important conservation role indigenous communities played, with chiefs having strict rules on when, how, and which animals could be hunted. Totems were not allowed to be killed, while many hunted animals' tusks or skins had to be given to the chief and community as gifts or for traditional ceremonies.

The European colonists redefined the norms and roles of hunting shortly after setting foot on the African continent in the 1800s. In many SSA regions, they made hunting a specific sub-culture. While commercial hunting for ivory and lion skins in British colonial Africa was fast becoming a perk for European settlement, hunting logs evolved into a literary genre. Colonists,

eager to fulfill their dreams of exploring the mysterious African wilderness, were inspired by hunting heavyweights such as Gordon Cumming, C.H. Stigand, and Frederick Courtney Selous, who made their fortunes writing and lecturing about savannah animals while expressing—in overtly racist terms—views toward indigenous communities (Pinnock, 2019).

As hunting took hold in SSA, the concept of trophy hunting began gaining traction in the Western World. In 1892, a British taxidermist named Rowland Ward outlined the Horn Measurements and Weights of the Great Game of the World, which was the first official record of trophy hunts in which trophies—successfully hunted animals—were measured to determine whether their dimensions were equal to or greater than other trophies shot around the world (International Fund for Animal Welfare, 2016).

Three decades later in America, President Theodore Roosevelt, himself an avid hunter, helped formulate the Boone and Crockett Trophy Scoring System for measuring North American trophies (Boone and Crockett Club, 2016). At nearly the same time, the International Council for Game and Wildlife Conservation (CIC) registered a trophy evaluation system at its newfound Paris headquarters (Council for Game and Wildlife Conservation, 2020).

All trophy measurement systems, by their very nature encouraged hunters to pursue large, older males since trophies of such dimensions could gain the highest points in record books. However, as the CIC's name suggests, trophy hunters have always fastened themselves to the idea that hunting and conservation were not mutually exclusive; if hunters do not protect wildlife and its habitat, they will not be able to hunt in the future.

By the mid-nineteenth century, as the colonial hunting culture hit its peak, a shift in land tenure was visibly happening in SSA (Hebinck, 2018). While indigenous Africans typically owned land communally through customary law, their landholdings were increasingly forced

over to colonial administrators in large part due to the Lockian belief that land belongs to those who cultivate it (Hebinck, 2018; Locke, 1689). The colonial authorities made it clear that the intensive colonial cultivation project was superior to indigenous, low impact uses (Domínguez & Luoma, 2020).

The African land grab fueled both the colonial authorities and then later the conservation project in SSA. The state deprived indigenous communities of land and reallocated it to white settlers, converting large swaths of forests and other landscapes into export crops and natural resource extraction (Domínguez & Luoma, 2020. Then, in the twentieth century, the state began creating game reserves and national parks after witnessing hunting and poaching's effects on wildlife and natural resources (Lindsey et al., 2007; Hebinck, 2018). By 2015, around 14 million people in Africa had been forcibly removed to make such parks and reserves, becoming what Wilfried Huismann in his book "Panda Leaks: The Dark Side of the WWF," calls "conservation refugees" (2014).

Trophy hunting, in its current form, took hold in SSA in the 1960s. It differs from colonial hunting in that it was an officially sanctioned, high-expense tourist activity. Kenya was the first SSA country to allow trophy hunting. In 1963, the year of its independence, the Kenyan government issued 393 elephant hunting licenses (Grzimek, 1971). While Kenya later banned trophy hunting in 1977, the sport took hold and spread to other parts of SSA (MacDonald et al, 2017).

Recent Developments in the Trophy Hunting Industry

Into the twenty-first century, the trophy hunting industry has taken on distinctive qualities and characteristics. Trophy hunts typically last from several days to several weeks and are led by one or more professional hunters, who are typically white but have African citizenship and have

passed tests on their hunting abilities and knowledge of their country's hunting laws regulations. Trophy hunting now also exists alongside eco-tourism as a type of tourism to SSA, though since the last quarter of the twentieth century eco-tourism has been the primary income source for most safaris. Trophy hunting still maintains some remnants of its colonial past, with 78 percent of trophy hunters being Americans, followed by Chinese and then Europeans (Sheikh & Bermejo, 2019: International Fund for Animal Welfare, 2016).

The SSA trophy hunting industry is now fully internationalized. The trade—or transfer of trophies from where an animal was killed to where the hunter lives—is heavily regulated. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement created in 1963 by the International Union for the Conservation of Nature (IUCN). CITES places restrictions on imports and exports of live and hunted wildlife and requires a complex permit-approval process for hunters seeking to pursue threatened or endangered wildlife. It has 183 signing Parties to date, making it among the most globally adhered to conservation agreements (CITES, 2020).

Demographics of the Trophy Hunting Industry

While the prior section focused on the evolution of the trophy hunting industry and its developments in SSA, this section will highlight the trophy hunters themselves, whose high-paying dollars and hunting-as-conservation perspectives influence the sport's direction. American trophy hunters constitute the bulk of trophy hunters worldwide and are thus considered in this report as the standard trophy hunter. They constitute a specific demographic: white, middle-aged to elderly, male, extremely wealthy, and conservative Republican. Steve West, a well-known hunting advocate who appears on the Outdoor Channel, runs a tourism company that plans trophy hunts (Stack, 2015). He claims that trophy hunters are first and foremost world

travelers with a sense of adventure who are also financially savvy and deeply committed to conservation (Stack, 2015).

Though no US surveys give definitive numbers on trophy hunters, the FWS reveals that out of all American hunters, 97 percent are white, with Blacks and Asians each constituting less than one percent (USFWS, 2016). This report's author visited the 2020 Safari Club International (SCI) annual convention in Reno, Nevada, the world's largest trophy hunting convention (with 20,000 attendees), and found herself out of place as a 22-year-old female because the vast majority of visitors appeared as aged white men (Dorsey, 2020). Moreover, in the US only one percent of American females are hunters, compared to eight percent of males (USFWS, 2016).

The typical trophy hunter is also economically wealthy. The most recent data on trophy hunting costs comes from a 2009 report by the UN Food and Agriculture Organization, which looked at Southern and Eastern African trophy hunts (Booth, 2009). Trophy hunting costs per person far exceeded eco-tourism and wildlife photography tours (Booth, 2009; International Fund for Animal Welfare, 2016). A hunter on a 21-day trophy hunting trip could pay between $81,000 and $110,000, while 28-day elephant, lion, leopard, or buffalo hunts ranged between $87,000 and $140,000 (Booth, 2009). These prices do not reflect other travel costs and specialized gear and weapons (Stack, 2015). The Democratic staff of the US House Committee on Natural Resources compiled a list of active trophy hunting clients, including an auto distributor with a $3.2 billion net worth, an oil and gas company CEO, and the wife of an owner of multiple companies (Grijalva, 2016).

Drawing from ample membership funding, it is no surprise that the trophy hunting industry has an active lobbying arm. SCI, which as the world's largest trophy hunting organization boasts 50,000 members worldwide, has a mission to "protect the freedom to hunt

and to promote wildlife conservation worldwide" (SCI, 2020). It does so, in part, by allocating 95 percent of its Super-PAC contributions to Republican Party members and only 5 percent to Democrats (Center for Responsive Politics, 2020). SCI recently embraced the Trump administration; the flagship auction of its 2020 convention was a trophy hunt in Alaska with Donald Trump, Jr. and his son, which sold for $340,000 (SCI, 2020).

Trophy hunters claim to hunt for three reasons: conservation, community development, and HWC mitigation (Baldus et al., 2008). By placing a hefty price tag on a specific individual from a wildlife species, trophy hunters believe their sport can fund conservation for the animals that are not killed because a portion of their hunt's proceeds can be used to achieve anti-poaching, habitat management, and other conservation objectives (Booth, 2008). Trophy hunters' hunts may also support rural development. Not only can trophy hunting create jobs and provide income for supporting or building schools and healthcare centers but also lead to free meals for community members (if the meat is donated?). Since it is difficult for trophy hunters to ship meat back to their home country, most meat is distributed to the local community, which can be of sizeable proportions. Finally, trophy hunters are useful in mitigating HWC. Since trophy hunters are willing to pay to hunt a "problem animal" that communities identify, they incentivize communities to protect rather than kill wildlife.

Trophy hunters have become a type of maverick for wildlife conservation, being known as less risk-adverse than tourists. This is particularly important as political and civil unrest and health scares like the current COVID-19 pandemic prevent tourists from visiting SSA. Moreover, trophy hunting is often done in remote locations with minimal roads and infrastructure, which tourists tend to avoid (MacFayden, 2020). Despite the prospective benefits of current trophy

hunting practices, the industry is frequently perceived negatively by the outside world (McCubbin, 2020).

Hunting participation rates in the US peaked in the 1970s and have since plateaued. In 2016, the percent of Americans who were hunters (includes all hunting, not just trophy hunting) was four percent, and as Baby Boomers age out, the figure is expected to decrease further. The trend in the US—and elsewhere in the Western world—has been a shift away from the Pittman Robertson Act concept of using hunting, guns, and ammunition proceeds to fund conservation and toward deriving revenue from economically more promising activities (Rott, 2018). Moreover, the trophy hunting industry is still relatively small: trophy hunting brings roughly $1 billion of revenue into SSA from less than 20,000 hunters, while tourism as a sector brings close to $40 billion a year and over 60 million visitors (Signé, 2018).

Non-hunters also frequently criticize trophy hunters' public display of their kills. A look at many social media profiles of trophy hunters and trophy hunting organizations reveals photos of hunters standing above their slain animal while holding their gun and smiling. In the highest profile news story on trophy hunting, a 2015 global public outcry was waged against an American hunter who shot Cecil the Lion in Zimbabwe (Stack, 2015). The event became known as "Cecilgate" and "The Cecil Moment" and led numerous American airlines to ban the shipment of trophies (McCubbin, 2020; Mkono, 2018). The American conscience is emphatic: while an overwhelming 80 percent of Americans approve of legal hunting, less than a third approve of trophy hunting and even less condone hunting charismatic safari species like the African lion (14 percent approval) and African elephant (7 percent approval) (Duda et al., 2019).

Public sentiment further opposes the competitive, hyper-masculine aspects of trophy hunting. SCI maintains a highly-detailed record book for trophy hunters to publicize the

dimensions of animals they kill, with animals ranked based on their size and method-of-kill and the larger animals earning the highest points. One of the most prestigious trophy hunter accomplishments is getting an African Grand Slam, a distinction for killing the African Big Five (Humane Society, 2015).

IV. SUSTAINABILITY IN THE TROPHY HUNTING INDUSTRY

In order to draw an accurate picture of sustainability in trophy hunting, this section will detail the context and meaning of sustainability, apply it to trophy hunting and natural resources management, and then share case studies that highlight initiatives at the trophy hunting-sustainability nexus.

Defining Sustainability

Sustainability currently takes center stage as the theme of the UN's 17-cross-cutting Sustainable Development Goals (SDGs) (UN, 2020). The SDGs seek—among other agenda items—to eradicate poverty, stop hunger, and make water and sanitation accessible to all in both developed and developing countries (UN, 2020). But sustainability is not just a development aim. The concept also helps define innovation, environmental integrity, and ethical standards and since the 1980s and 1990s has inspired several SCSs (OECD, 2016). Yet despite all of sustainability's applications, Salas-Zapata & Ortiz-Munoz (2018) write that "the ambiguity and lack of clarity about the concept of sustainability is a recurring obstacle to sustainability research."

The US set the tone for sustainability when it instituted the National Environmental Policy Act (NEPA) of 1969 (National Environmental Policy Act of 1969, 1970). Since then, NEPA has served as a benchmark for environmental policy in over 100 countries (Eccleston, 2008). In its words, sustainability should "create and maintain conditions, under which humans

and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations" (National Environmental Policy Act of 1969, 1970, p. XX)

Created nearly two decades later, the UN Brundtland Report iterated many of NEPA's same ideas but did so through a development lens. Sustainable development, in its words, was "development that meets the needs of the present without compromising the ability of future generations to meet their needs" (UN, 1987).

The takeaways of NEPA and the Brundtland Report are profound and long-lasting. Importantly, NEPA split sustainability into environmental, social, and economic pillars (Eccleston, 2008). Both documents stipulated that: 1) humans must use some resources to live, and 2) overuse and exploitation would make future life impossible.

Sustainability, then, is premised on the belief that the world would eventually be destroyed if humans do not live in partnership with the planet and its resources. The 2016 UN Paris Agreement was signed by 196 countries as a sweeping plan to reduce human-induced climate change, with the punishment for inaction including more extreme weather, flooding, and climate refugees (UN Framework Convention on Climate Change, 2016; WWF, 2020).

Applying Sustainability to Trophy Hunting

Sustainable trophy hunting has never been clearly articulated. Instead, "conservation hunting" has been used by some industry insiders (Darimont et al., 2017; Lamprecht, 2020). Marina Lamprecht, a Namibian professional hunter and popular media spokeswoman about trophy hunting's benefits, uses "conservation hunting" when speaking with non-hunters to connote the benefits that can come from trophy hunting, including its furtherance of species and supporting local communities to live with rather than harm wildlife (Lamprecht, 2020). She

echoes terminology of the Ministry of Environment and Tourism in Namibia, a country viewed as the most conservation-friendly trophy hunting country in SSA (Namibia Professional Hunters Association, 2020).

Though the term "sustainability," as framed by NEPA and the UN Brundtland Report, may not be used frequently in trophy hunting vernacular, the basic intent of the industry connects strongly with sustainability and its adjoining concept, "sustainable use." Introduced by the Convention on Biological Diversity in 1992, sustainable use is "the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations" (CBD, 2006).

Sustainable use in trophy hunting is premised on allocating sustainable offtakes, maintaining genetic integrity in species, ensuring the survival of current native species, and maintaining ecosystem health. Details of each are below:

- *Sustainable Offtake Quotas*

With consistent wildlife monitoring data hunting quotas can be kept at a sustainable rate for the population. In this way, the effects of hunting are minimized and can be helpful in preventing overpopulation and habitat degradation (Booth, 2008). Australia is a case study of using effective quota systems for hunting (Pople & Grigg, 1999). Its individual states develop Kangaroo Management Programs, submitting harvest quotas for kangaroos and wallabies annually to the Department of the Environment based on population trends and the most recent survey data gathered by the state's environment ministry (Pople & Grigg, 1999). In SSA, the quota management situation is similar. Countries' ministries of environment or natural resources

may fund population counts and likewise allocate hunting quotas, though in some cases the task is given to the game reserves/outfitters (Weaver & Peterson, 2008).

Nevertheless, theory and practice differ when it comes to population counts. In SSA, scientific wildlife population surveys are the exception rather than the rule. Many conservationists contend that none of the countries in Eastern or Southern Africa have ever compiled reliable population estimates. Without reliable populations estimates it becomes difficult to set quotas at sustainable levels for various species (Baker, 2010). Calculating offtake quotas are also extremely expensive and challenging depending on the species being measured (Pinnock, 2019; Paul G. Allen Family Foundation, 2020).

High rates of trophy hunting, assumed to be well above the quota threshold, have caused notable declines in African lions (*Panthera leo*) and possibly African leopards (*Panthera pardus*) (Packer et al., 2009). High rates of trophy hunting can also combine with other factors to cause wildlife population declines (Sheikh & Bermejo, 2019) For example, poaching and trophy hunting of wild elephants in Africa, put together, have been shown to outpace species' reproductive rate, causing an unsustainable loss of elephants (CITES, 2015). All in all, trophy hunting has a mixed record on sustainable offtake, with the cost, resource intensity, and management of population counts and resulting quotas being both country and context-dependent.

- *Maintenance of Genetic Integrity*

"Artificial selection," or "selective harvest," is the basis for many of the trophy hunting industry's standards. In particular, SCI maintains one of the largest and most detailed trophy record books (SCI, 2020c). Criteria for trophies includes characteristics of the animal hunted (e.g. tusk, antler, skull, body size), with more points accruing for larger sizes (SCI, 2020c). With

the exception of Rowland Ward and CIC, the major scoring systems of trophy hunting organizations show no sign of changing size norms that currently favor large, mature, and reproductively active males (Damm, 2008).

However, from the author's interactions at the SCI 2020 annual convention in Reno, the trophy hunting industry portrays the message that hunters pursue post-prime animals that are near their deaths anyway. This contention, however, is inconsistent with the data on trophy hunting. Trophy hunters often selectively harvest males that would otherwise be responsible for much of the reproduction of the unhunted population (IUCN, 2008). Furthermore, large males have high reproductive success because they outcompete other males (IUCN, 2008). Trophy hunting can thus discriminate against the best (or "fittest") males, as evinced notably by the decline in trophy quality of African lion prime pride males (IUCN, 2008). However, a challenge for the trophy hunting industry is the relative difficulty in determining the age of animals being hunted, especially those lacking antlers and horns (E. Fundira, personal communication, February 7, 2020).

The discrimination of trophy animal by trophy size relates to what some scientists have coined as the "Anthropogenic Allee Effect" (Courchamp et al., 2006). It refers to the human predisposition to place more value on rare items and to pursue those items at an accelerated pace until the items in question are no longer available or, in the case of trophy hunting, endangered or extinct (Courchamp et al., 2006). The Anthropogenic Allee Effect could help explain the drastically expensive prices for trophy hunts of endangered species like the rhinoceros (Courchamp et al., 2006).

- *Continuation of Present Native Species*

Sustainable use in trophy hunting refers to putting in place conditions for the native species to continue to survive in the ecosystem. Introducing non-native species for niche hunts or allowing canned hunts are thus counterproductive to native species interests. Non-native species brought to SSA increase trophy diversity but do not contribute to conservation; examples include the exotic fallow deer (*Dama dama*) and the hybrid black and blue wildebeests (*Conochaeetes taurinus*).

Canned hunting refers to animals that are primed be baited and shot by trophy hunters at an easy distance in enclosures (citation for definition?). Canned lion hunting mostly happens in South Africa and the lions are captive-bred on farms. Canned hunting costs a fraction of a regular hunt, almost guarantees a kill, and requires less time and skill than a typical trophy hunt requires. The lions on such farms are neither wild nor recommended by ecologists to be reintroduced into the wild. Many national and international trophy hunting organizations have strongly distanced themselves from canned hunting although the practice continues to exist (Young & Chevallir, 2015).

- *Ecosystem Health*

Game ranchers—or those that maintain game reserves—are known to follow several stewardship practices that help wildlife and the ecosystem in which it lives. Game reserve management practices include control of bush encroachment, removal of invasive, exotic plants, erosion control, use of fire, and active management of game to maintain habitat quality. However, these activities are neither uniformly followed by game ranchers nor always based on ecological advice. With large swaths of land increasingly at odds of becoming cultivated, used for plantation forestry, or falling prey to urban sprawl, loss of natural habitat is the single greatest

cause of biodiversity loss in SSA's terrestrial ecosystems. Thus, the economic incentives to have game reserves is a powerful motivator for the ecosystem health practices (Pienaar et al., 2017).

- *Funds for Natural Resource Conservation*

The essence of sustainable use and trophy hunting is the mantra "if it pays, it stays." Funds from trophy hunting economically incentivize game ranchers to support wildlife and habitat management and restoration, with private game reserves alone accounting for six times more land area in SSA than public reserves (Semcer, 2019). Additionally, individual trophy hunts fetch far higher prices than the average tourist visitor? does, generates less environmental impact, and frequently take place in rural, undeveloped areas that tourists avoid since trophy hunters prefer more remote experiences (Lindsey et al., 2007).

Trophy hunters have a higher inelastic demand than the average tourist, meaning they are more willing to hunt during political conflicts and instability. Case in point, during Zimbabwe's land redistribution program, tourist occupancy fell 75 percent; in the meantime, trophy hunting revenues had dropped by only twelve percent (Booth, 2002). In the context of COVID-19, which have vastly decreased the number of tourists, it is suspected that trophy hunting visits declined less steeply (Lindsey et al., 2007; Braczkowski et al., 2020).

In SSA, many examples of trophy hunting as a conservation success story exist. In South Africa, the recovery of the bontebok, black wildebeest, and cape mountain zebra were said to have been made possible through game ranchers who, through earning revenues from trophy hunting, had financial incentive to reintroduce the species (Flack, 2003). Trophy hunting is also credited in helping recover the wildlife populations in Mozambique's Coutada hunting areas after its brutal civil war (Lindsey et al., 2006a). Conversely, after bans on trophy hunting,

scientists have documented biodiversity loss in Tanzania (1973-78) and Zambia (2000-03) (Lindsey et al., 2007).

Trophy hunting's applicability as an economic model for conservation spans beyond earnings and incorporates tenets of corporate social responsibility (CSR). Trophy hunting clients have voiced their desire to purchase hunts that achieve social goods (Fernando, 2020; Lindsey et al., 2007b; Fischer et al., 2015). Eighty-six percent of trophy hunters visiting Africa are more likely to purchase a hunting package that benefits communities as opposed to one that does not (Lindsey et al., 2007b). Studies have also shown that trophy hunters are willing to pay up to $3,900 extra for hunting that benefits communities (Fischer et al., 2015). Finally, up to 99 percent are unwilling to support hunting operators that are not conservation friendly (Lindsey et al., 2007b).

Critiques of Sustainable Use and Trophy Hunting

Anthropocentricism

Sustainable use, and by extension the sport of trophy hunting, is anthropocentric; in other words, it benefits people more than animals and is motivated by personal profit. Jeremy Hance of Mongabay deplores what he calls "neoliberal corporate conservation" in which nature has and continues to be transferred from public to private hands. Nature must pay its way to continue to exist rather than be allowed to exist without being used or harmed (Pinnock, 2019).

Overexploitation

A potential problem of privatizing nature is the potential that nature's full value is underestimated. Environmental economics is still not developed enough to give full values to nature for either direct or indirect use or current or future benefit (Vardakoulias, 2013). This may

cause game ranches and conservancies to weigh present needs over the future integrity of their ecosystem or the animals living in it (Michel, 2008).

Ethics

The trophy hunting debate "hinges on whether trophy hunting supports or impedes" conservation agendas (Nelson et al., 2013, p. XX). What it fails to probe at, however, is whether shooting trophies is an ethically appropriate way to interact with individual animals, regardless of whether trophy hunting results in positive conservation outcomes (Batavia et al., 2019). Counterarguments claim that the Western lens of animal ethics overly focuses on animals and animal welfare at the individual level (e.g. considering the characters of Bambi or Simba, thus personalizing animals) but fail to take into account the conservation significance of entire species populations and benefits of selective hunting (Hutton & Leader-Williams, 2003).

Animal Behavior and Psychology

Elephants, as among the most well-documented mammals, are known for having a strong sense of family and a highly complex communication system (Pinnock, 2019). Research also provides persuasive evidence that many animal species feel a full array of feelings including fear, joy, happiness, shame, embarrassment, resentment, jealousy, grief, and more (Bekoff, 2000).

What is clear is that trophy hunting is not psychologically healthy for animals given their choice to avoid hunting areas. Elephants are known to have traveled away from the trophy hunting-prominent Namibia to Botswana, where hunting was banned up until 2020 (Pinnock, 2019; Mahr, 2019). In the US, Erie Insurance of Pennsylvania revealed that opening day and the first Saturday of hunting season were two of the most dangerous days to drive because deer were pannicked (PETA, 2019).

No Clear Authority for Trophy Hunting Regulations

Corruption is well-noted in SSA, and the trophy hunting industry is no exception. Government scouts are known to overlook the overshooting of hunting quotas and government ministers may favor specific operators when granting hunting concessions (Lewis & Jackson, 2005). Duckworth (2004) goes so far as to suggest that corruption was a key problem facing Ethiopia's trophy hunting industry, alleging that the country's professional hunting association was used for the economic benefit of the president.

Corruption easily fits into the trophy hunting industry, which has clear inconsistencies in the way it is managed from country-to-country. Each country's natural resources and environment ministry usually enforces trophy hunting standards and allocates quotas, though each country also has one or more professional hunting associations that impose additional standards (Sheikh & Bermejo, 2016). Nevertheless, there are a few powerful actors in the trophy hunting industry: CITES governing bodies, which regulate trophy hunting import and export permits for endangered species, and the US FWS, which implements CITES for the US and has the power to impose additional restrictions on trophy imports to the US, which is where the vast majority of trophies are shipped (Sheikh & Bermejo, 2016).

Sustainable Trophy Hunting Efforts

This section details prominent efforts made by or for the trophy hunting industry to reform its practices. Labeling of trophy hunting, as in a certification scheme, has thus far been minimal, localized, and at times not sustainability-focused, as will be shown through the case examples of the Savannas Forever Tanzania NGO and Craig Boddington Endorsed Outfitters. Community-based natural resource management has been a credible attempt by many

governments to incentivize rural communities to share the benefits of maintaining wildlife populations, as will be revealed in the Zimbabwe and Namibia examples.

Savannas Forever Tanzania

Savannas Forever Tanzania (SFTZ) is an example of a small-scale SCS that sought to tackle the game management challenges of one specific species in one country (Packer, 2005). It was originally setup as an NGO for lion hunting in Tanzania by Craig Packer, an academic heavyweight in wildlife conservation, member of the American Academy of Arts and Sciences, and Distinguished McKnight University Professor at the University of Minnesota (University of Minnesota, 2020).

The main problem SFTZ sought to address was HWC between people and lions. In Tanzania, communities were known to attack wild lions to retaliate for lions killing their livestock. A survey to quantify lion-human attacks throughout Tanzania found that well over a hundred Tanzanians were attacked by lions annually, not to mention the thousands of cattle the lions killed too. However, lions were reported to be the single most valuable species to the Tanzanian trophy hunting industry (Packer, 2005)

Packer co-founded SFTZ in 2006, awarding game reserves a "Gold Star" if they adhered by the following rules:

- *Lions hunted at age 6 and up*
- *Effective anti-poaching practices in-place*
    - Reserve to participate in anti-poaching that links to enforcement activities of Tanzania's Wildlife Division (within its Ministry of Natural Resources and Tourism)

    - SFTZ to provide on-site inspections and share best practices on poaching prevention
- *Community development*
    - Reserve to focus on reducing HWC in local communities through partnerships
    - Reserve to provide economic returns to local people
- *Only lions shot at denoted "Gold Star" reserves put in international trophy hunting record books*

At the outset, SFTZ appeared promising. According to Packer (2005), a significant percent of Tanzanian reserves already earned a Gold Star for their current practices, so the SCS was an incentive to reward these reserves and incentivize laggards to improve. A further advantage that SFTZ had was its status as an independent arbiter in the industry. It hoped that after three years of donor funding, it would be able to self-generate profits from the costs of reserves being certified.

Unfortunately, SFTZ proved a failure. In *Lions in the Balance: Man-Eaters, Manes, and Men with Guns* book (Packer, 2015), the scheme did not last beyond its initial three years due to what Packer called a collusion between the political elite of Tanzania and reserves who refused to have their trophies examined for age determination or engage with local communities.

Craig Boddington-Endorsed Outfitters

Craig Boddington Endorsed Outfitters is another example of an attempt to reward trophy hunting game reserves by labelling those that are successful at reaching a set of standards. The difference with this scheme as compared to SFTZ, however, is that it is not sustainability-focused. Rather, it is an endorsement by a well-known member of the trophy hunting industry which denotes that if this individual were hunting in that part of the world and for a certain

animal, he would hunt at that game reserve (C. Evarts, personal communication, February 8, 2020)

The Craig Boddington Endorsed Outfitters label is considered the most prestigious seal a trophy hunting outfitter can receive. Outfitters approach the label, pay a hefty fee, and are then vetted to be certified by Craig Boddington himself. The label is competitive to get since only about half of reserves that apply are accepted (C. Evarts, personal communication, February 8, 2020).

Craig Boddington has star appeal in the trophy hunting world. Arguably the world's most famous hunter, Boddington hosts the "Boddington Experience" TV series on The Sportsman Channel and is an outdoor writer and international hunter. Thus, when trophy hunters are looking for the next place for their trophy hunt, the appeal of his website, which displays all his endorsed outfitters, is significant:

> *Africa hunting guides can be as diverse as the safari animals you hunt in Africa. It isn't hard finding an outfitter in Africa, it's hard finding the right hunting package for you. We make it easy by only endorsing the best hunting guides in Africa. How do we know they are the best? Because I've hunted with these guides and I only endorse outfitters you can trust* (Boddington, 2020).

Game reserves endorsed by Boddington are not only displayed on his website but also appear on each of the game reserves' websites and the seal is displayed prominently on their booths at the major US-based trophy hunting conventions, including SCI and Dallas Safari Club. (C. Evarts, personal communication, February 8, 2020).

Craig Boddington Endorsed Outfitters should by no means be seen as an emblem of trophy hunting sustainability. According to communication between the author and other industry insiders, his seal is merely marketing for Boddington. Compared against the sustainable trophy hunting pillars of ethics, conservation, and community development, the seal does not

address any of these. Ethical standards used to evaluate whether a game reserve should or should not be endorsed are based entirely on Boddington and his CEO's feelings about the quality of the game reserve. They claim to know within a few minutes whether a game reserve is "legitimate" or not. The CEO and Craig Boddington do research beforehand on a reserve to ensure it does not have questionable history but when asked for what this research entails, the CEO was unable to give a precise answer but said that it varies (C. Evarts, personal communication, February 8, 2020).

The conservation benefits from the seal were also not explicitly laid out, though what is known is that Boddington does not mind whether an animal is a non-native species, which this paper has dismissed as intrusive to conservation interests. Moreover, Boddington stated that the reserve's certification process does consider the long-term development of local people near reserves, including the building of schools and infrastructure. However, his CEO gave no examples of how community development objectives were measured or vetted when determining prospective endorsements.

Though Craig Boddington's team's process of determining whether reserves would be endorsed versus non-endorsed was opaque, much can be learned from the seal's existence. Importantly, it is the first label of its kind introduced within the trophy hunting industry that has been taken seriously by hunting outfitters and trophy hunters, leading to increased sales of hunts to those outfitters and their respective reserves. This is not surprising given the clout of Craig Boddington. The question is whether a similar trophy hunting label could be developed with explicit sustainability criteria. Secondly, one must ask whether a conservation NGO or other organization would have the same level of trust that Boddington does in the trophy hunting industry. The author's personal experience at the 2020 SCI Convention revealed that while the

industry vigorously paints itself as conservation-minded, there is a deep distrust of "greenwashing."

Community-Based Natural Resource Management

Community-based natural resource management (CBNRM) is a community-led strategy aimed at achieving sustainability objectives through consumptive and non-consumptive uses of wildlife and natural resources, including trophy hunting. CBNRM takes place on communal lands, which are community-shared lands that comprise up to 500 percent more acreage than state-managed reserves and national parks in rural Africa (Naidoo et al., 2016).

CBNRM has expanded throughout Africa over the last three decades as a policy tool for conservation, largely in response to what Pinnock (2019) calls a failure of centralized colonial and post-colonial policies to effectively manage natural resources. It is an economically competitive land use option since communities are given ownership and responsibility of wildlife, leading them to value and protect rather than destroy it, even though it lives at odds with their livestock and crops (Grimm, 2008).

--*Case Study: CAMPFIRE (Zimbabwe)*

The Community Areas Management Programme for Indigenous Resources (CAMPFIRE) is often touted as the posterchild and founding creator of CBNRM in rural Africa. Before the program, Zimbabwe's central government had full authority over wildlife both in protected areas and communal lands. Local peoples were not permitted to hunt either for subsistence or to protect themselves and their livelihoods (Campfire Association, 2016). That all changed with the *1975 Parks and Wildlife Act*, which allowed communities and private landowners to use wildlife on their land and provided the basis for the CAMPFIRE program to officially begin in 1989 (Vorlaufer, 2002; Campfire Association, 2016). At the outset, the purpose of CAMPFIRE was to

stimulate long-term development, management, and sustainable use of natural resources in Zimbabwe's rural communities through wildlife, woodlands, water, and grazing. These integrated strategies were particularly important for CAMPFIRE communities since many of them were not well-suited to agriculture. In reality, however, CAMPFIRE became centered on ecotourism and to a much greater degree trophy hunting (Frost & Bond, 2008).

CAMPFIRE is set up in such a way that the state devolves authority for wildlife management in communal areas to rural district councils (Balint & Mashinya, 2009; Nemarundwe 2004). While the Zimbabwe Parks and Wildlife Authority sets up and monitors hunting quotas, which determine how many permits can be given, the locally-run rural district councils are given permits (Balint & Mashinya, 2009). In turn, the locally-run district offers these permits to wards, or the administrative sub-units within each district. Wards generate income from selling permits to trophy hunting operators, which provides income to the communities (Balint & Mashinya, 2009). According to the CAMPFIRE Revenue Sharing Guidelines, 55 percent of income is allocated to communities, 26 percent to the rural district councils, 15 percent for general administration, and four percent as a levy to the Campfire Association, the private voluntary organization administering CAMPFIRE (Campfire Association, 2016).

Since its inception, CAMPFIRE has experienced both successes and failures. Its success stems in part from its broad geographical impact. Fifty-eight of Zimbabwe's fifty-nine districts have been integrated into the CAMPFIRE program, covering twelve percent of the country and reaching 2.4 million people (Campfire Association, 2016). The program has improved livelihoods and access to social services (Campfire Association, 2016). Communities earn about $1 million collectively each year, which since the program's inception has led to a 15 to 25

percent increase in household income (Semcer, 2019). While 200,000 households participate in CAMPFIRE, an additional 600,000 are estimated to indirectly benefit from the social services and infrastructure that CAMPFIRE income supports (Campfire Association, 2016).

CAMPFIRE also serves wildlife conservation interests. Trophy hunting constitutes roughly ninety percent of revenues, with over half of hunts being of elephants (Frost & Bond, 2008). The program is seen as a viable way to reduce poaching: elephant poaching in CAMPFIRE communities averages 75 percent less than the rate in non CAMPFIRE-communities (Campfire Association, 2016).

However, CAMPFIRE has faced its share of critique. Donor support, originally provided by USAID and other international development agencies, has been greatly reduced since the 2000s (Campfire Association, 2016). There have also been concerns that CAMPFIRE sidelines community members while working to advantage key leaders in rural district councils (The Chronicle, 2020). The success stories of CAMPFIRE are also geographically limited. Wildlife species that migrate from Hwange National Park cause serious HWC because there is no buffer zone between the park and the communal area (Campfire Association, 2016). All in all, only 15 districts have sufficient wildlife resources to gain full financial benefits; in other words, the consumptive use of wildlife is supplementary to subsistence farming for most communities (Campfire Association, 2016).

Overall Assessment of CBNRM

Assessed as a whole, CBNRM provides many positives in achieving conservation, community development, and ethical goals through giving communities autonomy over natural resources. However, CBNRM ties to NGOs (with unpredictable funding) or the government (unpredictable rollout) make for uneven and inconsistent implementation. CBNRM should not be

viewed as a one-size-fits-all solution for trophy hunting but rather a specialized approach since it only applies to communal lands, thus leaving private game reserves and state reserves off-limits.

V. Applying Sustainability Certification Scheme Best Practices to the Trophy Hunting Industry

Building off the earlier sections that analyzed existing sustainability practices in the trophy hunting industry, this section will draw from current sustainability certification schemes in other industries to determine the appropriateness of applying a new SCS to trophy hunting in SSA.

Defining sustainability certification schemes (SCS)

Sustainability certification provides the acceptance criteria and guidelines to differentiate a product or service for the marketplace (Barry et al., 2012; Tscharntke et al., 2015). SCSs may adhere to many different names, including:

- Eco-label
- Eco-certification
- Certification
- Certification scheme
- Sustainability certification scheme

Well known examples of SCS include the Rainforest Alliance/UTZ, which through its green frog logo symbolizes to consumers that its product is eco-friendly and benefits smallholder farmers (Rainforest Alliance, 2017). Similarly, Fairtrade International ensures a guaranteed price for smallholder farmers globally (Troster & Hiete, 2018) and LEED (Leadership in Energy and Environmental Design) incentivizes administrators of buildings of all types and purposes to

adhere to progressively higher standards of energy and waste efficiency (Troster & Hiete, 2018; Encyclopedia Britannica, 2021b).

The objectives of SCS vary widely and could encompass a complete triple bottom line—social, environmental, and economic factors—or a combination of one or two factors (ISEAL, 2020). Means of demonstrating SCS impact also differ greatly. Some SCSs reach standards through a threshold model with an agreed-upon performance level for all stakeholders to achieve. Others have a constant improvement benchmark where one tier of accomplishment can be built upon in subsequent years. Still others, usually individual companies, establish their own scales for measuring sustainability from within. SCS also play an important and diverse role in the global marketplace. Certified agricultural products are among the oldest SCSs and include coffee (38% of the market), cocoa (22% of the market), palm oil (15% of the market), and tea (12% of the market).

There are certain conditions that are conducive to a successful SCS. One is in developing countries, which lack stringent government measures that would otherwise stipulate sustainable standards. Private approaches in SCS have thus been a response to insufficient binding *de jure* state activities, and the buildup of CSR bears witness to international corporations' efforts to improve and report sustainability performance (Troster & Hiete, 2018; Mena & Palazzo, 2012). Another condition for creating SCS is a lack of international frameworks or conventions to define sustainability standards. For example, the Forest Stewardship Council (FSC), which promotes responsible management of the world's forests, was founded by environmental NGOs in response to what they believed was an unsatisfying outcome to the Rio de Janeiro Earth Summit (Pattberg, 2005).

Initial Consideration of Trophy Hunting as a Sustainability Certification Scheme

Trophy hunting warrants consideration as a prospective SCS because it contains many of the existing conditions that are ripe for the formation of an SCS. Firstly, the trophy hunting industry lacks consistent industry regulations. National governments and/or professional hunting organizations in SSA set their own hunting standards, which vary greatly. Moreover, the issue of corruption begs the question as to whether governments are equipped to legislate regulations that would be widely followed. After all, SSA has the lowest corruption perception index of any region in the world (Transparency International, 2021). Moreover, the trophy hunting industry lacks rigorous international frameworks or conventions from which to implement an SCS. While the IUCN regulates the import/export permit process for trophies of species that are threatened or considered protected, far more species are unprotected and actual hunting practices (such as method or ethics of the hunt) are not outlined through the convention.

A final reason to consider trophy hunting under the SCS framework is purely economic. In-depth studies are needed to further assess trophy hunters' demand for sustainable hunts, but initial studies verify not only that trophy hunting messaging is laden with strongly pro-conservation and pro-international development marketing but also that they have a willingness to pay substantially more for hunts that meet sustainability objectives (Fischer et al., 2015; Lindsey et al., 2007b). As referenced earlier in this paper, trophy hunters are willing to pay up to $3,900 extra on an individual hunt if they know that a portion of the proceeds benefits nearby communities, while 99 percent of them are unwilling to support hunting operators that are not conservation-friendly (Fischer et al., 2015; Lindsey et al., 2007b).

The Eight Components of Sustainability Certification Success

Very few studies have analyzed SCSs on a macro-level to understand their strengths, weaknesses, and potential strategies for improvement. The most comprehensive study done was by Mori Junior et al. (2016), who performed an integrated literature review on SCS. They concluded that there were eight common approaches to a successful SCS: 1) sustainability awareness, 2) market access, 3) management systems and productivity, 4) social/environmental/economic impacts, 5) monitoring outcomes, 6) competition, overlapping, and interoperability, 7) stakeholder participation, and 8) accountability and transparency.

- *Sustainability awareness*

Sustainability awareness means that consumers and business representatives know about the provenance of materials and products they purchase. Consequently, a certain segment of the population must be willing to shift their market preferences toward better sustainability performers (Mori Junior et al., 2016). Mikkila et al. (2009) and Hueratas et al. (2010) detail the importance of sustainability awareness, finding a direct link between level of success of SCS and level of interest of consumers toward sustainable products.

An example of sustainability awareness in practice is the organic label, which traces its roots to the first half of the twentieth century (Mithofer et al., 2016). Mechanized agriculture based on external inputs raised concerns about human health impacts, product quality, and foods' loss of "naturalness" and spiritual qualities (Mithofer et al., 2016). With Rachel Carson's bombshell book "The Silent Spring" (1962), which detailed some of the dangers of chemical pesticides, people's desire for an organic movement gained momentum and inspired the creation of the International Federation of Organic Agriculture Movements, the motherhood movement of organic agriculture (Lytle, 2007).

Sustainability awareness already influences some of the practices and perceptions of the trophy hunting industry. Anecdotally, the author found significant interest both from the leadership of professional trophy hunting organizations in SSA and researchers within the Oxford Wildlife Conservation Research Unit in the idea of reforming the industry to meet stipulated conservation and community development objectives, not to mention previous references by publications in Nature, the US Congressional Research Service, and the IUCN to do the same. Moreover, trophy hunters' higher willingness to pay for sustainable hunts gives a trophy hunting SCS high potential as a product.

The importance of sustainability awareness in trophy hunting also stems from critics of the industry. Threats to boycott game reserves that allow trophy hunting are found on a number of African travel websites and malpractices like canned or baited hunting influence public opinion, with governments and businesses held accountable by people's votes and wallets (Trip Advisor, 2013; Young & Chevallir, 2015). A trophy hunting SCS could thus generate positive sustainability awareness that leverages trophy hunting's strengths.

- *Market access*

Expanding market access allows businesses to cater to potentially higher paying consumers as well as consumers with different needs and preferences. Certified products can create new market opportunities, especially in markets where consumers have greater awareness about sustainability and CSR. An example of SCS' connections to market access is with the Marine Stewardship Council (MSC), which sets an international standard for sustainable fishing. The lobster industry was pressured into becoming part of MSC through factors connected to market demand. Large retailers like Wal Mart, Marks and Spencer, and Sainsburys increasingly

demand MSC fish while the fish industry itself felt that MSC certification would reinforce its presence in European markets (Giacomarra et al., 2021).

A prospective trophy hunting SCS could help game reserves or other certified industry entities expand their market access opportunities. While a majority of trophy hunters are American and European middle-aged to elderly men, and that market is unlikely to change soon, an SCS could instead increase the price for certified hunts. Charging higher priced hunts could pose a positive incentive for hunting outfitters or other entities that would be certified. Based on the author's discussions with the Craig Boddington Endorsed Outfitters, demand for game reserve certification was greater than he allowed to be certified and each game reserve applying for certification had fronted the travel, accommodation, and accreditation expenses that Boddington and his CEO required to evaluate the reserve? (C. Evarts, personal communication, February 8, 2020). While game reserves could expand market access by being accredited for an SCS, a potential issue may be accessibility and costs? for smaller enterprises, as Ndhukula et al. (2009) demonstrated in their study of Namibia ecolabels.

- *Management systems and productivity*

Management systems and the productivity of an organization or company can be improved by an SCS because an SCS may require that the entity meet environmental, social, and/or economic aims. Many ecolabels provide training and on-site support to help the entity reach such objectives. Voget et al. (1999) show how FSC certifications resulted in managers believing the FSC requirement of improving their management practices and internal controls made them improve these management systems. Lewis & Davis (2015) shared a similar outcome in their analysis of the impacts of the Malaysian Timber Certification Scheme.

Organizations that adopt environmental standards have higher labor productivity numbers than organizations lacking standards, so organizations involved in social causes positively impact employee workplace attitudes (Delmas & Pekovic 2013). Moreover, they explain that the adoption of environmental standards is linked with increased employee training, thereby improving labor productivity.

A trophy hunting SCS could lead to enhanced management systems and productivity on game reserves in SSA, in large part by the awareness and education that an SCS certifier could provide. Pienaar et al.'s (2017) qualitative study found that game ranchers follow several stewardship practices but that these practices are not universally adhered and that an extension system in most SSA countries is poor. Trainings or roundtable forums provided by the SCS certifier could prove useful; for example the Roundtable on Sustainable Palm Oil teaches and promotes sustainable palm oil best practices among stakeholders (Ayompe et al., 2021).

Trophy hunting management and productivity may also benefit from landscape-wide management as applied to its SCS. Trophy hunting typically occurs on remote and often disconnected swaths of land. However, biodiversity depends on processes at larger landscape scales. Thus, a certification mechanism may consider linking with broader landscape and ecosystem service management approaches, as Kai-Uwe Denker, a veteran of the Southern Africa trophy hunting industry and former president of the Namibian Professional Hunters Association, suggests (K.-U. Denker, personal communication, February 7, 2020). This initiative would be similar to the pioneering thinking of EcoAgriculture Partners, the leading non-profit champion of integrated landscape management (Buck, 2020).

- *Social, environmental, and economic impacts*

Social, environmental, and economic benefits can be reached by an SCS. It is important that data for environmental, economic, and social impacts are collected since economic metrics do not fully account SCSs' impacts. Barry et al. (2012) conducted a critical review of schemes in agricultural, forestry, fisheries, and aquaculture sectors, showing their direct environmental impact on regional biodiversity. Through the organic label, an SCS brings positive economic benefits not only by fetching a premium price for certified products but also reducing costs for producers who use less chemicals. Other authors show how SCS contributes to social development through fair and ethical trade initiatives, an improvement of working and living conditions, and positive impacts on human health and poverty reduction (Stark & Levin, 2011; AccountAbility, 2018; Mori Junior et al., 2016).

Trophy hunting can fulfill a unique niche as a prospective SCS because it meets the triple bottom line of environmental quality, social equity, and economic prosperity. Environmentally, it can either help conservation of species and habitat. Socially, it can improve local livelihoods, provide meat, and ensure funds for rural services like healthcare and education. And economically, it can provide greater returns to game reserves and contribute to the rural economies of SSA that have limited livelihood alternatives.

- *Monitoring outcomes*

Monitoring outcomes is an essential aspect of any SCS because it allows the certified entity to periodically review their effectiveness at meeting their objectives. This type of accountability is essential as it provides evidence to consumers and other stakeholders that they are indeed sustainable (ISEAL Alliance, 2010; Schiavi & Solomon, 2007). Impact evaluations are a key tool to measure causality of impact because they use a counterfactual to assess whether the program or project's effects would have occurred had it not existed (Gertler et al., 2016).

Blackman & Rivera (2011) find that many SCSs do not clearly articulate their objectives or give well-measurable indicators of success, which would make impact evaluations difficult to perform. Komives & Jackson (2014) further reveal that many SCSs do not fulfill stakeholders' expectations about whether outcomes result in achieving sustainability improvements or halting harmful practices. There is a greater need for stakeholder engagement in SCSs so that an SCS can collaboratively map out its objectives and, over time, evaluate the rigor of meeting them.

The dearth of impact evaluations of SCSs and conservation projects could present an advantage and opportunity to trophy hunting because these measurements are powerful, scientifically objective tools that demonstrate what the project or program does. However, as with any impact evaluation, creating a trophy hunting SCS impact evaluation plan would entail significant costs (Baylis et al., 2015; ISEAL, 2020).

- *Competition, overlapping, and interoperability*

A duplication and overlapping between SCSs presents both advantages and disadvantages (Mori Junior et al., 2016). Today, the Ecolabel Index (2021) estimates there are 457 ecolabels in 199 countries and 25 industry sectors. The sheer number of schemes may cause confusion in the marketplace, contribute to greenwashing, and create a fragmented governance system and weak outcomes (Mori Junior et al., 2016). However, if SCS can harmonize with regulations, laws, principles, and initiatives, sustainability issues can be better targeted (Barry et al., 2012).

Rainforest Alliance and UTZ provide a telling example of SCSs merging together. Rainforest Alliance and UTZ met similar objectives for empowering smallholder farmers as two major certifiers in the developing world. According to a 2017 press release by Rainforest Alliance:

> *Streamlining the certification process will help the 182,000 cocoa, coffee, and tea farmers currently certified under both standards and new farmers alike to invest more*

efficiently in sustainability, avoiding a double administrative load of working with two standards and certification systems.

As mentioned earlier in this paper, Craig Boddington Endorsed Outfitters is the only label of its kind in the trophy hunting industry and channels star appeal rather than on-the-ground sustainability impact (C. Evarts, personal communication, February 8, 2020). Thus, trophy hunting would have the advantage of joining a market with no known SCS label, giving it the ability to set sustainability objectives that support or build off existing government or professional hunting organization laws and standards.

Nevertheless, a potential risk of creating an SCS is creating an unnecessary standard that does not acknowledge existing sustainable practices in the industry. For instance, CAMPFIRE and other CBNRM practices already achieve economic, social, environmental, and even ethical benefits. An argument for an SCS may then be that it becomes a universal marker of excellence in the trophy hunting industry so that when trophy hunters attend hunting conventions shopping for their next hunt, they can recognize an SCS label and understand what it represents.

- *Stakeholder participation*

Stakeholder participation involves the participation and cooperation of stakeholders in developing, monitoring, and reviewing an SCS (Mori Junior et al., 2016). Through this dialogue, high-quality objectives and outputs can be agreed upon and implemented (Mori Junior et al., 2016). Involving stakeholders is critical because SCSs are voluntary and not state-authorized, meaning they need endorsement by external parties (O'Rourke, 2006). Moreover, engagement can help regulate or reduce conflict while fostering legitimacy and credibility of the SCS (Mori Junior et al., 2016). One example of broad stakeholder engagement is the Roundtable on Sustainable Palm Oil, composed of oil palm producers, processors, traders, consumer goods

manufacturers, retailers, banks/investors, and environmental and social NGOs who develop and implement global standards for sustainable palm oil (RSPO, 2021).

Four stakeholder groups are relevant for granting authority to SCSs: 1) government organizations representing the state, 2) companies that implement the SCS requirements, 3) supply chain actors that put pressure on implementing companies, and 4) civil society (e.g., media, environmental NGOs). All such groups are either directly involved in the SCS (e.g., through standard-setting or implementation) or indirectly by putting pressure on non-participating entities (Cashore, 2002).

As with any SCS, a broad inclusive stakeholder process would be fundamental to creating and sustaining a trophy hunting SCS. The first step in meeting this objective might involve stakeholder mapping, where stakeholders are asked which sustainability objectives it considers important relative to ?. Government organizations (1) might include members of the US FWS, the IUCN, and governments from SSA countries. Companies that implement requirements (2) could include hunting outfitters/game reserves, professional hunting organizations, and larger trophy hunting organizations like SCI and the Dallas Safari Club. Supply chain actors that put pressure on SCS entities (3) can include airlines, game lodges, the tourism industry and even gun companies and taxidermies. Finally, civil society (4) could encompass both mainstream and conservation-focused media as well as NGOs who highlight malpractices in the industry. These may include the WWF, The Nature Conservancy, the Sierra Club, and even anti-hunting organizations such as Born Free USA. Finally, a trophy hunting SCS may involve outside experts, including scientists and researchers in the field of conservation biology and sustainability who can help shape the SCS and its components.

- *Accountability and transparency*

Transparency and accessibility are key to encourage dialogue and networking of different stakeholders (Acosta, 2014; ISEAL Alliance, 2014). ISEAL (2020) defines a transparent process as "relevant info made freely available in an accessible manner" and accessible as "avoid[ing] structures that create unnecessary barriers to participation and seek to minimize reporting and engagement burden". A successful SCS should include structures and processes that make its standard-setting process and results widely available and understandable not only to certified entities but also consumers. Stark & Levin (2011) reveal that certifications using vague language leave room for loopholes and misinterpretation, leading SCSs to mislead stakeholders through greenwashing. Thus, clear language translates into a more comprehensive, adhered-to SCS (ISEAL, 2020).

Trophy hunting is well known for its publicized malpractices, so transparency and accountability would be important tenets for its SCS to foster trust in the industry. Capacity building and relationship building among certified entities by the potential SCS could potentially break down barriers in communication and information sharing, which as ISEAL (2020) reveals, would be a gradual, time-intensive process.

Recommendations for Shaping a Trophy Hunting Sustainability Certification Scheme

Trophy hunting is complex and regionally variant, with many stakeholder perspectives and agendas. However, in light of the discussion of trophy hunting industry challenges and opportunities and the composition of other SCSs, below are suggestions for a trophy hunting SCS that address three thematic components: ethics, conservation, and community development.

- *Ethics*

Ethical trophy hunting encompasses not only animal ethics but also human ethics from the hunter and the professional hunter/party.

--*Human Ethics*

- Individual accreditation of hunters in a hunting association – the association usually holds Fair Chase standards, or rules that the animals hunted must be wild (naturally bred, living in nature) and free-ranging (not confined in enclosures or artificial barriers, as is the case for canned hunting or smaller private game reserves) (Boone and Crockett Club, 2016)
- Clear quotas done through selective hunting and monitoring (which puts no pressure on genetically dominant and healthy animals) (Wanger et al., 2017)

--*Animal Ethics*

- Intolerance of cruel treatment of animals, such as canned hunting or killing of mothers or young (Young & Chevallir, 2015)

o *Conservation*

Trophy hunting that supports conservation must not only work toward species furtherance through maintaining populations and their habitat but also protecting them.

- Species-specific quotas and strict limits on trophy size (Wanger et al., 2017)
- Channeling of trophy hunting funds toward anti-poaching and wildlife protection initiatives (Lindsey et al., 2007)

o *Community Development*

Trophy hunts often occur at or near areas where indigenous communities live and interact with wildlife on a daily basis. Efforts are needed to ensure communities are part of the decision-making and benefit-gathering process of trophy hunting.

- Adequate benefits of trophy hunting accruing to landowners and/or nearby communities (Weaver & Peterson, 2008)

- Integrating local community in trophy hunting and game management decision-making (Weaver & Peterson, 2008)
- Ensuring use benefits for local people (e.g. meat, carcass) (Wanger et al., 2017)
- Keeping wildlife numbers at a socially sustainable level (e.g. through preventing HWC) (Wanger et al., 2017)

The aforementioned points are suggestions and guidelines that could be expanded upon in greater detail through stakeholder engagement. Programs like the National Science Foundation I-Corps provide funding for university researchers to identify the needs of a given market through stakeholder interviews and engagement and may be beneficial if this project were carried further (NSF, 2021).

The trophy hunting industry has the opportunity to take a number of different SCS pathways. This would encompass deciding which entity could apply for certification. For example, a professional hunting association for an SSA country could be certified, ensuring that the professional hunters who guide a trophy hunt do so according to a stipulated standard. A game reserve/hunting outfitter could also be certified, with their ecolabel promising that all animals killed on their reserve are done according to the SCS' standards and uses. Applying a SCS at a landscape level may provide more ecological benefits for habitat management and restoration, but the logistics may prove complex. However, the game reserves/hunting outfitters may be the best implementation avenue to achieve integration across the trophy hunting industry and to change the behavior of trophy hunters. An SCS label could easily be displayed at a hunting outfitters' booth at trophy hunting conventions like SCI and the Dallas Safari Club, the main places where trophy hunters book their hunts.

Other matters would need to be considered when designing an SCS. For example, there are general agreed-upon practices in trophy hunting, but there is national or regional variance in particular needs and priorities for different SSA countries. A SCS requires flexibility to adapt objectives to local needs, similar to how the now dormant Savannas Forever seal catered to Tanzania and its lion hunting industry (Packer, 2005).

Additionally, systems would need to be put in place to prioritize long-term development of the trophy hunting SCS. Given the closed-door nature of the industry, it would be important to have an impartial third-party certifier with credibility to the trophy hunting industry, conservation field, and other stakeholders. Using impact evaluation as a tool for monitoring SCSs could serve to foster legitimacy from within, proving causality of impact (Cameron et al., 2016). However, in order to create a vigorous evaluation framework, stakeholder mapping and creating a theory of change to understand the SCS objectives and impact metrics would be needed. Finally, for long-term development, a trophy hunting SCS should consider incorporating a graduated improvement model where the certified entity improves its operations overtime. Such a strategy would be beneficial as it allows newcomers to the SCS to be rewarded and incentivizes longer-standing entities to reach higher levels of the same seal, fetching higher prices and meeting consumers' demands.

VI. CONCLUSION

In conclusion, trophy hunting is a highly controversial, billion-dollar industry that occurs worldwide and has special conservation, ethical, and economic considerations for Sub-Saharan Africa. "If it pays, it stays" is a mantra put forward by pro-trophy hunting advocates to defend the idea that conservation is an expensive undertaking where the costs of a single animal hunt

can potentially support wildlife habitat and restoration for other animals. While the current benefits of trophy hunting are mixed, there is no doubt that some practices of the industry, have led to positive impacts for conservation and rural development.

However, the trophy hunting industry's complexities must be understood for what they are: historically rooted in inequality, colonialism, and evidence of malpractice. To address challenges in the trophy hunting industry while presenting it as a viable model for conservation and rural development in Sub-Saharan Africa, this study considered the concept of sustainable trophy hunting. It assessed past and present examples of trophy hunting's efforts at being sustainable, from Savannas Forever Tanzania's efforts at certifying lion hunts to Craig Boddington Endorsed Outfitters's seal-esque qualities, which lack sustainability benefits, to the good practices entailed in community-based natural resource management through CAMPFIRE. This study also examined the strengths and weaknesses of SCSs for sectors including agriculture, forestry, and fishing in order to understand basic guidelines that a prospective trophy hunting SCS may incorporate, concluding that the main objectives a trophy hunting SCS could address are ethics (both animal and human), conservation, and community development.

For a trophy hunting SCS to be implemented and prove successful, strong stakeholder engagement is needed from within and outside the trophy hunting industry. Agreed upon, measurable objectives for sustainability that meet local needs while addressing overarching objectives is also integral, as is a system of transparency, accountability, and impact evaluation to demonstrate causality of sustainability impact. From a practical standpoint, certifying game reserves/hunting outfitters may be the easiest way to introduce an SCS since trophy hunters could easily see the SCS label hunting outfitters at the hunting outfitters' booths at trophy hunting conventions, but that other types of entities could be certified depending on the priority

objectives of the SCS. Overall, more research is needed to understand the needs and preferences of the trophy hunting industry before proposing an in-depth SCS or alternative.

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