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**IMPLICATIONS OF SPORT HUNTING ON WILDLIFE CONSERVATION IN
UGANDA**

**A CASE OF NYAKASHASHARA SUB COUNTY KIRUHURA DISTRICT,
WESTERN UGANDA**

BY

**WILSON K. KATAMIGWA
2019/AUG/MNRM/M226141/WKD**

**A DISSERTATION SUBMITTED TO THE SCHOOL OF SCIENCE IN
A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF A MASTER OF SCIENCE DEGREE
IN NATURAL RESOURCES MANAGEMENT
OF NKUMBA UNIVERSITY**

AUGUST 2023

DECLARATION

I hereby declare that this dissertation is my original piece of work and it has never been presented anywhere to an institution of higher learning for any academic award.

Signature.....

Date.....

WILSON K. KATAMIGWA

2019/AUG/MNRM/M226141/WKD

DEDICATION

I dedicate this dissertation to my beloved parents, the late Mr. Kezekia E. Rwakatogoro. Katorogo and Mrs. Esteri Kabibi, for their parental love, as well as to my wife, Madam Prossy Mbabazi, and our children Glorious Tushemerirwe, Frank Tukwatanise, Hope Natukunda, Chris Nuwagaba, Tumuramyé Moses Katamigwa, Rugambwa Vigorous Katamigwa, and Rutakirwa Joshua Katamigwa.

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LIST OF ABBREVIATIONS

AWF	:	African Wildlife Foundation
CA	:	Conservation Area
CAMPFIRE	:	Communal Areas Management Programme for Indigenous Resources
CBC	:	Community-Based Conservation
CBNRM	:	Community Based Natural Resource Management
CCP	:	Community Conservation Policy
CHAs	:	Controlled Hunting Areas
CWA	:	Community Wildlife Area
CWAs	:	Community Wildlife Associations
GTL	:	Game Trails Uganda Limited
IUCN	:	International Union for Conservation of Nature
KDLG	:	Kiruhura District Local Government
KKTGMA	:	Kabwoya and Kaiso-Tonya Game Management Area
KTCWA	:	Kaiso-Tonya Community Wildlife Association
KWR	:	Kabwoya Wildlife Reserve
LMNP	:	Lake Mburo National Park
LMCA	:	Lake Mburo Conservation Area
NEMA	:	National Environment Management Authority
PAs	:	Protected Areas
SPSS	:	Statistical Package for Social Scientists
TFCAS	:	Transfrontier Conservation Area
UBOS	:	Uganda Bureau of Statistics
UWA	:	Uganda Wildlife Authority
UWP	:	Uganda Wildlife Policy
WUR	:	Wildlife User Rights

DEFINITION OF TERMS

Sport hunting is described generically as the recreational chasing of very old male wild animals to collect trophies such as horns, antlers, skulls, skins, tusks, or teeth for display. Sport hunting also refers to an activity such as stalking, killing wild animal for recreation purposes and to take home a sport. It targets very old males that are no longer active in reproduction.

Wildlife: The term "wildlife" originally referred to undomesticated animal species, but it has now expanded to cover all creatures that naturally develop or exist in a place without being introduced by people. Every environment supports wildlife. "**Wildlife**" also refers to any non-domesticated kind of animal or plant. However, in popular parlance, the phrase refers to non-domesticated, vertebrate creatures, particularly terrestrial ones. Animals can be categorized as either game or non-game species under this more stringent criterion. Game species are those that are currently or have historically been harvested by humans.

ABSTRACT

The study examined the implications of sport hunting on wildlife conservation in Rurambira and Nyakahita Parishes, Nyakasharara Sub County, Kiruhura District. Specifically, the study was aimed at establishing the socio-economic contributions of sport hunting, determining the perception of local communities towards sport hunting activities, and assessing the effect of sport hunting on the conservation of wildlife populations. A cross-sectional design was used for the survey. Quantitative and qualitative data were collected through the use of questionnaires and face-to-face interviews, respectively. Content analysis was the main technique for qualitative data analysis, and quantitative data was analyzed using SPSS. The results show that there are improvements in local community livelihoods; some people were of the view that sport hunting had encouraged conservation, hence a relatively positive attitude towards sport hunting activities. The study also showed that animal populations increased over time because of sport hunting. The findings reveal that sport hunting is desirable since it helps the local community and leads to a decline in poaching ($r = 0.271^{**}$; $p = 0.000$). The popularity of sport hunting has increased in support of wildlife conservation ($r = 0.301^{*}$; $p = 0.001$). The study further revealed that sport hunting increased community income and revenues, resulting in improved livelihoods and improved infrastructure that has enhanced wildlife conservation. There is a need to increase awareness about the sport hunting program and strengthen law enforcement by recruiting village wildlife scouts to work with sport hunting companies to curb poaching.

Key Words: *Sport Hunting, Wildlife Conservation, Kiruhura District*

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Uganda Wildlife Authority (UWA) is a semi-autonomous government organization that conserves and assures sustainable management of wildlife resources in Uganda, both within and outside of protected areas. UWA has put in place a range of mechanisms, including sport hunting programs, to manage wild animal populations outside protected areas.

According to Saayman *et al.* (2018), sport hunting as a wildlife conservation tool was introduced on ranches outside Lake Mbuoro National Park to control various factors, including, human wildlife conflicts, poaching, wildlife trafficking, and over-exploitation, which had become a threat to wildlife conservation (Anon, 2015). Uganda experienced a massive decline in wildlife in 1970s and 80s mainly due to civil war, insurgency, and political instability; as a result, thousands of animals were killed by military groups and wildlife protected areas experienced heavy encroachment.

Sport hunting was then introduced as one of the ways to promote wildlife conservation to control threats such as poaching for bush meat, illegal wildlife trade, and competition with livestock, which were resulting from the growth of the human population and demands for food, income and land for development in many biodiversity-rich parts of Lake Mbuoro National Park, which exacerbated pressures on wildlife and making the need for viable conservation incentives more urgent.

Sport hunting was regarded as a positive conservation driver because it increases the economic value of wildlife and the habitats on which it depends, thereby providing critical benefit flows that can motivate and enable landowners to participate in long-term conservation of wildlife. Local communities in the Lake Mbuoro National Park began to benefit from sport hunting in a variety of ways, including direct payments from a hunting company for land use, projects funded using revenue from animal fees that typically support improved community livelihoods and services such as water infrastructure, schools, and health clinics; gaining jobs as guides, game guards, wildlife managers, and other hunting-related employment; and gaining access to meat (Achieng, 2018).

Sport hunting also, attracted photographic tourism, which in turn generated enormous benefits for conservation around Lake Mbuoro National Park. Anon, 2015b). According to International

Union for Conservation of Nature, like all conservation approaches, the conservation impact of sport hunting varies according to numerous factors.

Well-regulated sport hunting plays an important role in delivering benefits for both wildlife conservation and communities living with wildlife around Lake Mburu National Park (Anon, 2015a). Various stakeholders have in the past expressed their concern about the conservation of wildlife numbers and advocated a practice that involved killing animals to ensure that species, subspecies, and populations are viable and able to fulfill their ecological roles in the ecosystems throughout their native range. For example, old males past reproductive age are hunted and removed to allow younger males to breed, and large populations reduced to prevent lasting ecological damage to their habitat. Sometimes this population management happens as part of a sport hunting program (Dickman, 2015).

1.1.1 Historical Background

For millennia, hunting has been a part of human history. Hunter-gatherers relied heavily on hunting for food and fur, but it also played an essential role in their rituals and as a display of strength. To kill wild animals, they mostly employed primitive means like as slings, snares, spears, nets, dogs, and occasionally bows and arrows (Hannis, 2017). Because the world's population was still low, this type of hunting had little effect on wildlife numbers. After European immigrants arrived in North America in the 1500s, hunting became more popular. Similarly, hunting grew in Africa in the 1800s as early explorers discovered a continent teeming with game. Wealthy Europeans accompanied them on hunting excursions, especially in Kenya (Nthigaet *al.*, 2015).

The origin of sport hunting may be traced back to England and, subsequently, the United States of America in the early 1800s, when the concept of sportsmanship was incorporated into traditional hunting for meat, fur, and pest control (Bizri et al 2015). Sport hunting was later introduced in Africa in the early 1900s by explorers and colonial rulers venturing into Africa's heartland. These immigrants mostly engaged in unrestricted sport hunting, which hurt animal populations, eventually leading to an increasing awareness (Africa Union, 2017). Several African countries, with support from international conservation and development organizations, have propagated sport hunting as a policy intervention to address livelihood as well as conservation concerns in and outside protected areas. For example, in Zimbabwe, sport hunting became part

of the Community Areas Management Plan for Indigenous Resources (CAMPFIRE) Project, and in East, Central, and West Africa it was included in many forms of community conservation programs (Muposhiet *al.*, 2016). Sport hunting was widely recognized as one market-oriented approach to helping the survival of wildlife, and it contributed to cash flows from payments made by sport hunters (tourists). Tourists had the objective of selecting and hunting animals with exceptional physical characteristics like large horns, tusks, enormous body size, and skull length, usually in the company of licensed professional hunting guides (Makuza, 2016).

Currently, sport hunting is legally permitted in 23 African countries, most of which are in Sub-Saharan Africa. The intervention is estimated to generate gross revenue of more than US\$21 million per year in sub-Saharan Africa from about 18,500 clients. Considering the economic potential, professional sport hunting companies have emerged in Africa and tendered hunting concessions and signed agreements with the state/community conservation agencies for a set period guided by specific rules which vary from state to state. These companies then design hunting safaris that are marketed and sold to prospective clients, who largely come from the western world (Lindsey and Hunter, 2016).

In the late 19th century, there was a growing need and recognition by some hunters to protect the remaining game. Several former hunters played a big role in the establishment of protected areas in many African countries in the early 20th century. With protected areas and wildlife laws in place, Kenya developed controlled and organized sport hunting, which was carried out by wealthy Western tourists (Balme et al, 2016). Professional sport hunting and hunting safari companies have also emerged elsewhere in Africa, including Uganda.

The arrival of Arab traders in the 1700s, especially in the coastal areas, signaled the beginning of a new era of socio-economic development accompanied by technological changes in the hunting industry. Hunting was no longer something people did mainly for subsistence, but commercial and leisure purposes. The hunters started to use new weapons, such as guns, which enabled them to kill more animals. Hunting during the colonial era was a major element in the struggle for survival, development, and for among the various forces vying for control of resources of land, water, and animals—wild and domesticated (Lindsey et al, 2016).

The ‘old’ sport hunting was associated with ‘fortress conservation’ and has changed into a ‘new’ sport hunting approach, coupled with a changed discourse on conservation. The ‘new’ sport of hunting was promoted within the context of market-based and community-based approaches.

Although market-based approaches are anchored in the idea of attributing monetary values to all wildlife to raise their conservation status, and community-based approaches on the idea of involving the formerly excluded communities in conservation activities, both approaches aim at deriving benefits from wildlife and sharing these benefits with the protected areas neighbouring communities to win their support for conservation activities while at the same time stimulating the economic development of the poor communities (Minin *et al*, 2016).

According to Kisame *et al.* (2017), the ‘new’ sport of hunting was first experimented with in the 1970s and early 1980s in Southern Africa and later West Africa, then Central Africa, and more recently, Eastern Africa, to promote the conservation-development nexus. In Uganda, it was particularly implemented to reduce human-wildlife conflicts. More generally, the new sport of hunting is promoted as an incentive for community participation in conservation and development. It allows both state and non-state actors in conservation and the sharing of conservation and benefits. Thus, sport hunting implementation in most parts of Africa is allegedly driven by a strong desire to conserve wildlife while deriving economic benefits from it (Ochieng *et al.*, 2018).

Conservation organizations in Africa have struggled to develop new and more participatory forms of wildlife conservation and management approaches recognizing that residents living adjacent to conservation areas suffer from crop loss and pasture depletion, competition for saltlicks and water by wildlife. In addition, wildlife competes with livestock for farm resources and exposes livestock to diseases carried by wildlife. This necessitates the development of new policies to ensure that conservation is linked with contributes to human welfare and development. In terms of human development, advocates have implemented sport hunting as a market-and community-based approach (Lindsey, 2016).

In Uganda, sport hunting became popular in the 1960s under the Game Department, which was charged with monitoring and issuing licenses (Ochieng, 2015). However, due to political instability and the declining populations of wildlife in the 1970s and 1980s, sport hunting was suspended by the government of Uganda to allow for wildlife regeneration. The government of

Uganda then passed a policy that banned sport hunting and re-affirmed that all wildlife was owned by the government (UWA, 2015). However, the same policy included a provision that allowed for future review of this ban in case a need arose. However, a challenge later emerged when the wildlife population recovered and numbers increased. Animals started looking for grazing areas outside the PAs on private land, creating conflict with surrounding communities. Uganda Wildlife Authority then decided to pilot sport hunting in the northern ranches around Lake Mburo National Park through a collaborative arrangement with a private company (Game Trails (U) Ltd), District Local Governments and local communities who were organized into a wildlife association. (Kisame *et al.*, 2017).

1.1.2 Theoretical Background

This research study was guided by ethical theory into four aspects of deontology, utilitarianism, and virtue ethics (Darimont *et al.*, 2017; Benjamin 2020), which are widely used to explain sport hunting practice in wildlife conservation areas. The theory conceptualizes that sport hunting must not jeopardize wildlife populations, alter natural selection and ecosystem functioning, or diminish native biodiversity (Macdonald *et al.*, 2017).

Sport hunting must create equitable net conservation benefits to the local community that is not available through alternative ethical practices; must not contribute to social inequality and injustice; must consider animal welfare and minimize sentient animals' suffering; and must not cause public outrage and undermine public trust in conservation (Treves *et al.*, 2018).

Such rules warrant the consideration of all sport hunting consequences to all who are affected, and following them can assure meeting the utilitarian principle of maximizing happiness for all. However, complying with all these rules seems formidable and makes the morality of sport hunting questionable as a general practice and when implemented at local levels, with both local and wider implications for development and wildlife conservation (López-Bao *et al.*, 2017).

According to Nelson *et al.* (2016), as a conservation tool, sport hunting has its roots in ethical considerations regarding killing animals for recreation, and sport ethics plays a fundamental role in justifying conservation activities. Therefore, conservation practitioners must contemplate ethical concerns regarding both humans and animals in conservation policy (Vucetich *et al.*, 2018).

1.1.3 Theoretical Framework

According to Actman *et al.* (2016), the ethics of sport hunting were intensified in July 2015, when an American dentist killed Cecil, the lion, in Zimbabwe, in what was perceived by the public as an inhumane manner. A series of published debates about conservation followed the public outrage arguing against sport hunting (Di Minin *et al.*, 2016; Macdonald, Johnson *et al.*, 2016; Nelson *et al.*, 2016; Ripple *et al.*, 2016).

According to the theory, sport hunting is a type of selective recreational hunting of nonhuman animals (hereafter, wild animals) done to obtain their body parts as a representation of success or memorial (Pospisil, 2017). Sport hunting is different from other forms of hunting that are done for survival, subsistence, or cultural purposes. It involves some components of physical activity and skill practice. Recreation or sport is not central to sport hunting, since the aim of sport hunting is obtaining a sport (that is a sign of victory, reward, and success). The theory further defines sport hunting as it is practiced by the Western world to promote conservation. The theory also contends that sport hunting can be used as a conservation tool. Though most arguments focus on ecological and management issues; the debate also stems from ethical concerns about killing animals for recreation and trophies (Nelson *et al.*, 2016). So, ethics plays a fundamental role in justifying conservation so that some scholars consider conservation as an ethically driven science (Vucetich *et al.*, 2018).

According to the theory, ethical convergence towards sport hunting is based on policy and environmental ethics. On practical grounds, these two levels of environmental concern do not always come into agreement. That is, a single moral value or principle may not adequately address policy since, depending on the context, an action may impose environmental problems on multiple levels, on various scales and with differential value (Nelson *et al.*, 2016).

Proponents of the theory suggest that there is a distinction between "consensus" and "convergence" in environmental ethics. At the policy level, the theory also contends that the implications of environmental holism and anthropocentrism converge; proponents of holism commonly argue that anthropocentrism is not a sound basis for an environmental ethic.

The conservation literature sparsely addresses ethical considerations of sport hunting (Batavia *et al.*, 2018; Macdonald *et al.*, 2016; Morris, 2020; Nelson *et al.*, 2016). These publications often adopt a single ethical framework to investigate the ethics of sport hunting, whether utilitarian

(Macdonald *et al.*, 2016), deontological (Ahmad, 2016; Nelson *et al.*, 2016) or virtue ethics (Batavia *et al.*, 2018), and came to different conclusions in favour of or opposition to sport hunting. It appears that such disagreements are rooted in differential moral values, various geographical or ecological scales, and diverse perspectives that each ethical view adds to the issue.

Furthermore, in the philosophical ethics of utilitarianism, sport hunting necessitates considering all the consequences of an action on all affected animals and humans that ought to be accounted for taken together welfare. Utilitarian moral philosophers have been at the forefront of advocating for the consideration of animals' interests and welfare in our decisions. Even, the father of modern utilitarianism, suggested that the capacity for suffering entitles animals to equal consideration of moral interests (Sinnott-Armstrong, 2019).

The principles of utilitarian theory have been applied in sport hunting to select sets of rules governing various general types of actions and/or social practices (Nathanson, n.d.). Opponents of active utilitarianism argue that it can lead us to wrong answers. Act utilitarianism may justify killing one person and using the organs to save five people in need of life-saving transplants. Also, critics of act utilitarianism claim that it can undermine trust among people. For instance, if doctors can kill one person to save five, no one will be able to trust the health system. Rule utilitarian's argue that good rules would prevent such practices and generate more good effects than making utilitarian judgments on individual cases, particularly at the societal level.

According to Nelson (2016), the theory also considers the practice of sport hunting as a type of activity that is governed by laws or policy documents), which stipulates the practice's negative consequences that are often ignored in utilitarian arguments in favour of sport hunting. Compared to deontology and virtue ethics, utilitarianism relies more on empirical facts to determine the actual circumstances and consequences of an action. Utilitarian's argue that sport hunting highlights the economic benefits of sport hunting for conservation and local communities. They rest on the utilitarian rationale of providing benefits for animal (and human) populations by sacrificing some individual animals' lives (Macdonald, Johnson, *et al.*, 2016). Such arguments rest on the premise that sport hunting's harmful biological and socio-economic consequences can be minimized or avoided (Dickman *et al.*, 2019; Lindsey *et al.*, 2017), and that sport hunting creates net economic benefits and conservation incentives (Naidoo *et al.*, 2016).

Sport hunting provides monetary incentives for local communities to protect wildlife and integrates conservation and development. Macdonald, *et al.* (2016) claim that a utilitarian view endorses properly regulated sport hunting since its gain for biodiversity outweighs the loss of individual animals.

According to IUCN (2016), sport hunting provides benefits for conservation and local communities. For example, communal conservancies or private wildlife lands in Zimbabwe and Namibia simulated a ban on sport hunting and thus reduced the number of conservancies that could cover their operating costs (Naidoo *et al.*, 2016). Well-regulated hunting frameworks and effective governance could minimize sport hunting's negative impacts on wildlife populations and bring benefits to local communities (Begg *et al.*, 2018).

However, according to the researchers' view, some evidence from the literature suggests that the negative impacts of sport hunting cannot be avoided entirely, and some negative impacts are often neglected in the utilitarian arguments. A more thorough inclusion of sport hunting's consequences in utilitarian evaluations is required.

In philosophical ethics, deontologists argue that some things should never be permitted, even if doing them does bring about the best consequences. Thus, they treat certain rules or individual rights as 'trump cards' against utilitarian considerations. In ethics, various deontological formulations exist and some ethicists have applied them to analyze hunting in general and often rejected its morality with some exceptions like subsistence or traditional indigenous hunting.

These philosophers distinguished between hunting for food and hunting for "sport". True subsistence hunting can be justified, but not sport hunting. Ahmad (2016) stated that sport hunting had only been discussed from the utilitarian ethical perspective. He rejected utilitarianism and explained that since animals and the environment have intrinsic values worth to protect them, without expecting incentives or benefits. Ahmad's perspective on sport hunting mirrors that of the premier animal rights philosopher. If individual animals have rights that block utilitarian justifications for harming them, then we cannot justify killing certain animals on the grounds that the consequences would be better overall (if large-scale starvation due to habitat degradation can be prevented by culling) (Manfredo *et al.*, 2020).

According to this study, a deontological ethical framework is important because it focuses attention on the rules or duties and/or respect for individual animal rights. Deontological authors have tended to condemn hunting in general, even when used for wildlife population control; thus, taking a deontological approach does not promise to support sport hunting specifically.

Virtue theorists assume that a flourishing human life involves developing and maintaining good relationships both with other human beings in civil society and with the animals and natural environments on which human civilizations depend. Furthermore, Child and Darimont (2015) describe sport hunters' satisfaction as achievement-oriented, which increased with large versus small prey, with versus without prey, and carnivore versus herbivore prey. In addition, sport hunting is a signaling behavior involving show-off and display, amplified by social media, to achieve social status and prestige (Darimont *et al.*, 2017).

As reviewed here, through a virtue ethics framework, there seems not to be an association between sport hunting and sport hunters' virtues and human flourishing. In contrast, studies done on the motivations and intentions of sport hunters suggest that some vices are involved in it. Therefore, sport hunting appears to be ethically problematic under a virtue ethics framework.

1.1.3 Conceptual Background

Hunting is the act of pursuing and taking wild animals the chase. The Wildlife Protection Act, Sec. 2(6) of which was repeated 1972, also defined hunting as the killing or poisoning of any animal or captive animal and every attempt to do so (Ahebwa & Visseren-Hamakers, 2015).

Sport hunting is one of the widely recognized, market-oriented approaches to helping the survival of wildlife pay its way through cash flows from payments made by sport hunters (often tourists). Sport hunting is a controversial and misunderstood activity by many on ethical, social, and cultural levels. The practice of sport hunting generates contradictory positions towards hunting in general. Alternatively, sport hunting is an activity that involves hunters (often tourists) paying to chase and kill an animal for pleasure (van der Duim *et al.*, 2015). Wildlife is animals living in their natural habitat and are not within the possession or control of humans. Wildlife is an important' shared' resource at Lake Mburo National Park, although this is on an illegal basis (Carpenter & Konisky, 2017). Conservation refers to the preservation of all species within Lake Mburo National Park, particularly endemics and those for which the park serves as an important or sole refuge (Muposhi, 2016). Wildlife conservation is an activity in which

humans make conscious efforts to protect plants and other animal species and their habitats (Ochieng, 2015). Wildlife conservation is very important because wildlife and wilderness play an important role in maintaining the ecological balance and contributing to the human quality of life.

1.1.4 Conceptual Framework

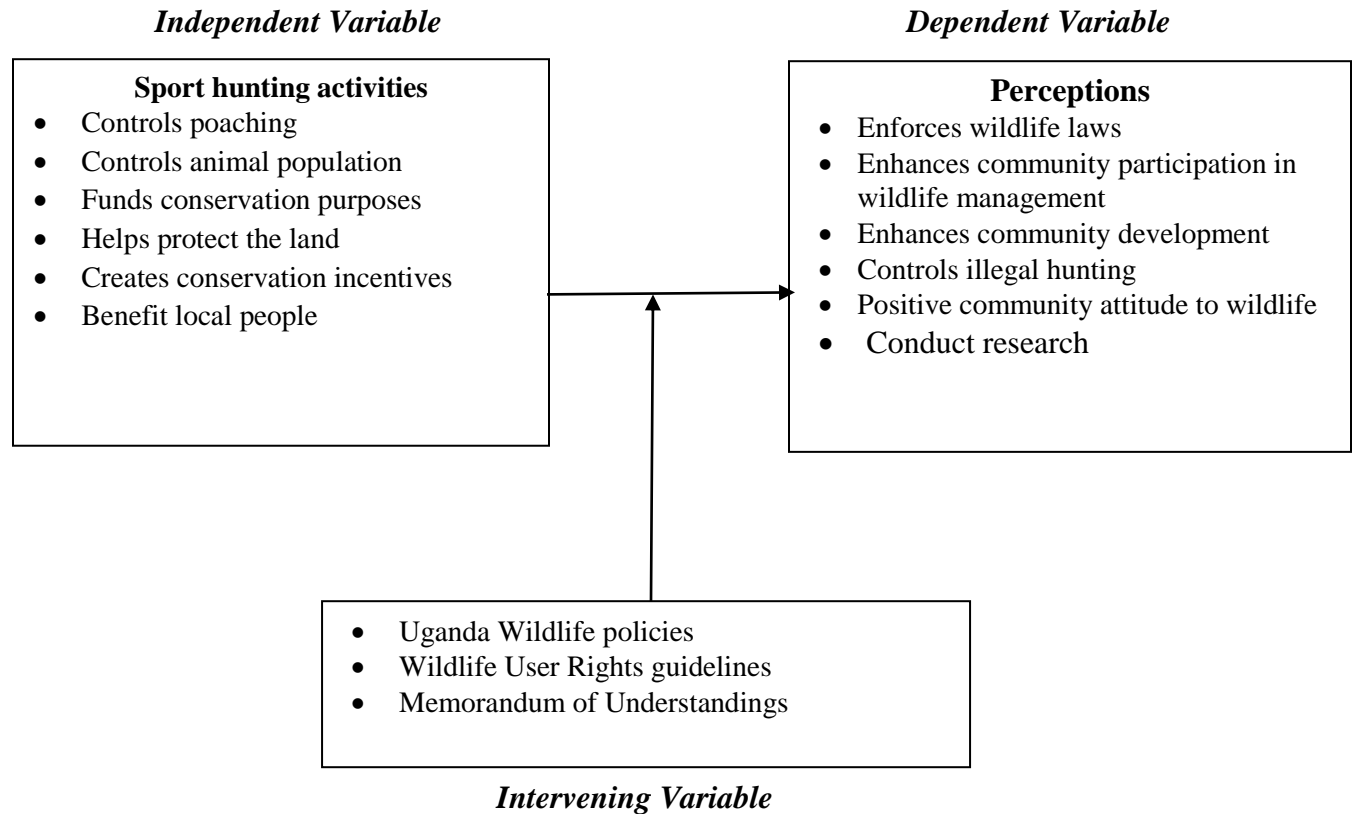


Figure 1: Implications of Sport Hunting on Wildlife Conservation in Uganda

The interaction of the factors that directs the investigation is illustrated by the conceptual framework above. Sport hunting is the independent variable of this study, and it is measured using a variety of items, such as controls poaching, controls animal population, funds conservation purposes, helps protect land, creates conservation incentives, benefit the local people, among others. In other words, these many goods served as a means of establishing the sport hunting tradition in the studied region. On the other hand, wild conservation strategies included enforcing wildlife laws, engaging in professional hunting, educating the public about wildlife management, promoting local development, stopping illegal hunting, and poaching, encouraging a supportive attitude toward wildlife in the community, and carrying out research.

1.1.4 Contextual Background

Rurambira and Nyakahita Parishes are in Nyakasharara Sub County in Kiruhura District, Western Uganda. The parishes are bordered by LMNP, which is surrounded by the Bahima (nomadic pastoralists and Bairu the subsistence farmers) and a few other tribes, such as the Bakiga and Baganda (Ochieng, 2019). Located in Kiruhura District. The district local government development plan 2015/2016-2019/2020 estimated the district population to be at 573,903 people in 2014, with an annual growth rate of 4.2%, with over 90% living in rural areas (Kiruhura District Local Government, 2015). The major economic activities of the residents include subsistence farming, pastoralism, fishing, and small-scale trade.

The Bahima (nomadic pastoralists and subsistence farmers) and a few other tribes, such as the Bakiga and Baganda, used to inhabit most of this area. By the early 1900s, the area was infested with rinderpest, killing large numbers of cattle, and forcing some nomads to migrate. According to Kisame *et al.* (2017), the total population estimate for each species in the national park and the ranches indicates that the dominant mammal species was Impala (22,335), followed by zebra (17,516), warthog (2,985), waterbuck (2,743), buffalo (1,733), eland (1,702), bushbuck (1,237), and topi (739) in decreasing species population order.

Kiruhura District is a farming district, and it forms the backbone of economic activity in the district. The animals raised include: Ankole cattle, exotic cattle breeds, hybrid cattle - mixtures of exotic and Ankole breeds, and African and goats. Milk and meat are important products produced in the district (UBOS, 2018).

Sport hunting was piloted by the Uganda Wildlife Authority (UWA) on private ranches outside LMNP in 2001 to address the long-standing history of human-wildlife conflicts in this area. Before it was gazetted, communities occupied the area largely living as pastoralists and cultivators (Ochieng, 2019). After gazettelement, these communities could remain in the area, but only after acquiring permits from the Game Department, implying that the communities had to seek permission from the government to occupy their ancestral land. However, although arbitrary, the new rules accommodated the interests of the community, and they were able to coexist with wildlife in the game reserve (UWA, 2015). The land outside the game reserve remained private ranches, allowing for grazing, cultivation, and wildlife to freely roam the area.

In 1960s, the government created Ankole-Masaka cattle ranches allocated to individuals which changed the situation when private land ownership around the game reserve was becoming more common, and communal lands were grabbed by the local elites, leaving out poorer community members, especially the pastoralists without adequate land. Worsening the situation for the pastoralists, another large part of community land was alienated by the government to establish government ranches, thereby pushing the pastoralists to the margins of these ranches. Therefore, many homeless and landless pastoralists resorted to grazing their cattle in Lake Mbuho National Park. The 1975 land reform decree caused further grabbing of the remaining communal land by the government, turning it into additional government ranches, pushing even more people into the game reserve and thereby intensifying the competition over resources (Wanyama *et al.*, 2017).

In 1983, in a move to tame this growing pressure on the game reserve, the government of Uganda declared the entire game reserve a national park (UWA, 2015). This land use change came with a new set of rules, terminating all previous forms of land tenure, traditional or otherwise. In this process, about 300 families living in the game reserve were evicted to the outskirts of the park. These people were neither consulted nor compensated for the loss of their homes and land, and no real attempt was made to explain the intention of the government. As a result, the community viewed the existence of the national park as the cause of their uncertainty, creating negative attitudes towards the park and all wildlife in the area.

When the National Resistance Movement government came to power in 1986, many of the communities were resettled as part of the Kanyaryeru Resettlement Scheme to end the land-use conflict, allowing them to occupy some areas of the park from which they had been previously evicted. Unexpectedly, this process even attracted new pastoralists from other areas (UWA, 2015), causing the government to realize that re-evicting people would not be the best option. Yet, a solution had to be found as wildlife conservation and people's livelihoods were at a crossroads. On orders of the Ugandan government, the Uganda National Parks, in conjunction with Rurambira and Nyakahita parishes, degazetted more than 50% of LMNP reserve reducing the park to its current size of about 260 km².

It is important to note that despite these major interventions, wild animals do not realize the changes in park boundaries and they naturally continue to spend most of the time outside the

park boundaries on the land that is now owned by communities, resulting in the re-ignition of human wildlife conflicts. Communities complained of their livestock having to compete with wildlife for pastures, water, and spreading disease and ticks on their private farms, as well as destroying their crops and killing their livestock or even some community members without receiving compensation from UWA or the government (UWA, 2015). In retaliation, communities resorted to the killing of wild animals sighted on their land, while visualizing a scenario of freeing their land from wildlife interference and constantly calling for the relocation of these animals back into the park and having the park boundaries fenced.

Consequently, Uganda National Parks (UNP) adopted the Community Conservation Policy (CCP) in 1989. On a local scale, the policy marked a shift from the old rules of fines and penalties to a more people-oriented approach to conservation (UWA, 2015). The CCP set out with the theme "protected areas, neighbors as partners" and aimed at creating a link between conservation, communities, and their livelihoods. Initially, this was implemented through the Park Management Advisory Committees (PMAC) set up by the Uganda National Parks in each parish, but later the PMAC was transformed into Community Protection Area Institutions (CPIs) to strengthen its performance (Basuta & Rwetsiba, 2017).

The USAID/Uganda Biodiversity for Resilience (B4R) Activity (2020-2025) provides technical support to communities, the government of Uganda, and the business sector to protect wildlife to maintain Uganda's economic development (USAID, 2019). In 1996, a new wildlife statute now wildlife Act 2019 was formulated which provides for implementing a pilot sport-hunting project in the parish surrounding LMNP. The intervention was first implemented in the three parishes of Rurambira, Nyakahita, and Rwakanombe, which had experienced many conflicts due to large herds of wildlife roaming the park (UWA, 2017). The overall aim of the sport hunting intervention around LMNP was to provide economic value to wildlife, which would act as an incentive for the community to manage and protect the wildlife on their land. Four objectives were set to achieve this aim. The main species hunted include the zebra. (*Equus burchelliboehmi*,) impala, (*Aepyceros melampus*,) buffalo... (*Syncerus caffer*) and *Tragelaphus (scriptus)*, as well as, to a lesser extent, *the hippopotamus amphibious*, *Panthera pardus*, and *Crocuta crocuta* (Ochieng *et al.*, 2015).

1.2 Statement of the Problem

One of the key factors that significantly contribute to 7.9% of the social, economic, and cultural advancement of Uganda as a whole, Western Uganda in general, and the Kiruhura area in particular is tourism (UBOS, 2018). The introduction of sport hunting in northern ranches near Lake Mburo National Park as a professional and ethical consideration of hunting and to promote the potential consequences of hunting for recreation and conservation purposes were innovations that began occurring in the area due to tourism. Several sport sport-hunting companies such as Game Trails Ltd., among others, were presented (GTL, 2018).

The government has adopted several strategies to protect, preserve, and conserve nature, including authentic, flora, and fauna, including the National Forestry Authority, Environment Protection Unit, Police, and UPDF, among others. These ministries and government agencies include the Ministry of Tourism, Trade, and Industry, UWA, and others (UWA, 2015). However, a lot of sport hunting was viewed by registered businesses as a substantial effort for wildlife conservation close to LMNP (Ministry of Tourism, Trade, and Industry, 2016).

Sport hunting, according to reports from the neighborhood, does not help to conserve wildlife. On the contrary, it encourages poaching, scares off other animals, and causes certain rare species in the LMNP to become extinct. This has had a bad impact on the tourism industry in the northern ranches. Local communities regard sport hunting adversely as a threat to animal conservation (UBOS, 2018).

The major concern is that whereas the concept of sport hunting has potential to generate economic benefit to landowners and can be good tool for human-wildlife conflict management, if not well regulated, it can be a serious threat to wildlife conservation.

Therefore, it is important to always monitor and assess the impact of animal hunting on wildlife and biodiversity conservation. It is on this basis that this study was carried out to draw lessons from implementation of sport hunting to guide managers to strengthen wildlife conservation and ensure that hunting is sustainable and beneficial to landowners and residents in the study area.

Considering this, the researcher became interested in the study to determine empirical findings for the activity of sport hunting and publicize the contributions of such businesses to the industry (UBOS, 2018).

1.3 Purpose of the Study

To assess the implications (positive and negative) of sport hunting in the two parishes of Rurambira and Nyakahita in Nyakasharara Sub County Kiruhura District.

1.3.1 Main Objective

To determine positive and negative contributions of sport hunting on wildlife conservation in Rurambira and Nyakahita parishes, Nyakasharara Sub County in Kiruhura District.

1.3.2 Objectives of the Study

1. To establish the socio-economic contributions of sport hunting to local communities in Rurambira and Nyakahita parishes, Nyakasharara Sub County in Kiruhura District.
2. To determine the perceptions of local communities towards sport hunting activities in Rurambira and Nyakahita parishes, Nyakasharara Sub County in Kiruhura District.
3. To determine the effect of sport hunting on wildlife conservation in Rurambira and Nyakahita parishes, Nyakasharara Sub County in Kiruhura District.

1.4 Research Questions

1. What are the socio-economic contributions of sport hunting to local communities in Rurambira and Nyakahita parishes, Kiruhura District?
2. What are the perceptions of local communities towards sport hunting activities in Rurambira and Nyakahita parishes, Kiruhura District?
3. What is the effect of sport hunting on wildlife conservation in Rurambira and Nyakahita parishes, Kiruhura District?

1.5 Significance of the Study

The study can help Government to formulate policies relating to sustainable wildlife resource utilization and conservation. It will highlight the need for systemic support for wildlife conservation and offer information regarding the effectiveness of wildlife utilization and community-based wildlife resource management programs.

The findings can be helpful to hunting company owners, managers, and employees in terms of how to handle sport hunting services not only to attract more tourists and ensure that it is done in a manner that is not harmful to wildlife conservation.

The research findings can be useful to Uganda Wildlife Authority (UWA) that is Lake Mburo National Park's management, as well as to Game Trails Ltd. and other hunting outfits, as gaps and areas of improvement will be highlighted and recommended interventions to fine tune the implementation of sport hunting will be provided.

The study provides researchers and other academics with invaluable information on the subject matter of sport hunting in Uganda.

1.6 Scope of the Study

1.6.1 Geographical Scope

The research was carried out in the Parishes of Rurambira and Nyakahita, Nyakashashara sub county situated in Kiruhura District in the Western Region of Uganda, about 240 kilometers (150 miles) west of Kampala Capital City, and about 30 kilometers (19 miles) East of Mbarara City (Googlecoordinates.org, 2022).

1.6.2 Content Scope

A study was conducted to understand the implications of sport hunting and wildlife conservation based on existing legal and policy framework covering wildlife, environment, and wetland sectors. The other policies are to address biodiversity and habitat loss. The study also probed the level of community understanding and awareness about sport hunting as well as their perception on wildlife conservation.

1.6.3 Time scope

The study covered a scope of from 2001 to 2022. This was considered because sport hunting began in 2001.

CHAPTER TWO

LITERATURE REVIEW

2.1 Socio-economic contributions of sport hunting to local communities

The study reveals that the homestay program has positive contributions to local communities but there are some ongoing issues to be addressed. The findings of this study show that community-based homestays can have many benefits for the community and its residents. As a result, the implications of these findings for policy-makers are discussed. Birendra (2020)'s findings inform the study by indicating that homestay, as a wildlife conservation approach, has benefits for the community policymakers. However, the specific benefits are not indicated, which leaves a gap. Besides, the current study deals with wildlife conservation at Lake Mburu National Park, which could have totally geological and management conditions as opposed to the literature.

Mamirkulova *et al.* (2020) analysed the interaction between the impact of tourism infrastructure development on the New Silk Road on local community perceptions of sustainable tourism development and their perception of quality of life. Both the direct and indirect impacts of road initiatives are It showed that tourism development had a significant and positive impact on the quality of life of residents. The results indicate that the New Silk Road Initiative for Tourism Infrastructure has a positive impact on the development of sustainable tourism opportunities, which in turn improves the quality of life of residents. Besides, findings from research studies can be helpful when designing promotional materials for sustainable tourism governance and resident welfare under the New Silk Road Infrastructure Projects. Mamirkulova *et al.*'s (2020) New York study inform the current study because it addresses concerns about the road infrastructure as a basic ground for tourism development, which is part of the Lake Mburu National Park tourism components. However, with the current study, the contributions of wildlife conservation that were targeted go beyond the road infrastructure to other benefits, as the findings indicate. Besides, the rating of findings was not done, thereby leaving a gap considering the rating of factors to find out the greatest versus the least important.

According to Abhishek *et al.* (2021) studied the role of tourism and hospitality in economic development. The study revealed that the tourism industry contributes significantly to the country's foreign exchange reserves and provides direct and indirect employment to large segments of the population. In addition, the support of nationality and strengthens the beauty of nature, the cultural heritage of nature, the cultural heritage of the state, national integration, and

the global brother process. For analytical purposes, it is important to distinguish between various types of tourist objectives. For example, tourism is often divided into two main categories. International and domestic tourism are defined by the territorial boundaries of the tourist's permanent residence. In Abhishek *et al.*'s (2021) articulate the role of tourism and hospitality towards economic development is articulated. However, while the hospitality function falls under the category of wildlife conservation, it cannot be used to explain the contributions of wildlife conservation in isolation. Further, methodologically, there are no statistical indicators of items to explain the findings. After all, the study is not conducted in the context of Lake Mbuo National Park, which may have non-similar objectives compared to the study area.

Aynalem *et al.* (2019) investigated the opportunity that community-based breeding programmes are a manageable solution for Ethiopian small ruminant genetic improvement. Findings indicate that Community-Based Breeding Programmes (CBBPs), with a core of attention on indigenous inventory and thinking about farmers' needs, views, choices, and active participation, from inception through to implementation, should be recognized as programs of choice. The Ethiopian authorities including non-public quarter need to make investments in strategic areas around CBBPs to make the program work for the poor and be sustainable in low-input systems. Much as Aynalem *et al.*'s (2019) findings concern community breeding programs and connect with community participation, they do not directly address wildlife conservation and not specifically in the context of Lake Mbuo National Park, where a gap of knowledge concerning the socio-economic contributions of wildlife utilisation.

Wondirad & Ewnetu (2019) studied network participation in tourism improvement as a device to foster sustainable land and resource use practices in a national park milieu. Based totally on study findings, the researchers conclude that communities' engagement in tourism development particularly is predicated on gatekeepers' nature and communities' monetary background, and argue that in a venue wherein economically vulnerable networks and manipulative gatekeepers exist, making sure network participation is greater hard that, in flip, negatively impacts the sustainable land and resource use practices that lead to irreversible devastation of ecologically sensitive habitats, including the Bale Mountains nationwide park. It is right to state that Wondirad & Ewnetu's (2019)'s study concerns conservation network connection. The study dwells much on the coordination between different parties headed by gatekeepers, but the current study was intended to provide a general assessment of the socio-economic contributions of sport

hunting the context of Lake Mburo National Park. The methodology in the current study comprised categories like park officials, tourism officials, and the local community, whose views were not automatically expected to indicate similarity as in the aforementioned literature.

In terms of creativity, Oyamada & Ktani (2019) investigated Consensus Building Gaming, which Promotes Creative Solutions to Wildlife Management Dilemmas, whereby they stated that natural wildlife management is becoming an extra difficult hassle for the duration of the world. One of the main difficulties it encounters is that residents tend to have ambivalent attitudes concerning whether or not the natural world should be eliminated or conserved. The findings showed that the gaming society functioned nicely, particularly for gamers with high pragmatic attitudes or those proper at generating thoughts, especially via speech with others. In the aforementioned study, Oyamada & Ktani (2019) also address creative solutions to wildlife management dilemmas. It is relevant to the study because sport hunting and wildlife management approach as well as obstacles seemingly connect. However, this time round, the focus was about the socio-economic contributions of sport hunting using a target population that involved the local community and park officials, which specifications are not mentioned anywhere in the aforesaid studies.

Nathalia *et al.* (2020) identified the predominant thoughts that humans exhibit toward flora and fauna species and the effects of such thoughts on animal population management. They revealed a controversy about these emotions. They noted that large predators such as wolves, coyotes, bears, big felids, and reptiles, such as snakes and geckos, typically promote anger, fear, and disgust. This is attributed to the perceptions, beliefs, and experiences that societies have traditionally constructed around them. First, Nathalia *et al.*'s (2020) study is appreciated as it directly explains wildlife conservation. However, the methodology used by Nathalia *et al.*, 2020 was one of reviewing available documents to obtain data for the study. On the contrary, this study is based on field. current study was conducted through a survey whereby the researcher visited the Lake Mburo National Park to investigate the subject matter right from the beneficiaries themselves. The two studies could not end up with similar results, thus the justification for the study.

By mapping out motivations, conservation practitioners and researchers Walters *et al.*, 2020 clarify the complexity of both individual wildlife product usage and the wildlife trade overall. However this underlines the importance of market research, which is lacking for many

demand reduction interventions (Greenfield & Verssimo 2018). The analysis provides a broad, globally applicable framework that will underpin the event of a typical language for wildlife trade research, making it easier for practitioners and researchers to spot relevant previous studies that might inform potential future interventions. It should be noted that the concern of Walters *et al.* (2020), the concern is how to minimize the use of wildlife products since it is detrimental to the survival of wild animals and birds. Besides, the study of population was largely conservation practitioners centred implying that the local community was not included. Walters *et al.* (2020), silent about the role of the local community in contributing to the study is not mentioned anywhere. In the event of all this, a study to establish the socio-economic contributions of wildlife conservation was required.

Mitrovich, *et al.*, (2020) indicate that successful conservation leads to the protection of species and niches and the preservation of natural geographies. The star types of conservation lands in California include reserves acquired and managed as part of Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs), public premises and monuments, state ecological reserves and wildlife areas, state premises, lands possessed by private realities (e.g., land trusts), lands with conservation easements, and mitigation lands. The relative significance of conservation and recreation values to the operation pretensions of these lands varies. For example, state and public premises generally emphasize recreational uses more than mitigation lands and ecological reserves.

Kwaslema (2018) assesses the natural world conservation success based upon nearby people's attitudes towards the natural world via semi-structured interviews with 240 respondents residing in five villages outside the southwestern Rungwa Game Reserve (RGR). He revealed that 9% of the respondents were conscious of flora and fauna conservation, and their cognizance varied with age, education, immigration status, and distance to the blanketed place (PA). Age, distance to the PA, education level, and sources of income were factors influencing the attitude of nearby humans towards the natural world in the location. Depredation and crop damage negatively influence people's attitudes towards problem animals. For high-quality conservation, the attitudes of neighborhood humans toward wildlife need to be considered. This conservation will be carried out via timely compensation schemes, the involvement of the nearby people in conservation planning, and the provision of education programs about sustainable conservation. According to Kwaslema (2018), the focus is mostly on the information concerning the

necessity of conserving wildlife. On the contrary, this study is designed to demonstrate the contributions of wildlife conservation to the Kwaslema (2018)'s literature is relevant to the study because it provides a hint on wildlife conservation but does not investigate the contributions. This gap justifies a lack of literature to explain the socioeconomic consequences of wildlife conservation at the Lake Mburo National Park.

2.2 Perceptions of local communities towards sport hunting activities

Sport hunting is said to be a breach of moral precept of the sanctity of life and can harm and even lead to the extinction of species. According to Fischer *et al.* (2015), hunting is only socially acceptable if it is done for sustenance. Otherwise, commercial hunting would be considered a kind of wildlife poaching and should be outlawed (Kisame *et al.*, 2017). Fischer *et al.* (2015) and Kisame *et al.* (2017) express concerns about negative public attitudes toward sport hunting in their literature. It is related to the study in that even among communities around Lake Mburo National Park, there are some with similar thinking. The gap in this literature is that it does not directly explain the reasons behind sport hunting activities, hence the need to find out the perception of local communities towards sport hunting using the case of Lake Mburo National Park.

Following the increased human population in Uganda, from 4.9 million people in 1948 to the recent 2018 population estimate of 44.3 million people (UBOS, 2018), human-wildlife conflicts have been on the rise, as Uganda's protected areas are surrounded by local communities who at times then attempt to increase food production encroach upon for arable land, settlement, grazing, and extractive industries. Human-wildlife conflicts are "conflicts which occur whenever an action by humans or wildlife hurts the other" (Nyhus, 2016). For instance, there are many forms of human-wildlife conflicts, for instance when as pests or nuisances, when people poach wildlife or when large predators and herbivores injure or kill people and livestock (Nyhus, 2016). In the case of Uganda, to reduce human-wildlife conflicts, the government has experimented with and implemented several (alternative) Community Based Conservation-related approaches, including the 20% Tourism Revenue Sharing Scheme.

According to Macdonald *et al.* (2017), sport hunting and wildlife conservation have both been part of human culture from the earliest times. As the World Bank Group (2019) notes, sport hunting does not always target problem animals. For instance, crop raiding by elephants in may Communal land, Zimbabwe, occurs largely in the wet season (November to April), but the most

of sport hunting takes place during the dry season (May to October), so elephants shot as trophies are not necessarily the animals involved in crop raiding, nor does the removal of these animals alleviate the problems of crop loss at other times of the year. In this observation, the World Bank Group (2019) identifies the nature or category of animals targeted for sport hunting and does nothing to explain the reasons for conducting sport hunting. This continues to show a lack of adequate knowledge about the second objective of the study, which seeks to establish the perception of local communities towards sport hunting activities.

According to Batavia (2018), sport hunting faces all the difficulties that other forms of enterprise-based conservation have. These include getting the incentive structures and resource ownership correct and ensuring effective and robust institutions for resource management and disbursement of benefits. Many countries also suffer from broader problems of corruption, poor governance, institutional failure, and social and economic upheaval, which reduce the likelihood of long-term success for any conservation or development activity. Sport hunting acts directly and indirectly on the ecology of the target species and other species. For example, where population management is thought desirable, hunters may take on the role of natural predators. Again, literature by Batavia (2018) hints at the difficulties involved in conducting sport hunting. This is related to the study because it talks about sports hunting, but the direct reasons for sports hunting are not articulated.

Wildlife populations management is often necessary when species have been reintroduced for conservation reasons, and revenue generated by sport hunting could potentially offset some of the losses caused by these species. This can in turn improve the public acceptance of such reintroductions. One of the most important potential benefits is habitat preservation, which acts to conserve both the target species and associated species. Any kind of hunting affects the demographic structure of the target species, and this can have knock-on effects, including evolutionary change. Sport hunting may be particularly detrimental in this regard because it is often highly selective, targeting specific individuals (Brandt, 2016). In these results, the idea behind sport hunting is the reduction of animal populations for better resources. However, the study was not conducted within the perimeter of Lake Mburo National Park; thus, this information could not automatically be considered valid enough to nullify the study.

In Africa, areas set aside for sport hunting and sustainable wildlife use greatly increase the amount of habitat available to wild species. Without revenue from hunting, political pressure

might be exerted to turn these areas over to domestic livestock production, which could irreversibly damage these ecosystems. Twenty percent (140,000km²) of Zambia's land area is made up of game management areas, whereas only half as much land is designated for national parks. The Zimbabwean rural district councils participating in the CAMPFIRE scheme set aside substantial areas for wildlife, estimated at 36,000km² (CAMPFIRE Association, 2016), whereas safari areas and private hunting land administered by National Parks make up another 50,000km². In South Africa, from the late 1990s to 2002, land was converted from cattle ranching to extensive game ranching, largely for hunting (van der Duim *et al.*, 2015). This Zimbabwean study directly concerns the expansion of areas for wildlife. It is more appropriate for studies that seek to establish adequate space for wildlife, so it cannot be used to halt research into the reasons for sport hunting activities.

Sport hunting can benefit conservation in several ways, with the acquisition and protection of habitat being a major benefit. In addition, the generation of substantial revenue is also possible, and there are cases where this revenue is used in the conservation of biodiversity. There are also many cases where it is less clear that hunting revenue is reinvested in conservation. Genetic, behavioral, and population impacts may need to be guarded against, although there are few clear-cut cases where these have had significant impacts on the viability of populations (Naidoo *et al.*, 2016). These benefits do matter and apply to the study, but they cannot be generalized to suit the context of Lake Mbuoro National Park and communities around it. There can be totally different opinions among the population.

On balance, it appears that the benefits of sport hunting can outweigh any disadvantages if responsibly managed and monitored. All conservation and resource use require managers that can monitor wildlife populations and ecosystems, set and enforce limits, and ensure that benefits are disbursed wisely so that conservation is competitive with alternative land uses. Such a regulatory infrastructure is expensive as compared with other non-consumptive uses of wildlife. Sport hunting has the potential to generate large profits, and sport hunters collectively demonstrate responsibility with passionate concern to see their quarry species conserved. This makes sport hunting a potentially attractive option for conservationists (Cove, 2018). These responses in the literature are not so clear concerning the reasons for the sport of hunting activity. Rather, a study conducted directly at Lake Mbuoro National Park was apt.

Sport trophy hunting is a selective force and must have consequences for demography and population genetics. Some hunters like to retain trophies, especially exceptionally fine, large, or old specimens. Species with sexually selected features that are easy to preserve (such as antlers in deer or tusks in elephants) may generate a particular demand among sport hunters. This can lead to genetic change within populations due to highly selective removal or sometimes the management of a population specifically to sport hunted animals. Brandt (2016) found no consistent impact of sport hunting on ungulate population sizes in southern Kiruhura. Intensive selective hunting pressure targeting adult males can cause a sudden population collapse. The disturbance caused by sport hunting can have an impact on animal behaviour. Hunting areas adjacent to the national park avoided areas where hunting occurred, although grizzly bears used hunting areas more frequently due to increased scavenging opportunities (Cruise, 2016).

2.3 Effect of Sport Hunting on Wildlife Conservation

According to Catherine (2019), sport hunting is a traditional practice that dates back hundreds of years. Each year in the U.S., hundreds of thousands of wild animals around the world are killed by sport hunters. The hunters' primary motivation for sport hunting is simply to obtain animal parts (heads, hides, claws, or even the whole animal) for display and bragging rights. The introduction of sport hunting around Rurambira and Nyakahita parishes benefits the local community in terms of employment, availability of money, the presence of food in the form of meat, and, above all, it creates incentives for the locals to tolerate wild animals without killing them. Catherine (2019) traces the origins of the concept "sport hunting". On the contrary, the current study seeks to connect sport hunting and wildlife conservation.

According to UWA (2016), the perception of local communities towards sport hunting activities in Uganda was to provide incentives to landowners to manage and protect wildlife on their land by giving wildlife as a resource an opportunity to demonstrate its economic value to landowners. Sport hunting also contributes to reduction in human-wildlife conflicts among the people living in Rurambira and Nyakahita parishes. The results by UWA (2016) present the circumstances surrounding Uganda as a whole. However, there are some factors which are specific to Lake Mburo National Park and require a specific study. The difference in mindset that characterized communities cannot be generalized to all conservation centers.

Similarly, Wanyama and Kisame (2015) state that sport hunting is implemented in wildlife conservation areas outside national parks to prevent the depletion of wildlife resources, and the usage of species and to regularize ecosystems. Sport hunting helps to regularize wildlife conservation efforts by, among other things, establishing harvest limits and methods, protecting wildlife habitat, educating the public, enforcing wildlife laws, researching wildlife ecology, and mitigating human-wildlife conflict. Collectively, these activities are termed "wildlife management." In this regard, in the case of Uganda, sport hunting companies like Game Trail Limited have helped in preventing wildlife conservation around Rurambira and Nyakahita parishes by setting hunting fees for different animal species. Wanyama's (2015) study is in line with the anticipations of the researcher in this study.

Several countries on the African continent promote sport hunting to avoid animals from developing bad habits. Sport hunting conserves wildlife species, habitats, and biodiversity. Sport hunting has an important role in African countries and it brings up a completely different set of issues. Some of those countries (Lindsey *et al.*, 2016). This author enhances knowledge concerning the value of sport hunting across Africa. However, the scope of the study was so large, thus, there was no tangible evidence to determine the role of sport hunting as noted by Lindsey *et al.* (2016).

Sport hunting around LMNP is intended to promote wildlife conservation. That is the reason UWA piloted it based on a collaborative arrangement starting with Wildlife Act Cap 200 of 2000 revised 2019 to grant a one-year pilot sport-hunting use right license to a private company—Game Trails (U) Ltd (GTL). The license involved GTL agreeing with UWA and the local community to reduce illegal hunting in the area and enable Uganda to retain its identity as a country blessed with rich biodiversity, especially wildlife (Game Trails Ltd Report, 2018). To ensure wider stakeholder involvement, the sport hunting project worked closely with the existing sub-county administration, local councils, and community protected area institutions (CPIs), whose roles were clearly spelt out in a memorandum of understanding.

According to UWA (2017), sport hunting is conducted around the northern ranches of LMNP to ensure better management of wildlife populations so that those species with fewer animals can have higher prices. This can be achieved through consultations with local communities as the key actors. Uganda, for example, allowed the introduction of sport hunting as it is in line with the

Wildlife Act (2000) revised 2019 with the view of managing wildlife. Several Sub-Saharan African countries allow sport hunting to form attractive environments where hunting can take place (Nthiga *et al.*, 2015). Equally, the studies here were conducted in 2015 and 2017.

Southwick (2015) indicates that in several countries where there are no strong central governments, hunting can protect against civil unrest, and poor food security, and avoid placing game populations in extreme jeopardy. Sport hunting saves the human population from exploiting game species and converts wildlife habitats into agricultural or other uses to meet their immediate needs including food security. Finding ways in which natural habitats and wildlife can contribute positively to the food security of local human residents (including ecotourism, the development of natural products, and carbon crediting systems) is essential to achieve a balance between the needs of human populations and their environments globally (Lamers *et al.*, 2015).

Sport hunting is furthermore conducted to address the challenge of hunting targeting notorious animal leaders. Individual animals that fail to return to the protected area may be spotted being hunted or killed to reduce the threat. Those killed in sport hunting generate revenue for the communities through the hunting fees, which in turn discourages poaching and contributes to conservation (UWA Report, 2018). Sport hunting offers employment opportunities as guides and wildlife trackers to the locals who would have opted for poaching. Revenue increases among the locals, it improves their standards of living, hence reducing chances of poaching (Ochieng, 2018).

According to Di (2017), sport hunting contributes to habitat protection, but the evidence is equivocal about whether it has improved the fortunes of the species that it claims to protect. However, the net benefit of habitat protection and its associated biodiversity might outweigh this doubt. Advocates of hunting often claim that hunters are effective custodians of wildlife habitats, providing support for anti-poaching teams and preventing poaching by operating in an area. Additionally, although hunters are often instrumental in protecting the species that they wish to hunt, this can sometimes be detrimental to habitats. Sport hunting, in these cases, exacerbates the conservation problem. However, it could also be part of the solution if it were structured to provide sustainable conservation revenues.

Sport hunting plays a role in contemporary wildlife conservation at LMNP and this has a direct effect on wildlife species preservation being hunted by a small, wealthy elite (Kisame, 2017).

However, in contemporary conservation, there are many more interest groups with claims on wildlife and its habitats. Sport hunting, against viable alternative activities from a conservation perspective, sustains the use of natural resources for the extirpation of a population, either through overhunting or through conversion of habitat to alternative uses (Child & Darimont, 2015).

In the Selous Game Reserve, where hunting is allowed on the periphery, 50% of hunting revenues are reinvested in conservation and anti-poaching (Estes, 2015). Like the United States, state wildlife agencies are partially funded through the sale of hunting licenses and permits. Following the U.S. ban on elephant trophy imports and increased restrictions on lion imports under the Endangered Species Act, more than 6 million acres of hunting blocks were surrendered back to the government due to decreased booking by American hunters and sport hunting having lost its economic viability as a land use in these areas. The surrender of these areas was accompanied by the dissolution of a 100-man counter-poaching unit that had been employed by a hunting outfitter (Pasanisi, 2018). Nevertheless, these studies are not current and they could not be used to stop a current study from going on.

2.6 Summary of Literature

In brief, the review reveals that sport hunting can be used as a conservation tool, though most arguments focus on ecological and management issues. The debate also stems from ethical concerns about killing animals for recreation and trophies (Nelson *et al.*, 2016). So, ethics plays a fundamental role in justifying conservation activities, so some scholars consider conservation as an ethically driven science. The conservation literature sparsely addresses ethical considerations of sport hunting. It appears that such disagreements are rooted in differential moral values, various geographical or ecological scales, and diverse perspectives. In the philosophical ethics of utilitarianism, sport hunting necessitates considering all the consequences of an action on all affected animals and humans.

Utilitarians argue that sport hunting highlights the economic benefits of sport hunting for conservation and local communities. They rest on the utilitarian rationale of providing benefits for animal (and human) populations by sacrificing some individual animals' lives. Well-regulated hunting frameworks and effective governance could minimize sport hunting's negative impacts on wildlife populations and bring benefits to local communities (Begg *et al.*, 2018). Virtue theorists assume that a flourishing human life involves the development and maintenance of

good relationships with other human beings. In contrast, studies on the motivations and intentions of sport hunters suggest that some vices are involved in it. Sport hunting appears to be ethically problematic under a virtue ethics framework. There seems not to be an association between sport hunting and sport hunters' virtues and human flourishing.

For instance, community-based breeding programmes (CBBPs) are a manageable solution for Ethiopian small ruminant genetic improvement. Findings from research studies are helpful when designing promotional materials for sustainable tourism governance and resident welfare under the New Silk Road Infrastructure Projects. Wondirad & Ewnetu (2019) studied network participation in tourism improvement as a device to foster sustainable land and resource use practices in a national park milieu. Large predators such as wolves, coyotes, bears, big felids, and reptiles, such as snakes and geckos, typically promote anger, fear, and disgust. This is probably due to the perceptions, beliefs, and experiences that societies have constructed around them.

Walters *et al.* (2020) examines motivations for the employment and consumption of wildlife products. By mapping out motivations, conservation practitioners and researchers clarify the complexity of both individual wildlife product usage and the wildlife trade overall. This underlines the importance of market research, which is lacking for many demand reduction interventions. The analysis provides a broad, globally applicable framework which will underpin the event of a typical language for wildlife trade research. The annual internet financial benefit associated with innovative use and value of unmet demand is estimated to be over \$2 million. Binod & Neelam (2020) characterize the monetary benefit of hunting probability ensuing from reintroduction. Most local communities' members inside TFCAs are nevertheless residing in abject poverty. The consciousness of flora and fauna conservation, and the cognizance of the public vary with age, education, immigration status, and distance to the blanketed place (PA). Depredation and crop damage negatively influence people's attitudes towards problem animals. Several intergovernmental policy instruments, including the World Heritage Convention of UNESCO and the Convention on Biological Diversity, have been proposed to boost integrated strategies to construct bridges between organic and cultural variety agendas.

Sport hunting breaches the moral precept of the sanctity of life and can harm and even lead to the extinction of species. The government has experimented with and implemented several (alternative) CBC-related approaches, including the 20% Tourism Revenue Sharing Scheme. In

Africa, areas set aside for sport hunting and sustainable wildlife use greatly increase the amount of habitat available to wild species. Any kind of hunting affects the demographic structure of the target species, and this can have knock-on effects, including evolutionary change. Sport hunting may be particularly detrimental in this regard because it is often highly selective, targeting only sport-minded individuals. Conservation and resource use require managers who can monitor wildlife populations and ecosystems, set, and enforce limits, and ensure benefits are disbursed wisely. Sport hunting can benefit conservation in several ways, with the acquisition and protection of habitat being a major benefit. Some hunters like to retain trophies, especially exceptionally fine, large, or old specimens. Intensive selective hunting pressure targeting adult males can cause a sudden population collapse.

The hunters' primary motivation for sport hunting is simply to obtain animal parts (heads, hides, claws, or even the whole animal) for display and for bragging rights. Sport hunting has an important role in African countries and it brings up a completely different set of issues. Sport hunting is conducted around the northern ranches of LMNP to ensure better management of wildlife populations so that those species with fewer animals can have higher prices. This can be achieved through consultations with local communities as the key actors. Uganda, for example, allowed the introduction of sport hunting as it is in line with the Wildlife Act (2000) amended 2019 with the view of managing wildlife. Sport hunting saves the human population from exploiting game species and converts wildlife habitats into agricultural or other uses to meet their immediate needs of lack of food security. Sport hunting is conducted to scare the problem animals back into the protected area, capturing and translocating them and sensitizing the communities by shooting to chase. Those killed in sport hunting generate revenue for the communities through the hunting fees, which in turn discourages poaching and contributes to conservation. Advocates of hunting often claim that hunters are effective custodians of wildlife habitats, providing support for anti-poaching teams and preventing poaching by operating in an area. Evidence is equivocal about whether it has improved the fortunes of the species that it claims to protect. Sport hunting can be part of the solution if it is well structured to provide conservation revenues while keeping deer numbers low. State wildlife agencies are partially funded through the sale of hunting licenses and permits. In the Selous Game Reserve, where hunting is allowed on the periphery, 50% of hunting revenues are reinvested in conservation and anti-poaching.

CHAPTER THREE: RESEARCH METHODOLOGY AND TOOLS

3.1 Research Design

A cross-sectional research design was used for the survey. Given the stratified structure of respondents, the strategy was chosen since it allowed for simultaneous interaction with many groups. This method is essential for obtaining data from a population sample so that findings may be generalized to the entire community to mitigate the effects of social change (Claybaugh, 2020). A survey is now the finest tool available for social scientists who are interested in obtaining unique data to characterize a group that is too large to examine in person. Furthermore, it gives the researcher a lot of analytical flexibility (Claybaugh, 2020).

Qualitative and quantitative methodologies were used in the study. The traits of the research variables were described using descriptive methodologies. In addition to uncovering facts, descriptive approaches frequently lead to the development of major knowledge concepts and the resolution of pressing issues. Data was collected from a predetermined number of respondents in a quantitative manner. Thus, intended that the study design aided in a just and correct interpretation of the findings.

3.2 Study Area

Kiruhura District lies in the cattle corridor in south western Uganda. It borders with Ibanda and Kamwenge in the North West, Mbarara District in the West, Isingiro District in the south, Rakai District in the South-East, Lyantonde District in the East, Kyenjojo and Sembabule Districts in the North and North East respectively. The district headquarters are located in Kiruhura Town Council.

3.2.1 Map showing Study Area (Nyakahita and Rurambira Parishes)

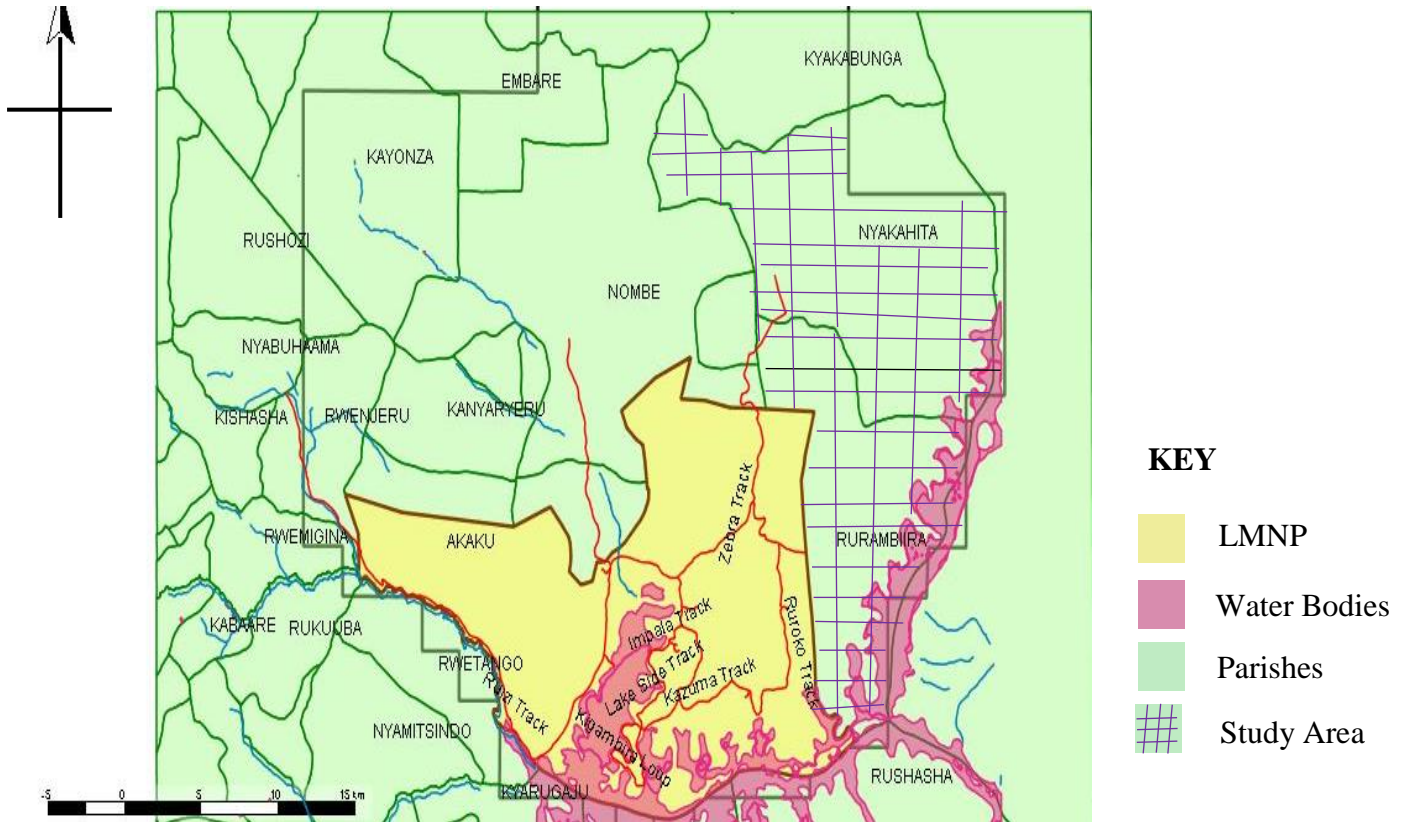


Figure 2: Map of Parishes around Lake Mbuo National Park

3.2.2 Climate

The District has a tropical wet and dry or savanna climate. Kiruhura typically receives about 357.72 millimeters (14.08 inches) of precipitation annually, temperature: Range (17 o C to 30 o C) annually and a bi-modal pattern rain season (August - November and March - May). Soil and rainfall patterns coupled with other edaphic factors greatly influences and determine the major agro economic and socio settings of the communities. The major Economic activities which sustain the livelihoods of the communities in the high rainfall zones include: livestock farming, maize, cassava, beans and banana growing,

3.2.3 Vegetation

The district has savannah woodland type of vegetation with a wide cover of thorny shrubs. The district has little water bodies (Lake Kacheera and Mbuo) with no natural forests. Generally,

soils are loamy with proportions of sand. It is mostly covered by grass savannah derived from forest wooded savannah with species of Acacia.

3.2.4 Topography

Kiruhura district is characterized by short and undulating hills with wide valleys. The topography within 2 miles of Kiruhura District contains very significant variations in elevation, with a maximum elevation change of 958 feet and an average elevation above sea level of 4,310 feet.

3.3 Study Population

The study population consisted of the different stakeholders, including sport hunting company (Game Trails Ltd., 2018), Kiruhura District Local Government Officials (KDLG), LMNP Officials (LMNP Top Management Report, 2018), and Local Community Members. They were sampled because of their knowledge and information about atheist life and their oversight of environmental conservation management and nature. In total, the population of the study was 1,000 people, and it was selected from the two sub-counties (UBOS Report, 2014; District Plan Report, 2020). According to the UBOS survey of 2014, it is estimated that Nyakasharara sub-county comprises 20,000 people. This implies that on average each parish with 2,000 people. As a researcher, sport hunting was conducted in the two parishes of Rurambira and Nyakahita and 286 people were selected. So, only 500 people were picked from each parish to represent community members' views.

3.4 Sampling

Based on the suggestions made by Amin (2005) and shown in Table 3.1, a sample size of 286 respondents was chosen because just a tiny percentage of the target population was needed.

Table 3. 1: Study Population and Sample Size

Designation	Target Population	Sample size	Sampling Technique
1. Sport hunting company officials	25	07	Purposive sampling
2. District local government officials	15	04	Purposive sampling
3. Lake Mburo National Parks officials	160	46	Purposive sampling
4. Local community members	800	229	Census sampling
Total	1,000	286	

Source: (LMNP Sport Hunting Report 2020; Census Report 2014; Yamane, 1967)

The sample was calculated using Yamane's (1967) formula: $n = \frac{N}{1+N(e)^2}$, where n = sample size, N = total population targeted, and e = percentage of error in sample selection (5% or 0.05), and 1 represents any likely avoided element that would have been included.

$$\text{Formula; } n = \frac{N}{1+N(e)^2}$$

Where n= sample size

N = total population targeted

e = percentage of error made in selecting sample (5% or 0.05)

1 = is representative of any likely avoided element that would have been included

$$n = \frac{1000}{1 + 1000(0.05)^2}$$

$$n = \frac{1000}{1 + 1000(0.0025)}$$

$$n = \frac{1000}{1 + 2.5}$$

$$n = \frac{1000}{3.5}$$

n= 286

Thus, the sample size of the study was 286 respondents.

3.5.2 Interview Guide

This technique for gathering data involves approaching the responder directly, over the phone, or orally. Face-to-face meetings between the interviewer and the respondents were a part of the approach. The study's topic was addressed in the questions posed to respondents. Face-to-face interviews were helpful in this study because they gave the researcher important and accurate first-hand data on the phenomenon under investigation. Because it was verbal rather than a questionnaire, which requires a lot of paper to print, the approach also allowed the researcher to reduce the expense of printing research equipment.

3.6 Validity and Reliability Tests

Reliability and validity of the research instruments were measured as follows;

3.6.1 Validity of Instruments

Validity is the degree to which the study's measurement tools capture the problems they are designed to. To guarantee the authenticity of the data, the instruments were started in the design stage, and a set of questions were created to gather some data, but with questions phrased differently. Expert opinions, including those of the researcher's superiors, were solicited. The results of the pilot study served as the foundation for updating the research tools (questionnaire and interview guide) as well as clarifying some of the inquiries. The findings allowed the researcher to rephrase and clarify unclear questions and eliminate all the filler.

3.6.2 Reliability of Instruments

The idea of "reliability" is described as the degree to which the measuring device yields consistent results when the same groups of people are repeatedly subjected to the same circumstances. To guarantee the validity and consistency of the data to be gathered, the questionnaire was pre-tested in the research region. To assess the instrument's dependability, the researcher employed Cronbach's alpha coefficients. According to Cronbach, a test's Cronbach Alpha must be at least 0.70 to be considered trustworthy. This verified the accuracy of the data produced by the instruments used to determine the legitimacy of the contract's content as well as its validity. According to Cronbach Alpha's reliability scale, any score less than 0.60 indicates unacceptably low reliability; 0.60-0.69 indicates marginally reliable results; 0.70-0.79 indicates reliable results; 0.80-0.90 indicates highly reliable results; and > 0.90 indicates very highly reliable results (Martyn & Wilson, 2019). Table 3.2 indicates the findings of the study.

Table 3. 2: Reliability Scores for the Study Results

No.	Variable	Scale	No of items	Cronbach score	Interpretation
	Wildlife conservation	5-point Linkert	9	0.858	Highly reliable
	Socio-economic factors	5-point Linkert	9	0.797	Reliable
	Sport Hunting	5-point Linkert	6	0.781	Reliable

Source: Primary Data

3.7 Data Processing

During data processing, the researcher carried out scrutiny of the data captured, edited, coded, and entered the computer using SPSS (Statistics Package for Social Science) software and presented it in frequency tables and charts. Quantitative data was analyzed descriptively. Responses from the three instruments were coded, stored, and analyzed both quantitatively and qualitatively using a computerized system. The results were presented in statistics in the form of frequency distribution cross-tabulation and percentages.

3.8 Data Analysis

Content analysis was the main technique for data analysis. The data was classified, tallied, and totaled according to the objectives of the study. Quantitative data was tabulated and converted into frequencies and percentages to fit the objectives of the study. Qualitative data was subjected to content analysis in which the main themes were identified, analyzed, and presented in relation to the objective of the study. The analysis of data collected was done in stages. The first stage involved computation and presentation of descriptive statistics using tables, mean and standard deviation. The relationships between variables was conducted using Pearson Correlation model while to determine the effect of sport hunting, socio-economic factors on wildlife conservation and a simple linear regression was performed.

3.8.1 The approach for interpreting mean scores

This was as follows

1.00 to 1.80 is considered *strongly disagree*.

1.81 to 2.60 is considered *Disagree*

2.61 to 3.40 denotes *Neutral* or *uncertain*.

3.41 to 4.20 stands for *Agree*.

4.21 to 5.00 for *Strongly Agree*

3.8.2 Interpretation scale for correlations

Table 3. 3 Reliability Scores for the Study Results

Correlation coefficient	Correlation strength	Correlation type
-.7 to -1	Very strong	Negative
-.5 to -.7	Strong	Negative
-.3 to -.5	Moderate	Negative
0 to -.3	Weak	Negative
0	None	Zero
0 to .3	Weak	Positive
.3 to .5	Moderate	Positive
.5 to .7	Strong	Positive
.7 to 1	Very strong	Positive

Source: Parith (2022)

3.9 Limitations

This study was limited by time to carry out the research because of busy schedules and fear of continued lock down because of COVID-19 pandemic. To overcome this, the researcher had to delegate some duties to subordinates and dedicate every free time to the study.

Some respondents feared revealing information thinking the researcher is a spy. This was counteracted by telling them the purpose of the study and explaining how confidential the information would be treated.

3.10 Ethical Considerations

After approval of the research topic by the University Supervisor and the development of the research tools, the researcher had to obtain a research permit from the school of science (SCOS) of Nkumba University authorizing the conducting of the research. This letter was presented to the Deputy Director Human Resource of Uganda Wildlife Authority that introduced the researcher to the Chief Warden, Lake Mburo National Park. The researcher explained the need for data collection and the purpose of carrying out the research to ensure that all subjects

participate voluntarily by obtaining their consent. Full explanation was made to remove any suspicion among the subjects.

Informed consent, and privacy were the main ethical issues addressed in this study. Confidentiality was considered to protect the privacy of the respondents or participants. Respondents/participants were also assured that the study was solely for academic purposes, and that the self-administered questionnaires were purposefully anonymous.

As a result, participants/respondents were given the option of giving their informed consent. The participants chose to participate in the study voluntarily, and they have the option to withdraw at any time. The respondents' anonymity was preserved by not asking them to write their names on the questionnaires. There is no known risk of physical or psychological harm to participants in this study.

Furthermore, all researchers and scholars whose work was cited in this study were quoted, acknowledged, and appropriately cited. The researcher ensured that findings are reported precisely to avoid fabrication of information through the presentation of fraudulent results.

At this level, the researcher acknowledged the importance of knowledge in the pursuit of truth. Individual identities were withheld to protect against traceability and flexibility, and a lot of effort was put into ensuring participants' or respondents' rights to privacy.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter provides and explains findings of the study. This chapter contains findings about the demographic characteristics of respondents as well as findings in line with the study's objectives.

Table 4. 1: Response Rate of respondents

Item	Frequency	Percent	Cumulative Percent
Sport hunting company officials	07	2.6	2.6
District local government officials	04	1.4	4.0
Lake Mbuoro National Parks officials	46	16.0	20.0
Local community members	229	80.0	100.0
Total	286	100.0	

Source: Primary Data 2022

The respondent's response to the set questionnaire and interviews study were sought and are shown in Table 4.1. The fact that the researcher himself administered the questionnaire and that the exercise was given adequate time for the researcher to follow up with individuals who could not be located the first time allowed for a 100% response rate was achieved. This was done to guarantee that all the intended respondents would be used to produce reliable and accurate data.

4.1 Demographic characteristics of the respondents

The results on demographic parameters or characteristics (sex, age group, marital status, education level, work experience and others of the respondents are shown in Table 4.2.

Table 4. 2: Demographic Characteristics of Respondents

CATEGORY	VARIABLE	N	(%)
1. SEX OF RESPONDENTS	Male	189	66.08
	Female	97	33.92
	Total	286	100
2. AGE	21 – 30 years	17	6
	31 - 40 years	23	8
	41 – 50 years	172	60.1
	>50 years	74	25.9
4. MARITAL STATUS	Married	98	34
	Single	114	40
	Cohabiting	74	26
5. EDUCATION LEVEL	None	29	10
	Primary	43	15
	Secondary	74	26
	Tertiary	140	49
6. EXPERIENCE (YRS)	Below 2yrs	46	16
	2 – 4yrs	92	32
	>4yrs	148	52
	Total	286	100

Source: Primary Data 2022

Sex was one of the variables the researcher examined. This was done to check for gender parity in the sample that was selected between the two parishes of Nyakahita and Rurambira. As seen in Table 4.2, males made up 66.08% of the gender split, while females made up just 33.92%. This implies that in the Rurambira and Nyakahita parishes in the Kiruhura District, men, who account for a higher percentage and according to views sought from respondents about sport

hunting, take out most of the recreational hunting and animal conservation efforts. Males are left to play a bigger role in recreational hunting and wildlife conservation because most women are stay-at-home spouses and cannot stay in the bushes.

The study also sought to assess the age group of the respondents were, and the results are reported in Table 4.2. According to the results, 60% of the respondents were between the ages of 41 and 50. This demonstrates that most of the sport hunting and animal conservation efforts are carried out by senior citizens. The next largest group of respondents, 26% of those 51 years of age and older, was followed by the group with the fewest respondents, 14%, who were in the Rurambira and Nyakahita parishes according to views from respondents.

Table 4.2 reveals that most respondents (40%) were single, followed by those who were married (34%), and that at least 26% were cohabiting. Marital status was also taken into consideration as one of the factors studied. According to this research, single respondents were more active in sport hunting and wildlife conservation because they felt a need to do so in the parishes of Rurambira and Nyakahita, where they could have seen a necessity to engage in sport hunting to support their families according to views from respondents.

The level of education was a variable that was examined in this research. In the Rurambira and Nyakahita parishes of the Kiruhura District, it was intended to ascertain the level of education that was most prevalent in the hunting and animal conservation activities. The results of Table 4.2 show that most respondents (28%) had a diploma, followed by those with a secondary education (26%), and 10% had no formal education. However, the finding shows that in Rurambira and Nyakahita parishes, Kiruhura District, sports hunting and wildlife conservation are practiced by all groups, independent of education level according to views from respondents.

Table 4.2 shows that 52% of the association members from the local community have expertise dealing with hunters who participated in the sport for at least four years. This demonstrates that sport hunting is well understood in the LMNP area. The responders who had participated in sports hunting for more than two years were 32% and 16%, respectively according to views from respondents.

4.3 Socio-economic contributions of sport hunting towards local communities

The first objective is about the socio-economic contributions of sport hunting on local communities in the study area. The results are shown in Table 4.3.

Table 4. 3 Socio-economic contributions of sport hunting towards local communities

Descriptive Statistics	N	Mean	Std. Deviation
1. Promotes infrastructure development	286	1.95	1.29
2. Source of foreign exchange	286	2.40	1.48
3. Promotes life skills	286	2.55	1.33
4. Provides market for local products and increases incomes	286	2.85	1.33
5. Leisure and entertainment	286	2.85	1.54
6. Source of employment	286	2.50	1.41
7. Improve on welfare of people	286	2.15	0.97
8. Promotes cultural diversity	286	2.55	1.21
9. Whistle blowing / security	286	2.95	1.29
Average	286	2.53	1.32

Source: Primary Data 2022

Results for the statement that wildlife protection encourages infrastructure development were rated as "disagree" as shown by (Mean = 1.95; SD = 1.29) in Table 4.3.1. This indicates that in the study area, the attempts to inform and the local population about the importance of wildlife conservation were minimal. It is reasonable to assume that the road network, medical facilities, and lodging facilities are built or maintained to provide tourist-friendly amenities.

From interviews with officials at the Kiruhura District Local Government as well as those from Lake Mburo National Park, there is evidence to indicate that though local communities viewed infrastructural development because of wildlife conservation, they just lacked some information since they were not directly working with the National Park. One of the officials indicated;

Surely, because wildlife conservation comes with financial benefits from tourists, the government organizes and sets aside funds that support the development of the road network and hotels used by tourists from within and outside the country or from the neighboring communities. It is just unfortunate that the locals have not taken initiatives to

participate in the tourism activities of the Lake Mburo National Park, but rather the benefits just go to those outside the local community.

First, as stated by the officer, the local population is unaware of the importance of wildlife protection to the growth of its own region. Furthermore, they were not even engaged in tourism-related activities, which may explain why so many comments were marked as "Disagree." But according to data from authorities, protecting wildlife leads to the growth of physical infrastructure. More evidence is included in the figures below.

A mean grade of "Disagree" was given to the idea that wildlife protection is a source of foreign exchange, as shown by the data in Table 4.3.1 (Mean = 2.40; SD = 1.48). This is a blatant indication that many of the respondents may not even be aware of what is happening in the Rurambira and Nyakahita parishes in Kiruhura District with reference to the wildlife sector. These comments don't show a feeling of ownership for the undertaking. Therefore, it is crucial for studies like these to improve information symmetry so that the public begins to see animal protection favorably. The main takeaway from key informant replies, nevertheless, was that it increased the likelihood of obtaining foreign exchange. Evidence from interviews reveals that foreign exchange is a reality arising from wildlife conservation in the Lake Mburo National Park. Responding to this issue of concern, Lake Mburo national Park official revealed;

We cannot forget the fact that the existence of this park on this side of Kiruhura District has attracted a million tourists, specifically from outside Uganda, coming in each month. We can hardly go a month without hosting a tourist from the United Kingdom, the United States of America, South Africa, or many other countries. When charging these tourists, we charge them in dollars or currencies familiar to them, and if converted, we end up getting quite a large amount, which helps in increasing salaries and maintaining the park.

The quote serves as a reminder that the local population lacks understanding and consistently expresses opinions that are in opposition to the alleged benefits of animal protection for nearby settlements. It demonstrates how little the government and park staff have done to involve the local population in the creation of Lake Mburo National Park. On the other hand, it appears that the community has not taken advantage of the opportunities to benefit directly or indirectly from the conservation of species at Lake Mburo National Park and neighbouring ranches.

Additionally, data in Table 4.3.1 show that the inkling that wildlife conservation fosters life skills obtained a grade of "Disagree," which was supported by (Mean = 2.55; SD = 1.33). However, the standard deviation is somewhat higher than the average rating, suggesting that this aspect was accepted to a significant extent. Thus, these findings imply that even if many respondents in the study area disagreed, a sizable proportion of them are aware that wildlife protection fosters community innovation and participation in arts, dance, and theatre, among other life skills. However, considering views of the Lake Mbuho National Park Officials together with views from the Kiruhura District Local Government official revealed that wildlife conservation at the Lake Mbuho National Park promotes life skills in various ways.

This park's existence allows us to welcome many students from all over the globe. Students may make connections between theory and reality by visiting locations like these. Many students enroll in university wildlife and tourism programs because they are interested in seeing and learning about how these creatures are managed, as well as because they are eager to learn how humans directly profit from them.

In addition to the quote above, the outcomes of the interviews revealed that some parents bring their kids to see how to properly care for wild animals. According to park officials, parents have been known to expose their young children to animals to determine what type of vocation their offspring are suitable for. Therefore, the local community views which suggest that wildlife conservation rarely leads to development of life skills are a little misleading.

The results on the idea that the market for area goods expands the earnings of local people in the study area who partake in associated wildlife conservation activities increases however, were scored as "Neutral" as supported by (Mean = 2.85; SD = 1.33). According to the study's objective, local people participate in handicraft activities and expand their inventiveness to the point where tourists purchase goods such as drums, xylophones, winnowers, ropes and baskets manufactured from local raw materials. These were being sold drastically altering people's habits and raising money for animal welfare. Even results from the interviews indicate that indeed wildlife conservation had promoted the local art industry. All Park officials hinted on the notion that during tourism seasons, local community members can sell crafts and other locally made equipment to the tourists. In the views of one of the park officials, it was quoted;

Wildlife conservation in this place largely benefits the local community in terms of enabling them to sell their locally made equipment. These include winnowers, baskets from local materials, table cloths made locally, chairs and tables made locally, locally made jewelry, and huts, among other materials. Though not frequent, the income from these sales can sustain the local community as they wait for another round of sales.

It is incorrect to imply that all people of the local population do not benefit from wildlife protection in Lake Mburo National Park based on the quotation. Instead, it shows that the few locals who recognize and take advantage of the existing opportunity to benefit from the resources provided by Kiruhura District's Lake Mburo National Park.

The assertion that wildlife conservation benefits local populations in the Rurambira and Nyakahita parishes in the Kiruhura District by providing leisure and entertainment was graded "Neutral" after analyzing the results regarding the socio-economic contributions. The results' "Neutral" evaluation was supported by their (Mean = 2.85; SD = 1.54). Unlike the preceding item, the standard deviation is significantly higher than the average, showing that even many respondents who recognized this item were surrounded by bottlenecks. Therefore, even though a sizable portion of respondents agreed that wildlife protection promotes leisure and pleasure, many members of the local community did not directly benefit from this opportunity. In relation to these findings, an official from the Lake Mburo National Park raised a concern:

Although there are many people that profit from wildlife protection in this area, many of them are from outside of Uganda or the Kiruhura District. Even more astounding is the lack of interest shown by residents of nearby regions in visiting the Kiruhura National Park. This gives rise to the perception that this park has benefited visitors considerably more than it has the locals.

The results confirm that wildlife protection being a key source of money to aid local communities was reported with a grade of "Disagree" and (Mean = 2.50; SD = 1.41). This indicates that employment opportunities for local people in the field of animal conservation were inadequate. A similar percentage of "disagree" was given to the claim that protecting wildlife increases human welfare, showing that there was no clear advantage for the neighboring communities. Furthermore, this interpretation has a very low standard deviation, suggesting that

even in the absence of significant difficulties, animal conservation efforts in the study area cannot ensure the welfare of the local populations. According to findings from Lake Mburo National Park officials, it may be true that the local population had not adequately benefited by the preservation of the area's wildlife, but few residents who take the initiative and engage in the sale of goods made from local resources make money which they use to support their families. According to one of the respondents;

As you can see, practically everyone conducting business in this park is a member of the neighborhood, suggesting that residents are the very first to gain from this industry. According to the official, roughly 98% of visitors from outside places are just interested in tourism, and locals manage most of the local business. The public already benefits from this.

Results in Table 4.4 show that the assumption that wildlife conservation supports cultural variety earned a grade of "disagree," which was justified by (Mean = 2.50; SD = 1.41). This study development relates to the benefits of wildlife conservation to local people. This implies that, to some extent, residents of the study area do not engage in cultural affairs to gain from wildlife protection. The awareness that wildlife conservation improves security or whistle blowing, on the other hand, obtained a grade of "Neutral," which indicates that the satisfaction residents attach to having security was made possible due of partaking in wildlife conservation.

Table 4. 4: Perceptions of local communities towards sport hunting

Perception	Min	Max	Mean	SD	N	SD	D	N	A	SA
SP controls poaching	1.00	5.00	2.29	1.51	286	49.7	10.8	13.3	12.9	13.3
SP controls the animal population	1.00	5.00	2.41	1.50	286	44.8	11.5	14.7	15.7	13.3
SP funds conservation	1.00	5.00	2.39	1.41	286	38.8	20.3	14.7	15	11.2
SP helps protect the land	1.00	5.00	2.42	1.45	286	36.7	26.2	8.7	14.7	13.6
SP conservation incentives	1.00	5.00	2.67	1.57	286	37.1	14.3	12.6	16.8	19.2
Benefits local people	1.00	5.00	2.66	1.61	286	41.6	7.3	14.3	16.8	19.9

Source: Primary Data 2022

Table 4.4 assesses perceptions of sport hunting among respondents from Rurambira and Nyakahita parishes around Lake Mburo National Park. The data show that sport hunting's ability to prevent poaching is rated as "disagree," or (Mean = 2.29; SD = 1.51). The fact that many

people disagree that sport hunting is a better activity than poaching suggests that the local populations in the Rurambira and Nyakahita parishes in the Kiruhura District do not have enough knowledge about the purpose or justification for it. Fortunately, the goal of this study was to raise awareness of the fact that sport hunting is never bad and is always beneficial to the welfare of wildlife that is being conserved.

Interactions with sport hunters reveal that a relatively limited number of animals, mostly older males past reproductive age, are taken when well-regulated, sustainable hunting is performed, according to findings from interviews with Lake Mbuho National Park authorities and Kiruhura District officials. Healthy animal populations are not adversely affected by this, and it may even assist numbers to increase. The evidence suggests that sport hunting can deter poaching. The fact that there is widespread disagreement about whether sport hunting is preferable to poaching implies that the local populace in the Kiruhura District's Rurambira and Nyakahita parishes are unaware of its benefits or justifications. Thankfully, the study's objective was to increase public understanding of the fact that sport hunting is always for good for the well-being of wildlife that is being protected. Fischer *et al.* (2015) report that hunting is only socially acceptable if it is done for food. Otherwise, it would be illegal to engage in commercial hunting, which is a kind of wildlife poaching (Kisame *et al.*, 2017).

The notion that sport hunting controls the animal population received a rating of “disagree” (Mean = 2.41; SD = 1.50). In other words, there also existed a knowledge gap because the majority of the local community members were not aware that sport hunting was an act geared towards reducing the number of animals and maintaining the required numbers that would easily receive enough feeds and medical attention. However, results from interviews revealed that sport hunters are also urged to record the number of animals they killed during a season and the location of the kill. This enables conservation biologists to assess long-term changes in the number and distribution of animals. The findings are consistent with those of Naidoo *et al.* (2016) and show that sport hunting has several conservation-related advantages, with habitat acquisition and protection standing out as key ones. It is also feasible to generate a sizable amount of income, and in certain circumstances, this income is put toward biodiversity preservation. There are also numerous instances when it is less obvious whether hunting profits are used to further conservation. Although there are few definite instances when genetic,

behavioral, or demographic influences have had a substantial impact on the survivability of populations, it may be necessary to take precautions against them.

Further, the study's findings show that there are still knowledge gaps in the local communities, particularly when it comes to their opinions on whether sport hunting is done to secure funds. Their responses were rated as "disagree," as shown by (Mean = 2.39; SD = 1.41) and the study's findings. Sport hunting has many good effects, including the element of gaining money, despite how it may first look and be regarded. The reasoning behind this is that keeping a reasonable number of animals at a zoo ensures that they receive proper care and protection, which is necessary to draw tourists and, in turn, generate revenue for the continued development of the wildlife industry. Brandt (2016) found no consistent impact of sport hunting on ungulate population sizes in southern Kiruhura. Intensive selective hunting pressure targeting adult males can cause a sudden population collapse. The disturbance caused by sport hunting can have an impact on movement behaviour. Hunting areas adjacent to the national park avoided areas where hunting occurred, although grizzly bears used hunting areas more frequently due to increased scavenging opportunities.

There was a disagreement on the perception regarding whether sport hunting helps to protect the land. The results as per Table 4 received a rating of "Disagree" as reflected in (Mean = 2.42; SD = 1.45). By implication, it is widely unacceptable that sport hunting is conducted for benefits related to land conservation. Additionally, the results showed that sport hunting obtained a grade of "Neutral" in terms of encouraging conservation, as indicated by (Mean = 2.67; SD = 1.57), suggesting that there are still more information gaps about the justification for sport hunting. However, considering the mean score, which is above average, it is suggestive of the fact that at least some individuals believe that sport hunting generates conservation incentives, though they were unsure. The idea that sport hunting improves the local community likewise obtained a grade of "Neutral" and was represented by (Mean = 2.66; SD = 1.61).

Overall, the notion that sport hunting controls animal populations received a rating of "disagree" from respondents in the Rurambira and Nyakahita parishes in the Kiruhura District, Kiruhura. This suggests that many people do not have enough knowledge about the purpose or justification for sport hunting. Studies such as this are important in creating awareness about the perceptions

of SP to strengthen wildlife conservation. Results showed that sport hunting obtained a grade of "Neutral" in terms of encouraging conservation, suggesting that there are still more information gaps about the justification for sport hunting. However, considering the mean score, it is suggestive that at least some individuals believe that sport hunting generates conservation incentives, though they are unsure. Respondents are not only certain but also believe that sport hunting is advantageous since it benefits the local population in terms of income especially when the wild animals are sport-hunted on their land.

4.5 Effect of Sport Hunting on wildlife conservation in the Rurambira and Nyakahita parishes of the Kiruhura District

The very first objective contained the interest to investigate into the effect of sport hunting on wildlife conservation in the Rurambira and Nyakahita parishes of the Kiruhura District. To obtain results for this, a procedural approach was followed; relationship between sport hunting and wildlife conservation, and then the regression analysis that reveals the effect of sport hunting on wildlife conservation.

4.5.1 Relationship between Sport Hunting and Wildlife conservation

The results on Pearson product moment correlation analysis and probability value (p-value) or 99% confidence interval as well as co linearity analysis which indicates relationships among the different aspects of sport hunting and each of the two categories of wildlife conservation, (the positive aspects and negative aspects of wildlife conservation) are indicated in Table 4.6 based on interpretation scale on Table 4.5.

Table 4. 5: Interpretation Scale

Correlation coefficient	Correlation strength	Correlation type
-.7 to -1	Very strong	Negative
-.5 to -.7	Strong	Negative
-.3 to -.5	Moderate	Negative
0 to -.3	Weak	Negative
0	None	Zero
0 to .3	Weak	Positive
.3 to .5	Moderate	Positive
.5 to .7	Strong	Positive
.7 to 1	Very strong	Positive

Table 4. 6: Correlation Between Sport Hunting and wildlife Conservation

		Wildlife conservation
Controls poaching	Pearson Correlation	.271**
	Sig. (2-tailed)	.000
	N	286
Controls animal population	Pearson Correlation	.151*
	Sig. (2-tailed)	.010
	N	286
Funds conservation purposes	Pearson Correlation	.301**
	Sig. (2-tailed)	.000
	N	286
Helps protect the land	Pearson Correlation	.257**
	Sig. (2-tailed)	.000
	N	286
Creates conservation incentives	Pearson Correlation	.199**
	Sig. (2-tailed)	.001
	N	286
Benefit local people	Pearson Correlation	.156**
	Sig. (2-tailed)	.008
	N	286
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		

These findings in Table 4.6 are related to the works of some authors in the literature review such as Naidoo *et al.*, 2016) who pointed out that sport hunting can benefit conservation in several ways, with the acquisition and protection of habitat being a major benefit generation of substantial revenue used in the conservation of biodiversity and this is important where in some instances less revenue would be available to assist in conservation work and hence sport hunting can be used to close this gap.

Because of the decline in poaching, fewer wild animals may be used to lure visitors to Uganda from both within and beyond the country. Inferentially, sport hunting improved wildlife conservation in the study area by 27.1%, which may be attributed to the practice's goal of reducing poaching. The responses from the local communities, which demonstrate a lack of comprehension of justification for sport hunting, were to blame for the low explanation percentage. Many of the respondents tended to view of sport hunting" negatively.

In the study area, there was a statistically significant positive correlation between the idea that sport hunting decreases the number of animals and wildlife conservation ($r = 0.151^{**}$; $p = 0.000$). This is true because when animal populations drop due to *sport hunting*, the resource base and animal base for tourism attractions are lost.

The belief that sport hunting was done to raise money for wildlife conservation has a moderately significant statistical relationship with wildlife conservation ($r = 0.301^{**}$; $p = 0.0001$). This indicates that the plan that makes sport hunting a source of income contributes to 30.1% of the improvements in wildlife conservation in the study area. This is specifically when the areas attract tourists and the local community sells crafts and other traditional equipment.

Conducting sport hunting for the purposes of protecting land space does more harm than good. This is because the association between sport hunting to protect land and negative aspects of wildlife conservation ($r = 0.356^{**}$; $p = 0.001$) is a medium correlation. This means that when sport hunting reduced wild animal's number, tourist attractions would not be interfered with. However, the quality of animals would improve. Simply put, sport hunting largely leads to the enhancement of the quality of animals and enhances the living standards of community members.

The notion that sport hunting created conservation incentives was a medium statistically significant association ($r = 0.365^{**}$; $P = 0.000$) with wildlife conservation. Relatedly, the study established a weak positive statistically significant relationship ($r = 0.156^{**}$; $p = 0.008$) between sport hunting to benefit local people and the positive aspects of wildlife conservation.

4.7. Regression analysis for sport hunting and wildlife conservation

According to the third objective, sport hunting has a significant effect on wildlife conservation in the study. The average mean score for the components that explain wildlife conservation and the average mean score for sport hunting factors are presented in Tables 4.8, 4.9, and 4.10.

Table 4. 3: Model Summary for Sport Hunting and Wildlife Conservation

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.374 ^a	.140	.137	.76691
a. Predictors: (Constant), Sport Hunting				

A regression analysis was performed and the results are shown in table 4.8. Sport hunting was taken as a significant aspect of conservation and the model shows that an adjusted R Square value of 0.137 and a standard error of the estimate of 0.76 was obtained. In this model, it can be interpreted that sport hunting has the capacity to contribute 14% towards improving conservation if the practice is undertaken under regulated measures to avoid excessive removal of useful wildlife from their habitat. Effective sport hunting statistically strongly predicts the success of wildlife conservation. When sport hunting is favored as part of conservation activities, it will have the potential to improve wildlife by 14% and this will again be of positive benefit to the local community as well as the national conservation sector authorities such as UWA. This is in agreement with other researchers such as Begg *et al.*, (2018) who studied the utilitarian theory and related it conservation and they found that in some instances it has enormous benefits to the users. In their analysis of this theory, they argued that sport hunting creates several economic benefits to the local communities and the nation. They rest on the utilitarian rationale of providing benefits for animal (and human) populations by sacrificing some individual animals' lives once the activity is well regulated.

Table 4. 4: Regression Analysis: Sport Hunting as a predictor variable for Wildlife conservation.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.237	1	27.237	46.309	.000 ^b
	Residual	167.035	284	.588		
	Total	194.272	285			
a. Dependent Variable: wildlife conservation						
b. Predictors: (Constant), Sport Hunting						

A regression analysis in table 4.9 shows that sport hunting is a significant predictor of wildlife conservation (sig = 0.000, P- vale < 0.05). In this model, the Fischer's statistic (F = 46.309) if is moderately large enough to prove that the model fits well with the data and variables in the analysis as seen in table 4.1. It can therefore be pointed out that sport hunting should be encouraged since it substantially contributes positively towards wildlife conservation.

Table 4. 5: Coefficients of the Linear Regression

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.467	.103		23.905	.000
	Sport Hunting	.255	.037	.374	6.805	.000
a. Dependent Variable: wildlife conservation						

This suggests that sport hunting statistically strongly predicts wildlife conservation in a positive way, according to Table 4.8 (B = 0.255; P=.000). Inference suggests that an improvement in some areas of sport hunting led to an increase in wildlife conservation of 25.5%. The degree of inaccuracy for the b-coefficient is explained by the t-value of 6.805. The t-value must be less than or equal to the range of 27–32 for positive findings to be statistically significant, beyond which the error may not be permitted. This encouraging finding supports the idea that sport hunting helps to conserve animals.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion of Findings

The discussion of findings attempts to explain the trends in the results.

5.1.1 Socio-economic contributions of sport hunting to local communities

The findings show that, despite opposition from the local population, infrastructure development is encouraged by wildlife conservation agency and local government authority. It may be acceptable to presume that the road system, medical facilities, religious facilities and accommodation facilities are constructed or kept in a condition to offer amenities that appeal to tourists and local communities Mamirkulova *et al.*, (2020) revealed that local community infrastructure development on the New Silk Road was influenced by animal conservation initiatives. This is consistent with the findings of the study. This improves the programs already in place to encourage tourism while protecting wildlife.

The study also showed that financing animal conservation may come from foreign exchange. However, the overriding message from key informant responses was that it made it more likely to get foreign exchange. Although it appears that the community had not taken advantage of the opportunities to benefit directly or indirectly from the conservation of wildlife earning species in Lake Mburo National Park, evidence from interviews reveals that foreign exchange is a reality arising from wildlife conservation in the Lake Mburo National Park. This is consistent with research by Abhishek *et al.* (2021), who found that the wild conservation act greatly boosts the nation's foreign exchange reserves and gives a huge portion of the population direct and indirect employment.

Additionally, research shows that protecting wildlife promotes life skills because it makes it possible to host many visitors from all over the world. By going to places like these, visitors may connect theory with reality. Because they want to witness and learn about how these animals are handled, as well as because they want to discover how people directly benefit from them, many students enroll in university tourism programs. These findings are in line with those of Aynalem *et al.* (2019), who found that community-based breeding programs (CBBPs), which prioritize indigenous inventories and take farmers' needs, opinions, and choices into consideration throughout the program's development as the programs of choice for wildlife conservation.

The results further revealed that wildlife conservation expands the market for area goods and increases the earnings of local people in the study area who partake in associated activities. According to the study's objective, local people participate in handicraft activities and expand their inventiveness to the point where tourists purchase goods such as drums, xylophones, winnowers, ropes and baskets manufactured from local raw materials. According to the findings of the interviews, wildlife conservation has promoted the sale of crafts and other locally made equipment to tourists. This is just slightly in line with Wondirad & Ewnetu (2019), though, indicating that participation in wildlife conservation fosters sustainable land and resource use practices, which in turn brings about a U-turn in economically vulnerable networks.

The findings also show that wildlife protection helps local communities by offering leisure and amusement in the study area. Many people in the neighborhood do not immediately benefit from the concept that protecting wildlife promotes leisure and enjoyment, even though a substantial portion of respondents agreed with this statement. Although many individuals in this region benefit financially from wildlife conservation, according to officials, many of them are not from Uganda or the Kiruhura District. Even more astonishing is the lack of enthusiasm displayed by locals for visiting Lake Mbuho National Park. As a result, it appears that park visitors have reaped the benefits much more than locals have. This may be contrary to research by Oyamada & Ktani (2019), who claimed that consensus-building gaming encourages innovative solutions to wildlife management dilemmas and that natural resource management is becoming an increasingly tough problem globally. One of the biggest issues it faces is that locals frequently hold conflicting views on whether the natural environment should be preserved or destroyed.

Further research demonstrates that funding for assisting local communities can come from protecting animals through sharing of animal fees from the hunting tourist, 85% of it is shared amongst communities and KDLG. However, some locals who take the initiative and engage in the sale of goods made from local resources make more money, and many of them use that money to support their families. It may be true that the local population does not benefit from the preservation of the area's wildlife. In a related study, Walters *et al.* (2020) looked at reasons why people use and consume animal goods to reduce wildlife consumption or replace it with more environmentally friendly options. Conservationists and scholars can better understand the complexity of both the use of specific animal products and the wildlife trade by mapping out reasons.

The results disprove the notion that cultural diversity is supported by animal protection. In conclusion, there are no obvious efforts in the study area to raise awareness of the value of animal protection. For the public to start seeing animal protection favorably, it is imperative that research like this increase information symmetry. The major conclusion from key informant responses was that the focus was at getting earnings. After examining the findings addressing the socio-economic contributions, the claim that wildlife conservation benefits residents in the study area by offering recreation and amusement was given the grade "Neutral". To test this, Kwaslema (2018) conducted semi-structured interviews with 240 respondents living in five communities outside the south-western Rungwa Game Reserve. The results show that the effectiveness of natural world conservation depends on the attitudes of the local population toward the natural world (RGR). According to the findings, 89% of the respondents were aware of the need to conserve the environment's flora and fauna, and their awareness varied according to factors including age, education, immigrant status, and distance from the affected area (PA).

5.1.2 Perceptions of local communities towards sport hunting activities

Results show that sport hunting can deter poaching. The fact that there is widespread disagreement about whether sport hunting is preferable to poaching implies that the local people in the study area were unaware of its benefits or justifications. The study's objective was to increase public understanding of the fact that sport hunting is always good to the wellbeing of wildlife that is being protected. Fischer *et al.* (2015) report that hunting is only socially acceptable if it is done for food in relation to this. Otherwise, it would be illegal to engage in commercial hunting, which may be taken to be well organized kind of wildlife poaching (Kisame *et al.*, 2017).

"Disagree" was given to the claim that sport hunting manages animal populations. This is attributed to the knowledge gap since most of the locals were unaware that sport hunting was an activity designed to keep the necessary number of animals in check so that they could readily obtain enough food and care. However, the findings of the interviews showed wildlife association or government officials advise sport hunters to report the number of animals they kill during a season and the place on ranches where animals are killed. This makes it possible for biologists to evaluate long-term changes in animal abundance and distribution. The findings are in agreement Naidoo *et al.* (2016) and show that sport hunting has several conservation-related advantages, with habitat acquisition and protection standing out as a key one. It is also feasible to

generate a sizable amount of income, and in certain circumstances, this income is put toward biodiversity preservation. There are also numerous instances when it is less obvious whether hunting profits are used to further conservation. Although there are few definite instances when genetic, behavioral, or demographic influences have had a substantial impact on the survivability of populations, it may be necessary to take precautions against them.

The results show that sport hunting has many positive effects, including this element of gaining money, despite how it may first look and be regarded. Brandt (2016) found no consistent impact of sport hunting on ungulate population sizes in southern Kiruhura. Intensive selective hunting pressure targeting adult males can cause a sudden population collapse. The disturbance caused by sport hunting can have an impact on movement behaviour. Hunting areas adjacent to the national park avoided areas where hunting occurred although grizzly bears used hunting areas more frequently due to increased scavenging opportunities

Overall, respondents in the study area were of the view that sport hunting controls animal populations a "disagree" grade. This shows that a lot of individuals are unaware of the benefits or justifications for sport hunting. Studies like these are crucial for raising awareness of the situation and promoting actions that support or promote animal protection. In terms of promoting conservation, the results indicated that there were still more knowledge gaps about the basis for sport hunting.

5.1.3 Effect of Sport hunting on wildlife conservation

The results indicate a statistically slightly positive correlation between the decline in poaching and improvements in animal conservation. This implies that less wild animals may be utilized to entice tourists to Uganda from both within and beyond the country as poaching decreases. The low explanation percentage is due to the residents' comments, which show a lack of comprehension of the justification for sport hunting. Many of the respondents seemed to have a poor opinion of "sport hunting." According to Catherine (2019), obtaining animal parts (such as heads, skins, claws, or even the entire animal) for exhibition and bragging rights is the main driver for sport hunting. Therefore, the issue is how the public views the idea of sport hunting.

There is a statistically significant positive correlation between the idea that sport hunting decreases the number of animals and wildlife conservation. This is true because when animal populations drop due to *sport hunting*, the resource base and animal base for tourist attractions are lost. On the other hand, the fewer animals due to sport hunting can help those whose lives are

frequently threatened by wild animals. According to UWA (2016), the reasons behind the sport hunting activity in Uganda is to provide an incentive to landowners to manage and protect wildlife on their land by giving wildlife as a resource an opportunity to demonstrate its economic value to landowners.

Sport hunting is carried out in wildlife conservation areas, according to Wanyama and Kisame (2015), to prevent the exploitation of species, the depletion of wildlife resources, and the disturbance of ecosystems. Sport hunting helps to regularize wildlife conservation efforts by, among other things, establishing harvest limits and procedures; protecting wildlife habitat; educating the public; maintaining wildlife laws; researching animal ecology; and minimizing human-wildlife conflict.

The belief that sport hunting is done to raise money for wildlife conservation has a moderately significant statistical relationship with wildlife conservation. This indicates that the plan that makes sport hunting a source of income contributes to the improvements in wildlife conservation in Kiruhura's Rurambira and Nyakahita parishes. This is specifically when the areas attract tourists and the local community sells crafts and other traditional equipment.

Sport hunting is not the best way to preserve land since it causes more harm than benefit. This implies that when *sport hunting* is practiced and animal populations are decreased, tourist attractions are not harmed; rather, the welfare of the animals is preserved. Sport hunting raises community members' living standards and contributes significantly to the improvement of animal quality. Sport hunting is carried out close to the northern ranches of LMNP, according to UWA (2017), to ensure better management of wildlife populations so that those species with fewer animals may command higher prices and the major actors in the local communities can be consulted to accomplish this.

5.2 Conclusion

Although funds from sport hunting had been used to construct classrooms, health centres, water dams, churches and roads, the beneficiaries-majority of the local communities did not easily associate these benefits to sport hunting. This is attributed to inadequate sensitization of the general public about the benefits of sport hunting.

Similarly, the residents were not well prepared to exploit existing tourism opportunities and incentives. As a result, very few residents were involved in the sale of handcrafts to tourists and tourism guiding activities.

Sport hunting improved infrastructure (roads, schools, health centres and churches) as households' incomes and revenues increased, hence local community livelihoods improved though the benefits at an individual level are still minimal in Rurambira and Nyakahita parishes.

The local communities' attitude towards sport hunting differs among community members. Although they are unclear, some people appear to feel that sport hunting encourages conservation, at least according to the mean score. The community widely pairs sport hunting with poaching.

At the inception of sport hunting in the area the community guarded against wildlife threats to resources (water and pasture for livestock), life and property and their assumption was that sport hunting would reduce or wipe out wildlife on their land instead improved animals' security by protecting them from poaching. Hence animal population increased overtime as seen in ground counts for large and medium animal population in and around Lake Mburo National Park.

5.3 Recommendations

1. UWA and Community Wildlife Associations in collaboration with Kiruhura District Local Government should develop and implement a Conservation Education and Awareness Strategy aimed at educating the residents in the study area the benefits of sport hunting and existing opportunities and incentives.
2. Mechanisms for accountability, transparency, monitoring and good governance practices should be developed and implemented to shield revenue earned from sport hunting against corruption tendencies.
3. Strategies for protecting resident's crops and livestock against wild animals should be developed and implemented.

5.4 Areas for further research

- Hunting Culture and its relationship with Sport Hunting around Lake Mburo National Park.
- Evaluate the Gender Practices and roles in Sport Hunting programmes around Lake Mburo National Park.

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