Fall 2014

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A Crude Awakening: The Relationship Between Petroleum Exploration and Environmental Conservation in Western Uganda

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Uganda Development Studies
Fall 2014

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Location: Kampala and Hoima Districts, Uganda
Dedication

These works are dedicated toward the thousands of lives currently being affected by oil exploration in the Albertine Graben through means of displacement, pollution, invasion of property, and environmental degradation, and to the movements of people striving to protect Uganda’s natural beauty and diversity.

“Developing Uganda’s oil and gas resources must never compromise the long-term conservation of the special environments and natural places where these resources have been found.”

- Representative of the World Wildlife Fund

Cover photo: Oil well head in Hoima district, Kristina Ericson, personal photo, 2014
Acknowledgements

I would like first like to acknowledge and thank the entire staff of the School for International Training’s Kampala Resource Center for their work and support during the practicum time, particularly Dr. Charlotte Mafumbo whose guidance and expertise made all internship and field opportunities for this project a reality.

I extend my deepest gratitude towards Ms. Lynn Turyatemba and Mr. Richard Businge of International Alert for the time they have dedicated towards this project, for opening International Alert’s doors and resources to me, and for providing a warm and welcoming atmosphere for me to work in.

Lastly, I would like to acknowledge representatives of the World Wildlife Fund, PROBICOU, Uganda Wildlife Authority, Victoria University, ECOTECH, Hoima District Offices, NAVODA, CNOOC, AFREGO, The National Chimpanzee Sanctuary and Wildlife Trust, and the Hoima community for the time and assistance they dedicated towards this research.
Abstract
In this study the researcher aims to explore the emerging oil and natural gas processes in the Republic of Uganda and the potential impacts that such exploration will generate upon Uganda’s biodiversity and local livelihoods. The researcher will approach this topic through extensive research on emerging and current legal frameworks pertaining to Uganda’s natural environment, and through practicum-based research via leading non-profit organizations in Uganda.

During the research process the researcher worked as a Student Research Intern with International Alert. International Alert is an international Non-Governmental Organization (NGO) that works to promote peace building and conflict resolution in over thirty countries worldwide. The researcher worked directly under International Alert’s lead oil and natural Gas researcher in their Kampala, Uganda office.

The researcher also worked with Victoria University of Kampala: Oil and Natural Gas Department, the National Environmental Management Authority (NEMA), World Wildlife Fund Uganda, and Hoima district officials and civil service organizations in order to gather adequate data for the presented research topic.

The researcher spent ten days of the allotted research time in Hoima District, located in the Albertine Graben in Western Uganda. This region is the principal location of Uganda’s oil and natural gas reserves, found primarily in Lake Albert and it’s adjacent shorelines. Here, the researcher studied closely with local community members, non-government organizations, and district environment officials to gather field data for the topic at hand.
Acronyms and Key Terms:

AFREGO – African State for Energy Governance
CNOOC – Chinese National Offshore Oil Company
Crude Oil – Unrefined petroleum, found naturally underground
CSO – Civil Society Organization
Downstream – Includes the distribution, marketing, and sales phases of oil development
DRC – Democratic Republic of Congo
Dutch Disease - The increase in the economic development of natural resources and a subsequent decline in other economic sectors
EIA – Environmental Impact Assessment
IOC – International Oil Company
MEMD – Ministry of Energy and Mineral Development
Midstream – Includes the transportation, refining, and conversion phases of oil development
Natural Gas - Flammable gas, consisting largely of methane and other hydrocarbons, occurring naturally underground (often in association with petroleum) and used as fuel.
NAVODA – Navigators of Development Association
NCA – Norwegian Coastal Authority
NDP – National Development Plan
NEA – National Environment Act
NEMA – National Environment Management Authority
NEMP – National Environment Management Policy
NGO – Non-Government Organization
NOGP – National Oil and Gas Policy
NOSCP – National Oil Spill Contingency Plan
PEDP – Petroleum (Exploration, Development and Production) Act
PROBICOU – Pro-Biodiversity Conservationists in Uganda
RAP – Resettlement Action Plan
SEA – Social Impact Assessment
UNOC – Uganda National Oil Company
Upstream - Includes the promotion, licensing, exploration, development, and production phases of oil development
UWA – Ugandan Wildlife Authority
WWF – World Wildlife Fund
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1. Introduction
In this study the researcher targeted how emerging natural resource extraction and petroleum exploration in the Lake Albert basin of Western Uganda will effect, or are already effecting, the natural environment and biodiversity in the region. The researcher began their study with the goals of studying how oil and natural gas exploration are currently effecting wildlife populations, water resources, land usages (such as agriculture), and human inhabitants in the Albertine region. The researcher proposed to conduct this research through a blend of traditional research and participant observation methods. Particularly, the researcher aimed to explore the legal frameworks surrounding environmental conservation and natural resource extraction that are currently in place in Uganda, and examine how these frameworks could be adjusted in order to create a sturdier path towards sustainable development in the region. To achieve these goals the researcher worked as an Undergraduate Student Research Intern with International Alert’s Kampala offices, under the lead of their oil and natural gas research team. Through International Alert’s guidance the researcher was provided ample sources of information and field opportunities throughout the six-week practicum period. The researcher split the practicum time between the city of Kampala, and the district of Hoima in Western Uganda, where the country’s primary oil reserves are located.

2. Background:
The Albertine Graben, also identified as the Albertine region or the Albertine Rift, refers to the geographic area straddling the border between Uganda and the Democratic Republic of the Congo (DRC) and surrounds Lake Albert, Lake Edward, and subsequent waterways. It was here that petroleum exploration in Uganda first began in the 1920s when Ugandan citizens began reporting seepages, or discharges, of oil in the region. In 1938 the Anglo European Investment Company of South Africa drilled Uganda’s first exploratory well, opening new doors to economic activity. Despite this promising start, hopes of an emerging oil sector were all but squashed at the materialization of the Second World War and were tabled when Uganda broke free of Great Britain’s colonial power in the mid-twentieth century (Bainomugisha, 2006). At the beginning of the 1980s, while internal conflict and guerilla warfare continued to spread throughout Northern Uganda, intensive oil exploration boomed in the Albertine Graben. In 1983 seismic surveys and aeromagnetic data confirmed the presence of sedimentary basins in the
region, formally recognizing the potential for Uganda to become a prominent oil producing state. This discovery paved the way for the construction of Uganda’s first legal frameworks concerning petroleum development, the Petroleum Exploration and Production Act of 1985. This act granted permission for international companies to obtain licenses to conduct seismic surveys and drilling procedures throughout the area, marking the start of the exploration phase in Uganda’s petroleum sector, which is where it remains today (International Alert, 2013).

Heavy exploration in the Albertine Rift began in 2003, and boomed in 2006 when the National Environmental Management Authority of Uganda (NEMA) confirmed the presence of commercially viable amounts of oil in the area, as concluded from studies by Australia’s Hardman Resources, and Britain’s Tullow Oil. At present, Tullow Oil remains one of Uganda’s three leading oil companies and most influential licensed stakeholders, alongside Total Oil of France and the Chinese National Offshore Oil Company (CNOOC). There are currently ten identified exploration areas in the Albertine Graben, and five licensed exploration areas both onshore and offshore (PEPD, 2014). The petroleum exploration companies currently holding licenses in Uganda are Heritage Oil, Tullow Oil, Hardman Petroleum Africa, Tower resources, and CNOOC (NOGP, 2008). As of 2012, there were 66 exploratory wells sunk in the Albertine Graben, of which 59 were found to be successful oil producers (International Alert 2013). In August of 2014 estimates of Uganda’s total oil reserves spiked following the appraisal of 14 new oil fields in the Albertine Rift, raising the total reserve calculation from 3.5 billion barrels to approximately 6.5 billion barrels. The new explorations identified that the number of recoverable barrels, or crude oil that can feasibly be taken from the ground, was only increased by a slight margin from 1.2 billion barrels to 1.4 billion (Musoke, 2014). Phase II of Uganda’s petroleum development process, the extraction phase, is set to begin in 2018 (Tentena, 2014).

The relationship between oil extraction and environmental conservation is rocky, and has produced on-going battles throughout the world’s oil-producing nations. Petroleum development is often connected with environmental degradation due to oil spills and leakages, pollution of water sources, gas flaring, destruction of forested and protected areas, and rapid mass physical developments which encroach upon natural areas. All of these potential dangers are serious risks currently in Uganda. Uganda’s Albertine Graben is the most diverse region of the country and
one of the most naturally rich regions on the African continent, and subsequently on planet earth. The Albertine Rift represents approximately 30% of Africa’s total mammal species, 51% of its bird species, 19% of its amphibian species and 14% of the continent’s plant and reptile species (International Alert, 2011). The Albertine region also houses 10 of Uganda’s 22 national parks and protected game reserves, such as Murchison Falls National Park and the Rwenzori Mountains, as well as 60% of Uganda’s water bodies, and numerous archaeological sites. It is these protected areas, such as Queen Elizabeth National Park and Murchison Falls National Park, that establish the Albertine region as Uganda’s largest pull for tourism, one of the country’s primary economic activities (International Alert, 2013).

In terms of environmental preservation, petroleum exploration in Uganda has already faced numerous issues, which are expected to worsen when extraction processes begin. As stated by a representative of the National Environmental Management Authority, “even in the preliminary stages of oil production there are still many environmental issues at hand” (Kristina Ericson, Personal Interview, 2014). Article 39 of the Ugandan constitution of 1995 states that “every Ugandan has the right to a safe and healthy environment,” along with the subsequent rights:” a) the right to freedom from pollution, environmental degradation and activities which threaten life, health, or livelihood; b) the right to protection and preservation of air, soil, water, flora, and fauna; c) healthy food and water; and d) a safe and healthy working environment.” Article 245 of the constitution also calls for “…measures intended (a) to protect and preserve the environment from abuse, pollution and degradation; (b) to manage the environment for sustainable development; and (c) to promote environmental awareness” (Republic of Uganda, 1995). These rights, governed by NEMA, have been reiterated throughout many of Uganda’s leading environmental legal frameworks such as the National Environment Act (NEA), the National Forestry and Tree Planning Act (2003), and the National Oil and Gas Policy (2008). All of these documents, however, face issues regarding implementation and enforcement.

3. Justification:
Natural resource extraction holds the potential to heavily impact all cross-sectors of development. If not approached in an ethical and sustainable fashion, misuse and mismanagement of this division could lead to environmental degradation, reduced health of
human beings and other organic matter and social instability, as has been seen in numerous oil producing nations throughout the world and the African continent.

Studying the relationship between petroleum exploration and the natural environment in Uganda is important for numerous reasons stemming from several sectors of development. These studies are important for the citizens of Uganda, particularly those in the Albertine Graben, so that they may become better educated in regards to the state of the environment in the area, as well as more informed about the legal frameworks protecting their natural habitats and the rights that they hold as Ugandan citizens. Furthering studies on the Albertine Rift’s environment might also promote awareness and conservation efforts in the area, from the grassroots to governing bodies. Oil exploration near Lake Albert primarily takes place in protected land areas and national parks, creating potential disasters for biodiversity, including human life, in the country. The region’s heavy reliance on land for agriculture and clean waterways for fishing leaves Uganda in a vulnerable state with the growing petroleum extraction sector. Through research approaches taken both in the capital city of Kampala and the oil-enriched region of Hoima, the researcher hopes that this holistic and cooperative comparative study can be used to examine multiple viewpoints and opinions concerning oil exploration in Uganda. The researcher hopes that this study will help promote conservation efforts throughout the Albertine Graben and call upon Ugandan nationals, no matter their level of expertise, to take a stand to protect their lands from environmental degradation due to poor extraction procedures.

4. Objectives:
Prior to this study the researcher proposed the following objectives:

- To learn about the extractive process of the oil and gas industry in Uganda
- To study environmental governance in Uganda and to learn about the laws and policies pertaining to natural resource management, particularly in the Western region
- To discover the current and potential environmental and social impacts that oil drilling processes inflict upon the Albertine Graben in Western Uganda
• To examine the proposed mitigation measures the oil and gas sector hopes to employ in order to prevent negative environmental and social impacts and to ensure community safety.

Supplementing these points, the researcher focused on the following topics within their research pursuits:

• How Ugandan petroleum development will effect agriculture and water sources in the Albertine Graben.
• How petroleum development will influence biodiversity in Western Uganda, including human habitats and health.
• How petroleum development will impact social livelihoods in the Albertine region.

5. Methodology:

For this study the researcher used qualitative research methods in order to create a holistic research approach to the topic of study. The researcher made use of personal interviews, participant observation, and traditional research of secondary data to adequately compile their research. A neutral approach was taken in this research, meaning that the researcher did not approach the topic from a particular opinionated stance or viewpoint. The researcher analyzed results through interview focus groups, interview transcriptions, and organization of research from legal documents, government reports, and natural resource development research sources.

5.1 Traditional Research Methods:

International Alert is an international NGO that strives to promote peace building and conflict resolution throughout the world’s six inhabitable continents. In Uganda, International Alert’s Kampala-based office strives to promote peace through research, education and capacity building. While a majority of their efforts focus on conflict resolution in Northern Uganda, International Alert’s research team also works to promote peaceful and sustainable petroleum exploration in the country, and to inform both the national and international community about the potential dangers and conflicts that oil exploration may bring (International Alert, 2009). The researcher chose to work with this organization in the hopes of gaining knowledge about environmental issues through a socially conscious, and well connected, platform. This proved to
be beneficial as it provided the researcher with contacts on both the grassroots and the governmental level.

The researcher spent each weekday at International Alert’s Kampala offices studying various research documents and legal frameworks provided by the research team. Many of the published works studied were International Alert productions (i.e. *Harnessing Oil for Peace and Development, Governance and Livelihoods in Uganda’s Oil-Rich Albertine Graben*, and *Oil and Gas Laws in Uganda*). To counteract the lack of environmental research done at International Alert, the researcher conducted analytical studies of relevant environmental laws and political frameworks including the National Oil and Gas Policy (2008), the National Environment Act (2014), the National Environment Management Plan (2014), the Constitution for the Republic of Uganda (1995), among various other contingency plans, environmental outlooks, and frameworks. These sources were essential tools in this study.

The researcher made use of Internet research tools and methods, as well as local Ugandan news sources, to further extend their research on Uganda’s environmental issues. The Internet research tools helped provide necessary background information on active International Oil Companies (IOC) in Uganda, Uganda’s environmental history, and information on the physical dynamics of the Albertine Graben. Uganda’s leading printed news sources, *The Daily Monitor* and *The New Vision* provided the researcher with up to date political, social, and environmental events happening within the realm of oil exploration.

5.2 Interviews:

The researcher conducted thirteen interviews throughout the allotted research time, seven formal and six informal. These interviews provided valuable information from primary sources about the current state of environmental conservation and preservation in Western Uganda, the social impacts of oil and natural gas developments, and future plans for the industry. To ensure the inclusion of multiple viewpoints the researcher identified three focus groups of interviewees, each from a differing authoritative position or area of expertise concerning Uganda’s environmental and social protection. The researcher used basic tools to conduct interviews, a pen and notebook, and made use of Microsoft Office components in the transcription and analysis processes.
The first group (Focus Group A) consisted of oil stakeholders who are currently employed by the government of Uganda. The three interviewees in this focus group provided the researcher with beneficial information on the governance of Uganda’s oil sector and expressed authoritative opinions on the issues at hand. These issues were often vague and unclear, yet offered the researcher valuable insight on opinions on conservation from an executive level perspective.

Focus Group B involved five members of non-governmental agencies (NGO). Many of these organizations, such as International Alert, focus primarily on the grassroots level of oil and natural gas ordinance. These groups tackle issues that cross both environmental and social margins, such as promotion of environmental education, evaluation of human and environmental rights violations, capacity building, and the advancement of conservation efforts in the Albertine region. These participants, with the majority hailing from the Hoima district, provided the researcher with eyewitness accounts of environmental degradation, changes in social atmosphere, changes in animal and human migratory procedures, among others.

Focus Group C was comprised of five individuals from varying backgrounds that are all crucial in the development of the oil industry. These included community members from the Hoima region, representatives of international oil companies (IOC) and professors of Ugandan university programs. The random assortment of participants in Focus Group C was crucial to the researcher, who learned that there is no one set of opinions or values on whether or not Uganda can pursue petroleum development in an environmentally sustainable and socially friendly manner. The collection of data from varying stances proved to the researcher how little this topic is discussed in Uganda, and how vulnerable and sensitive environmental sustainability movements are in the country. This focus group also made clear that all viewpoints are valid, and offer valuable information towards research endeavors.

5.3. Participant Observation:

During the research period the researcher participated in a blend of university classes, stakeholder conferences, internship activities, and field site visits. These opportunities for observation allowed the researcher to gather data from first hand experiences and live-action events, and to experience in full the impacts of oil exploration in Ugandan society. In chronological order, the researcher participated in and attended Victoria University’s Oil and
Gas Department field site visit to Hoima and Buliisa districts, the National Oil Spill Contingency Plan conference in association with Ugandan oil stakeholders and the Norwegian Coastal Authority (NCA), site visits and home-stays in the town of Hoima, and an internship with International Alert.

5.4. Data Analysis:

The researcher faced numerous limitations during the data collection period of the study. Despite having strong contacts and sources of information regarding Uganda’s natural environment and oil and natural gas development, Uganda’s oil and natural gas sector is still in its exploration phase. It will be difficult to assess how big of an impact this sector will leave on Uganda’s natural and social environments until drilling begins in 2018. These limitations will be discussed in further detail in the Challenges section of this paper.

The researcher made use of coding techniques to analyze the acquired data. This was done through transcription and annotations of interview notes and statements, specifically through numerical organization and color-coding techniques. All notes, transcriptions, and data were collected in the researcher’s field journal and subsequent journals.

6. Ethics Statement:

During the data collection process the researcher was aware of the possible exposure to a variety of opinions concerning the oil and natural gas industry in Uganda, and that these viewpoints might differ radically from those of the researcher. The researcher was aware that oil and natural gas development is currently a highly politicized and controversial issue in Uganda, as it is in many oil-producing nations in the world, and that certain conversation topics may not be fully supported in certain scenarios. While conducting both formal and informal interviews, the researcher made sure that consent was applied before execution of the interview. Consent was provided for the researcher through their advisor at International Alert and through the World Wildlife Fund Uganda. In order to protect the identities and opinions of participants in this study, the researcher has disregarded names of interviewees or produced pseudonyms where needed in this paper. The researcher was cautious to remain courteous towards various cultural
practices, political opinions, and religious beliefs throughout the practicum time in order to provide a peaceful and cohesive learning environment.

A written consent statement can be located in the annex section of this paper.

7. Challenges and Limitations:

During the practicum period the researcher faced numerous challenges and research limitations pertaining to environmental conservation and petroleum development. The current state of Uganda’s oil and natural gas production sector was by far the biggest limitation. The state of Uganda’s natural resource sector currently lies in the exploration phase of upstream development, meaning that oil companies and IOCs have yet to begin extracting crude oil from the ground. The extraction phase, according to NEMA and the Ugandan Petroleum Authority, is not set to begin until 2018 (International Alert, 2014). Because of the sector’s infancy, it is difficult to prove the exact state of conflict between oil exploration and the state of the environment in Uganda. Hard data and evidence proving the sector's impacts on the environment and social constructs can only be thoroughly analyzed once the sector enters into extraction and production phases. Lack of ecological science pursuits in Uganda also hinders environmental conservation research. Currently, only speculations can be made as to how production, midstream, and downstream phases of development will effect Uganda’s natural environment.

Another challenge in this research is the lack of effective legal frameworks and environmental governance enacted in the country. Some of Uganda’s environmental frameworks are not up to date with the country’s current environmental affairs, making it difficult for the researcher to conduct a thorough analysis of environmental governance in Uganda. The NEMP, originally written in 1994, and the NEA, originally produced in 1995, are both, as of October 2014, under review by Uganda’s parliament and ministries (NEMA, 2014). Implementation and enforcement measures of these frameworks are severely lacking, and environmental authorities are not mobilizing to quickly fix this issue. Lack of legal implementation in the oil sector of Uganda challenged the researcher greatly, as it was hard to understand what precautions were truly being taken by oil companies to protect the environment.

Lack of awareness on the potential negative impacts of oil exploration, particularly in regards to environmental conservation, was a consistent limitation to the researcher’s work.
During some of the conducted interviews, interviewees, particularly those holding higher governmental authority, held a stable sense of hopefulness regarding Uganda’s oil boom. The general opinion gathered from these interviews was that the emerging oil industry in Uganda could bring nothing but benefits to the country. The researcher’s attempts to explore opinions on Dutch Disease, oil spills, and severe environmental degradation were often met with discontent and pushed aside. Many other contacts remained unaware as to the severity of unsustainable natural resource production methods, and the devastation that oil development can unleash onto a nation.

8. Research Findings

The following section depicts the overall findings compiled by the researcher during the practicum time. The following research findings follow the proposed research objectives, which are stated in section 5 of this paper. These objectives, and subsequently their findings, focus on the environmental impacts, social impacts, and legal frameworks and mitigations associated with Uganda’s oil and natural gas exploration efforts.

The researcher found it difficult to study the oil industry’s environmental impacts in the Albertine region due to the infancy of the sector. The following findings are reflective of the relationship between oil exploration measures and environmental conservation.

8.1. Exploration and Extractive Processes

The researcher’s first goal in this study was to gain a broader understanding on oil exploration methods and procedures in Uganda. The 6.5 million barrels of crude oil currently estimated to be in Uganda are located within the Lake Albert Basin, on the Ugandan-DRC border. According to the National Association of Professional Environmentalists (NAPE) and the Ugandan Petroleum Authority, around 40% of the total area of the Albertine Basin has been seismically explored and mapped for potential natural resource reserves (NAPE, 2014). According to Reuters, the world’s largest international multimedia news agency, Uganda has a high drilling success rate of around 88%; meaning that 88% of wells that have been drilled have resulted in the discovery of hydrocarbons, which signify the presence of natural resources (Reuters, 2014). As reported by NEMA in 2014, there are over twenty active oil fields located in
five licensed petroleum exploration areas, or blocks, in Uganda. Blocks are large areas of land, typically granted in 1000s of square kilometers, which are awarded to large oil companies by a country's government specifically for oil exploration purposes. These blocks are: Lyec Exploration Area, Paara Exploration Area, Buliisa Exploration Area, Kaiso-Tonya Discovery Area, and the Kingfisher Development Area in the south (NEMA, 2014). These areas are depicted in Figure 2 below:
Currently, there are around 90 wells in place in the Albertine region. These wells are drilled via various drilling techniques methods such as using tilted fault blocks, rollover anticlines and flower structures of significant sizes. In the last twelve years well drillings have resulted in the discoveries of 21 exploitable oil fields in the Albertine Rift, equaling an estimated of 6.5 billion barrels of oil in total reserves, with 1.4 billion of those barrels being extractable (PEPD, 2014).

8.2. Environmental Relations:

Oil and natural gas development poses heavy threats and dangers towards environmental conservation and the health and safety of the earth’s biodiversity. Even in the world’s elite and best-funded oil producing nations oil spills, pollution, and other devastating disasters are not uncommon occurrences. For example in the African continent’s top oil-producing nation, Nigeria, oil spills are regular events in both onshore and offshore proceedings. In 2010, Newsweek magazine estimated that between nine million to thirteen million barrels of oil have been spilled in Nigeria since the resource was first discovered in 1958. The majority of these spills are caused by corrosion of pipelines, neglected equipment, and citizen sabotage (Baird, 2010). Nigeria also flares more natural gas associated with oil extraction than any other country in the world. Gas flares, otherwise known as flare stacks, are gas combustion devices used at oil and gas production sites for burning off excess flammable gas. Gas flaring is a contributor to the worldwide anthropogenic emissions of carbon dioxide, which directly relates to rises in global temperatures and other climate change impacts. Improperly operated flares may emit methane and other volatile organic compounds, as well as various sulfur compounds, which are known to exacerbate asthma and other respiratory problems (Beychok, 2005). Because Uganda is still in the exploration phase, it is difficult to provide hard data and details on environmental impacts from oil and natural gas development. The majority of these research findings are projections of what could potentially happen in Uganda.
8.2.1. Water Concerns in the Albertine Rift:

Water pollution is a primary environmental, social, and economic concern whenever oil and gas drilling procedures are conducted near primary water sources. Oil spills are the number one environmental concern in this regard, as a spill in a primary body of water, such as Lake Albert, affects not only the health of the lake and the biodiversity within it, but subsequently affects local livelihoods and human health in the region. Lake Albert is the seventh largest lake on the African continent, and a key member of the complicated Nile waterways system. It is the source of the Albert Nile, which flows in the direction of South Sudan, as well as a contributor to the Victorian Nile, which flows through eleven different North African countries (Boukerrou, 2012).

The potential for water pollution from petroleum exploration activities is a major fear in many communities in the Albertine region (Kristina Ericson, personal interview, 2014). Water runoff from established well pads or from storms is one potential threat to Uganda’s waterways. Runoffs can introduce sediment and toxic chemicals into nearby waterways. If these contaminants enter surface or groundwater sources, than humans, wildlife, livestock, and all other organisms face the danger of contamination from drinking or living with the water. Contaminated water could also lead to contaminated plants and food sources. ‘Produced water,’ or water used for oil drilling procedures, may contain arsenic, cadmium, mercury, lead, zinc, and copper, all heavy metals that could provoke major contaminations and impact human and environmental health (Oil in Uganda, 2014). Mud cuttings and wastewater remaining from well drilling procedures are also likely to pollute underground aquifers and ground sources (International Alert, 2013).

The Albertine Rift, which also encompasses Lakes George and Edward, contributes to 18.7% of Uganda’s national fish catch and consumption (International Alert, 2013). According to a representative of PROBICOU, the fish populations in the Albertine Graben “have dwindled, and are continuing to do so” due to increases in the oil industry (Kristina Ericson, personal interview, 2014). Members from Focus Groups A and B voiced concerns over impacts on Western Uganda’s fishing industry. One representative from Focus Group A, a Hoima district employee, stated that the construction of the new roads in the Hoima region would lead to high increases of over-fishing in the Western lake’s region, as well as a drastic increase in fish prices. The representative stated that in the last five years fish prices have increased from 500 Ugandan
Shillings to upwards of 10,000 Ugandan Shillings per fish due to high increases of development in the area (Kristina Ericson, personal interview, 2014). An interviewee from AFREGO told the researcher that many citizens in the Hoima district have voiced fears over licensing Lake Albert to large companies, in fear that this will take away their fishing rights and subsequently their sources of income (Kristina Ericson, personal interview, 2014). A representative from International Alert stated that over-fishing and illegal fishing activities in Lake Albert potentially become “the next major conflict in the oil industry” (International Alert, 2014). CNOOC, however, maintains that it will “protect the health, safety, and security of the communities and that a grievance resolution mechanism has been developed in the event of unforeseen negative impacts from the project” (Oil in Uganda, 2014).

8.2.2. Effects on Forests and Agricultural Lands:

Rapid developments in the Albertine region fueled by the oil industry could potentially cause impacts to local forested areas and agricultural lands. According to the NOGP of Uganda, increases in oil and gas development could lead to the depletion of forested areas in the Albertine region. Improper waste management methods, water runoffs, and improper gas flaring could also lead to potential contaminations of agricultural lands and forests (NOGP, 2008). According to representatives of the NCA, potentials of oil spillage in Uganda could lead to erosion and soil contamination in local agricultural and forested areas. These changes however, according to a representative of PROBICOU, may not be realized right away (2014).

Representatives of Focus Group A and Focus Group B had varying viewpoints on this issue. All members of Focus Group A who met with the researcher did not depict any major threats or fears concerning the conservation of agricultural lands and forests. A representative of the UWA stated that environmental authorities were apprehensive about deforestation from oil developments because of the natural populations of chimpanzee in the region. He went on to say, however, “there is nothing to worry about because all Ugandan forests are under government protection by the National Forest Authority (NFA)” (Kristina Ericson, personal interview, 2014). In contrast, Group B members working in the Hoima district described that pipeline development and rapid population increases in the Hoima and Buliisa districts have already proven to negatively impact unprotected and protected lands. According to the representative from NAVODA, wetlands have become majorly threatened in the Albertine Basin as well as forested
areas. The number one threat to these areas is over-population. As large amounts of human beings move into the Hoima district in search of work with the oil industry, they are rapidly encroaching on protected areas and wetlands either through agriculture development or housing construction. Construction of a crude oil refinery in the region, and the subsequent mass displacements, also effect the agricultural environment and economy. The proposed site for the oil refinery lies directly amidst an agricultural area. The pollution from the refinery could greatly degrade the quality of agriculture in the area. The most pressing issue faced by Group B representatives, according to a spokesperson for the National Chimpanzee Wildlife Sanctuary and Trust, is to try and find alternate sources of income for citizens in the Hoima district that will not encroach on forests and wildlife habitats. There are currently, the spokesman stated, no forested areas in Uganda that are in danger of being directly affected by an oil spill (Kristina Ericson, personal interviews, 2014).

8.2.3. Changes in Protected Areas and National Parks:

A majority of Uganda’s oil wells are located within national protected areas such as national parks and wildlife reserves. Changes in oil development in these protected areas could lead to profound changes in wildlife characteristics and populations in the region (International Alert, 2013).

Migrations of animal populations retreating from oil development are already prevalent issues in many areas across the Albertine Graben. Wildlife experts in the country believe that these migrations are due to excessive noise and vibrations from oil development, and may lead to disruptions in human settlements, crop growth, and more (International Alert, 2013). Animal species are also affected by contaminated water sources from well runoffs and rapid road construction. According to a biodiversity expert at PROBICOU, “As Uganda moves into the production phase, local wildlife will likely suffer great disturbances” (2014). The expert stated that species living in protected lands near waste management facilities, such as baboons and impalas, could suffer greatly from drinking from contaminated water sources.

Representatives of Focus Group A were not as worried about wildlife health and safety as their Group B counterparts. A representative of the UWA, Uganda’s leading wildlife protection agency, identified that the three major species of concern in oil development were elephants and human beings, yet stated that the government of Uganda was “not yet worried about any species
in the Lake Albert region” (Kristina Ericson, personal interview, 2014). A representative from the Hoima district offices greatly emphasized that government authorities were “strictly maintaining and monitoring” protected areas so as to prevent and protect local species. Maps of these protected areas are located in the annex section of this paper. The speaker also stated that once oil wells are determined finished and no longer of use, they are closed and the area is fully restored to their original state of being (2014). On a site visit to one oil field that had been restored, the researcher discovered that wells are plugged with cement once they are no longer being used, and all exploration tools that had been brought on to the site are removed. Oil companies place a small, headstone-like stone atop the filled well site. The site is then monitored for approximately two years and then, supposedly, returned to its original owners. This is an excellent example of environmental conservation put forth by oil companies in Uganda.

8.2.4 Oil Waste Management:

According to NCA representatives from Focus Group C, the mismanagement of oil waste could lead to severe environmental degradation from effluent from sewage treatment, drill fluids, drill and mud cuttings from well construction, and other solid and hazardous waste materials (Kristina Ericson, personal interview, 2014). Focus Groups A and B, however, remain reassured that Uganda’s oil waste management systems are well monitored and properly structured. Waste management occurs at waste treatment facilities, such as the Kisinga facility in Buliisa district. Here, all operating systems are monitored daily so as to ensure ultimate precaution. Wastewater storage occurs in large pits in the ground that are lined with heavy protection liners so as to prevent wastewater from entering into the soil. All waste storage areas are covered with lining mechanisms so as to prevent evaporation of toxic chemicals into the atmosphere. Chemical levels and quantities are measured in both water and solid waste treatment procedures, and samples are regularly sent to Kampala for further PH testing procedures. The most pressing issues concerning waste management in Uganda’s oil sector are where waste particles will go once they are treated, and how will they be safely transported. A representative from NAVODA states that water, if treated properly, can be reused for agricultural purposes, and treated drill and mud cuttings can be recycled into concrete mixtures for infrastructure development (2014). Final waste treatment procedures are still being developed in Uganda.
8.3. Social Impacts:

Oil exploration procedures, despite not entering the production stage yet, have already caused significant impacts on human lives and social constructs in the Hoima district. “Just by mentioning the word ‘oil,’” states a NAVODA representative, “changes start appearing” (2014). Multiple interviewees from Focus Group B were in agreement that movements of populations of human beings were the primary social change occurring in Hoima district. Migrations of people from rural to urban areas in search of employment with the oil industry and its subsequent developments is leading to an abandonment of crop production and a rapid increase in business pursuits in Hoima town, which could lead to radical changes in the local economy. These migrations are also creating an over-crowded and over-populated atmosphere in Hoima town. With so many people and no additional government funding for civil services Hoima town is currently struggling to improve hospital capacity, civil service reforms, and other community necessities. In the past five years, Hoima town, according to a representative of AFREGO, has also faced drastically rising land prices, a rapid increase in banks and microfinance institutions (from two to ten in five years), an increase in commercial building production, and a dramatic increase in social behaviors, such as growth of the prostitution industry and alcohol consumption. According to a Hoima district official, tourism has been increasingly on the rise.
since oil exploration began in Hoima district. A member of NAVODA, however, disproved this theory by saying that there have been extreme production rates of hotels in the area, yet no tourists to fill them. The researcher, too, attests that Hoima’s tourism industry is anything but booming (Kristina Ericson, personal interviews, 2014).

Lack of education for civil society members on impending oil production and exploration plans is a major downfall in Uganda’s oil industry. A majority of interviewees from all three focus groups stated that Uganda’s number one civic duty concerning petroleum exploration and production should be community education, sensitization, and capacity building. According to researchers at International Alert, many society members in oil producing districts are not aware of what oil companies are doing on or near their lands, nor are they aware as to what rights they have as Ugandan citizens. Even if they were provided with copies of the appropriate laws and measures, many would not be able to read the materials that are primarily printed in English (International Alert, 2013). Most NGO-representatives in Focus Group B voiced concerns of lack of awareness on this issue in the Albertine region, and of the failure of IOCs to support human rights and education in the region. At CNOOC, officials declined their comment to the researcher concerning whether or not the company is promoting human rights, education, or adequate capacity building in the region. As a major IOC, and one of the few stakeholders with adequate budgeting for these procedures, CNOOC’s lake of community involvement and promotion is a key example as to how top-down commandants in the oil industry are failing Ugandan society. “The bottom line is to support capacity building,” states a professor from Victoria University in Kampala, “the bottom line is support the sustainability of this sector and all who are involved” (Kristina Ericson, personal interview, 2014).

8.3.1 Human Displacement in the Albertine Region:

Human displacement is perhaps the most pressing community issue that has come as a result of oil exploration and development in Uganda. The proposed oil refinery will be located in the Kabaale parish in Hoima district on 29 square kilometers of land, and is set to open in 2018 (Oil in Uganda). The refinery is projected to cause the displacement of up to 30,000 citizens throughout nine villages in the district (International Alert, 2014). Approximately 7,116 households have already been displaced. The government of Uganda issued a Resettlement Action Plan in May of 2012 that ultimately offers individuals and households the choice of
compensation or resettlement resources. According to the Action Aid organization, out of the thousands of property owners in the region only 79 opted for resettlement action (Kristina Ericson, personal interview, 2014).

There have been constant streams of problems regarding the compensation and resettlement plans in Hoima district. According to data collected from Focus Group B participants many community members and peoples affected by displacement are upset about the lack of compensation funds, and the poor management and cooperation from government entities and oil companies. Many who chose to be resettled have yet to be moved are left illegally squatting on what was once their own lands, and many who chose compensation have either not seen the money or are radically abusing it. There are many violations of the Resettlement Action Plan (RAP) in terms of compensation i.e. compensation money being accepted and then spent on alcohol and personal uses rather than family relocation, women not being allowed to cosign on compensation agreements, reclusive fathers coming back to the family just to collect compensation money, etc. Most interviewees from the civil society level concluded that compensation costs were not sufficient enough for a family to realistically rebuild their lives. Representatives of oil companies, however, believe that compensation costs are sufficient and that displacement of peoples for oil development is a “civic duty” for Uganda. According to one oil company’s community liaison officer: “The (Ugandan) government needs to take land from the people regardless of whether or not people say ‘No, you can’t.” It’s compulsory, and Uganda needs this development” (Kristina Ericson, personal interviews, 2014).

8.4. Current State of Environmental Governance:

Over the past decade Ugandan parliament has produced and approved numerous laws and regulations relating to the protection of the environment. Of these, the overarching laws and acts pertaining to petroleum development are the National Environment Act (NEA), the National Environment Management Policy (NEMP), the National Development Policy (NDP) and the Petroleum (Exploration, Development and Production) Act. Uganda is currently in an exciting period in terms of environmental governance, as the government is currently reviewing and adding changes to the NEA and NEMP to suit the current environmental demands of the nation. If these changes are approved and adequately governed, the state of Uganda’s environmental conservation efforts will greatly improve.
**NEA**: The researcher analyzed the current 2014 bill for the National Environment Act that is currently under parliamentary review. The 2014 NEA stands to “…to provide for sustainable management of the environment; to continue the national environmental authority as a coordinating, monitoring, regulatory and supervisory body for that purpose; to provide for environmental management in petroleum activities” among others (NEA, 2014). According to a representative of PROBICOU, the NEA is the “mother law” for environmental protection in Uganda. Concerning petroleum development the act strives to “strengthen the institutional set up of the Authority (NEMA) to enable it to manage the environment challenges that will emerge with the developments in the petroleum sector” and “incorporate economic instruments in the control and protection of the environment, with particular reference to the impact of petroleum activities.” The act also outlines the requirements for Environmental Impact Assessments (EIA) and Strategic Impact Assessments (SEA), which are documents that are required to be approved before any major development or exploration activity in Uganda. This document provides stable ideas and claims to thoroughly support environmental conservation and enforcement, such as charging persons who “discharge hazardous substances, chemicals, oil, or a mixture containing oil into the environment” with a criminal offence (NEA, 44, 2014). The document struggles to explain processes of environmental enforcement and legal implementation of these policies however, which in the researcher’s opinion is Uganda’s number one struggle in mitigation and legal processes.

**NEMP**: The researcher also studied and analyzed the National Environment Policy (NEMP). The NEMP was originally constructed in 1994, but the researcher focused on the current draft, Draft 7, of an updated NEMP that underwent parliamentary review in October of 2014. Regarding petroleum exploration, the NEMP’s objective is to ensure that “oil and gas activities are undertaken in a manner that conserves the environment and biodiversity” (NEMP, 2014). Some of the strategies proposed to handle this are: to promote sustainable development in the oil and gas sector, operationalize the monitoring plan, coordinate the implementation of oil spill contingency plans, strengthen the institutional arrangements for management of environmental aspects in oil and gas sector, prioritize environmental concerns, develop effective oil waste management regulations, and promote the awareness of environmental danger in the petroleum sector. The policy also pushes to mainstream climate change accommodations, the ruling
authority of NEMA, and cross-border agreements with the DRC. Sustainable resource use should be mainstreamed into all education levels, and should provide a sound foundation for Uganda’s developing economy.

The NEMP is perhaps the most inclusive of Uganda’s environmental protection documents, and provides an outline for effective implementation of laws. This policy should be upheld to the same legal authority as the NEA, and should effectively be held to its promises and enforcements suggestions.

**PEDP Act:** The Petroleum (Exploration, Development, and Production) Act was commenced in Parliament on April 5, 2013, and apart from the NEA and the constitution this act takes precedence over all other similar acts. The act calls into order article 244 of the Ugandan constitution (regulating minerals), and supports article 245. The act supports the regulation of petroleum exploration, development and production, the regulation of licensing and commercial activities, and the restoration of ‘derelict lands’ among others. The PEDP act also establishes the governing Petroleum Authority of Uganda, and the Uganda National Oil Company. These are crucial establishments because they promote the employment and authority of Ugandan voices, instead of IOCs. The Petroleum Authority of Uganda is the primary body for monitoring and regulating the petroleum sector in Uganda. Environmentally, the PEDP act calls for the enforcement of environmental conservation practices to be upheld by the license holders and for the Petroleum Authority to provide ample governance. This act, however, does not provide adequate proposed convictions towards individuals or groups who neglect to comply with environmental protection practices. A fine of 200,000 currency points is not, in the researcher’s opinion, a threatening conviction especially when polluters are often wealthy international stakeholders.

**NDP:** The National Development Plan (NDP) of Uganda covers the fiscal term from 2010 to 2015, and outlines the country’s development priorities and economic conditions. In regards to oil and natural gas development, the plan almost exclusively focuses on economic development of the sector. It warns about the potential of extracting the ‘Dutch Disease,’ and advises Uganda to steer clear of this threat. It provides vague ideas on how to specifically prevent and mitigate these ideas. The plan’s strategies to specifically develop and build the petroleum sector are to
‘scale up’ the petroleum industry to ‘increase the potential capacity of reserves,’ build infrastructure and commercial production capacity, and build capacity for all stages of oil and gas production (NDP 2010). The NDP also calls for the construction of more roads, particularly leading to tourist sites, mining areas, and oil exploration areas, and a thermal power plant to be included as a part of the national refinery. These developments would all lead to further environment degradation of the sensitive Albertine Graben and would most likely lead to the displacement of more civilians in the area. The plan provides environmental suggestions at the very end of the document, which include restoring damaged ecosystems, strengthening environmental frameworks and legal documents, upholding sustainable development practices in oil exploration, and protecting water sources, soil erosion, and climate changes. The enforcement of these ideals in the last four years of their implementation have been dismal, and must improve if Uganda wishes to conserve its natural environment.

**Sensitivity Atlas and Contingency Plans:** The Environmental Sensitivity Atlas for the Albertine Graben (2009) is a document produced by some of the oil industry’s key stakeholders in Uganda, such as NEMA, UNEP, WWF, etc. It will “display, identify and provide the ability to analyze the relative sensitivities (environmental, biological, geographical, and socio-economic) to oil spill and oil development within the exploration areas in the Albertine Graben region of western Uganda”. The document is perhaps the most beneficial document in Uganda in specific regards to the conservation of biodiversity in the Albertine Graben, as it includes detailed seismic data on the sensitivity of the Albertine region, and maps identifying areas in the Albertine rift that hold high levels of biodiversity and environmentally sensitive areas. According to this atlas, oil exploration could potentially harm all levels of sensitivity in the Albertine Graben, especially sensitivity level nine areas (waterways and wetlands) as “oil spreads fast and easily in case of a spill” in these areas (Sensitivity Atlas, 2009).

National Oil Spill Contingency Plans (NOSCP) are scenario-based plans established by both oil companies and governing bodies (i.e. NEMA) to depict the emergency actions that will be taken in case of an oil spill in the country. Oil spills in Uganda pose disastrous threats to the country’s environment and human populations. In a presentation put forth by Tullow Oil, the researcher identified that Tullow Oil, a major IOC, has a stable emergency action plan for oil spill disasters in place. These plans are based on a three-tier disaster system: Tier One spills are
likely to be small and affect a localized area, and are best managed by the site’s manager; Tier Two events are more diverse in scale and involve a broader range of stakeholders and impacts, and involve multiple parties to clean up; Tier Three events are extremely rare and hold the power to cause widespread and long term damage, affecting many people and overwhelming the cleaning capacities of local, national, and even international groups. Tullow’s basic response system to these events are: safety promotion of individuals involved, geographic surveillance of the area affected, tracking of the oil spilled, mechanical responses, non-mechanical responses, and the compilation of statistical data on the spill. Representatives of CNOOC and Vivo Oil (a national company) declined statements regarding their oil spill contingency plans or gave the researcher roundabout answers that avoided provided answers to emergency preparedness actions. Section 11 provides the researchers recommendations to these scenarios.

8.5. Future Plans for Uganda’s Oil Industry:

No individual, group, or governing body can effectively predict the future of a country’s oil and natural gas industry, and Uganda is no exception. During the interview sessions, the researcher asked individuals from all three focus groups their thoughts and opinions on how Uganda’s oil and natural gas sector will change of the next five years, the time remaining until extraction and refining are set to begin.

Interviewees from Focus Group A, government employees and officials, generally viewed the next five years as a period of positive growth and development in the sector. With pipeline and refinery construction set to begin in 2015, large revenue and infrastructure changes will be brought to Western Uganda. Hoima district officials pressed the importance of upholding environmental laws and frameworks in the district over the next five years with these impending developments, yet failed to mention specifics on the implementation and enforcement measures to be taken.

Interviewees from Focus Group B, NGO workers, view the coming years as a darkening period in Uganda’s oil sector. Rising concerns from this group for the next five years include increasing government corruption, more hotels and trade in oil producing districts, the development of more factories that will subsequently cause more pollution and displacement in the region, and more illegal fishing and forestry activities due to new roads and easier access to
these areas. Some recommendations put forth by this group are to push for cohesive relations between NEMA and CSOs in Uganda, push for government implementation and enforcement of legal implementations, increase community involvement, and strengthen Uganda’s border with the DRC, particularly in the Albertine rift.

As Focus Group C consisted of a blending of people from various occupations; the researcher subsequently collected a varying degree of answers in this regard. Educators from Victoria University claim that Uganda will fall prey to the Dutch Disease in upcoming years if the government does not take precautionary steps to ensure financial security. One recommendation they had in this regard was to promote transparency of all legal documents pertaining to the oil sector, particularly those on economic organization and outputs. CNOOC, a primary IOC in Uganda, views the next five years as a space for growth in infrastructure and economic revenue. During this period the company aims to increase road construction, pipeline construction, and the drilling of more wells and seismic mapping activities in Western Uganda.

9. Conclusion:

In conclusion, Uganda’s rapidly developing oil sector has already imposed numerous negative impacts on the country’s natural environment, and will continue to do so in coming years. In this study, the researcher made use of personal interviews, traditional research methods, and observation methods in order to collect a blend of official statistics and first-hand experiences on petroleum exploration in Uganda. The goals of the researcher in doing this was to learn about the extractive processes in the petroleum industry, to study the proposed and current mitigation factors in Ugandan environmental law, and to research the current and potential environmental impacts of oil production in the Albertine Graben of Western Uganda. The researcher’s overall findings covered many different environmental and social topics. The main environmental threats posed by the oil industry are oil spills, degradation of protected lands, deforestation, water pollution, and adverse affects on Uganda’s wildlife, which is a major proponent of the country’s tourism industry. Social impacts from petroleum exploration in the country include displacements of local communities, ineffective compensation measures, and radical changes in infrastructure development and migrations of individuals from rural to urban areas. The NEMP, NEA, and NDP, among numerous other laws and environmental policies, are
the primary governing frameworks in terms of environmental conservation in Uganda. These policies, while well written and inclusive of beneficial proposals, struggle to include implementation and enforcement methods, particularly in regards to the oil sector. Adequate implementation of all environmental, social, and economic laws and policies is, in the researcher’s opinion, the number one thing that should be changed in Uganda’s oil sector before further actions can take place. The promotion of education, particularly in oil enriched lands, capacity building, and stronger stakeholder relationships are also ideas strongly supported by the researcher in this study. This study took place in the city of Kampala and the district of Hoima, primarily, and was completed in association with International Alert’s oil and natural gas research department.

10. **Recommendations:**

After concluding the research process, the researcher generated a list of recommendations for the governing authorities of Uganda, particularly NEMA. These recommendations need, in the researcher’s opinion, to be upheld if the Republic of Uganda is to attempt to follow a path of sustainable development. The recommendations are:

1. Improve transparency of all legal frameworks and policies concerning Uganda’s oil industry, particularly agreements between stakeholders and governing bodies. These documents should be made available in their entirety to Uganda’s citizens, and all other stakeholders in the country, so that they may be made aware of all transactions and possible future liabilities regarding oil and gas development.

2. Mobilize enforcement and implementation of environmental protection frameworks and policies. Currently, Uganda’s leading environmental laws lay sturdy foundations for environmental protection, yet on the ground implementation is dismal, and enforcement of conservation procedures are largely glanced over by powerful, wealthy stakeholders. The researcher calls upon NEMA, in collaboration with oil companies and waste management facilitators, to increase its level of enforcement concerning environmental laws and to make sure all laws and policies are adhered to. This should be done by heavily implementing environmental conservation methods into the trainings of all oil employees, and increasing NEMA and the Petroleum Authority’s presence in the region.
Regional environmental officers should also work to increase implementations of laws in the region. All civil society members should be made aware of what to do in case of an oil spill (i.e. what methods to take, and what tools to use). Adequate oil spill contingency equipment should be made available at all drill sites by oil companies, and all workers should be educated as to how and when to use such equipment.

3. Promote education of oil and natural gas development activities, and their potential impacts to development. This should be done in all levels of education in Uganda, particularly in the western region. All Ugandan’s have a right to a clean and healthy environment, yet many who are uneducated are unaware of even this basic constitutional knowledge. Along with this, all legal documents concerning the oil industry, environmental conservation, and human health should be made public and published in the languages of Western Uganda, such as Bunyoro, so that they can reach a larger pool of people.

4. Progress the relationships between stakeholders in Uganda’s oil industry, as well as improve relations between stakeholders and civilians. Specifically, Uganda’s governing environmental authorities, such as NEMA and the UWA, should significantly improve their relationships with CSOs, IOCs, and affected communities to ensure peaceful and sustainable natural resource development in Uganda. International oil companies need to drastically improve their relations with affected communities, particularly those falling prey to displacement and compensation disputes.

5. Oil spill contingency plans need to be strongly identified and made easily available by each licensed oil company. All well sites where crude oil will be extracted hold the potential of an oil spill. In Uganda, this is a terrifying thought because many wells are located in protected wildlife zones and national parks. If an oil spill were to occur in Murchison Falls National Park, for example, tourism revenues would radically decrease as well as wildlife habitats. All employees of licensed oil companies need to be educated and prepared in case of an oil spill emergency, and emergency preparedness equipment should be stationed at each functioning well site. Cross-border contingency plans also need to be mobilized between the government of Uganda and the government of the DRC so as to attempt to promote peace and prosperity in an already disputed border zone.
6. All players and stakeholders in Uganda’s prospering oil industry need to be thoroughly educated on the sensitivity atlas of the Albertine Graben, as well as all EIAs and SEAs currently in place. The sensitivity atlas should be regularly updated and promoted especially amongst licensed oil companies who are conducting the continuous drilling of oil wells in the Lake Albert region.

(Figure 4: Oil Drilling Rig in Albertine Region, NEMA, 2009)
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Annexes:
Letter of Consent:

To whom it may concern

RE: REFERENCE LETTER FOR MS. KRISTINA ERICSON

With pleasure I certify that I recommended and provided contact details for resource and competent persons to Ms. Kristina for consideration during her research period in Uganda on the relationship between conservation and petroleum exploration.

I came to know Kristina in October 2014 through International Alert, an organization WWF has been closely working with on Oil and gas issues in Uganda. I believe her research findings would add valuable information in the field of environmental management in the Albertine Graben, a region not only rich in biodiversity but also with huge petroleum potential.

Please feel free to contact me if there is any question regarding this reference.

Yours sincere

Florence Kyalimpa

Oil and Gas Officer

World Wide Fund for Nature

Uganda Country Office
Annex 1:

Sample Interview Questions for World Wildlife Fund (WWF)

1. What is the current state of action take by the WWF in the Albertine Graben in terms of conservation, preservation, and protection of wildlife and natural resources?
2. What role is the WWF playing in the preservation of the Lake Albert Region in regards to the emerging oil and natural gas sector?
3. What animal species in the Albertine Graben is the WWF striving to protect?
4. Are there certain species being protected above others?
5. Is the WWF working in all protected wildlife areas in the area? If not, which ones are excluded/included?
6. Which areas are focused on more extensively?
7. After a recent trip to Hoima and Buliisa districts, I learned that many oil fields are located in protected wildlife areas. What is the relationship between these areas? Have any conflicts or issues been raised concerning the extremely close proximity of the oil developments and protected areas?
8. What are the primary issues that you envision will be raised concerning oil and natural gas developments in the area?
9. How will changes in habitat in the AG affect wildlife populations?
10. Does the construction of new highways and other infrastructure elements in the region pose any immediate threats to local and protected wildlife?
11. What are the current policies and political frameworks that govern sustainability and wildlife conservation in Uganda? Are there certain policies that the WWF does not agree with, or do not support the WWFs actions?
12. What relationship does the WWF hold with NEMA and other governmental organizations?
13. In accordance with part VIII sections 62-64 of the currently under revision National Environment Act, NEMA will strive to “prescribe measures to ensure the conservation of environmental resources” and to “ensure that species threatened with extinction…are reintroduced into their native habitats and eco-systems where (i) the threat to species has been terminated or (ii) a viable population of the threatened species has been achieved.”

   a. How does this proposal associate with the Albertine Graben and the emerging oil industry, and what stance does the WWF take on this statement?
14. The NEMP also aims to “develop clear and implementable strategies and guidelines on management of impacts of exploration of oil and gas and other mining activities on biodiversity and human beings.”

   a. What role is the WWF playing in the implementation of this?
15. What are the WWFs goals and future aspirations in the Albertine Graben, and in Uganda as a whole?
Annex II:
PROBICOU Sample Interview Questions

1. What is your organization’s role in Uganda’s environmental conservation efforts?
2. What role does PROBICOU play in the conservation efforts occurring in the Albertine Graben?
3. Which areas of the country do you focus on the most?
4. What is your role within the UNEP/UNDP? How do these organizations connect with the emerging oil sector?
5. What is their relationship with NEMA?
6. What environmental impacts are most commonly breached while dealing with waste and chemical management?
7. What are the primary regulatory policies that PROBICOU must follow while promoting conservation and management?
8. How is bio-diversity conservation threatened by the emerging oil and gas sector in Uganda?
9. In the Albertine Graben?
10. What is PROBICOU doing to help improve the livelihoods of the Bunyoro and Congolese peoples who are facing displacement and upheaval due to emerging oil development?
11. What do you envision the waste and chemical management systems of Uganda to look like?
12. In your opinion, what steps should now be taken by Ugandan authorities to preserve biodiversity in the Albertine Graben and in the country as a whole?
Annex III: International Alert
Sample Interview Questions for International Alert

1. What role does International Alert play in the emerging oil and gas sector in Uganda?
2. What aspects/areas are you specifically working with regarding oil and gas regulation?
3. What are the primary issues that international alert focuses on regarding the oil sector?
   a. Expand on these!
4. What are your opinions on the NEA and NEMP that are currently under revision?
5. What recommendations would you make to further enhance these policies?
6. I have talked to numerous people regarding issues of policy implementation and regulation. How will these policies be enforced and integrated into Ugandan society to ensure quality enforcement?
7. How do you think that the emerging oil sector will effect border tensions between Uganda and the DRC?
8. What, if any, conflicts have already arisen?
9. Is international alert working with communities in the Hoima district that are being/have been displaced?
10. What is your role in the promotion of education?
11. Can you discuss gender issues that are arising with the exploration of oil, as previously explored in International Alert’s publication on gender roles and oil exploration?
12. What are the next steps that international alert believes should be taken in order to ensure peaceful oil exploration in Western Uganda?
Annex IV: Sample Interview Questions for Uganda Wildlife Authority

1. What is the UWA’s role in the emerging oil sector in Uganda?
2. What is the UWA’s relationship with Tullow and other oil exploration companies?
3. What threats or potential dangers does the UWA expect to see from Uganda’s emerging oil sector?
4. What role is the UWA playing in the preservation of the Lake Albert Region in regards to the emerging oil and natural gas sector?
5. What animal species in the Albertine Graben is the UWA striving to protect?
6. Are there certain species being protected above others?
7. Is the UWA working in all protected wildlife areas in the area? If not, which ones are excluded/included?
8. After a recent trip to Hoima and Buliisa districts, I learned that many oil fields are located in protected wildlife areas. What is the relationship between these areas? Have any conflicts or issues been raised concerning the extremely close proximity of the oil developments and protected areas?
9. Does the construction of new highways and other infrastructure elements in the region pose any immediate threats to local and protected wildlife?
10. What are the current policies and political frameworks that govern sustainability and wildlife conservation in Uganda? Are there certain policies that the UWA does not agree with, or do not support the UWA’s actions?
11. What relationship does the WWF hold with NEMA and other governmental organizations?
12. In accordance with part VIII sections 62-64 of the currently under revision National Environment Act, NEMA will strive to “prescribe measures to ensure the conservation of environmental resources” and to “ensure that species threatened with extinction…are reintroduced into their native habitats and eco-systems where (i) the threat to species has been terminated or (ii) a viable population of the threatened species has been achieved.”
   a. How does this proposal associate with the Albertine Graben and the emerging oil industry, and what stance does the UWA take on this statement?
13. What are the UWAs goals and future aspirations in the Albertine Graben? And for the relationship between oil and biodiversity in Uganda in the future?
Annex V: NEMA
Sample Interview/Discussion Questions

1. What are the main goals or issues that NEMA is currently focusing on regarding the exploration of oil and natural gas?

2. What are NEMA’s goals for 2014-2015 in terms of oil and natural gas exploration?
   a. Will NEMA be working to enhance EIA and SEA reports in the oncoming year?

3. Are there any current plans to update and revise the National Oil and Gas Policy of 2008 to meet the current demands of oil exploration and development?

4. After reading through the NEA and NEMP that are currently under parliamentary revision I become increasingly intrigued by the processes of implementation and enforcement that NEMA and the Ugandan government has established. Both of these acts are filled with wonderful ideas and concepts yet severely lack, in my opinion, concrete and reasonable ideas in terms of policy enforcement and legitimate environmental protection.
   a. What is NEMA doing to further enhance these treacherous areas?
   b. What are NEMA’s plans of enforcement and protection in the future (i.e. 2018) when regular oil drilling and extraction processes are set to begin?

5. Many of the oil wells and exploration areas lie in protected areas as established by NEMA and the UWA. Unsustainable drilling procedures in these areas could result in drastic declines of biodiversity, endangered wildlife, and ecotourism (one of Uganda’s main industries)
   a. How does NEMA intend to enhance protection of these areas during oil extraction processes in order to ensure sustainable development?

6. What is NEMA doing to help with the relocation and compensation processes of the communities and individuals that are being forced to leave their lands to create space for oil development?

7. What potential impacts and conflicts does NEMA anticipate with the construction of an East African pipeline? (Socially and environmentally)

8. How is NEMA working with the UWA or the WWF to help preserve endangered/indigenous species and wildlife in the area?

9. What is NEMA’s protocol for mass oil spills in protected conservation areas?

10. What is Uganda’s oil spill contingency plan for potential spills on the lake? With limited technologies how are these spills going to be taken care of?

11. How will oil spills on the lake interfere with DRC/Uganda relations?

12. After a visit to an oil waste site in Hoima district, I was told that the waste from the site “gets properly taken care of.”
   a. Where is this waste going?
   b. Is it actually being sustainably disposed of?

13. What are NEMAs efforts to protect fishing and agriculture in the Albertine Graben?

14. NEMA has pledged to “promote public awareness through formal, non-formal and informal education about environmental issues”
   a. How is NEMA adhering to this promise?
ANNEX VI: Sample interview questions - Victoria University

1. Discuss his role in oil and natural gas research
2. How is the growth of oil and natural gas education at institutions like Victoria University predicted to aid in the emerging oil sector?
3. While there are many benefits of promoting oil and gas education, do you think it will become an issue that you’re releasing numerous graduates into a sector that hasn’t even come into being yet? What will these grads do for the next 5 years before Uganda begins to drill?

4. Ask about:
   a. Fishing industry
   b. Agricultural lands
   c. Effects on ecotourism
5. What environmental conservation efforts does Victoria University promote within the classroom?
6. Are oil spill contingency plans and programs implemented within the education system?
7. Do you work at all with communities directly affected by this industry?
8. Do you teach/promote the NEA and the NEMP in the department? Are students aware of the over-arching policies in this sector?

Annex VII: Phillip Kihumuro
Environmental Consultant for Ecotech
Hoima Community Educator

Sample Questions/Discussion Topics

1. Describe work you do in Uganda’s oil sector
2. What areas of the Albertine Graben do you focus on specifically?
3. What are the main environmental factors that you focus on?
4. Describe relationship with fishing
5. Agriculture
6. Wildlife
7. What is your company’s five year plan for the region
8. What are your opinions of Uganda’s oil spill contingency plans? How can the country strengthen these?
9. Is there any collaboration with the DRC regarding these plans
10. What is your relationship with NEMA
11. What are your opinions on implementation and how does your company aim to enforce environmental policies effectively?
Annex VIII – Hoima Interview Question Bank

1. What specific work do you deal with in regards to the oil sector in the Hoima district?
2. What major changes have been brought to Hoima’s economic, social, and environmental livelihoods since the discovery of oil?
3. Have further issues with the DRC arisen? Do you see tensions increasing with oil exploration?
4. The goals of NOGP state that the oil industry’s primary aim is to eradicate poverty. What are your thoughts on this statement and how do you think Uganda will fare with increasing oil development? Do you believe this nation will go the same way as it’s African compatriots?
5. How is oil/gas development being enforced/implemented in this district?
6. How is community education and capacity building being incorporated in Hoima district?
7. Are citizens of Hoima provided access to oil laws/regulations? Do they know their rights? Has there been any backlash?
8. Displacement – How many people have been affected by displacement/compensation in the district?
9. In the next five years how do you see Hoima district changing due to oil development?
10. How do you see social livelihoods changing in Hoima?
11. How do you see the emerging oil sector effecting the fishing industry in Hoima district?
12. Waterways and wetland systems?
13. Agriculture - How has this already been affected?
15. Where are oil drillings/cuts being permanently disposed of?
16. Are Uganda’s current oil spill contingency plans and emergency response systems able to provide adequate coverage of the region and will they be enough to prevent total destruction of protected areas and waterways in case of a spill?
17. Are there any managing policies or controlling factors concerning air quality and atmospheric pollution?
18. Some of the deepest and most vulnerable wells are found in protected wildlife regions and parks. How will drilling in these areas effect tourism and biodiversity in the region?
19. If and oil spill occurs in lake Albert, what cross-border contingency plans are in place to effectively clear the spill without promoting further conflict with the DRC?
20. Do you see oil companies pursuing/testing the oil in other parts of Uganda after/during Albertine exploration?
21. Are EIAs and SEAs truly effective in the region?
22. What cultural concerns have risen concerning oil and natural gas exploration in the Bunyoro region?
23. Will Uganda fall into the Dutch Disease trap?
24. UNRA ROAD – displacement/environmental disturbances
25. PWYP vs EITI
Additional Figures:

(Figure 5: NEMA, 2014)
(Figure 6: PEPD 2014)
(Figure 7: PEPD, 2014)