

**Balancing Conservation and Development:
A Case Study of Economic Efficiency in Queen Elizabeth National Park, Uganda**

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Abstract

This study is a comprehensive economic analysis of Queen Elizabeth National Park's revenue and expenditures. Queen Elizabeth National Park is located in Southwest Uganda. It is the most visited park in Uganda, welcoming over 34,000 visitors annually and generating more than \$1,705,000 US per year in tourist expenditures. The researchers spent three weeks in the field at Queen Elizabeth National Park, and three weeks in the capital city of Kampala, Uganda to assemble a collection of literature, statistics, and interviews with all stakeholders to fully analyze the national park's current level of economic efficiency. The study includes data on stakeholder incentives and interests, community relations, resource extraction, economic appraisals of wildlife, and accountability. The researchers ultimately concluded that while Queen Elizabeth is currently profitable, it is not yet reaching its full potential for either conservation efforts or revenue generation, largely due to conflicting stakeholder interests and the results of miscommunication. As such, the park is not playing the larger role in national economic development that it could be. Several closing recommendations to increase efficiency, productivity, and sustainable conservation within the park, and expand QENP's impact on national development are included in this report.

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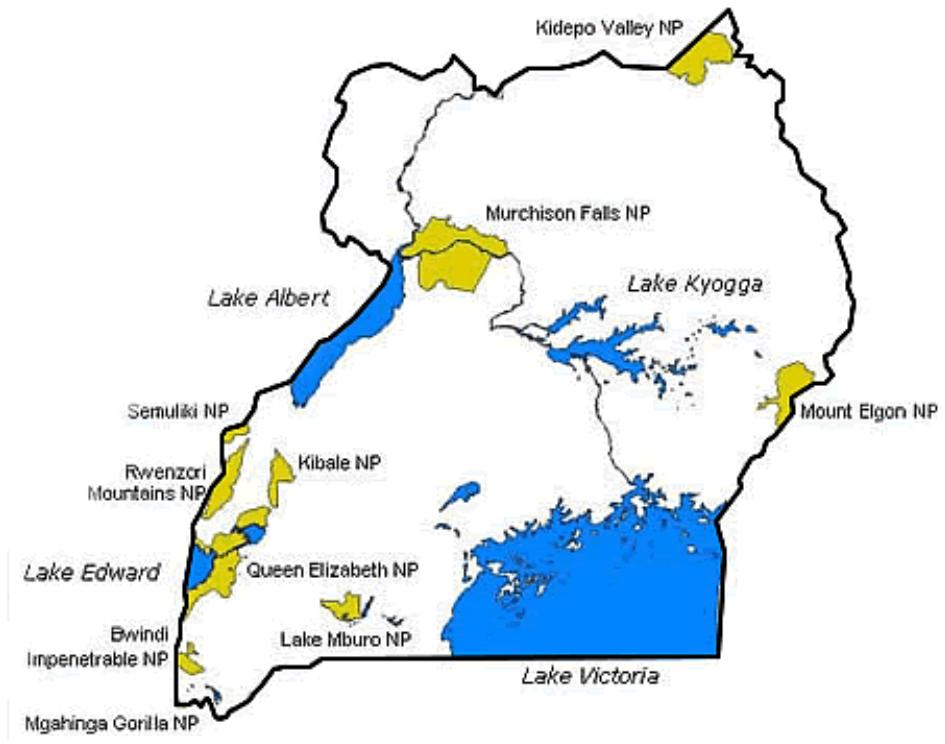
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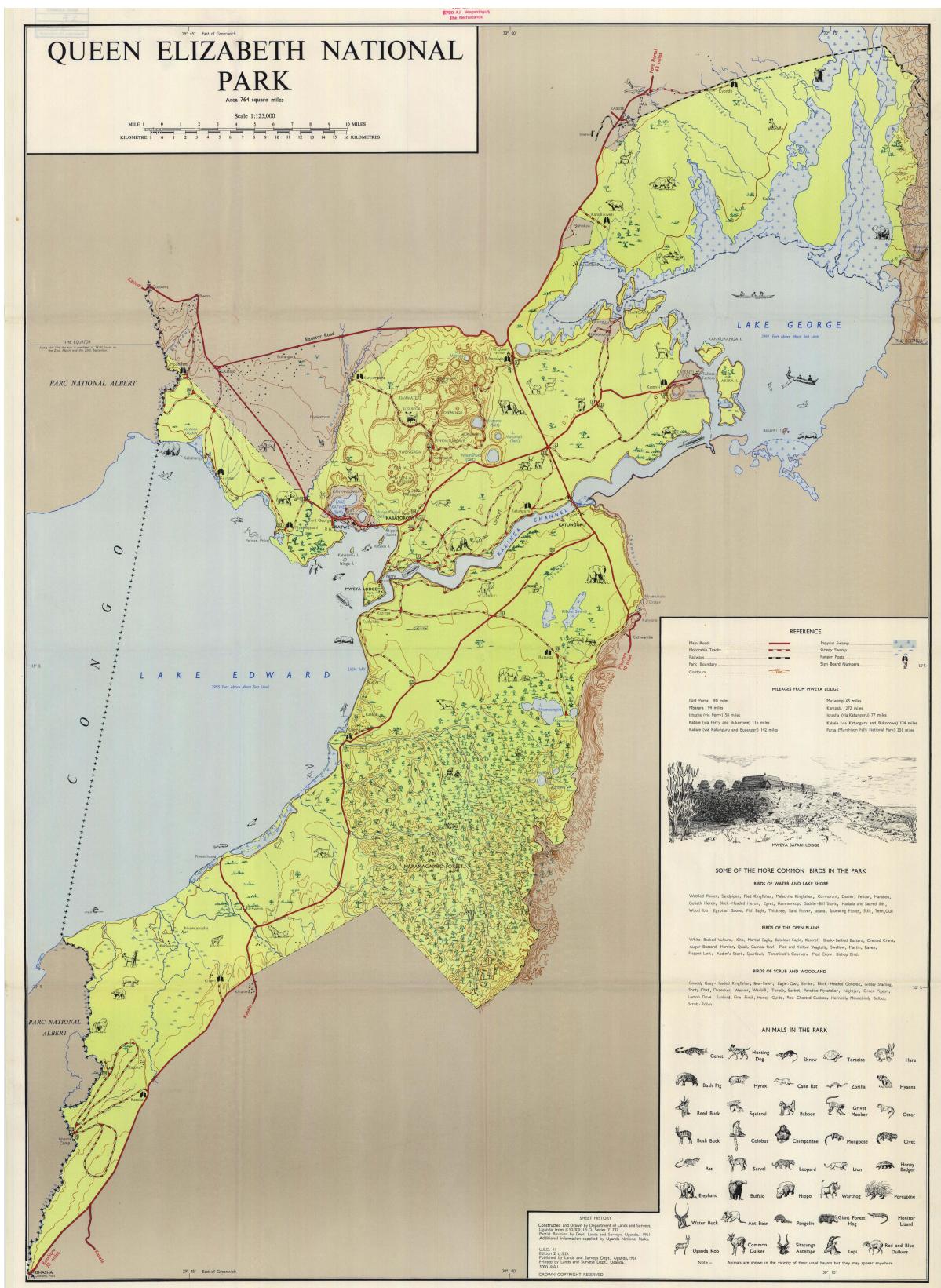
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Uganda's National Parks



Queen Elizabeth National Park, 1961



Acronyms and Abbreviations

- BINP – Bwindi Impenetrable National Park
- DRC – Democratic Republic of the Congo
- GDP – Gross Domestic Product
- MEMD – Ministry of Energy and Mineral Development
- MFNP – Murchison Falls National Park
- MTTI – Ministry of Tourism, Trade, and Industry
- MTWH – Ministry of Tourism, Wildlife, and Heritage
- NDP – National Development Plan
- NEMA – National Environment Management Authority
- NFA – National Forest Authority
- QENP – Queen Elizabeth National Park
- SWOT – Strengths, Weaknesses, Opportunities, Threats
- UGX – Ugandan Shillings [~ 2500 UGX = \$1 US]
- UWA – Uganda Wildlife Authority
- UWEC – Ugandan Wildlife Education Centre
- UWTI – Uganda Wildlife Training Institute

1.0 Introduction:

Tourism in Uganda is an increasingly important sector that plays an enormous role in the nation's greater development. Despite various setbacks in recent decades, ranging from prolonged conflict to government instability, the industry remains one of the top grossing nationally and was just ranked one of six primary growth sectors that should be further cultivated in Uganda's *National Development Plan* of 2010-2014 (National Development Plan, 2010). The number of tourists that visited Uganda exceeded one million in 2013; their expenditures netted over \$800 million US, and according to the *Economic and Statistical Analysis of Tourism in Uganda*, had a direct impact amounting to 3.7 percent of Uganda's total GDP (Schmidt, 2013).

Uganda's ten national parks are some of the greatest of Uganda's attractions for tourists, particularly those who participate in high-expenditure, luxury travel. Located across the country, the parks span a variety of ecosystems and include a diverse population of flora and fauna. Uganda boasts roughly 10 percent of the world's bird species at 1062 species, 7 percent of mammal species with 364 species, and the highest number of primates per unit of any country in the world (Mugizi, 2013).

Such incredible biological diversity attracts enormous international attention and makes Uganda a singularly unique travel destination for millions of visitors. Gorilla trekking, like the staggering diversity of species, is another distinctive attraction. Bwindi Impenetrable National Park, located in the southwestern corner of the country, is home to over three hundred and fifty of the remaining seven hundred mountain gorillas in the world and remains one of the country's most lucrative attractions (General Management Plan, 2011). National parks, as defined by the *Uganda Wildlife Act* of 1996, are wildlife conservation areas that accommodate biodiversity conservation, recreation, scenic viewing, scientific research, and economic activity (*Uganda Wildlife Act*, 1996). Through this definition, the many facets of national park governance are illuminated, from utilization of their economic potential, to the importance of conservation and preservation for future generations.

Queen Elizabeth National Park is the most visited in the nation, with roughly 34,000 visitors per year excluding local students, who do not pay park entrance fees (General Management Plan, 2011). It is also the second largest park by area, following

Murchison Falls National Park, and the third highest revenue generating for the Uganda Wildlife Authority after Bwindi Impenetrable National Park and Murchison Falls National Park (General Management Plan, 2011). In total, those who visit QENP account for 40 percent of all visits to the ten national parks in the nation, demonstrating the significance that Queen Elizabeth has in the greater park management system (Kamuntu, 2012). In 2011 the funds generated from tourist expenditures in QENP, also known as direct tourism revenue, exceeded 4,263,107,248 UGX, or over \$1,705,000 US (General Management Plan, 2011). One year prior to that revenue generated purely for the Uganda Wildlife Authority was 2,986,859,075 UGX (\$1,195,000 US) and total expenditure was measured at 1,702,392,963 UGX (\$681,000 US), achieving a budget surplus of 43 percent for UWA, demonstrating QENP's potent reported profitability (General Management Plan, 2011). Ultimately the objective for the UWA's management of tourism development in Queen Elizabeth is to further increase the Authority's revenue by 15 percent annually by 2021 (General Management Plan, 2011).

A SWOT (strengths, weaknesses, opportunities, and threats) analysis of Queen Elizabeth from 2010 concluded that while the park has the advantages of a large and diverse area with 95 mammal species, 612 bird species, and a convenient location for tourists, it continues to lack a unique marketing scheme and is inhibited by the fishing villages and well-traveled public roads within its boundaries that serve to undermine the positive aspects of the overall visitor experience (General Management Plan, 2011). At the same time, the park is also currently threatened by oil exploration and the potential for future extraction, wildlife diseases, invasive species, insecurity and political instability, and lack of adequate funding (General Management Plan, 2011).

There are many actors both directly and indirectly involved in the affairs of Queen Elizabeth National Park. For the purpose of this study, these actors will henceforth be known as 'stakeholders.' A full list of these stakeholders and their interests will be more fully examined in the findings section (3.2). It is these stakeholders and their conflicting interests and related incentivized actions that ultimately create the obstacles preventing Queen Elizabeth National Park from reaching its maximum economic efficiency.

1.1 Background:

As the tourism industry continues to grow, the national parks in the Republic of Uganda have played an increasingly important role in the country's long-term economic development. Tourism is an integral piece of Uganda's developing economy, and its national parks are recognized as a main tourist attraction for the highest spenders, particularly foreign travelers. In 1996 the *Uganda Wildlife Act* defined a national park as "an area of international and national importance because of its biological diversity, landscape, or national heritage," with an additional purpose "to generate economic benefits from wildlife conservation for the people of Uganda" (Uganda Wildlife Act, 1996). With the establishment of the *Uganda Wildlife Act* and the creation of the Uganda Wildlife Authority to manage natural protected areas, Uganda's government publically recognized the potential of national parks as resources for immense revenue generation to assist in continued national development.

Queen Elizabeth National Park was one of Uganda's earliest protected areas. It was gazetted as a protected area in 1952 by the colonial government of the time because of the growing popularity of commitment to the conservation of Africa's beautiful landscapes and captivating wildlife (Cook, 1994). The area near Lake George and Lake Edward was chosen because it had been largely evacuated due to tsetse fly infestations and the sleeping sickness carried by the insects (Guma, 2013). After the completion of the gazettlement, however, small village clusters that relied on subsistence fishing in the nearby lakes remained on the land. These villages were incorporated into the park instead of being resettled (Cook, 1994).

In 1979, Queen Elizabeth National Park was then officially deemed a 'biosphere reserve' to serve traditional cohabitation of human settlements and natural wildlife (Cook, 1994). The stipulation that accompanied the acknowledgment and acceptance of the village enclaves was that fishing would be the only business or economic activity allowed in the communities (Guma, 2013). As nearby areas such as Kasese developed, the villages within Queen Elizabeth developed alongside them and grew in size and population, broadening their economic activities to accommodate their growing needs. This expansion of enclave communities resulted in many of the continuing problems

facing increased tourism development and conservation efforts in Queen Elizabeth National Park.

As one of Uganda's largest and most diverse parks, Queen Elizabeth National Park encompasses many facets of biodiversity that are not found elsewhere. For this reason, Queen Elizabeth is a protected area in need of more research on the pivotal connection of its tourism and conservation efforts. In addition, the park's unique integration of community enclaves into the management system of the park serves to further the need for more in-depth economic study. The park's unique features give it the vast potential to contribute to economic growth and development on a national scale if the current inefficiencies are addressed.

This paper is in part a summary of Queen Elizabeth National Park's economic systems. It will encompass revenue generation, funds management, multi-level accountability, and economic incentive programs associated with QENP. In discussing such themes, the researchers will also incorporate issues of community relations, poaching, focused conservation efforts, and increased tourism potential so as to create a comprehensive and accurate picture. To completely understand the economic activities and structures, it is important to understand all fundamental stakeholder interests. After these interests are identified and outlined, the context created will allow for a better understanding of stakeholder actions and methodology.

Following the findings and discussion, conclusions will be made in reference to each overarching step in the economic system. Finally, additional recommendations for new policies or programs will be made according to information gaps or inefficiencies that are observed in the parks.

1.2 Justification:

This study was undertaken in order to create a more comprehensive analysis of development in the context of conservation, the tourism industry, and the national parks of Uganda. National parks were chosen as the topic for research because of 1) their importance to the national economy 2) their unique existence in Uganda, 3) the existing acknowledgment of varying ineffective objectives and policies within the park's

management, and 4) an interest in how stakeholder relations can play a role in park functionality and efficiency. The researchers hope that this report can be seen in the larger context for which it is meant; it serves as a focused in-depth analysis but represents the larger system that it is contained in. Some of the conclusions reached in this report have the potential to expand beyond Queen Elizabeth National Park and even the greater national park system to Uganda's overall national management.

Queen Elizabeth National Park was chosen as the focus for this study because of its position as the most frequently visited national park, the second largest by area, and the third highest revenue generating. It also boasts a diversity of species and unique attractions that are only available at Queen Elizabeth, including tree-climbing lions, crater drives, and community visits, all of which continue to draw tourists from around the country and around the world. At the same time, Queen Elizabeth also faces a number of distinct challenges to its sustainability, which include substantial community relations' issues and the threat of natural resource exploration and extraction on park lands. QENP is a critical topic of study because it represents many common qualities of all Ugandan national parks, but also demonstrates a particular set of obstacles that continue to hinder its maximum potential as an economic driver. It is through examination of the common qualities that this economic analysis will aim to be representative of all of Uganda's national parks. Through the assessment of distinct challenges to QENP the study will become focused, analyzing how these obstacles affect the park area and allowing the researchers to make recommendations as to how this particular park could be made more efficient through innovative economic means.

Ultimately, the researchers hope to justify the enhancement of sustainability and growth of the national parks, using their inherent economic value as the premise for discussion. The research, therefore, is undertaken to be of assistance to both stakeholders in the national park system and actors in management positions of any park policies. This is a series of neutral observations and recommendations based on field interviews and background research. There are a number of controversial topics discussed in this study, including the reality of corruption, questionably ethical community actions and relations, and unchecked private-public partnerships.

Research surrounding the accountability of the agencies supporting national parks will be relevant to management in UWA, as well as international stakeholders. By illuminating the negative effects corruption has on revenue generation and community empowerment, the researchers hope to demonstrate the importance of collaboration in order to strengthen a culture of personal accountability and sustainability within the park system. Community relations are of equal importance due to their impact on wildlife and conservation efforts, as well as their role in the local economy. Finally, public-private partnerships are an integral part of the functionality and value of the park, and therefore both parties must be critically examined to determine their incentives regarding the partnerships and overall conduct in the context of park policies.

A detailed and accurate assessment of revenue generation, the current distribution methods, and the effect that current policies have on community members and stakeholders will serve to create a foundation for feasible recommendations to be made. The role of conservation in sustainable development on a global scale must also be analyzed. To ensure a fair representation of interests, this project draws from the experiences and practices of international and local actors in the field to create its final recommendations.

1.3 Objectives:

- i. To research and report on all stakeholder interests related to QENP
- ii. To report on the system of operations, revenue generation, redistribution, and management of national parks under the Uganda Wildlife Authority
- iii. To outline different stakeholder interests and incentives and analyze their impact on the achievement of stated objectives at QENP
- iv. To determine the extent that QENP's biodiversity, and subsequently conservation, should be value-labeled and controlled to maximize economic rewards that most benefit Uganda's national development
- v. To make recommendations addressing conclusions on how to better maximize the economic efficiency of QENP while meeting stakeholder interests

2.0 Methodology:

Methodology was a critical consideration undertaken by the researchers before and throughout the research process. Consistently maintaining methods of information gathering that were ethical and created a comprehensive and multifaceted picture of the topic of study was a fundamental goal for the entirety of the study.

2.1 Data Collection

There were several methods of data collection that the researchers used throughout the practicum in order to gain a comprehensive understanding of conservation within the national parks and the way in which economic incentives and accountability have impacted the continued preservation of biodiversity and land. Unstructured and semi-structured interviews and self-administered questionnaires were essential, and the researchers did their best to make contact with all stakeholders involved in the park system as defined in section 2.0 (DeWalt). These include government agencies, lower level park employees, private corporations benefitting from the national parks, community members living in and around the parks, workers in the oil exploration field, and international actors.

To prepare to do fieldwork, the researchers did a significant amount of background reading on the national park system, the economic processes within it, and the actors and stakeholders that play a role in its success (Devereux, Hoddinott, 1993). The researchers also conducted a number of preparatory interviews in order to gain more background knowledge before embarking into the field. Next, the researchers chose to live in the area of study in order to gain honest and complex views of the people involved in the national park system, allowing for direct access to many of the stakeholders of interest (Devereux, Hoddinott, 1993).

The researchers prepared for the possibility of utilizing rural rapid appraisal methods, but were able to conduct thorough, comprehensive, and successful in depth semi-structured interviews with local chairmen and community members, rendering other methods unnecessary. However, strategies like seeking out experts and viewing secondary data like survey maps both proved useful tools (Chambers, 1997).

To begin, the researchers spent a full week in Kampala, where the headquarters of the Uganda Wildlife Authority, the Ministry of Tourism, Wildlife, and Heritage, the National Environment Management Authority, and other integral contacts are stationed. The researchers used this week to confirm their research applications with the proper authorities. They also conducted several interviews with those who have substantial power or stakes in Uganda's national parks to obtain the proper background information and data that they would need to start research in the field. This provided the researchers with the skeleton of the project, allowing travel time throughout the park to be spent filling in the details of how the economic incentives of each stakeholder play out within the bigger picture.

Following the initial interviews in the capital city, the researchers traveled to Queen Elizabeth National Park to study the economics of tourism, the relations with the surrounding community, and to determine the interests of officials who reside in the park and physically maintain it as compared to those in more supervisory roles in Kampala. They spent over two weeks doing research at Queen Elizabeth National Park, compiling in-house literature and conducting interviews with all major stakeholder groups. Much of their time was spent in UWA accommodations near the Kazinga channel and traveling around the park to meet with members of the community, private corporations, resource exploration employees, and UWA officials.

For the last two weeks of the practicum period, the researchers returned to Kampala to assess their data and compile all research. They ended with a few closing interviews to tie up loose ends and send their appreciations for all participant support.

2.2 Instruments

To conduct comprehensive research, the researchers used a variety of literary documents from both international and local sources. These include World Bank data sets, economic analyses on park management and community relations, documents on transparency, locally maintained park records, and sample tourism and economic projects containing info-graphics and recommendations. The researchers presented a data analysis constructed from information of internationally accredited institutions to best

ensure that the conclusions drawn from the report are as accurate as possible. The researchers were extremely careful with the sources utilized; the sensitive nature of particular sections of the project made it critical that they survey a variety of sources, published with supporting research and data to affirm validity.

Questionnaires were the primary instrument used throughout the research process. Before they conducted interviews, the researchers would prepare a number questions in order to semi-structure the conversation. These questionnaires can all be found in the Appendices section. While adjustments were often made during the actual interactions, having a guiding document proved extremely helpful and allowed for much more informative and high quality interviews.

Additionally, the researchers used recording devices during several interviews, after obtaining permission from the subjects. This added step, in conjunction with detailed note taking, helped the researchers to record and retain as much information as possible, as well as come back to the interview for detailed transcriptions following the interactions.

Emails were another tool utilized by the researchers to gather information from subjects. Some private tourist lodges at QENP were difficult to visit, or had managers who were out of the country at the time of contact. As such, communicating with them through email and providing them with a number of questions helped the researchers to access information that they otherwise could not have found.

2.3 Limitations

The researchers encountered a number of limitations when conducting research. Perhaps the most frustrating challenge was obtaining a copy of the park budget of QENP. Because of confidentiality issues within the management of UWA and the communication between field offices and headquarters, the researchers were unable to gather the data they had originally planned to. While the researchers mitigated this problem by using the General Management Plan to outline much of the budget, it would have been more helpful, specific, and relevant to use the actual budget.

Another issue encountered by the researchers was security within the national park system of Uganda. As the conflict in the Democratic Republic of Congo continued to develop, refugees and border security made travel plans to Bwindi Impenetrable National Park and the Kisoro region impossible. This problem was particularly interesting in the context of this paper, as the researchers were able to understand firsthand how critical stability is for development and the growth of the tourism industry in Uganda.

Finally, time constraints were a limitation encountered during the data collection process. While the researchers had planned to study at several different national parks in order to gain a comprehensive understanding of the entire system, transportation time made this option very difficult. The researchers instead conducted a specific and in-depth analysis of one park, which gave them a different yet equally informative picture of development and the park system in Uganda.

2.4 Ethics

There were a number of ethical considerations identified during the practicum that the researchers were careful to address throughout their studies. Interview consent forms were brought to all meetings and used to gain permission from interview subjects for the sharing of their titles and the information collected from them when applicable. Maintaining neutrality while interviewing respondents was critical, especially as the researchers discussed problems like conflicting stakeholder interests among various parties. Displaying any bias or judgment when speaking to groups, especially vulnerable populations like the community groups, could have seriously hindered or impacted the accuracy and quantity of information obtained. In light of those same issues, the researchers worked to develop questions that were neutral and unbiased, and that left room for the respondents to answer as openly and as thoroughly as possible.

Another ethical consideration that the researchers identified early in the process was the conflicting nature of much of the data collected from different sources, and the impact of accountability on the truth. As they continued to conduct interviews and collect information, the researchers maintained the attitude that answers given to

questions were representative of the communities and groups being interviewed, and may not necessarily reflect the truth or the entire picture. While this was a limitation at times, it also helped to clarify the challenges faced by stakeholders in the national parks and various managers within the system. Realizing the conflicting nature of information and accepting it for what it can shed light on was a critical step for the researchers in working to find the actual truth in a number of situations.

Finally, the researchers worked carefully to develop a set of recommendations that was as ethical as possible for all stakeholders involved, looking for solutions that were in the best interests of actors, the park, Uganda's economy, and the country's citizens.

3.0 Findings:

There are a number of factors inhibiting the maximum economic efficiency of Queen Elizabeth National Park, and the findings section is designed to explain in detail the causes and effects of these factors. After giving a complete overview of the systems in place affecting Queen Elizabeth's management and sustainability, the following section will present and explain the greatest current challenges that are inhibiting park economic success.

The findings section will begin by explaining in detail the statistics of tourism, national park revenue generation and distribution, and government management structures. It will then identify the challenges to economic efficiency that are currently diminishing the capabilities of Queen Elizabeth National Park. These factors include discordant stakeholder interests, multi-level corruption, poor community collaborations and community conservation efforts, increased pressures for natural resource extraction on park lands, lack of proper economic evaluations of wildlife, and unstable public-private partnerships. Recommendations for serious adjustments to the existing programs will for the most part be left for the recommendations section at the close of the study.

The challenges hindering the park's success are substantial, but the possibilities for QENP's development after addressing these difficulties are numerous. The potential

for economic growth is the last topic discussed in the findings section, followed by overall conclusions and recommendations for how to best meet this potential.

3.1 Tourism, Uganda Wildlife Authority, and Queen Elizabeth National Park

3.1.1 Tourism In Uganda

Tourism is an integral piece of Uganda's developing economy. Because it is acknowledged as such by various actors within the country's management and governing bodies, the need for continued and expanded investment is also recognized. The National Development Plan created by the Republic of Uganda in 2010 outlines the growing need for the design of strategies and infrastructure that will more efficiently facilitate economic expansion through the Ministry of Tourism, Trade, and Industry (National Development Plan, 2010).

Throughout this study, the researchers will define 'tourism sector' as units within different industries that provide consumption goods and services demanded by foreign and domestic visitors (Sustainable Tourism Master Plan for the IGAD Region, 2011). 'Tourists' will be defined as people traveling in Uganda and spending for leisure purposes. The researchers will define 'tourism expenditure' as the amount paid for the acquisition of consumption goods and services for use during tourism trips (Sustainable Tourism Master Plan for the IGAD Region, 2011).

Despite the acknowledged strength of the industry, "Uganda is clearly not yet realizing its full potential as a tourism destination," due to several constraints (Kamuntu, 2012). According to the NDP, the percentage of the national budget allotted to the MTTI for the next five years will average 0.9 percent (National Development Plan, 2010). Limited available funding is perhaps the most largely recognized and prevalent problem within both the national park system and the industry as a whole. The promotion and marketing of tourist attractions "is costly yet the sector experiences serious shortages in resource allocation to effectively compete with other tourist destinations (National Development Plan, 2010)."

The absence of widespread and accessible physical infrastructure restricts the ease of travel for visitors, further limiting the attractiveness of Uganda as a destination. A lack of collaborative marketing and institutional development is another key factor limiting the growth of the industry; insufficient public sector support has left the private sector unable to meet potential capacity (National Development Plan, 2010). Finally, past conflict continues to play a role inhibiting the development of the sector in Uganda, and as local newspapers such as the *Daily Monitor* report, negative perceptions remain among potential visitors whose concerns of safety and security often influence their ultimate choice of destinations (Kulabako, 2013).

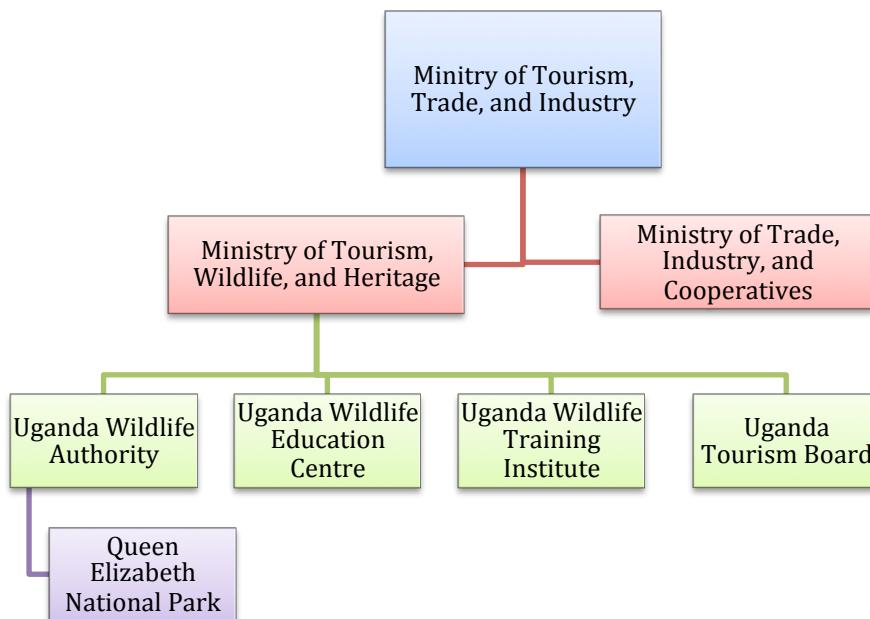
Several national statistics act as indicators, demonstrating the importance of the tourism industry both to the national economy and the country's continued development. The *Economic and Statistical Analysis of Tourism* reported by the World Bank Group calculates the multiplier effect as 2.5; for every dollar spent by foreign tourists, two and a half dollars are added to Uganda's GDP (Schmidt, 2013). Employment numbers within the tourism industry also speak to its central role in the national economy. In 2011, combined direct and indirect employment accounted for over 447,000 jobs, or 6.6 percent of total formal sector employment (Sustainable Tourism Master Plan for the IGAD Region, 2011). In summary, the national government has recognized that tourism is a large part of Uganda's economy, though they continue to fail to commit to resolved investment in the industry. One of the greatest areas in which this investment could be made is in the location of its highest spending tourists: Uganda's beautiful natural landscapes and wealth of wildlife protected by national parks.

3.1.2 The Uganda Wildlife Authority and Uganda's National Parks

The Uganda Wildlife Authority is the governing body designated to manage Uganda's national parks and protect its flora and fauna, but the greater powers which oversee national park management by the UWA are the Ministry of Tourism, Trade and Industry, and underneath it, the Ministry of Tourism, Wildlife, and Heritage. The Uganda Wildlife Authority is the governance division under the MTWH, created in 1996 under the *Uganda Wildlife Act* to oversee the care of Uganda's wildlife conservation

areas (Uganda Wildlife Act, 1996). Thus, Uganda's national park system, the revenue generated, the redistribution of funds, and the costs incurred are under direct supervision of the UWA. A visual aid to illustrate this structure of management can be seen below in Chart 1.

Figure 1: Structure of Ministries Managing QENP



Assembled by R. Turner Shaw and Louisa Dunwiddie

As demonstrated above, there are a multitude of organizations under the MTWH, including the UWEC and the UWTI, which heavily contribute to conservation and wildlife appreciation for both domestic residents and foreign tourists in Uganda. It is ultimately the UWA, however, that manages the national parks and protected areas (excluding forests). This management encompasses all earnings; following its collection, all national park revenue owed to the UWA is combined into a single account managed by headquarters in the capital city of Kampala, where it is then redistributed to individual parks on a budgeted needs basis (Mann, 2013). The redistribution is determined by a combination of annual budgets prepared by individual parks and ten-year general management plans that each park creates in order to identify long-term goals (Mann,

2013). The parks do not keep their own accounts and budgets, but instead are incorporated into a system in which the more profitable parks contribute to national conservation efforts by indirectly funding the less lucrative and thereby less sustainable parks.

A national park as defined by the *Uganda Wildlife Act* is “an area of international and national importance because of its biological diversity, landscape, or national heritage,” in which the activities of “biological conservation, recreation, scenic viewing, scientific research, and any other economic activity” may be permitted (Uganda Wildlife Act, 1996). In addition to protecting rare, endemic, and endangered species of wild plants and animals, an additional purpose of wildlife conservation areas is “to generate economic benefits from wildlife conservation for the people of Uganda” (Uganda Wildlife Act, 1996).

To best achieve these economic benefits, Uganda has relied heavily on tourism expenditures in the parks and has been largely successful. National parks are some of the country’s most naturally beautiful and unique attractions, making them “the country’s principal tourism draw” with 190,112 visitors in 2010 (Kamuntu, 2012). Such a vast number of visitors play a large role in strengthening the national economy. In addition to tourist direct expenditures, wildlife based tourism and conservation programs in Uganda also directly employ over 80,000 persons, contributing to both direct and indirect job growth (National Development Plan, 2010).

The wildlife that exists in Uganda’s national parks remains incredibly diverse, if not as abundant as in previous years. The 1970s and early 1980s saw an enormous decline in nearly every large mammal species in Uganda due to the rampant poaching and encroachment that ensued during and following the tumultuous era of Idi Amin’s rule. Since that time, Uganda has struggled in its conservation efforts both to keep its diversity of species and to maintain stable population numbers. Table 1, below, shows the fluctuations in populations of many of Uganda’s large mammal species over the past 50 years.

Table 1: UWA Species Population Estimates (1960s-2011)

Species	1982-1960s	1983	1995-1996	1999-2003	2004-2006	2007-2010	2011
Buffalo	60,000	25,000	18,000	17,800	30,308	21,565	21,639
Black Rhino	400	150	0	0	0	0	0
Bright's Gazelle	1,800	1,400	100	50	-	-	57
Burchell's Zebra	10,000	5,500	3,200	2,800	6,062	11,814	-
Common Eland	4,500	1,500	500	450	309	1,409	-
Derby's Eland	300	0	0	0	0	0	0
Elephant	30,000	2,000	1,900	2,400	4,322	4,393	-
Hartebeest	25,000	18,000	2,600	3,400	4,439	4,099	4,001
Hippopotamus	26,000	13,000	4,500	5,300	7,542	6,580	-
Impala	12,000	19,000	6,000	3,000	4,705	33,565	-
Oryx	2,000	200	0	0	0	0	0
Roan	700	300	15	7	-	5	20
Rothschild's Giraffe	2,500	350	250	240	259	984	-
Topi	15,000	6,000	600	450	1,669	845	-
Uganda Kob	70,000	40,000	30,000	44,000	34,461	54,861	54,080
Waterbuck	10,000	8,000	3,500	6,000	6,493	12,925	13,128
White Rhino	300	200	0	0	0	11	11

Data Source: Uganda Tourism Sector Situational Assessment, UWA Data

Assembled by R. Turner Shaw and Louisa Dunwiddie

The importance of wildlife, specifically in Queen Elizabeth National Park, will be more directly addressed in section 3.2.4.

The Uganda Wildlife Authority's mission statement is "to conserve, economically develop and sustainably manage the wildlife and protected areas of Uganda in partnership with neighboring communities and other stakeholders for the benefit of the people of Uganda and the global community (General Management Plan, 2011)." Both goals of conserving and economically developing the park areas are stated, and the success and progress of these two issues at Queen Elizabeth National Park will be closely examined in this report.

3.1.3 Queen Elizabeth National Park

Queen Elizabeth National Park is the most visited park in Uganda, the second largest by area, and the third highest revenue generating. It is home to a range of wildlife, including lions, leopards, elephants, hippos, chimpanzees, water buffalo, Uganda kob, and an expansive variety of birds, many species that are particularly popular with tourists and park visitors. The greater park area also offers a variety of activities, including but not limited to bird watching, crater drives, chimpanzee tracking, boat tours, and community visits.

The greater Queen Elizabeth Park Area encompasses the lands known as Queen Elizabeth National Park, Kyambura Wildlife Reserve, and Kigezi Wildlife Reserve. For the purposes of this study, the greater park area will be referred to as Queen Elizabeth National Park as it is in public documents. The national park is a protected, mainly savannah area in southwestern Uganda covering 1978 km² (General Management Plan, 2011). See map on page 6 for reference to the park geography.

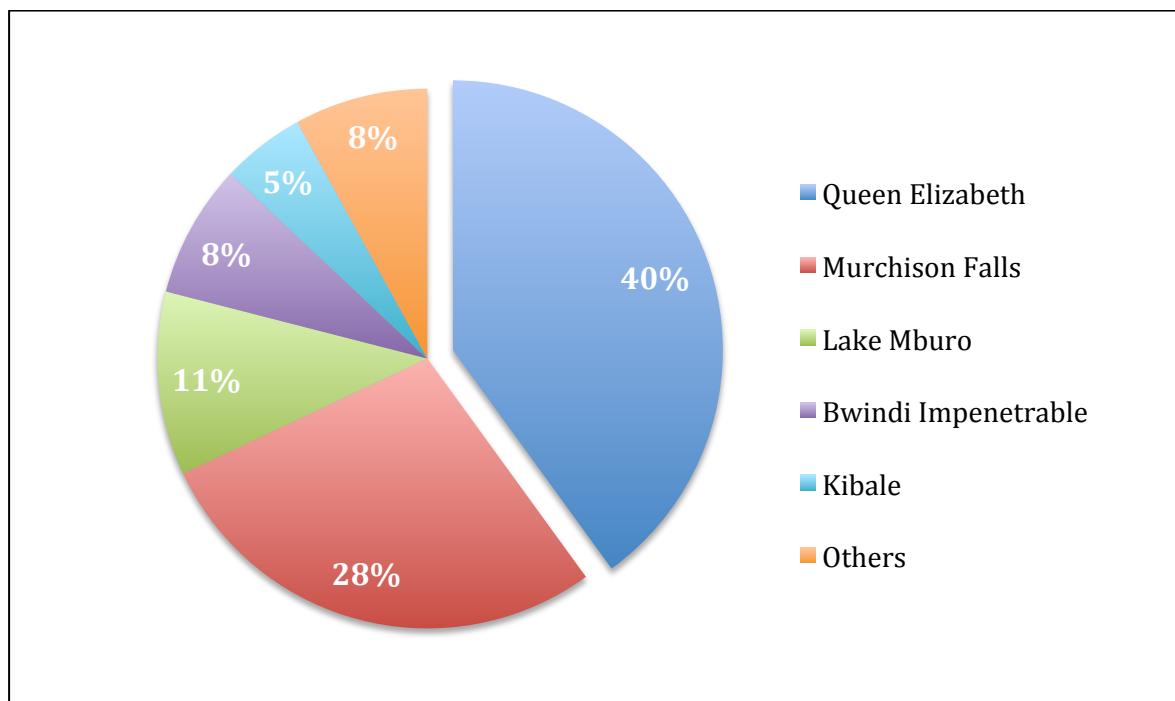
In 2011, the funds generated from tourist expenditures (direct tourism revenue) in QENP exceeded 4,263,107,000 UGX, or over \$1,705,000 US (General Management Plan, 2011). This high figure is largely due to the fact that annual percentage increase in visitor revenue has been 378 percent in the last 10 years, a result of both more tourists coming to the park and tourists spending more during their stay at QENP (General Management Plan, 2011).

In terms of revenue generated specifically for UWA, 2,986,859,075 UGX (\$1,195,000 US) from QENP was brought in to the Authority in 2010 (General Management Plan, 2011). UWA total expenditure at Queen Elizabeth was then measured at 1,702,392,963 UGX (\$681,000 US), resulting in a surplus of 43 percent of revenue earned (General Management Plan, 2011). Of this revenue, almost 50 percent is derived from entrance/gate fees, with the two next largest portions resulting from boat rides and photographic fees. Smaller shares included vehicle fees, camping fees, chimp tracking, UWA accommodations, and concessions (General Management Plan, 2011). A large percentage of park expenses were personnel salaries and park utilities (General Management Plan, 2011).

Queen Elizabeth is one of only four protected areas in Uganda that “generates enough income to cover its expenditure and remains with a surplus” (General Management Plan, 2011). However, because all revenue is sent into the greater UWA account managed by headquarters, QENP is not able to directly spend its surplus on local improvements. In total, QENP is roughly 70 percent self-sustaining, with the other 30 percent of its budget coming from the one general UWA account and donations from organizations such as the World Bank Group (Mann, 2013).

The park area receives roughly 34,000 visitors each year excluding Ugandan students, who are not counted because they do not pay gate fees or vehicle charges (General Management Plan, 2011). In fact, Queen Elizabeth is by far the park with the highest traffic, amassing 40 percent of the total distribution of Uganda’s park visitations, as can be seen in Figure 2 below. (Kamuntu, 2012).

Figure 2: Distribution of National Park Visitation (2010)



Source: Uganda Tourism Sector Situational Assessment

Assembled by R. Turner Shaw and Louisa Dunwiddie

The headquarters for the QENP branch of UWA are located in Katunguru and are broken up into seven departments of management, each led by a warden who is responsible for a varying number of staff. The departments include finance and administration, monitoring and research, tourism, community conservation, law enforcement, engineering, and civil engineering. These departments then manage each respective branch of park affairs and each has its own budget.

The illustrative list of infrastructure and equipment needs in QENP as denoted by the *Uganda Tourism Sector Situational Assessment* includes new safari tracks, new bird trails and hides, bridges and boats for the Kyambura Gorge crossings, and a vehicle for night game drives (Kamuntu, 2012).

The Uganda Wildlife Authority's additional infrastructure development projects, designed to benefit the visitors of Queen Elizabeth National Park most, are heavily recommended because of the recognition that appealing to higher-end tourists and increased marketing of UWA accommodations are necessary steps to attract greater numbers of domestic and foreign tourists. Currently, the UWA is competing with private companies for low-budget travelers on the Mweya Peninsula, and because of a lack of marketing, market prowess, and quality of products, places like the UWA lower camp at Mweya and Tembo canteen are not generating as much as the private corporations or as much as they have the potential to (General Management Plan, 2013).

To outline an average tourist's expenditure at Queen Elizabeth National Park, a budget was created explaining normal expenses on a leisure trip, denoting which agency each fee is received by. A single tourist was chosen for simplicity, staying three nights, the average stay at Mweya Safari Lodge (Carstens, 2013). In this expenditure analysis the tourist stayed at the Mweya Safari Lodge, one of the more expensive but most frequently visited lodges, and the only accommodation with the legal right to be located within the designated park boundaries (Carstens, 2013).

To complete the expenditure analysis in Table 7.1, some assumptions about this representative tourist were made. Because they are staying three nights and four days, the tourist participated in four of the most popular activities in QENP. These included a game drive, a boat tour, a bird observatory, and a chimpanzee walking safari. For the game drive, there is a fee for both the vehicle hire and the guide hire. The guide hire can

be either a UWA official or a private staff member, so for this analysis a guide from the UWA was hired. For the boat ride and the chimpanzee walk, however, the private options were chosen.

For every night a tourist spends at Mweya Safari Lodge, a \$5 US royalty fee from their accommodation fee is sent to the UWA. For this reason, the cost of the cheapest bed is denoted at \$201 in the Table with the \$5 royalty fee separated, though it is advertised as a \$206 room. The sample tourist chose the cheapest options for bedding and private boat ride.

Table 2: Single Tourist Expenditure Analysis

Fee/Activity	Daily Cost \$ USD	3 Day Trip Cost \$USD	Agency
Entry Gate Fee	35 per day	105	UWA
Vehicle Gate Fee	12	12	UWA
Lodging (Full Board)	201 – 1096	603	Private
UWA Royalty bed fee	5	15	UWA
Game Drive Vehicle Rent	220	220	Private
Ranger/Guide Hire	20	20	UWA (or Private)
Bird Observatory	15	15	Private
Boat Tour	26 - 36	26	Private (or UWA)
Chimpanzee Walking Safari	50	50	Private (or UWA)
Total		\$ 1066	
UWA Total		\$ 152 (14%)	
Private Total		\$ 914 (86%)	

Data Source: Mweya Safari Lodge Expenses Sheet

Assembled by R. Turner Shaw and Louisa Dunwiddie

From this tourist expenditure analysis in Table 2, the distribution of fees to different agencies can be more clearly inspected. From the calculation of an average of tourists' overheads, 86 percent of payments were made to the private corporation while the remaining 14 percent went to UWA, showing the disparity of revenue divisions often prevalent at Queen Elizabeth.

3.2 Challenges to Efficiency

Several challenges to optimal economic efficiency persist in Queen Elizabeth National Park. These challenges limit the park, mainly because actors with competing interests work against each other to accomplish both organizational and individual interests. After a full analysis of these interests and the major challenges that result, recommendations that better align these interests to allow for greater efficiency will be given.

3.2.1 Conflicting Stakeholder Interests

The conflicting interests and their impact on decision-making and policy implementation in the park result in most of challenges to the park's economic efficiency. For a visual representation of the stakeholders and their relevant interests, Table 3 was constructed, separating each stakeholder by greater category. Under these stakeholder categories the stakeholder groups are then listed, along with their particular interests in Queen Elizabeth National Park.

Table 3: Stakeholder Interests in QENP

Stakeholder Category	Stakeholder	Interests
Government	MTWH (Barirega, 2013)	- Maximized tourist numbers and profitability - Interests of Ugandan citizens - Interests of greater government
	UWA (Guma, 2013)	- Conservation - Economic development of park - Sustainable Management
	MEMD (Barirega, 2013)	- Resource Extraction - Maximized Profitability - Public-Private Partnerships
Private Corporations	Mweya Safari Lodge (Carstens, 2013)	- Maximized profitability - Higher patron numbers - Conservation - Sustainable Tourism
	Kyambura Safari Lodge (Anonymous, 2013)	- Maximized profitability - Conservation - Fire control - Increased UWA responsibility
International Actors	Tourists (Carstens, 2013)	- Unique wildlife attractions - Satisfactory accommodations - Beautiful sceneries - Engaging Activities - Safety and Security
	Conservationists	- Continued survival of all biodiversity species - Habitat and ecosystem protection - Limited illegal activity (poaching) - Conservationists also represent interests of the wildlife of QENP
Community	Fishing Villages (Arube and Bwambale, 2013)	- Community Conservation Education - Financial Compensation - Employment Opportunities - Safety from Wildlife - Land Rights
Uganda Nationals	Citizens	- National development - Universally improved quality of life

Sources: As Cited

Assembled by R. Turner Shaw and Louisa Dunwiddie

These interests reported in Table 3, when examined, exhibit many serious conflicts. The conflicts prove to be the most detrimental element to the economic efficiency of the park, hindering the efforts towards effective conservation as well as profit maximization within Queen Elizabeth National Park, and for this reason they will be thoroughly analyzed and discussed.

Agencies and corporations involved in oil exploration are perhaps the most controversial stakeholders within the national park. Because oil exploration and in turn, extraction, are detrimental to the sustainable conservation of the land and ecosystems, their objectives conflict with the interests of tourists, conservationists, UWA officials, as well as private corporations who focus on deriving benefits from the continued preservation of the environment in its natural state.

Another relationship that represents a source of significant conflict is that of the UWA and communities in or directly impacted by QENP. UWA has enacted policies by which they share the revenue from the national parks with local villages; through interviews, however, it was made clear to the researchers that these revenues rarely reach the communities themselves (Arube and Bwambale, 2013). Lack of compensation is only one weakness in the relationship of officials and locals. Other sources of conflict include lack of employment opportunities and little community conservation education on behalf of wardens or officials (Bwambale 2013). Local chairmen outlined substantial disputes over land rights and the responsibility of community safety measures; officials, on the other hand, cited poaching and lack of commitment to conservation on behalf of the communities as key sources of deteriorating relationships between the stakeholders.

Domestic and international conservationist interests also conflict with many interests of local community groups. While conservationists advocate for the maintained integrity of the land and ecosystems within the park, the local communities focus on subsistence and the perpetuation of their lifestyles and economic practices, many of which conflict with the natural landscape. While the communities interviewed recognized the importance of national parks and protected lands, their primary concerns fall within the development of their villages and livelihoods, which often means putting their interests above the interests of the park and wildlife (Arube and Bwambale, 2013).

In addition to community conflicts, conservation interests often conflict with UWA interests as well; these conflicts are visible on an individual rather than organizational scale. As reported by community members and local tour guides, poaching and financial accountability have been key issues faced by UWA administrators and will continue to undermine the effective conservation of the park until the problems are addressed (Arube and Bwambale, 2013).

Finally, private tourism organizations that share many interests with UWA and their objectives can conflict as both groups compete for a limited revenue source: tourists. While UWA has struggled to market themselves effectively to international bodies, private corporations have had much more widespread success in attracting visitors to the park and catering to their needs. As government officials try to take advantage of the tourism market, the researchers expect to see continued and growing conflict between their efforts and those of the private sector.

While the organizational interests of each stakeholder are responsible for a number of conflicts, individual interests also result in a substantial decline of efficiency and effective management of the park. Officials within both the upper and lower-level UWA structure demonstrate a lack of accountability as they have acted on their individual interests, rather than the mission of the organization. As reported in *The Kanyeihamba Commission Report on MTTI-UWA – PAMSU Project*, funds intended for the preservation of land and use within the national parks were channeled into construction of headquarters and even personal accounts (Kanyeihamba , 2011). Corruption on the minor and major scale still seems to exist within the organizations governing the national parks, remaining one of the greatest hindrances to better economic efficiency. Additionally, reports of poaching by UWA ranger staff were reported among tour guides and community members within QENP (Arube and Bwambale, 2013).

The UWA is not the only stakeholder that has acted on individual interests rather than mutually agreed upon goals and objectives. In fact, instances of individual interests dictating stakeholder actions are visible in nearly all groups to some degree. While many community members acknowledged the value of conservation and the national park land, poachers often come from the communities surrounding the park and enclaves within the park, and play a key role in the decline of the wildlife population and the undermining of

sustainable maintenance of the national park (Mugyerwa, 2013). Similarly, tourists often off-track on game drives, particularly to see tree climbing lions in the southwestern Ishasha region of QENP, an activity which causes damage to the natural habitats that visitors have come to observe and appreciate (General Management Plan, 2011).

In these cases where individual interests outweigh greater interests, it is because the individuals see major personal gain even if it comes as a cost of expense of the park or other actors. It is the premise of game theory that without the proper incentives in place to better influence individuals' actions, individuals will nearly always act in self-interest even at the expense of the greater population. Unquestionably, it would be better for Queen Elizabeth and all collective stakeholder groups if there existed no internal corruption, poaching, and off-tracking, for QENP would be more sustainable and profitable. However, as long as there are no greater incentive programs in place, individuals will continue to take advantage of the park's resources for personal gain. To effectively suppress individual interests magnifying the inefficiencies of QENP, it is up to the stakeholders with power to create incentive programs that counter these hindering individual interests. These stakeholders include the MTWH, the UWA, and powerful private corporations and NGOs invested in QENP.

These stakeholder conflicts have tremendous impacts for nearly every challenge faced by the national parks of Uganda. As long as interests continue to collide and are managed ineffectively, the economic potential and the developmental growth will continue to remain below the ideal level. These conflicts will present themselves in each of the subsequent challenges, and for this reason the underlying stakeholder interests and incentives should always be kept in mind with park policy and structural changes.

3.2.2 Community Conservation Challenges

Communities play a unique and important role in the economic management and sustainable conservation efforts of Queen Elizabeth National Park. Before the establishment of Queen Elizabeth, it was recognized that Lake Edward and Lake George contained one of the highest fish biomass in the world, resulting in a number of villages

on the peripheries of these lakes to take advantage of this resource (Cook, 1994). Thus when the park was gazetted in 1952, these fishing villages were then incorporated into park boundaries (Cook, 1994). Eleven communities exist within park borders, located both on park land and in segmented enclaves of non-park land but surrounded by the park (Guma, 2013). Although these communities were officially designated as subsistence, self-sustaining fishing villages with the creation of the park, national development as well as dramatic population growth have contributed to significant expansion of community activities, which now include farming and raising livestock.

With over 150,000 people inside park boundaries or enclaves, the large population has led to a diverse range of economic activities that has increased interaction and conflict between park authorities, community members, and wildlife. In the next ten years, the community population is expected to continue to grow, arriving at an estimated population of 300,000 by 2024 (Lemieux, 2013). Currently, the levels of local fishing, farming, and poaching are recognized as unsustainable, and they will continue to become increasingly untenable if populations continue to rise as expected (Lemieux, 2013).

Since these fishing villages have existed within park boundaries since the establishment of the protected area, a series of policies have been created, derived from the need for community relations and community conservation. Perhaps to best accommodate for the existence of these established communities and community enclaves within park boundaries, Queen Elizabeth National Park was officially termed a ‘biosphere reserve’ in 1979, designed to emulate the traditional cohabitation of human settlements and natural wildlife of Uganda (Cook, 1994).

To some QENP officials at UWA, however, the making of a biosphere reserve was more of a “quick fix” for the government than a purposeful arrangement of cohabitation (Anonymous, UWA, 2013). One UWA staff commented that the biosphere is by far more detrimental due to community growth and development than it is realistic of the traditional ways or beneficial to the natural environment (Anonymous, UWA, 2013). The Uganda Wildlife Act in 1996 made a point of recognizing the “historic rights of individuals in conservation areas” for communities that were already living on park lands before 1959, demonstrating the government’s commitment to the settlement rights of these communities (Uganda Wildlife Act, 1996). Nonetheless, the UWA officials

within QENP acknowledge the need for great change in the community mindsets of conservation, or more drastic alternative options that involve the relocation of communities.

The unavoidable interaction between local communities and wildlife has been one of several reasons for the implementation of revenue sharing programs, designed to increase local investment in the long-term success and conservation efforts of the national park. Since the beginning of the current revenue sharing scheme in 2003, 20 percent of gate fees are distributed to local communities through an equation developed by the UWA, which measures impact and proximity of communities to the park (General Management Plan, 2011). The program, which has reportedly generated over 1.8 billion UGX to date, is designed to allow local communities to determine the ways in which their money is spent (Mugyerwa, 2013). The districts have organized proposals for the funds to be used in a number of ways, including the funding of income generating activities, the construction of schools, roads, and healthcare units, and even the implementation of wildlife conflict management measures like elephant trenches and crocodile cages (Mugyerwa, 2013).

While the communities impacted by the park do receive certain benefits, it is clear that conservation and preservation do not always remain priorities for these villages. Demonstrating the enormous potential for increased economic benefit from the national parks could play a large role in increasing community incentives to work collaboratively with agency officials and conservationists (Guma, 2013). Currently, substantial conflicts remain as a result of both the management structures in place for communities within the park, as well as the wildlife interacting with the growing population and developing needs of humans. Because the enclave communities specifically are under the jurisdiction of local governments, rather than the UWA, it is extremely difficult to effectively punish illegal fishing, hunting, grazing and farming activity that can significantly negatively impact the integrity of the national park (Guma, 2013). In addition, the local government officials that have the jurisdiction to limit community expansion usually see these enclaves as constituencies of potential voters, dissuading them from implementing restrictive policies (Guma, 2013).

When speaking with village chairmen directly, the substantial levels of miscommunication between authorities and local residents, as well as the lack of accountability among low-level government officials emerged as two key weaknesses in the community conservation chain. Evidence of significant misunderstanding was obvious in Kisenyi Village, where local leaders voiced their frustration over not receiving the *25 percent* of gate revenues that they believed they had been promised; this figure, however, does not match any records of revenue sharing programs in place by the UWA (Bwambale, 2013).

The local chairman and fellow community members of the Kisenyi village stated that to date, they have not received any funds, and the only compensation they have received is the construction of two pit toilets by the UWA several years earlier (Bwambale, 2013). It was suggested several times that the money from revenue sharing programs was indeed distributed by UWA but then lost at the district level, so that it never reached the communities themselves (Bwambale, 2013). The village leaders also expressed frustration over the lack of contact with park authorities in recent years. As they explained, community conservation wardens, who had previously provided wildlife and conservation education programs to local people and discussed current problems and concerns, no longer visited the village (Bwambale, 2013). This resulted in a breakdown of communication and further conflict, as the community felt unable to address their concerns or meet their needs without the help of officials.

Safety and wildlife conflict was another concern of community members, which many felt should be addressed by local authorities who were not only failing to do so, but perhaps adding to the communal sense of insecurity. As community members in both Kahendero and Kisenyi villages claimed, hippopotamuses had killed seven people in the last several months, though accounts seemed to vary slightly (Arube and Bwambale, 2013). Other wildlife, including crocodiles, lions, and leopards, posed threats to both humans and livestock living in the communities and resulted in property lost and continued frustration. To address these issues, the *General Management Plan* has the UWA spending nearly 3 billion UGX from the period between 2011 and 2021 on reducing human-wildlife conflict, primarily through implementation of trenches, scare

shooting, planting of irritants and non-palatable crops, bee hives, vermin controls, and sensitization methods (General Management Plan, 2011).

Community members also complained of violence at the hands of authorities working within the park, both from rangers and army members (Arube and Bwambale, 2013). While specific accounts remained unconfirmed, these examples did point to hostility and the deterioration of collaborative efforts towards conservation.

Private corporations within the national parks also play a role in community relations and economic activity. Mweya Safari Lodge, the only private hotel within park boundaries, employs roughly 80 percent of its 131 staff from local districts (Carstens, 2013). The Lodge also orders produce from Kasese weekly, promotes a “Pack with a Purpose” program allowing guests to donate school supplies to local students, and donates \$1 US from every guest to a fishing village school on the Kazinga Channel through a partnership program with USAID (Carstens, 2013). While minimal when compared to some other stakeholders, the private corporation’s role in community relations may prove valuable if UWA were to join or replicate these proven, relationship-strengthening methods.

Unfortunately, overwhelming evidence points to the fact that communities adjacent to and within Queen Elizabeth National Park boundaries “continue to feel that the costs they incur as a result of the existence of Queen Elizabeth Park Area far outweigh the benefits they get,” as validated by *A Review of Revenue Sharing Around QENP Protected Area* (Manyindo, 2005). It is imperative that this pattern of thinking is reversed, or measures are taken to ensure that the integrity of QENP’s resources and wildlife is not further threatened.

3.2.3 Resource Extraction

The discovery of and continued search for natural resources, including petroleum extraction, hydropower, lime stone quarrying, and cobalt processing have also posed a conflict of interests as Uganda struggles to balance economic development and improved livelihood for its people with the continued preservation of natural lands and the maintenance of national parks (General Management Plan, 2011). While many people

have noted the serious potential for negative and permanent environmental impact, powerful authorities in the Ugandan government as well as private corporations have exercised control over these industries, leaving officials involved in national park management with little authority or input. Uganda's *National Development Plan* asserts that while it is integral that Ugandans should exploit and use national resources gainfully, it should be done "sustainably" and result in an economy "which supports stability and protection of biological and physical systems" (National Development Plan, 2010).

The Albertine Rift, an area in which "commercially-viable quantities of oil" were discovered in 2006, is also where a number of Uganda's protected national parks, forest reserves, and wildlife sanctuaries are located because of the incredible natural habitats the Rift offers (Veit, 2011). As a result, a "number of parks are partly or wholly inside the oil blocks and many others that lie outside the blocks will likely be affected by oil development," and oil exploration activities, including drilling and mining, have already begun in several parks, primarily Murchison Fall National Park, the largest park in Uganda (Veit, 2011).

Petroleum exploration and extraction has been conducted in Murchison Falls National Park since 1998, actions which have resulted in a number of irreparable damages to the natural habitats (Kityo, 2011). Over 80 percent of Uganda's oil fields are found within MFNP boundaries, and the material extracted has resulted in the production of billions of barrels of oil (Kityo, 2011). Evidence of the controversy surrounding oil drilling can be seen when compared with Bwindi Impenetrable National Park, which was designated a possible rich natural resource territory but has remained untouched, potentially because of its status as the highest revenue generating national park and the fact that as a natural area it is more ecologically sensitive (Barirega, 2013).

Queen Elizabeth National Park currently falls in a middle ground of exploitation, for while lime stone quarrying, cobalt processing, and petroleum exploration are currently taking place on QENP lands, extraction of petroleum has not yet begun as it has in MFNP (General Management Plan, 2011). The UWA *General Management Plan of 2011-2021* for QENP directly states that "the activities of oil exploration are likely to have negative impacts on the integrity of Queen Elizabeth National Park, the biodiversity, environment, water catchment protection, and ecosystem services" (General Management

Plan, 2011). These impacts are recognized as mainly noise and physical presence, drilling and hazardous waste, interference with tourism, and the establishment of industry infrastructure, as well as the possibility of environmental disasters such as oil spills, blow-outs, and fires (General Management Plan, 2011). The Uganda Wildlife Authority's strategies for confronting these negative impacts are vague and immeasurable, but they do not hold substantial power or authority over this industry. The UWA has little control when dealing with oncoming affronts to conservation. Instead, higher government agencies must step in and recognize that there are conflicting positions taken within Uganda's own ministries and work towards resolutions.

Already there are several economic development projects dealing with extraction that negatively impact the park ecosystem, and many worry that petroleum extractions will only further this degradation (General Management Plan, 2011). In order to address these negative impacts, an oil field monitoring unit will be established by the UWA, costing an estimated total of 950 million Uganda shillings. This serves to further demonstrate the lengths that conflicting stakeholder interests force actors to go to, even in situations where both stakeholders are under Uganda's governmental structure. As such, ministries such as the Ministry of Energy and Mineral Development and MTWH need stronger communication, followed by better partnerships and controls over the private industries that are seeking to make the public ministries to spend on conflicting projects (General Management Plan, 2011).

Current zones have been designed in Queen Elizabeth as the Tourism Zone, Special Climbing Lion Zone, Integrated Conservation Zone, Wilderness Zone, Active Management and Recovery Zone, and Administrative Zone (General Management Plan, 2011). The integrated conservation zone is currently the one where the majority of exploration and extraction is being done, while the wilderness zone is where “no resource extraction will be allowed” (General Management Plan, 2011). The idea and implementation of special zones is innovative and effective, but needs to be actively enforced and the zones themselves must be intractable. The implementation of zones is discussed more in the recommendations section (5.0).

Resource extraction in national parks remains a topical and controversial issue in Uganda's continued development. Such measures can result in tremendous revenue

generation for the national economy, though they can also leave behind destruction that cannot be repaired. Mr. Akankwasah Barirega, Principle Wildlife Officer at the Ministry of Tourism, Wildlife, and Heritage, recognized the controversies surrounding petroleum extraction, confirming that “oil can contribute both positively and negatively” to Uganda’s national parks (Barirega, 2013). The capital the nation receives from oil extraction and exportation is more substantial than national park revenue and has the potential to drastically assist development in Uganda. It can therefore both increase funds to spend on protected areas and improve nationwide human quality of life so that encroachment and community extraction of natural resources declines. At the same time, the petroleum extraction processes do take a toll on the natural environment, and therefore come at great cost (Barirega, 2013). It is critical for the national government to consider the fact that oil is a finite resource, whereas biodiversity is infinite and widely available, and for this reason Uganda should continue to ethically balance natural resource extraction with the preservation of biodiversity (Barirega, 2013).

3.2.4 Appraising Wildlife

Queen Elizabeth National Park is home to a vast diversity of plants and animals, which remains one of its greatest draws as a tourist attraction. Because of QENP’s diverse landscapes and large area, many of the species that tourists are most attracted by are “seen more easily in the park area than elsewhere in East Africa,” demonstrating the park’s competitive advantage over some other national parks in the region (General Management Plan, 2011). Unfortunately, many of these species and especially those which are most popular are facing severe declines in population in Queen Elizabeth National Park and nationwide. The UWA, responsible for direct management of QENP, is thus left with the burden of protecting a variety of different species and continuing conservation efforts, as well as managing the potentially conflicting job of increasing tourist numbers and revenues.

The *Uganda Wildlife Act* proclaims that the ownership of “every wild animal and wild plant existing in its wild habitat in Uganda is vested in the Government on behalf of, and for the benefit of, the people of Uganda (Uganda Wildlife Act, 1996).” It is therefore

the government's duty, through properly supporting the UWA, to best protect the wild species of Uganda and manage them in a way that benefits the people of Uganda. One way to do this is to sustainably increase tourism and government revenue from national parks such as Queen Elizabeth and improve overall national development through the use of the infinite resources available in Uganda's protected areas.

The appraisal of wildlife in particular is an important calculation for Queen Elizabeth National Park, for while the flora and fauna are the park's major commodities, it is often only a small number of specific species that tourists come to see. Conservation of these and all species often incurs notable expenses; as such, understanding the variation in economic value between individual species can prove beneficial to park policy makers as they look to maximize profit by increasing efficiency. By valuing wildlife according to the level that they attract tourists, current population numbers, and level of endangerment, UWA can best allocate its budgeted resources to have the most impact, simultaneously conserving biodiversity and increasing park revenues.

Some of the more popular species at Queen Elizabeth National Park include elephants, hippopotamuses, buffalos, lions, chimpanzees, leopards, crocodiles, kob, topi, and baboons. The World Conservation Union in the 2008 *IUCN Red List of Threatened Species* designated the African elephant, lion, and hippopotamus as vulnerable species, and the chimpanzee as endangered, demonstrating how fragile many of QENP's most popular species currently are (International Union for Conservation of Nature, 2008).

Wildlife surveys conducted in 2010 give the most recent statistics of several species in the park area, including elephants, lions, hippopotamuses, buffalos, Uganda kob, and many other mammal, bird, and reptile species. Many of these animals, particularly large mammals, remain at reduced population numbers following the high instances of poaching that took place in the 1970s and 1980s, and still are showing declining population rates (General Management Plan, 2011). Species population estimates can be seen in Table 4 and Table 5, the former of which was conducted by the UWA and the latter by the Auditor General.

Table 4: UWA Population Estimates for QENP

Species	1988	1995	2000	2004	2006	2010
Buffalo	5,000	17,000	10,000	6,777	14,858	8,128
Elephant	400	1,100	1,100	2,497	2,959	2,502
Hippo	2,200	2,800	3,400	2,632	5,024	
Lion		160-210		105*		
Uganda Kob	18,000	31,000	32,000	17,440	20,971	8,483
Topi	400	500	94	440	1,521	262
Waterbuck	1,500	1,800	4,500	3,382	3,548	2,483
Warthog	1,600	1,200	2,400	1,880	1,388	1,466
					*2002	

Source: General Management Plan

Assembled by R. Turner Shaw and Louisa Dunwiddie

Table 5: Auditor General Population Estimates for QENP

Species	1988	1995	2000	2004	2006	2010
Buffalo					14,858	8,128
Elephant					2,959	2,502
Hippo					5,024	2,886
Uganda Kob					20,971	6,543
Topi					1,521	657

Source: Uganda Tourism Sector Situational Assessment

Assembled by R. Turner Shaw and Louisa Dunwiddie

Two distinctive facts can be noticed from Table 4 and Table 5; there is a trend of declining populations, and there is a discrepancy between the figures of UWA and the Auditor General, particularly for the year of 2010. These declining rates are due to a combination of factors, which include changing environment and habitats, invasive plant species limiting grazing land, encroachment, poaching, and human-wildlife conflict (Guma, 2013). The discrepancy, denoted by the numbers in red, and is most apparent with kob and topi. The Auditor General figures put the kob population as roughly 25 percent lower than UWA, while also marking the topi population as 250 percent higher. There exist challenges in Queen Elizabeth in terms of species tracking; there are not

effective, concurring censuses, despite the known declining of species populations and the importance of accurate data at this pivotal time.

Local park authorities cannot address many of these problems, primarily due to a lack of adequate funding. There is little that UWA can do to combat large-scale climate change and the resulting effects on QENP's habitats, for example. But for problems they are able to address, such as the growth of invasive species, there is still disagreement on the best methods. The agency has been taking a number of steps to combat the spread of invasive species, including physically removing these plants to reduce the negative effects on wildlife populations (General Management Plan, 2011). Though invasive species are likely a greater threat to the kob and other mid-sized, even-toed ungulates, it remains direct contact with humans that is most greatly affecting the vulnerable populations of lion and elephant, through poaching and poisonings (General Management Plan, 2011).

Poaching, defined as the illegal hunting or catching of game for either commercial or sustenance purposes, remains a pressing issue in QENP despite a decrease in the number of incidents compared to the late 20th century. The animals most commonly poached include hippopotamuses and buffaloes; Uganda kob, topi, reedbuck, waterbuck, and warthog are less commonly poached but still threatened by local populations hunting for meat (General Management Plan, 2011). Incidences of elephant poaching for the international trading of ivory also continue to plague Queen Elizabeth, but are limited because of the easier opportunity of poaching in the neighboring Democratic Republic of the Congo (General Management Plan, 2011). The most common methods of poaching include firearms, wire snares, nets, and foot traps (General Management Plan, 2011). However, there are also incidences of poisoning, particularly when elephants have eaten village food or are involved in human-wildlife conflict, and occasionally when lions attack village livestock (General Management Plan, 2011).

The Uganda Wildlife Authority plans to spend nearly 3,100,000,000 UGX on initiatives to thwart poaching and similar illegal activities between 2011 and 2021, which includes increasing the ranger force, conducting patrols, strengthening law enforcement, establishing ranger mobile units, establishing an intelligence unit, prosecuting offenders, establishing and marking park boundaries, controlling bush fires, lobbying, and evicting

encroachers (General Management Plan, 2011). QENP has also been the location of a pilot program for a new criminology project named Wild-Leo in which specialized geo-tracking cameras have been sent out on patrol with park rangers in order to better understand poaching patterns (Kirya, 2013). This program has been a great success so far and plans to implement it in other Ugandan parks are in place.

There are currently funds designated in the QENP *General Management Plan* for monitoring wildlife populations and stability, with emphasis on the endangered chimpanzees and the vulnerable African elephants. The UWA plans to conduct animal population censuses every two years to track animal trends, and will continue the Management Information System (MIST) that geo-references animal data to better monitor populations and assists rangers on patrol (General Management Plan, 2011). In total, the UWA has budgeted over 1,800,000,000 UGX in a ten year period on land acquisition, lobbying, conducting population censes, staff training, and Muhokya corridor monitoring, all for the expressed purpose of benefitting the wildlife populations, particularly elephants, of the park (General Management Plan, 2011). These large expenditures seem to demonstrate a commitment on behalf of UWA to wildlife monitoring and protection, though the current plans do not consider tourists' preferences or the potential for financial gain that these investments could have.

In order to accurately value flora and fauna species at Queen Elizabeth National Park, a suggested economic appraisal formula has been created to assist in the valuation of Queen Elizabeth species. The purpose behind this formula is to inspire parks such as Queen Elizabeth to be both sustainable and economically viable through the utilization of natural assets. Mammals were the only species used in the examples of the suggested formula in Figure 3, but other plant and animal species can also be easily substituted in.

SUGGESTED APPRAISAL FORMULA:

TB = Total Conservation Budget (variable to UWA allocations) = ~ 600,000,000 UGX

M = Money that should be spent on a particular species, annually

T = Threat level by human or natural risks at QENP (0, 1, 2)

V = International Vulnerability of species (.5, 1, 1.5)

P = Popularity with tourists at QENP (.5, 1, 1.5)

T, V, and P are all set on scales of three levels – a low, a medium, and a high.

They then have three set multiplier figures assigned to each level.

$$TB = (M \text{ of A species}) + (M \text{ of B species}) + \dots + (M \text{ of X species})$$

$$M = 30,000,000 * (P * V * T)$$

African Elephant example:

T = high: population is currently at only 2,502 with continuing poaching threats

V = high: African elephants are internationally recognized as vulnerable

P = high: tourists are very eager to see elephants at QENP

$$M (\text{elephants}) = 30,000,000 (1.5 * 1.5 * 2) = 135,000,000 \text{ UGX annually}$$

Ugandan Kob example:

T = medium: population is between 6,000 and 9,000 but on the decline, slight poaching threats

V = low: kob are not particularly vulnerable

P = medium: tourists enjoy seeing kob but they are not one of the main attractions to QENP

$$M (\text{kob}) = 30,000,000 * (1 * .5 * 1) = 15,000,000 \text{ UGX annually}$$

The figures in Figure 3 are therefore fairly arbitrary but serve a greater purpose of demonstrating the important relativity. The 30,000,000 UGX in the equation solving for M, for example, can be easily altered to fit UWA budgets. These variables can and should be calculated by QENP and conservation experts who better know the proper protection methodology. Similarly, these experts should also determine the policies that the M figures should ultimately be spent on. If policies overlap for species (e.g. land acquisition), the figures can be counted in multiple M's, increasing net effects and

encouraging projects that apply to multiple species for those at UWA in charge of implementation.

It should be noted that 3,000,000,000 UGX is the annual revenue from roughly 34,000 visitors at Queen Elizabeth. The current percentage of total revenue spent on wildlife protection and conservation appears to be near 20 percent (other expenses are primarily salaries and facilities), as further explained in the private park budget for 2013-2014. Twenty percent of the 3,000,000,000 UGX annual revenue comes to 600,000,000 UGX, which has thus been attributed as the total annual budget for conservation and protection methods.

With the implementation of a formula like the one submitted in Figure 3, the UWA can be more successful and effective in their expenditures on conservation and increased revenue generation plans.

4.0 Conclusion:

After conducting a comprehensive economic analysis of Queen Elizabeth National Park, several elements of the study emerged as critical factors to the continued economic development of the country, as well as the ongoing protection of Uganda's natural lands. The adjacent communities' proximity to the park, community relations with government and wildlife, and community conservation efforts are three concerns which each hold tremendous implications reaching far beyond their immediate impact. Similarly, government management, communication, policy-making, and efficiency appeared integral to the park's ultimate success. In its current state, mismanagement of funds, poor collaboration and communication between agencies, and conflicting interests and objectives all play a role in harming the economic efficiency, the integrity, and the overall mission of Uganda's national park system.

While these conclusions based on the findings and the following recommendations are produced in the context of Queen Elizabeth National Park's limitations to economic efficiency, there is still a greater need for similar analyses to be conducted at Uganda's remaining national parks and wildlife conservation areas. In

many ways Uganda's national parks do not match the infrastructure, coordination, and tourist attractions that exist at other East African and Southern African national parks, and it is only by examining and restructuring their own national park management system that Uganda can begin to achieve its potential.

Uganda's national government does not have to make the choice between national development and conservation. It is possible to utilize nationalized natural resources for the growth and sustainability of both if the right policies and individual mandates are put into action. Once exceptional economic efficiency is truly achieved at Queen Elizabeth and at Uganda's other national parks, the country will see great rewards in the form of higher tourist numbers and federal revenue, spurring national development and economic growth.

5.0 Recommendations:

After conducting a comprehensive and detailed analysis of stakeholder interests, revenue generation, and management of Queen Elizabeth National Park, the researchers have outlined a number of recommendations with the intention of maximizing economic profit, increasing the rate of national development, and maintaining the integrity of the natural land and species within the park and the system as a whole. Each recommendation is dependent on a substantial number of external factors, but the themes are important and recognizable. The researchers hope that the gradual and systematic achievement of the recommendations noted below will result in numerous and far-reaching positive implications for the ecosystems of the park, the communities surrounding them, and the country.

5.1 Ministries and Higher Government

The broad power and authority of governmental policy-making agencies like the Ministry of Tourism, Trade and Industry and the Ministry of Tourism, Wildlife and Heritage give them a tremendous amount of responsibility over the parks and their increased development. The researchers believe that first and foremost, QENP and other lucrative, tourism based parks must be made more accessible and secure; this involves strengthening the infrastructure and modes of transportation within and surrounding the parks, as well as increasing security, particularly for protected areas near Uganda's borders. In conjunction with these efforts, upper-level government officials should be increasing the amount of international and domestic marketing done to attract visitors to the national parks. To capitalize on the potential of the tourism industry and tap in to the market of high-spending foreign travelers, advertising the park must be a recognized priority.

Another critically important aspect of the government's management of the national parks is the link between upper-level agencies that enjoy a supervisory role, and lower-level agencies like the Uganda Wildlife Authority that are responsible for direct, daily administration. The breakdown in communication and collaboration that has developed contributes to significant conflicts, as well as poor execution of park programs, policies, and objectives. When both groups are working together to achieve the same goals, the national parks will run much more smoothly and successfully.

Finally, there is a growing need for policy-making agencies within Uganda's national government to both outline a plan for sustainable and low-impact resource extraction, and follow through with this plan in order to maintain security and enforce its limitations. As petroleum exploration continues in QENP, and resource extraction remains a tempting and lucrative investment for private corporations and the government alike, it has become increasingly important to enact restrictions quickly so that the impact to natural habitats remains as low as possible.

5.2 Uganda Wildlife Authority

The UWA is another stakeholder in the national park system that has significant authority in the parks and in turn, substantial responsibility in the maximization of potential and sustainable conservation. Some opportunities for the UWA that were acknowledged in the SWOT analysis of 2010 and should be acted on immediately are to raise the park entrance fees by at least \$5 US due to an inelastic demand, and to develop more tourist activities with the overhead that UWA anticipates in the *General Management Plan* (General Management Plan, 2011). In addition, the researchers have an extensive list of their own recommendations for UWA based off of their field research.

The UWA's proximity to and high incidence of interaction with community members makes the authority the critical actor in the success of community conservation efforts in QENP if such efforts are to be continued. Increasing the presence of community conservation wardens and emphasizing their role as educators, community advocates, and liaisons between the government and local people is a basic step that will make a huge difference in relations between the groups and continued conservation. It will also serve to minimize human wildlife conflict and give communities a space in which they may voice their concerns and give their own recommendations.

The educators within UWA should also be conveying that same knowledge about conservation, wildlife, and natural habitat protection to other security forces working within park boundaries, including the UDPF and military personnel. These groups, which in the past have negatively impacted conservation efforts, have enormous potential to contribute. Next, as long as the revenue sharing programs are continued, the UWA has a responsibility to ensure that the allotted funds arrive in the communities where they are supposed to, rather than in the pockets of district officials and larger local governments. The UWA's demonstration of commitment to this recommendation will also play a large role in mending the deteriorating relationship between themselves and local communities.

At the same time, however, the researchers have recognized that one of the greatest future challenges to the sustainability of Queen Elizabeth National Park both as a conservation area and a development prospect for Uganda is the growth of the internal and peripheral communities. The population of communities that live inside enclaves

that exist within park boundaries alone already exceeds 150,000, and with the current population growth rates UWA estimates are that it will reach 300,000 in the next 10 years (Guma, 2013). Therefore, the researchers believe that the UWA should explore options of resettlement for communities living inside QENP. The *Uganda Wildlife Act* does specifically give the right to “resettle any persons resident in a wildlife conservation area or in a specific area of the wildlife conservation area or outside it” to the Uganda Wildlife Authority (Uganda Wildlife Act, 1996).

Even with the most successful community conservation programs, the villages in the parks engage in economic activities that are detrimental to the preservation of natural land and habitats, while simultaneously continuing to grow. Relocation would also eliminate a substantial amount of common human wildlife conflict completely. Community members have complaints that they are left with no way to make a living if they cannot keep livestock and the fish they rely on are exposed to chemicals from nearby processing plants (Arube, 2013). Resettlement could be financed both by revenue sharing percentages that are currently not meeting their goal anyway and UWA headquarters. It could then provide these communities with more options for better lifestyles.

The researchers believe that the UWA, with the assistance of NGOs, conservation agencies, or private corporations also has the power and responsibility to develop a more concentrated effort to protect the threatened species of plant and animal life, while at the same time acknowledge and act on the reality that certain species bring in the most tourist revenue. Drawing attention to these large-scale conservation efforts will serve two roles, both strengthening international esteem of the UWA, as well as increasing awareness of the parks, their value, and attraction to potential tourists.

In the larger industries of tourism and resource extraction, there are several recommendations for the UWA that would contribute to stronger national development while supporting the national parks. The researchers believe that tourism efforts like the construction of UWA Lower Camp and Tembo Canteen in QENP that are situated in direct competition with private corporations should be either discontinued or highly invested in by UWA with greatly increased marketing and improvements to all infrastructure and products. Unless these improvements are made, the resources for

management and upkeep would be better-utilized elsewhere, and private corporations are currently much better equipped to maximize the profit capabilities of tourist accommodations. QENP under the management of the UWA plans to run deficits for the years of 2012, 2013, and 2014, relying on high investments in tourism infrastructure, facilities and products to produce the future revenue to show large surpluses 2015 to 2021 (General Management Plan, 2011). While it is not unwise to show deficits for high investment projects that have high prospects for return, UWA should reconsider exactly where these investments should go to have maximized profitability.

In terms of resource extraction, the researchers believe that the UWA is well equipped to play a role in direct zoning for resource extraction, due to their knowledge of the land and habitats within the park. As the policy-makers have the responsibility to design and enforce a plan, the authorities and rangers of the UWA can contribute their knowledge of zones that will have the lowest possible impact on the park itself. But in repetition, these zones must be properly enforced and once designated, the boundaries cannot be malleable or the whole system is meaningless. The integrated conservation zone, which should be the only zone where natural resource activities should be allowed, should be kept as compact as possible.

Currently the distribution of various species of wildlife at Uganda's national parks is fairly sporadic, due mainly to poaching and the elimination of certain savannah species in the past half-century. Giraffes, for instance, remain at Murchison Falls but not at QENP, despite the similar habitats of each park. While introduction of certain species has been suggested by some of the area's conservation experts, it is a costly and difficult option. There are therefore two paths that UWA should take going forward to maximize profitability and continue or increase conservation efforts. Uganda, through the MTWH and UWA, should either aggressively market the differences between the parks, perhaps designing a single tour that reaches several, or they should engage in efforts to introduce all of their popular species to their most popular parks like QENP in order to compare to regional competitors.

If the MTWH were to increase marketing of variations between park species, they should adopt and utilize something similar to the 'Big Five Game' marketing campaign, in which areas highlight the presence of lions, elephants, buffalo, leopards, and rhinos.

Since Uganda does not have rhinos, however, they could create a ‘Uganda Big Five,’ in which they attract tourists to visit two or three parks to see the five most popular species, substituting hippos or giraffes for rhinos (and perhaps advertising the domesticated rhinos at the UWEC in Entebbe). If species introduction was instead chosen over a new marketing campaign, a serious effort should be made for the integration species including giraffe, zebra, or hyena into QENP’s ecosystems. In this way, QENP could hope to compete with some of the more developed park areas in the Serengeti and Maasai Mara regions.

Finally, the researchers believe that the lack of NGOs in QENP is a weakness that is prohibiting the achievement of maximum economic efficiency. The UWA should make every effort to increase attractiveness of the park area to international groups, who could contribute in a variety of ways, from development of infrastructure, marketing of the park, protection of wildlife, and increased education opportunities.

While the majority of recommendations fall on the government bodies that hold the most control over park objectives and policies, there are also a number of steps that could be taken by other stakeholders to contribute to the success of QENP and the park system.

5.3 Private Actors

Private corporations in the tourism industry should strive to cultivate a self-enforcing culture of responsible and low-impact tourism. By refusing to engage in activities like off-tracking on game drives, private lodges and guides can help the conservation efforts of other stakeholders and contribute to the sustainability of their industry. In addition, a lack of non-profit private involvement in conservation was apparent at Queen Elizabeth. Conservationists and related NGOs should invest in the park and surrounding area in any number of capacities, mentioned above, and local communities should remain open to improving relationships with UWA rangers and the agency itself.

Other conservation models involving private actors have also been suggested. Similar to the proposal that there should be a greater NGO presence at Queen Elizabeth,

there are discussions of a different park management system with greater private involvement. One such public-private partnership that has been proposed is that sections, reserves, or perhaps particular zones could be managed by NGOs or private entities instead of entirely UWA (Kamuntu, 2012). Such partnerships for “commercial arrangements to manage conservation areas” are allowed and encouraged by the *Uganda Wildlife Act* when the arrangements provide management for the protected area, the provision of services and infrastructure, and the management of particular species (Uganda Wildlife Act, 1996).

While many of these recommendations are themselves dependent on the continued development of Uganda and stability of the government and surrounding countries, the stakeholders have the organizational interests and incentives to substantially improve the economic efficiency of not only Queen Elizabeth National Park but also the entire national park management system. With the achievement of these recommendations, the researchers hope for the sustainable and profitable conservation of natural land and biodiversity across Uganda and increased national economic development.

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Appendices

1) Consent to Participate in Interview

Title of Research: Analyzing Economic Efficiency in Uganda's National Parks

You have been asked to participate in a research study conducted by Louisa Dunwiddie and R. Turner Shaw from the School of International Training (SIT). The purpose of this study is to draw conclusions on how the continued preservation of national parks affects Uganda's economic development. We plan to research revenue generation, funds management, redistribution, and then the economic programs created with these funds to increase community relations, better conservation efforts, and increase tourism potential and experience. Lastly, the researchers hope to compile enough information to assemble their own recommendations for additional programs. Please read the rights below and feel free to ask questions.

- This interview is completely voluntary. You have the right to answer or refuse to answer every question and to stop the interview at any time.
- You have the right to grant or deny the researchers access to use your name, title, and/or direct quotes in the research study.
- There is not an obligation of compensation for this interview.

Please check all that apply:

I give my permission for this interview to be recorded on tape.

I give my permission for the following information to be included in publication resulting from this study:

My Name

My Title

Direct Quotes

Printed Name

Signature

Signatures of Interviews

Email: ldunwiddie15@students.claremontmckenna.edu, rtshaw@gwu.edu

2) Questionnaire: UWA Wardens, UWA Officials

1. What is your full name and title under the UWA?
2. What are the official interests of your department concerning Queen Elizabeth National Park?
3. What are your personal interests in the park?
4. What have been the greatest economic successes of the park in recent years? What programs were recently implemented designed to improve park profitability and economic sustainability?
5. How are these programs currently functioning?
6. What are the current greatest challenges to the park's economic success?
7. What measures are being taken to address these challenges?
8. In what areas do you believe the park could improve its economic efficiency? What gaps or inconsistencies do you see in the current management and planning?
9. Whose authority would significant changes to management or planning fall – the UWA or higher government?
10. Have there been any reports done for an economic evaluation of wildlife? What are the conclusions reached?
11. Does the UWA and Queen Elizabeth N.P. recognize any species as more valuable at this time? If so, are there measures taken to specifically protect these species?
12. Does the UWA ever conduct surveys of tourist satisfaction and expectations for Queen Elizabeth N.P.? Do they ever take measures to try and better meet these expectations?
13. How are the UWA relations with the private corporations that profit off of the national park?
14. Does any revenue from these private corporations get transferred to the UWA?
15. Do these private corporations have any power over conservation, regulation, or planning issues?

3) Questionnaire: Fishing Community Local Chairmen

1. What are your interests in the Queen Elizabeth Park Area?
2. How much money does your community receive from revenue sharing at QENP?
3. What programs has your community put this money towards?
4. Do you feel more invested in the park because of the revenue sharing program?
5. Do you believe that 20% of gate proceeds is a fair amount?
6. If not, what do you believe would be fair compensation?
7. Do you believe the new formula measuring distance and impact for new revenue distribution that UWA is using is more or less fair?
8. How does the park most impact your and your neighbors' lives?
9. How often are you in contact with park authorities?
10. Do you feel that you have a good or bad running relationship with park authorities? Why?
11. Do you feel that places such as QENP are necessary for the protection of Uganda's land, animals, and biodiversity?
12. Who do you think has that responsibility to maintain such areas, if anyone?
13. What role do you see your community having in the preservation of natural areas?
14. Is there human wildlife conflict in your area?
15. What are the causes of human conflict in your area?
16. How successful has UWA been in mitigating those conflicts?
17. Do you feel as if community growth should result in an increase in designated community land area?
18. Do you feel limited by any restrictions placed on you because of how close you live to the park?
19. Do you have any recommendations for additional community conservation programs?

4) Questionnaire: Tourists at QENP

1. What is your full name?
2. Why did you choose to come Uganda? Why to Queen Elizabeth National Park rather than other parks?
3. How long are you staying in Uganda?
4. How long are you staying in Queen Elizabeth?
5. Where are you staying?
6. What activities will you participate in during your stay?
7. Do you plan to go to any other national parks during your trip?
8. Did you come to see any particular animals?
9. How much do you know about UWA and their management procedures? What are your opinions on them?
10. Do you have any complaints or concerns about the national park since being here?

5) Questionnaire: Private Corporations in and around QENP

1. What are your interests in the national park?
2. What is your relationship with the UWA? What sort of interactions do you have regularly?
3. How many visitors do you have per month?
4. What fees do you pay to UWA?
5. What influence do you have over UWA policies on natural resource extraction, conservation, community relations, and overall management? Do you wish that you had more?
6. Does the lodge place a higher economic value on some wildlife over others?
7. Do you employ community members, Ugandans, or foreigners?
8. What are your biggest concerns for the future of the park and what do you think is holding QENP back from maximum potential profitability?