

Norwegian University
of Life Sciences

Master's Thesis 2019 30 ECTS

Faculty of Landscape and Society

Inclusive Development and the Emerging Oil Sector. A Case of Hoima District in the Albertine Region of Mid-Western Uganda

Phionah Kabera

International Environmental Studies

Inclusive development and the emerging oil sector. A case of Hoima district in the Albertine Region of mid-western Uganda.

By
Phionah Kabera
Noragric, NMBU.

The Department of International Environment and Development Studies, Noragric, is the international gateway for the Norwegian University of Life Sciences (NMBU). Established in 1986, Noragric's contribution to international development lies in the interface between research, education (Bachelor, Master and PhD programmes) and assignments.

The Noragric Master's theses are the final theses submitted by students in order to fulfil the requirements under the Noragric Master's programmes 'International Environmental Studies', 'International Development Studies' and 'International Relations'.

The findings in this thesis do not necessarily reflect the views of Noragric. Extracts from this publication may only be reproduced after prior consultation with the author and on condition that the source is indicated. For rights of reproduction or translation contact Noragric.

© Phionah Kabera, September 2019

phionahkabera@nmbu.no

Noragric

Department of International Environment and Development Studies

The Faculty of Landscape and Society

P.O. Box 5003

N-1432 Ås

Norway

Tel.: +47 67 23 00 00

Declaration

I, Phionah Kabera, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

Acknowledgements

I am most grateful to the Almighty God for giving me the needed strength and courage to accomplish this course successfully. Baring all the difficulties that came my way while researching into this important topic, I have nothing but just to say His grace has been my driving force.

I am sincerely and deeply thankful to my supervisor, Professor John Andrew McNeish whose patience and guidance inspired me to keep working enthusiastically on this research project.. All your efforts, comments and suggestions have helped me to successfully finish the thesis.

My sincere gratitude goes to my dear Fiancé, Erik Karsrud and his family, for the encouragement and support you have showed me toward this writing . Special thanks also goes to the entire family of my beloved sister Ritah Katusiime Sandvik. Thank you for the love, care and support you have shown me in the entire study. I cannot thank you enough for what you have done for me in my life but I pray for the almighty God to bless you.

I am very grateful to my Dad Nkurikiye Christoher, my mum Munezero Jenninah, my siblings, relatives and friends for the great support, prayers and sacrifice to see me achieve greater heights.

Abstract

This thesis presents the findings of a study on inclusive development and the emerging oil sector in the Albertine region in mid-Western Uganda. The study sought to find out the level of stakeholder involvement in oil and gas activities at the various levels. The study also aimed at assessing the current environmental governance framework as well as examining the impact of the emerging oil sector in the Albertine region. Furthermore, the study adopted a case study design and qualitative approach. A total number of 44 respondents comprising of residents of Kaiso-Tonya village and Key Informants at the district and national level provided the primary data. Information was therefore, obtained by use of household survey questionnaire and key informant interviews. The collected data was analysed in a thematic way by applying descriptive statistics following the study objectives.

The study findings revealed that there were attempts of involving stakeholders, however, the study participants generally reported that stakeholder involvement and consultation was not adequate, especially at the district and local community levels. Local leaders believe that local masses were not adequately sensitised and prepared on what to expect from the oil sector. The study findings demonstrate that oil exploration activities in the region have caused numerous impacts, which are socio-economic and environmental in nature. There has been mixed perceptions on these impacts with people reporting positive, negative and a combination of both impacts. On a positive note, there has been evident infrastructural development in form of roads, hotels, schools and health facilities, employment and business opportunities, among others. Some of the negative impacts revealed by the study include; pollution of natural resources, wetland loss, wildlife disturbance, soil erosion, limited land, increased crime rate, increased pressure on available resources and increased land conflicts due to the growth in population. The study recommends that in order to minimize or avoid future negative externalities, proactive engagements of stakeholders at different levels should be scaled-up.

CONTENTS

1.0	Introduction.....	8
1.1	BACKGROUND OF THE STUDY.....	8
1.2	Problem statement.....	10
1.3	Specific objectives and research questions.....	11
	Objective 1	11
	Objective 2	12
	Objective 3	12
	Research questions.....	12
1.4	Scope of the study.....	12
1.5	Definition of the concepts.....	13
1.6	Conceptual framework.....	13
1.7	structure of the study.....	15
2.0	Research methodology.....	16
2.1	Methodology.....	16
2.2	Study area.....	16
2.3	Research Strategy.....	17
2.4	Research design.....	17
2.5	Research method.....	18
	2.5.1 Data collection.....	18
	2.5.2 Key informants' interviews.....	18
	2.5.3 Documentary review.....	19
2.6	Data management and analysis.....	19
2.7	Population and sampling procedure.....	19
2.8	Reliability and validity.....	20
2.9	Ethical considerations.....	21
2.10	Challenges encountered.....	21
3.0	Literature review.....	23
3.1	Brief profile of Uganda.....	23
3.2	Oil exploration and production in Uganda.....	24
	Map 1. Uganda's main discovery areas.....	25
3.3	Production and sharing agreements (PSAs).....	26
3.4	The resource curse theory, resource blessing and the Dutch disease.....	27
3.5	Stakeholders' involvement in the oil exploration activities in the Albertine region.....	29

3.6	Current policy and legal framework on the oil and gas sector in Uganda.	30
3.7	Impacts of oil and gas exploration in Uganda.....	32
4.0	Data analysis and results	34
4.1	Introduction.....	34
4.2.	Demographic Statistics of the participants.....	34
4.3	Stakeholder’s Involvement in Oil exploration activities.....	36
4.4	Impacts of oil immerging sector to the economy in Albertine region.	41
4.5	Social-Economic and Environmental impacts of oil exploration in Albertine region.	44
5.0	DISCUSSION OF STUDY FINDINGS	53
5.1	Introduction	53
5.2	Stakeholder involvement in oil activities.....	53
5.3	Perception of people on the benefits of stakeholders’ involvement in oil activities.....	53
5.4	Adequacy of stakeholders’ involvement in gas and oil activities	54
5.5	Perception on the effectiveness of laws governing the environment in the Albertine region.....	54
5.6	Socio-Economic and Environmental impacts of oil exploration in the Albertine region	55
	5.6.1 Socio-economic changes that emerged due to oil and gas exploration in the Albertine region.....	55
	5.6.2 Environmental changes that have been witnessed since the oil discovery in the Albertine region.....	57
5.7	Impacts of oil and gas activities on tourisms in the Albertine region.	57
6.0	Summary and Conclusion.....	58
6.1	Summary of major findings	59
6.2	Conclusion	59
	AppendiX.....	61
	63
	64
	65
7.0	References.....	66

1.0 INTRODUCTION.

This thesis examines the possibilities for inclusive development and the emerging oil economy of Uganda. It is a case study of the Albertine region in South Western Uganda, specifically Hoima district. The study mainly focused on the level of stakeholder involvement at different levels in the oil and gas activities, but also looked at the impacts realised after the oil exploration process started.

This chapter presents the background, statement of the problem, objectives, research questions, and scope of the study, definition of the concept, conceptual framework and the structure of the thesis.

1.1 BACKGROUND OF THE STUDY.

Natural resources, specifically oil and gas, are important and growing sources of energy globally (Brittingham, Maloney, Farag, Harper, & Bowen, 2014). Their role in a country's economic development cannot be disregarded due to the huge financial resources that accumulate from the oil and gas industry (Peprah, 2011). In addition, oil and gas extractions play an important role as a source of export earnings and generation of tax revenue for the government (Sunley, Baunsgaard, & Simard, 2003). It is also well documented in literature that

oil and gas production come with other supporting economic activities such as hotel and restaurant services, banking, transport activities, health care services, road construction, telecommunication and many more similar services that are able to benefit the people (Peprah, 2011).

However, development from natural resources such as oil depends on how such a resource is well-managed to benefit the people of that particular country. In regard to this, countries including Norway, Canada, Australia and Chile have successful stories (Nejad & Masoudi, 2013). In Africa, Ghana is also considered to have a relatively successful story because of its peace and stability, democracy and governance, control of corruption, poverty reduction, macroeconomic management, and signs of an emerging social contract (Moss & Young, 2009).

On the other hand, almost all aspects of oil and gas exploration and exploitation have a potential to cause negative impacts on natural ecosystems (Ite, Ibok, Ite, & Petters, 2013). Furthermore, the oil extraction activity can have negative effects on human wellbeing and all its components including basic material needs such as food and shelter, individual health, security, good social relations, and freedom of choice and action (Jones, Pejchar, & Kiesecker, 2015). The situation can be worse if there is no adequate stakeholder (local people) involvement in all the key stages of oil and gas production.

According to (Karl, 2007), the oil and gas industry can disrupt established patterns of production. There are also problems of the expropriation of fertile land for resource extraction activities, and environmental damage, which lead to reduced subsistence agriculture. The resulting instability in employment, income and food production can stress the local economy (Brake & Edward, 2014; Karl, 2007). Furthermore, the culture of the indigenous people is diluted because as inequalities in income emerge, immigrants from other communities, ethnic groups, or religious faiths in search of accessing opportunities increases (Opukri & Ibaba, 2008).

Uganda's Albertine rift valley is a region that is both ecologically fragile and valuable; the region is a biodiversity hot spot for both fauna and flora, many of which are endemic species (Mairal et al., 2017). It is home to more species of vertebrates than any other region on the African continent, harbours more than half of continental Africa's bird species and almost 40% of its mammal species (Plumptre et al., 2007; Winterbottom & Eilu, 2006) Basing on the levels

of species endemism and the proportion at which habitats are destroyed, Conservation International pointed out the Albertine region as one of the world's most endangered areas (Winterbottom & Eilu, 2006).

Uganda is among the economically low developing countries in Africa that recently discovered commercially viable oil reserves in its Albertine region. The Petroleum exploration in Uganda started way back in the 1920's, (Vokes, 2012) when the oil seepages were first reported in the Albertine region. However, the exploration work began in the 1980's.

Aeromagnetic data in 1983 confirmed the existence of sedimentary basin in the Albertine area and this was followed by the enactment of petroleum exploration and production act in 1985. This led to the licensing of international companies to undertake seismic survey and drilling (Hickey & Izama, 2016).

In 2006, Uganda confirmed the existence of oil deposits in the Albertine rift (Kiiza, Bategeka, & Ssewanyana, 2011). Thereafter, in June 2016, it was estimated that Uganda had about 6.5 billion barrels of oil that are equivalent to 1.4 to 1.7 billion barrels that are recoverable (Byakagaba, Twesigye, & Ruyle, 2018). This oil reserve is considered large by both African and Global standards and is set to firmly put Uganda among the top oil producers in Africa (Anderson & Browne, 2011). Many Ugandans hope that if the oil is well managed, it will greatly contribute to the development of the country, improve people's income and reduce the country's dependence on foreign donors.

This study therefore focuses on understanding stakeholder involvement in the oil exploration activities in the Albertine region of Uganda where commercially viable deposits were confirmed in 2006 (Mawejje, 2019).

1.2 Problem statement.

Uganda's oil and gas sector has transitioned from the exploration and the appraisal phase to the development phase in preparation for sustainable production of the petroleum resources that have been discovered in the country (Lokeris et al., 2014). The development of the oil and gas sector has the potential to transform landscapes and local communities through increased revenue (Souther et al., 2014). Although the discovery of oil in viable amounts in Uganda's Albertine region could be a blessing, there are related severe socio-economic and environmental complications that may come a long with it and restrain realization of sustainable development

(Namuyondo, 2014). Some studies show that areas where oil is exploited tend to suffer from lower economic growth, lower per capita incomes, greater displacements, higher environmental and health hazards, and higher levels of conflict compared to the rest of the country (Chindo, 2011; Karl, 2007).

For instance, the mismanagement of oil in Nigeria has led to increased political violence, abuse of human rights and poverty in the Nigerian delta (Bainomugisha, Kivengyere, & Benson, 2010). Furthermore, oil spills lead to adverse effects on the environment and biodiversity while affecting agricultural resources, water bodies and tourism attractions.

According to (Ericson, 2014), the exploration activities involved have detrimental effects to the human lives and social construct of Hoima district. The exploration of oil in the Albertine region has led to land grabbing, property destruction, fighting, unemployment, displacement of people, and increased pollution, which affects the health of the people. The involvement of stakeholders such as the local communities, civil society organisations, national and local government, parliament, oil companies, both the private sector and business communities is likely to help avoid the above problems associated with the oil and gas industry. In Uganda, there has been little attention paid to the importance of consulting or involving stakeholders in the oil and gas activities at different levels. Most studies conducted on oil and gas in Uganda have mainly focused on the impacts of oil exploration and production, environmental management issues (Aper, 2015; ARSDP, 2013; Kasimbazi, 2009; Kaweesi, 2014) among others. This study therefore seeks to fill this information gap by examining the extent to which stakeholders have been involved in the oil and gas activities in Uganda.

1.3 Specific objectives and research questions.

Objective 1

To explore the extent of stakeholders' involvement in the oil exploration activities in the Albertine region.

Research questions

- a) What are the strategies being implemented to promote stakeholder involvement in the oil industry in the Albertine region?

- b) What impact does stakeholder participation have on industry practice in the Albertine region?

Objective 2

To assess the current environmental governance framework of the Albertine region.

Research questions

- a) What is the current environmental governance framework of the Albertine region?
- b) Where do oil governance and the wider environmental governance plans for the region converge and diverge?

Objective 3

To examine the impact of the emerging oil sector to the local socio-economic conditions in the Albertine region.

Research questions

- a) What are the effects of oil exploration in the community of Hoima district in Albertine region?
- b) What problems have emerged because of oil exploration in the Albertine region?
- c) Does the concept of the resource curse have grounded significance in this context?

1.4 Scope of the study.

The research focus was on inclusive development and the emerging oil sector. The study focused on the stakeholder`s involvement in the oil and gas exploration activities in the Albertine region, specifically in Hoima district.

In this study, stakeholders refer to those groups, individuals, organisations, government and local people who are associated with the sector. Therefore, this study mainly focused on the stakeholders such as the government, local leaders, civil society organisations, Non-governmental organisations, ministries and local people of Hoima district. The study targeted the following stakeholders; National Environmental Management Authority (NEMA), Ministry of Gender Labour and Social Development (MGLSD), Advocates Coalition for Development and Environment (ACODE), Civil Response on Environment and Development (CRED), Join Business Network (JBN), Navigator of Development Association (NAVODA), Mid-western Uganda region Anti-corruption (MIRAC), Hoima local governmental officials and the local

people of Kaiso village in Hoima district. The above groups were chosen because they have knowledge on the oil and gas sector in the Albertine region.

1.5 Definition of the concepts.

A stakeholder is any group or individual who can affect or is affected by the achievements of the firms objectives(Freeman, 2010). Additionally, a stakeholder is an individual or a group inside or outside the company that has a stake in or can influence the organisations performance(Atkinson, Waterhouse, & Wells, 1997). In this study, stakeholders refer to those groups, individuals, organisations, government, local people who are associated with oil sector and therefore can affect or affected by decisions on activities concerning oil and gas sector.

Inclusive development is a pro-poor approach that equally values and incorporates the contributions of all stake holders including marginalized in addressing development issues. It promotes transparency and accountability and enhances development cooperation outcomes through collaboration between civil society, government and private sector. (Oxfam, 2012). Inclusive development requires equitable benefits sharing of development and equal opportunities and these include equal economic opportunities for local people and participation. In extraction industries inclusive development focuses on social economic benefits for local communities and addressing the problem (Bos & Gupta, 2016). The inclusion of local communities is essential to avoid the mistake of oil related decision-making mistakes, which could turn a valuable natural resource for development into source of conflicts.

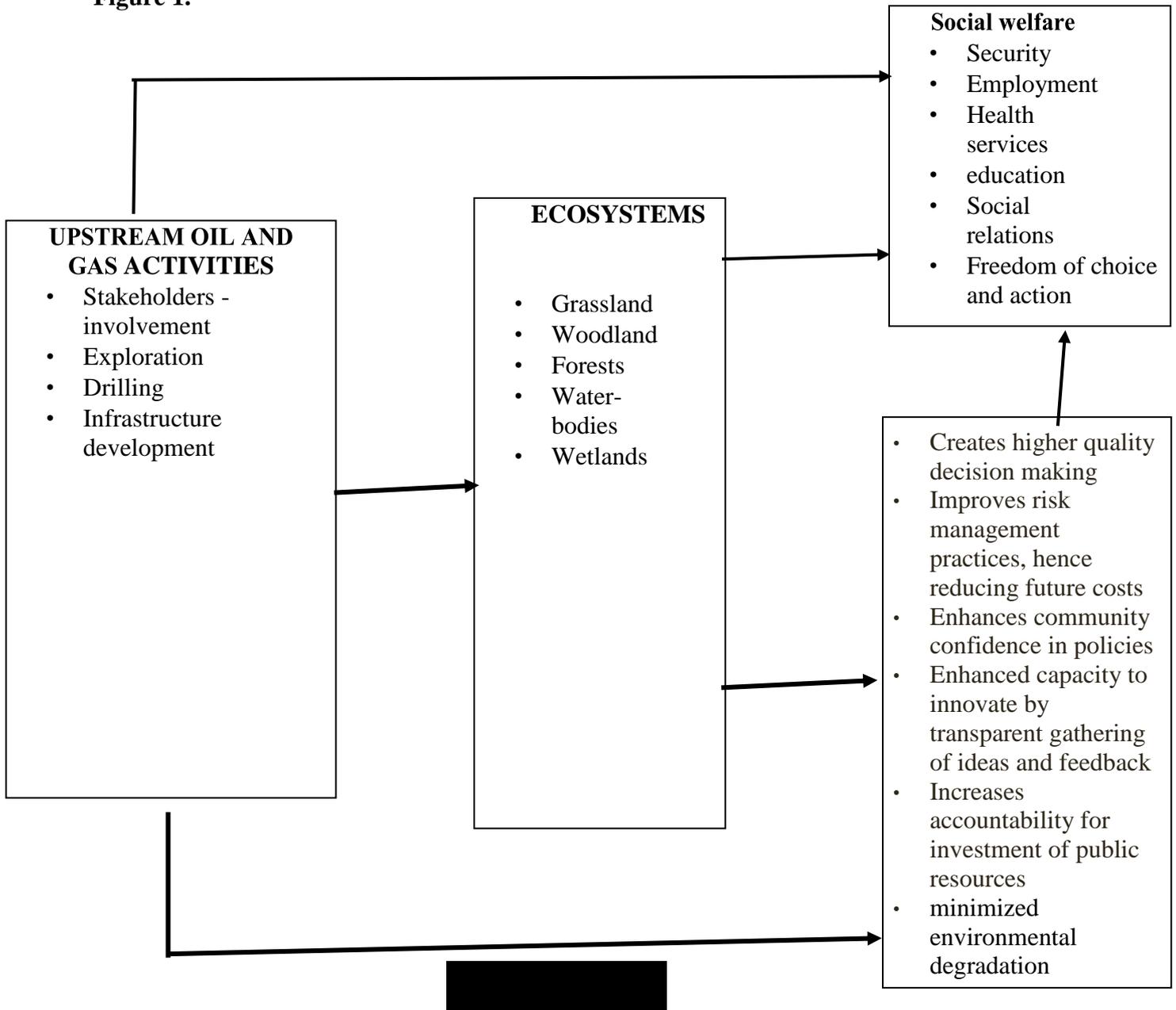
Involvement

This refers to the act or the process of taking part in something.

1.6 Conceptual framework.

In this study, the conceptual framework (figure1) is to visualise a discussion of the main areas of focus in the study. It specifically illustrates the link or relationship between stakeholder engagement in oil and gas exploration activities and the impact of oil and gas sector in Uganda. In this study, the independent variable refers to the different stakeholders' involvement in the oil and gas exploration activities at different levels whereas the dependent variable refers to how people's life in the region and in Uganda was generally affected

Figure 1.



Description and interpretation of the conceptual framework

Linkages between stakeholder engagement in oil and gas activities in the Albertine region of Uganda.

Oil exploration and development involves land use and land cover change activities that alter certain critical aspects of the spatial pattern, form, and function of landscape interactions

(Slonecker et al., 2012). These changes can negatively and / or positively affect people or society in general. The quality of life of the people is affected economically, socio-culturally or environmentally in form of the entire ecosystem. In this study, the assumption is that the level of stakeholder participation in the whole process of oil and gas activities determines the outcome. For instance, if there is stakeholder involvement right from planning, budgeting, implementation, supervision, assessment, capacity building and feedback among others (Independent variables), the assumption is that there will be satisfaction among people, minimized environmental degradation, shared opportunities, transparency and accountability (Dependent variables) and eventually there will be improved social welfare and sustainable development that is all-inclusive.

1.7 structure of the study

This thesis consists of six chapters. Chapter one is the introduction and it consists of the background to the study, illuminates the research problem with the study objectives together with the research questions and the structural layout of the report. The second chapter presents the methodological breakdown on which the study is based, it provides the research design, instruments of data collection, sampling procedure, sample size, reliability and validity, ethical consideration and the challenges encountered. The third chapter goes on to explore relevant literature to the study topic Chapter four presents data analysis and the results from the findings. The findings are presented following the study objectives, Chapter five discusses the findings of the study against existing literature and the last Chapter (six) presents the summary and conclusion.

2.0 RESEARCH METHODOLOGY

Introduction.

This chapter discusses the choice of research methods used in relation to data collection, documentary review, research strategy, research design, population and sampling procedure, reliability and validity, Ethical considerations and problems the researchers encountered.

2.1 Methodology

The researcher collected and assessed primary and secondary data. This includes the review of documents such as government policies, laws, studies and publications on the set of interviews and household were conducted with the key informants and respondents in study area. Respondents were selected persons with knowledge on oil and gas sector and these included central and local government officials and the members of Non-Governmental Organisations (NGOs) working in the Albertine graben. A total number of 44 people participated in key informants' interviews and household interviews. The fieldwork was carried in one month from January to February 2019 in central part of Uganda (Kampala) and Hoima district in mid-western Uganda. The research design used was a case study. Exploratory research design was also applied.

2.2. Study area

The study was carried out in the Albertine region, Hoima district in mid-western Uganda, part of the left arm of the East African Rift valley where the oil reserves were first discovered in the 1920 (Anderson & Browne, 2011). This region has numerous protected areas such national parks, forest reserves and wetlands, which are used for ecotourism. Lake Albert, which is the second largest fresh water lake in Uganda, that is famous for its unique fish species. Kaiso villages located in Hoima district, western Uganda, were purposively selected for the study because these were the areas that had experienced most oil and gas exploration activities in the whole Albertine region at the time of the study. Such activities include: seismic surveys, exploratory drilling, movement of drilling rigs, construction of support camps and oil roads connecting exploration sites to trading centres for example Kaiso Tonya road ((Tumusiime, Mawejje, & Byakagaba, 2018)).

2.3 Research Strategy

The objectives of this study were: 1) to explore the extent of stakeholder's involvement in the oil exploration activities in the Albertine region 2) to assess at the environmental governance framework of Uganda's resource management especially in the Albertine region and 3) to examine the impact of the oil development sector to the local economy of the Albertine region.

The study was carried out from January 2019 to February 2019 in Kampala district and Hoima district in mid-western Uganda. The staff from the Ugandan authorities and organisations, local communities were interviewed. These were interviewed because of their significant knowledge regarding oil exploration activities in the Albertine region. The main methods that were used are key informant interviews and semi-structured interviews for the households.

I interviewed 44 respondents (7 respondents in Kampala. 1 from **ACODE** (Advocate Coalition for Development Environment), 3 from **NEMA**(National environment management Authority),1 from **MGLSD**(Ministry of Gender Labour and Social Development)1 from **CRED** (Civil Response on Environment and Development) 1 from **JBN** (Join the business network) 4 Hoima local government leaders(1community development officer ,3 land officers) , 3 representatives of the three non-governmental organisations that is 1 from **MIRAC**(Mid-western region anti-corruption coalition) 1 from **BAPENCO** (Bunyoro Albertine petroleum network on environment and conservation) and 1 from **NAVODA** (Navigator of Development Association) in Hoima and 30 households' residents in Kaiso village in Hoima district.

For this study, I chose to use qualitative methodology in order to create holistic research approach to the topic of the study. I used key informants' interviews, semi structured interviews and field note taking. Qualitative methods are helpful because they are dynamic and flexible (Bryman 2008). Statistical analysis was also used to analyse the survey data.

2.4 Research design

A research design is defined as the plan that is used to produce answers to research problems. Additionally, the research design can also be defined as an arrangement of conditions for collection and analysis of data in a way that combines significance with the study's main on relevant variables from a variety of people. Case study design is a proper design for narrowing down abroad field of research into an in-depth of one or few specific cases. Case study

contributes to the researchers learning process by shaping skills needed to do a good research. Case study is appropriate method on studies focusing on contemporary events rather than historical events, their goal is to expand contribute to the general theories (Yin 2009). I used a case study because it would allow me to get detailed exploration of political, economic and social opportunities of the oil and critically examination of the theory of the resource curse.

The case study is also used in order to have an in-depth understanding of the outcomes of the stakeholder's involvement in the oil and gas exploration activities to the local communities.

2.5 Research method

Research entails the collection of information on a phenomenon using different techniques. By so doing, one technique or a combination of different techniques are used. Silverman (2000) states that methodology is the “general approach to a research topic”. This statement implies that every research work has to follow a kind of procedure based on a chosen technique. This could be in the form observation, questionnaires; semi structured interviews and structured interviews. This research work made use of such techniques such as key informant's interviews, semi-structured interviews, household survey. The methods of data collection therefore were based on.

- Key informants' interviews
- Semi-structured interview for households
- Field note taking

2.5.1 Data collection

The study employed both primary and secondary data collection approach. In this study both primary and secondary data from various sources of evidence such as interviews to generate empirical findings. It is argued that data can be collected using different approaches like direct, indirect, and elicited approach. However, in this study, direct approach was used, and this covered the household interviews and key informants' interviews.

2.5.2 Key informants' interviews

The interview were used to collect in depth information on the study. There was a need to capture the perception of the local people, local government employees, officials from the authorities and Non-Governmental Organisations. Interviews are the correct methods to use when exploring sensitive topics such as stakeholder's involvement in the oil emerging sector. These were done face to face by the researcher with the help of an interpreter.

2.5.3 Documentary review

Secondary data was obtained from various articles, books, theses, reports, and other scholarly materials written on the stakeholder's involvement in oil and gas sector. This was done before and during the period of conducting my research and this process continued during my thesis writing.

2.6 Data management and analysis

Thematic analysis was used in this study where data from the questionnaires was entered into Microsoft excel, checked for errors and then exported into Statistical Package of Social Science (SPSS) software for rigorous analysis. Through an exploratory approach, frequency distributions and descriptive statistics were generated and represented in frequency tables. To establish the relationships between variables specially to highlight stakeholder involvement in oil activities and subsequent impacts of oil exploration in Albertine region, cross-tabulations were utilized.

The focus group key informant interview recordings were transcribed and together with notes during the discussions, the data was grouped into themes that were developed based on the study objectives.

2.7 Population and sampling procedure

This research used a sample of the population of the study area from which data collection techniques were applied. The term population, as is applied here, implies the total number of household (for example a community) out of which a sample is used to represent the total population. Different sampling procedures maybe used to arrive at a number that will reflect a true and unbiased representation of the total population.

Non-probability sampling approach was used and this included; purposive sampling and snow ball sampling.

Purposive sampling is to sample participants in a strategic way, so that those sampled are relevant to the research questions that are posed. I used this approach because it enables the researcher to select the sample size based on the purpose of the study; it is also flexible and meet the multiple needs of interests.

Snowball sampling is where the researcher makes contact with a small group of people who are relevant to the research topic and then uses those established contacts with others to be interviewed (Bryman, 2008). A selected group of people was sampled, and these included; local communities of Kaiso village in Hoima, leaders at the local level and government workers to participate in key informant interviews (Land officers, community development officer, Respondents with relative knowledge of the two variables in the research study that is inclusive development and the emerging oil sectors in the Albertine graben will be used to obtain the information that is highly reliable in the process of conducting the research study.

This choice was favoured because of the nature of settlements and the presence of the people to be interviewed. For the number of days I stayed in Hoima District, most of the targeted people were said to have been on the Lake Albert before the discovery of oil and they are involved in the fishing activities in the area where the oil was discovered. Others such as the District Officers, Oil company representatives, local leaders/ NGOs/Civil Society Organizations were also contacted for interviews.

2.8 Reliability and validity

Reliability is concerned with the question of whether the results of a study are repeatable or not (Bryman, 2004:28). Additionally, Reliability implies that the variables are consistent in the sample which implies that the research can be repeated by another researcher and obtain similar results (Berg and Lune, 2012). In this case, this study is reliable. Interm of validity, this research was valid because the results are the intended outcome. The household questionnaire items used in this study were constructed taking some parameters into consideration to make the results consistent. The instruments were first tested to find out how suitable the instruments are. The instruments were then adjusted to make sure that they would fulfil the reliability requirement.

Validity on the other hand generally deals with whether an instrument measures exactly what it is meant to measure. The household questionnaire was tested in order to see the outcome of stakeholder's involved in the oil and gas sector. Ecological validity as a criterion is "concerned with the question of whether social scientific findings are applicable to people's every day, natural social settings" (Bryman, 2004:29).

In order to reduce the risk of having many biases or errors, I employed qualitative methods in a participatory manner and explained to the interviewees the purpose of the research before each interview was conducted. An example of such errors could be that some respondents in the Kaiso village were satisfied with what is happening due to oil exploration activities like road construction, hospital and schools, and yet the majority complained about the distance from their residences to the hospital as being very long.

2.9 Ethical considerations

I followed the ethical principles that Diener and Crandall broke down into four major parts; "*harm to participants, lack of informed consent, invasion of privacy and deception*" (Bryman 2008:121).

The principle of informed consent refers to that prospective research participants should be given as much information because they may need to make decision about whether they wish to participate in a study or not. Therefore, it was very important during the process of the research for the researcher to make respondents understand that their participation was voluntary and that the participants were free to answer any question or to withdraw from participation any time they wanted to. Since protection of the participants' identity was important in this research, I changed the participants' names and location during the write up to protect their identities and opinions, so that the third party does not easily identify them. I also ensured that all data collected from the field, was copied to my computer and locked with a password so that it was not easily accessed by anyone. After data analysis, the original data was disregarded to ensure that the findings do not harm any participants after the study.

2.10 Challenges encountered

The research area (Hoima - Uganda) is located almost 2 hours and 30 minutes from Kampala City. Part of the road to Hoima was under construction, so there was a lot of dust. The road

users were making chaos because of too much dust and the congested traffic jam. These road users wanted the oil construction cars to pour water in the road and due to the chaotic interaction between the two parties; the police sprayed tear gas in the whole town and interviews were interrupted due to the noise and irritation from the tear gas.

The researcher also encountered difficulties when contacting the National Environmental Management Authority (NEMA) requesting to interview some of the officials. Furthermore, in order to be granted an approval to interview NEMA officials, my application letter took more days than I expected.

Some of the respondents were not willing to give certain information concerning the oil exploration activities, because this is regarded as a sensitive topic in Uganda and thus interrupted my interviews.

Working on a tight budget with insufficient funds to collect the necessary data proved to be another challenge. I incurred more costs in form of transport because I used to use a motor cycle or public means to go to the authorities or organisations and ministry to conduct interviews. Additionally, I would sometimes be denied access to information without any reason, which interrupted my interviews.

Lastly, language barrier was a great challenge, especially in Kaiso village of Hoima because most people speak Runyoro, which is a language that I do not understand. I therefore hired interpreter and local personnel who had to guide and introduce us to the research participants.

3.0 LITERATURE REVIEW

Introduction.

This chapter covers the reviews of literature from previous studies that are related to this study. It includes the brief profile of Uganda, Production and sharing agreements, oil exploration and production in Uganda, impacts of oil and gas exploration in Uganda, current policy and legal framework on oil and gas and the resource curse, resource blessings and the Dutch disease.

3.1 Brief profile of Uganda

Uganda known as a pearl of Africa and is also a landlocked sub Saharan country in East Africa bordered by Kenya in east, South Sudan in North, Democratic Republic of the Congo in west, Rwanda in south west, and the Tanzania south. Agriculture is the back bone of Uganda`s economy and livelihood of people. About 80% of Uganda`s population depends on agriculture for both food and income. Most of Uganda`s agriculture depends on rainfall and therefore, inherent to climate change. According to (Mubiru, 2010), it is projected that crop yields from rain fed agriculture in some countries in Africa could be reduced by 50% by 2020 because of climate change. Climate change such as drought, floods, landslides and prolonged dry spell pose a threat to country`s natural resources and economic development. Uganda is rich in natural resources, recently they discovered the oil in the Albertine graben. The oil exploration in Uganda was first done by Wayland in 1920`s, who documented oil seeps in the Albertine region. Petroleum activities seized due to the world war in 1945 and in 1983 the exploration was resumed due to the presence of oil in the graben (Vokes, 2012). This led to the creation of petroleum units in 1985. In 1985, the petroleum exploration and production act were enacted to make the provision of production and exploration and production of oil, it was officially announced in 2006. The energy sector in Uganda is made up of three subsectors namely Power, Petroleum and New and Renewable Sources of Energy. The power sub-sector covers electricity generation, transmission and distribution. The new and renewable sources include woody and non-woody biomass, solar, wind, geothermal and hydrological. The petroleum sub-sector covers both upstream (exploration and development) and downstream (refining, storage, distribution and marketing) industries. The sector is placed under the Ministry of Energy and Mineral Development which deals specifically with the formulation, implementation and monitoring of energy policy (Kasimbazi, 2012).

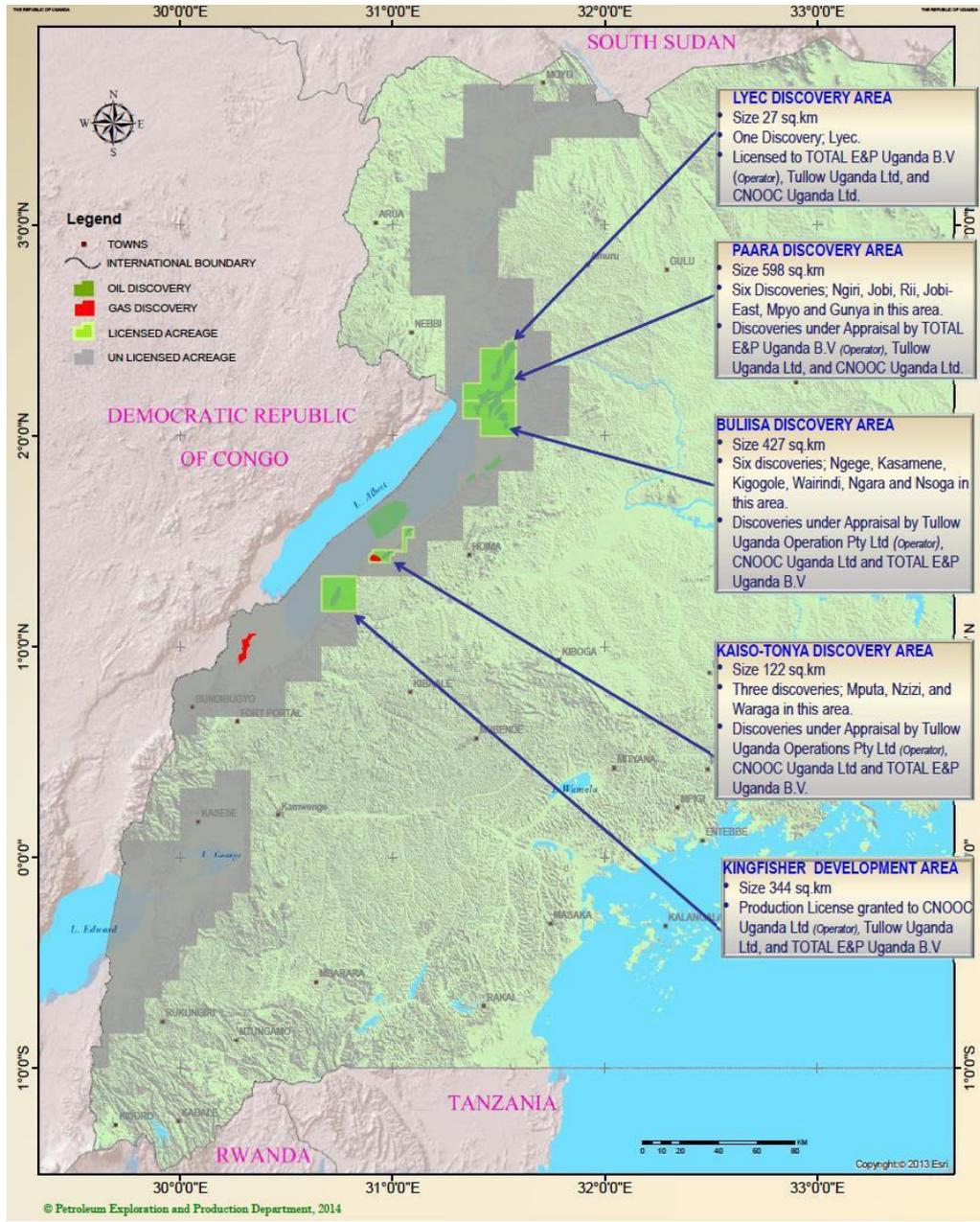
3.2 Oil exploration and production in Uganda.

The process of oil exploration in Uganda is not new; it was done by Wayland a government geologist who documented substantial hydrocarbon occurrences in the Albertine graben in 1920's. This oil exploration was interrupted during the Second World War, but it resumed in 1980's. (Kasimbazi, 2012) shows that oil industry is considered in two parts namely upstream and downstream. Upstream covers exploration and development while downstream covers refining, storage, distribution and marketing. According to Ericson 2014, 6.5 million of barrels of crude oil were estimated to be in Lake Albert basin in Uganda that borders Democratic Republic of Congo (DRC). Since early 2000, Uganda embarked on the oil sector and has entered into oil exploration agreement with many companies including Tullow oil, Dominion Uganda limited, Neptune petroleum Uganda limited and Heritage oil and gas limited. In 2006 the hardman and energy Africa/ Tullow oil made their first discoveries in Mputa 1-well, Kaiso-Tonya area and it was licenced to Dominion petroleum limited in 2007.

According to the Ministry of Energy and Minerals Development, the Albertine rift is subdivided into ten Exploration Areas (EAs), out of which, there are five active Production Sharing Agreements and four Production Sharing Agreement (PSA) operators. 51 The four PSA operators are Heritage Oil and Gas Uganda Limited;52 Tullow Oil plc, which operates

Block 2 (in Bunyoro); Dominion Petroleum Limited, which operates in the area around Lake Edward and Lake George; and Neptune – now Tower Resources – which operates in the West Nile region.53 These companies are carrying out oil exploration activities, Albert at different phases of discovery. Currently three companies have been granted licences for exploration and production and these include; Tullow Operations Pty limited , Total E&P and China National Offshore Oil Corporations (Sandbrook, Cavanagh, & Tumusiime, 2018) as shown in the map below.

Map 1. Uganda's main discovery areas



(Patey, 2015)

3.3 Production and sharing agreements (PSAs)

The PSAs is the most common type of contractual arrangement for petroleum exploration and development. Under the production and sharing agreement, the state as the owner of the mineral resource engages a foreign company as a contractor. This is done to provide technical and financial services for the exploration and development operations. In the late 1990s and early 2000s brought interests in Uganda`s potential natural resources, with the contracts signed by hardman petroleum, heritage oil and the energy Africa.

There are two types of production agreements usually signed in production of extractive resource in Africa-concessionary and contractual and service sharing (Kashambuzi, 2011).

These types are;

1. Service /Contractual Agreements – these agreements are whereby the government pays some amount of money to a company to carry out a service. In this case the payment can be that resource for instance Oil.
2. Concessionary Agreements – the license bear the cost of exploration, development and production. In return, they own the Oil (Resource) and pay back to the government in profits and royalties. On the other hand, in production sharing Agreements, the license bears all the risk as in Concessionary agreements but does not own the resource.

Ugandan PSAs are highbred of both concessional and service agreement and are common in developing countries including Africa (Kashambuzi, 2011). Ugandan PSAs give licensee 8 years of exploration phase, which is divided into three parts; four year for booking, Explore and decide, two years to apply for production licensee and two more years for assessment.

According to Strategic Environment Assessment Final Report, 2013, these agreements form official commitment between the government and oil companies, within these PSAs, environmental aspects of oil and gas activities are treated under overall theme on Health, Safety and Environment (HSE) which tends to focus on drilling and production issues. Therefore, these PSAs are deficient in addressing these wider Environment issues.

The government of Uganda negotiated about production and sharing agreement with international oil companies. Tullow oil and heritage were the first companies that were involved in the exploration of oil in the Albertine graben. According to Ericson 2014, heritage oil, hard

man petroleum and Tullow oil are companies that are currently holding licences in the petroleum exploration in the Albertine graben. There are several on-going petroleum-exploration projects in the energy sector to meet the increasing demand of energy in the economy. There are also discussions between Uganda and Kenya to find the best option for implementing the Kampala Oil Pipeline Extension project to minimise the cost of delivery of petroleum products from the seaports.

Production and sharing Agreements should be made public in order to allow all people to get information and participate in decision-making process, with information, citizens and Civil Society will effectively support the industry (AFIEGO, 2009).

3.4 The resource curse theory, resource blessing and the Dutch disease.

Resource curse refers to the phenomena in which countries that are rich in natural resources tend to experience slow growth despite their abundance in rich resources. Countries that are rich in natural resources are more likely to experience political and socio-economic problems than their counterparts (Logan & McNeish, 2012)The argument is that natural resources such as oil leads to high levels of poverty, poor economic performance, low level of democracy and poor governance.

The idea that natural resources are bad for development and the economic performance has attracted many researchers, international financial institutions and the NGOs around the world (Logan & McNeish, 2012). Some studies have shown that there is a negative relationship between economic growth and natural resource abundance (Sachs and warner 1995, Sachs and warner 1997,(Sachs & Warner, 2001). In addition, this negative relationship is what Auty, 2002 called a “resource curse.” The resource curse term is used to describe how countries that are rich in natural resources are unable to use the wealth from the natural resources and boost their economies. These countries tend to have lower economic growth than countries without natural resources.

Economists have observed that resource rich nations especially in Africa, Latin America and Middle East tend to grow at a slower rate than countries with less natural resources [Auty,1993](#) (Auty, 2002). Various countries economically depend on these natural resources for example copper, gold, oil, diamond among others. Most countries in Africa and Middle East are rich in oil, gas and other mineral resources, yet their people experience low per capita income and low-quality life (Badeeb, Lean, & Clark, 2017).

According to Ainslie, 2013, the Dutch disease is the conceptual formulation about resource booms and industrialization that was mostly worked out by economists Max Corden and Peter Neary in the early 1980s. The Dutch disease describes the negative effects of natural resource boom on manufacturing and agricultural export growth; booms that crowd out demand for tradable sector products because labour becomes more expensive and the value of the country's currency rises.

Ainslie, (2013) further explained that, in a kind of two-step process, commodity revenue drives up the price of labour, manufacturers suffer inordinately, pressure is placed on manufacturing profit margins and rising manufacturing costs are (In part) attributable to rising real exchange rate with high value currency, manufacturing exports demand drops, which leads to high unemployment in manufacturing. While higher income from the resource sector demands higher demand for endogenous services, this rising service demand does not balance out all the ills of fallen manufacturing. Exported agricultural products face the same pressure as exported manufactured goods.

The Dutch disease co-exists of booming and lagging sector in an economy due to temporary or sustained increase in export earnings (Davis, 1995). In this situation, it explains that the mining sector booms while other sectors shrink or decline. This leads to over dependence on the oil sector and therefore results into a decline in other sectors such as the agricultural sector. An example is Gabon whose overdependence on oil destroyed the agricultural sector (Bainomugisha et al., 2010).

There are many factors that cause the resource curse and many scholars have written about these factors (Ross (2002), Collier and Hoeffeler (2004), Sachs & Warner (1995). These factors include revenue volatility and corruption, the Dutch disease and resource reliance. Many African countries have suffered from the resource curse and the Dutch disease for example Angola, Sudan, and Nigeria. Despite of being the largest oil producers in Africa, they are still poor.

It is however important to note that not all resource boom end up in the Dutch disease scenario as there has been a number of success stories. According to Karl, (2007), a resource boom can be either beneficial or detrimental. For example, In Ghana, the discovery of oil has been considered a fortunate event that promised people's happiness (Egyir, 2012).

Countries such as Indonesia, Austria, Botswana, Malaysia, Canada and Norway have benefited from natural resource abundance, and thus have managed to avoid the resource curse (Mbabazi, 2013; Rosser, 2007).

Norway for example, was one of the poorest countries in Europe in the 1900s. In the 1960s, Norway still lagged behind its Scandinavian neighbours in GDP per capita and other economic indicators. By the 1990s, Norway had overtaken Denmark and Sweden. Norway is currently one of the world's richest and well-governed countries, with some of the best human development indicators (Bategeka, Kiiza, & Ssewanyana, 2009); UNEP, 2017). Therefore, it is crucial for a country like Uganda that is trying to explore its oil resource to avoid the underlying causes of a resource curse. This can be achieved, by for instance learning from the mistakes made by countries where such resources have turned out to be sources of instability. Furthermore, borrowing approaches adopted by countries like Norway with success stories could be good for Uganda.

3.5 Stakeholders' involvement in the oil exploration activities in the Albertine region.

Stakeholder engagement is important of any planned intervention as it goes a long way in shaping decisions. It is a continuous process that needs to be understood as running through the lifecycle of the intervention and beyond (Atacama consulting, 2016).

According to the study that was carried out by (Manyindo et al., 2014), they recommended that stakeholder engagement plans should be gender-sensitive, so that women have equal participation in the decision making process. They further said, where women have come to community Investment decision-making process, out comes have more sustainable development impacts.

According to a study carried out by (Tumusiime et al., 2018) local people, their leaders and the officials of Bunyoro felt there was inadequate engagement between government agencies and local communities in the oil and gas activities being implemented in the region. This brought a feeling of marginalization, which exacerbated by what locals called secrecy around oil-related activities in the region. For example, residents of Buliisa district claimed that sometimes especially at night, they saw trucks carrying unidentified materials from exploration and drilling sites and wondered why these trucks were operating at only night.

The above residents further explained that one of the community members was wondering if oil was being taken away without their knowledge, while that was unlikely. Some staff working with the oil companies indicated that the trucks were carrying wastes generated during exploration. This shows the extent of lack of involvement and limited knowledge of what was happening in the region. In worst-case scenario, the local people felt that ultimately, they might not benefit from the oil industry if the activities are not carried out in a transparent manner.

Communities/villages should actively demand peacefully and open engage companies and local and national leaders, more so, communities should seek for face-to-face contact with important decision makers and engage in more extensive discussion about oil development in their villages. Active engagement of stakeholders/communities facilitates a deeper pursuit of information on the part of local community members, which leads to other kinds of civic activity and results in the community feeling more, satisfied with important issues (Eric Coleman, Jacon Mayindo, Rani Parker and Bill Schultz, 2019).

Nalubega Flavia, Ssamula Kanyesigye, 2017, explained that public understanding of government revenues and expenditures could over time can help public debate and inform choice of appropriate and realistic options for sustainable Development. They said that achievement of greater transparency must be set in the context of respect if contracts and laws. The Petroleum, (Exploration, Development and production) (National Content) regulations 2016 came into force by 6th May, 2016 and are intended to ensure that the participation of indigenous Ugandan entities in the oil and gas sector, the regulations require any licensee, Contractor, and sun contractor to give the first priority to goods and services that are produced and available in Uganda and which are rendered by Ugandan citizens and companies during procurement (Marion Angom, Fiona N. Magoma, 2017).

3.6 Current policy and legal framework on the oil and gas sector in Uganda.

Ever since oil exploration and production was officially announced in 2006, several laws have been put in place by the Parliament of Uganda to protect the environment as well as contributing to Uganda's development.

According to the 2008 National Oil and Gas policy, the role of the parliament in Uganda's Petroleum sector is; to enact petroleum legislation, to enact the proposed legislation for the management of petroleum revenues and to monitor the performance in the petroleum sector through policy statements and annual budgets (International alert, 2011).

The oil and gas policy that was put in place on the 1st of January 2008, with objectives of dealing with the environment and biodiversity, was designed to ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity. This policy was designed with several strategies to achieve the objective among which was promoting environmental protection in oil and biodiversity, requiring oil companies and their contractors and sub-contractors to use the best practices in ensuring environmental protection in oil and gas activities and among others (African institute for energy governance (AFIEGO), 2009).

For oil to be properly managed, there should be a policy on the environment that encourages national participation. Technocrats and company staff should be hired on merit, and people should be able to participate either directly or through representatives in managing the oil resource. This implies a far greater role in scrutiny across the stages of oil and gas activity than is currently provided in the bill. Relevant bills should be translated and disseminated with greater emphasis on community dialogue. There are well established and tested International guidelines on stake holder engagement on such issues (International Alert, 2011).

The 2008 National Oil and Gas policy calls for Uganda natural resources to contribute to poverty eradication. Its aim also emphasizes national participation in oil and gas activities in order to expand on employment opportunities, acquire diversified skills and enable application of skills from the oil industry in other sectors of the economy (Republic of Uganda 2008. 2). This policy acknowledges limited opportunities for direct employment, but claims that the industry should provide significant employment opportunities through chain or multiplier effect (Manyindo et al., 2014).

According to the study that was done by Manyindo et al., (2014), communities recommended that oil revenues should be shared by all oil-bearing areas and proposed percentages to be received from the government should range from 25% to 50%. However, before communities raised their proposal, they said that the government and oil companies should ensure transparency and accountability in resources and revenues from the oil.

Oil and gas are non-renewable and finite resources. Benefits that accumulate from them may expose and deplete fields. The national oil and gas policy was formulated to promote the safeguarding of these resources and managing them in manner that will create lasting benefits

to the society. Creation of these lasting benefits include use of these resources to create durable and competitive competences through education, infrastructure development and financial and social capital, which are useful beyond the life of oil and gas. The activities of the current generation should not impose a burden on the future generation, especially regarding the depletion of renewable resources. These resources should, therefore, also be used to provide for integration equity. Sustainable resource management as opposed to accelerated revenue generation will, among other things create lasting benefits to the society (Ministry of Energy and Mineral Development, 2008).

3.7 Impacts of oil and gas exploration in Uganda.

Oil exploration has both negative and positive impacts on local people and the environment. Exploration and production operations are likely to induce economic, social and cultural changes in Uganda. According to the Africa Research Institute for Energy conservation (2009), influx of immigrants due to discovery of oil has led to increased population and boosted demand for local goods and services on one side, while on the other side, it is slowly, but heightening tribal cultural sensitivities and prejudices as a result of competing interests, values, customs and practices.

The ongoing oil and exploration and preparation for production is an important progress towards development in Uganda. Oil is a resource that can create lasting development for Uganda and its people. However, if not properly managed, it can bring a curse rather than a blessing. According to AFIEGO (2009), the exploration in Uganda is still faced with a number of governance and environmental management challenges such as secrecy around oil exploration in the Production Sharing Agreements (PSAs), poor Environmental Impact Assessment principles, threats to human and animals ecology, culture, air, water and land pollution.

The oil discovery in the Albertine region will improve the quality of life of the people and help the country to reduce on foreign donors' dependence. This will increase national prosperity and poverty reduction. Additionally, the study of (Bainomugisha et al., 2010), suggests that the discovery of this oil in Uganda raised hope and expectations of many Ugandans that the revenue from the oil will make poverty a history.

According to the International Alert (2013), oil exploration has direct impact on economic, social and cultural dimensions of the community. These impacts include changes in livelihood patterns such as fishing, agriculture, livestock rearing, hunting and eco-tourism. A higher proportion of the population in the Acholi and West Nile sub-region are poorer compared with those living in other regions (Rwenzori, Bunyoro and Kigezi); earning less than UGX 50,000(\$20) a month. More women (29%) than men (15%) were also reported that their household earnings were less than UGX 50,000. However, results showed that people were optimistic that oil exploration would contribute positively to increased employment opportunities (57%), a higher income (51%), improved access to roads (41%) and improved access to social amenities (36%). Nevertheless, community members were sceptical about benefits arising from oil exploration, because their youth and children were likely to be employed for casual jobs because they lacked necessary qualifications.

Furthermore, the study shows that although there are employment opportunities, the communities are limited to low skills and low paying jobs. Low levels of education in villages means that the community members have limited skills to compete for good jobs in the oil industry (Manyindo et al., 2014). Other studies about oil in the Albertine region have witnessed both positive and negative expectations from the oil discovery (Balikuddembe & Ardanan, 2014) and (Bainomugisha et al., 2010). Many people are expecting that oil production will contribute positively to increased employment opportunities, higher incomes, improved roads, and improved access to public services. However, (Shepherd, 2013) suggests that *“oil also brings risks of the erosion of the relationship between people and government, of economic distortion, of increased corruption and of internal tensions.”*

Exploration and developing the oil product could result into variety of direct and indirect biodiversity; these include fragmentations of population and/or habits, disruption and/or foraging routes (Case of elephants), destruction of Habitat of animals forcing them to use one area and will lead to increased poaching and other illegal activities (Louise Johnson 2007).

4.0 DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter presents analysis and the findings of the study by the researcher. The results were presented and interpreted according to the specific objectives. These findings follow the three specific objectives stated in chapter one which are; To explore the extent of stakeholders' involvement in the oil exploration activities in the Albertine region, to assess the current environmental governance framework of the Albertine region, to examine the impact of the emerging oil sector to the economy of the Albertine region particularly in Hoima district. The findings from household survey were then presented in tables with explanation being given. The findings from the key informants' interviews were also analysed and presented below;

4.2. Demographic Statistics of the participants.

Table 1: Demographic Statistics of the respondents.

Household position	Number of respondents	percent
Household head	19	65.52
House wife	8	27.52
Son	1	3.45
Daughter	1	3.45
Total	29	100

The majority of respondents were household head and were 65.52, and house wife were 27.52% this show that data that was obtained from reliable source. And these were the majority of the sample size.

Table 2: Gender of the respondents.

Sex	Number of respondents	percentage
Male	19	63.33
Females	11	36.67
Total	30	100

Source: primary data 2019.

The table 2 shows that 63.33per cent of the respondent that were interviewed were the majority and these were males. Whereas, 36.67 per cent were found to be females. In Uganda, the

households are normally headed by the males. Some households are headed by females and this due to unavoidable circumstances.

Table 3: Level of education of the respondents.

Education level	Number of respondents	percentage
University	2	6.67
Tertiary	2	6.67
Secondary	12	40.0
Primary	13	43.33
None	1	3.33
	30	100

Source: primary data 2019.

The table 3 above shows, the majority of the respondents had completed primary school making a total percentage of 43.33. The respondents who attained secondary were 40 per cent and the respondents who attained Tertiary were 6.67 per cent. 6.67 per cent of the respondents had attained University, 3.33 percent had not attained any level of education level and was coded as none. Education is an important characteristic which may affect persons attitudes and the way of understanding particular phenomena. The researcher investigated the level of education as it is presented in the above table.

Table 4: Marital status of the respondents.

Marital status	Number of respondents	percentage
Married	23	73.31
Separated	2	6.90
Single	4	13.79
Total	29	100

source: primary data 2019

The above table (4) of the respondents shows that majority of the respondents were married and they were 73.31 per cent, those who were single were 4 with 13.79 per cent. The remaining 2 respondents were single with 6.90 per cent of the total sample.

Table 5: Occupations of the respondents.

Main occupation	Number of respondents	Percentage
Business man	18	62.07
Lab technician	1	3.45
Teacher	1	3.45
Causal laborer	1	3.45
Fishermen	6	20.69
Pastor	1	3.45
Saloon lady	1	3.45
Total	29	100

source: primary data 2019

The majority of the respondents were Businessmen and were 62.07% and fishermen with the percentage of 20.69%.

4.3 Stakeholder's Involvement in Oil exploration activities

The first objective of the study was to find out the extent to which stakeholders were involved in oil exploration activities. Here the researcher, explains the finding on the extent of stakeholders' involvement in oil exploration activities and the benefits of stakeholder's involvement.

Qualitative data was obtained from key informants' interviews and households' interviews. key informants' interviews were done through interviewing different officials in different organizations and Authorities while household data was obtained by administering semi-structured questionnaires to household members.

Regarding people perception on the stakeholder's involvement in oil exploration activities, majority (56.7 per cent) of the respondents had not participated in different oil exploration activities. Those who had participated, they outlined different activities they had participated in. Table 7 show the list of those activities

Table 6: Stakeholder Involvement in oil exploration.

Participated in any oil Exploration activity	Number of respondents	Percent
Didn't participate	17	56.67
Participated	13	43.33
Total	30	100

Source: primary data 2019.

Table 7: Different activities people participated in oil exploration

Activity participated in	Number of responses	Percent
I was assistant supervisor BMS under Tullow	1	7.69
I used to supply soft drinks to the workers	1	7.69
Attended the meeting organized by Tullow, Total and other oil companies	4	30.77
Casual laborer during construction of Camp	2	15.38
Drilling	1	7.69
employed as a surveyor	2	15.38
Total	13	100

Source: primary data 2019.

A larger proportion (31%) of the respondents had attended the meeting that was organized by Tullow, Total and other oil companies. This shows how stakeholder are not fairly involved in oil exploration activities. However, when they were asked whether stakeholders involvement in oil exploration was beneficial, their responses are presented in table 8 below where 100% agreed that involving stakeholders in oil and gas exploration.

Qualitative information from respondents concurs with results in table 7 above, the key informant interviews that was conducted revealed that the most important thing is awareness of what is being done

if we are to come out we begin with the indigenous people you have found around these are key stakeholders because they are the people going to be affected, then you go to the local administration, local government, central government, agencies like

international agencies then Non-Governmental Organizations (NGOs) all these are stakeholders in all and gas activities

Interview with the Hoima district development officer.

The key informant interview further concurred with results in table 8, where it shown that stakeholders' involvement is beneficial, the findings revealed some of these benefits which include, minimizing conflicts especially on land, creating awareness and reducing on accidents Another benefit of involving stakeholders is that it has helped in planning to move over as the resource is to be exploited, they may opt to outsource like in terms of accommodation, so involving stakeholders can certainly benefit directly and indirectly as it expressed below

And involving stakeholders also creates awareness which might reduce risks of accidents because at any time you will know which route is safe because oils activities involves blasting of rocks which can be risky. So, when you are aware you can even participate and benefit but if you are not involved you will not know. So, involving stakeholders helps them to know what is expected of them and this helps to create peace

Key Informant Interview, Hoima District land officer

Table 8: Perception of people on benefits of stakeholders' involvement in oil exploration

Perception on Benefits of stakeholders' involvement	Number of responses	Percent
Beneficial	30	100
Total	30	100

Source: primary data 2019.

Table 9: showing adequacy of stakeholders' involvement in oil and gas sector

Perception on adequacy of stakeholders' involvement in oil and gas sector	Number of respondents	Percent
There is no adequate stakeholder involvement	18	62.07
There is adequate stakeholder involvement	11	37.93
Total	29	100

Regarding the adequacy of stakeholders' involvement in oil and gas sector, majority (62%) thought that there was no adequate stakeholders' involvement in oil and gas sector, this was evidenced when they were asked whether they had involved themselves in any oil and gas exploration activity and majority said, they had not. Refer to table 6.

During key informant interview with land officers in Hoima district, the findings slightly differed from results from household survey where the land officers stated that

“
some involvement at least at 60% involvement. The central government has also brought various stakeholders on board, it has involved various stakeholders from different levels right from village, sub-county up to the district. They have encouraged social cooperate responsibility”.

When researcher asked the same to the Hoima district planner, he said that

“
be adequate”.

This means that it not yet adequate which concurs with results from household survey.

Table 10: Limitations to stakeholders' involvement in oil and gas exploration activities.

Limitation to stakeholder involvement in oil and gas exploration activities	Number of responses	Percent
Corruption and political interests	12	20.69
Lack of knowledge and information on oil and gas activities	13	22.41
Limited technical skills	26	44.83
Local people have not been given a chance to participate	1	1.72
Poor Compensations	2	3.45
using foreigners instead of employing local people	1	1.72
weak government policies	2	3.45
less work compared to the population in the area	1	1.72
Total	58	100

Regarding the limitations to stakeholder's involvement in oil emerging sector, A higher proportion (44.8%) attributed limited stakeholders' involvement to limited skills that locals have. Other limitations was stakeholders' lack of information about oil and gas activities and there were 22.4% of the sample. Corruption and political interests were also mentioned as one of the limitations to stakeholders' involvement in oil and gas exploration in Albertine graben. The qualitative data from key informant interview with land officer of Hoima district concurred with that lack of knowledge in oil and gas has limited their involvement.

The Hoima land officers stated that

“At first the oil companies never wanted to open up so much to the public but now they are open to public involvement. when they are going to do something they come and explain to the public that for instance, we are going to put up a factory and is going to do this and that. The other factor that has affected stakeholder involvement has been the tendency of coming from top and going straight to the affected person and leaving out the middle person (leaders like the councilors which people trust may not be a good approach but this has been now rectified compared to before when they would go straight to the community without reporting to the district. Now they first come here. But generally, the limited

knowledge in issues of oil and gas among the people in this region has limited their

4.4 Impacts of oil immerging sector to the economy in Albertine region.

The second objective of the study was to find out the impacts of the emerging oil sector to the economy of Uganda. Here, the researcher presents findings on emerging Oil sector to the economy. Tables represented responses of people from different households. Here researcher also presented the views that was obtained from key informant interviews that were contacted about the same.

Table 11: Perception on effectiveness of laws governing Environment in ensuring environmental sustainability in Albertine region.

Perception on Laws governing Environmental Management	Number of respondents	Percent
Laws not Effective	5	16.67
Laws Effective	25	83.33
Total	30	100

Regarding the effectiveness of Laws governing Environment sustainability in Albertine Graben, Majority (83%) of respondents think that, these laws are effective.

Qualitative information from key informant interview has shown that laws governing environment are in place only, however they raised a concern of laws not being enforced or implemented. This is in contradiction with results from household survey which shows that laws are effective.

Hoima land official said that Uganda is one of the countries with good laws and policies, but the problem is implementation and enforcement.

When it comes to laws and policies, we may be among the countries with best laws and enforcement otherwise we have robust policies which are good if enforced and if only we were implementing and enforcing them, we would be very far. It is even on record that many countries neighboring and elsewhere come copy and paste our laws and policies. But also, there are somethings that keep on changing and the reviews of some

of these laws are on-going so when things new comes up they review them, for instance now the landlord and tenant relationship that has been recently on going. So, I think the laws that are in place are good but because of the changing circumstances it is always inevitable to review them but generally we have no problem.”

Table 12: Perceptions on fairness of decisions involving environmental resources such as Forests, wetlands and other water bodies during oil exploration.

Perceptions on fairness of decisions made on Forests, wetlands and other water bodies	Number of respondents	Percent
Not Fair	5	16.67
Fair	25	83.33
Total	30	100

When the respondents were asked on what they think about decisions made on forests, wetlands and water bodies and other water bodies during Oil and Gas exploration, majority, 83% thought that the decisions made were fair as far as preserving them. The key informant interview results reveal that these decisions involving environmental resources are not fair basing the statement by the district planner.

According to the Deputy executive director and manager environmental democracy program of ACODE,

of awareness, many are always taken by surprise when some decisions are implemented. You know this region is rich in terms of biodiversity so you find that a decision is made like giving someone an area to do sand mining and you find that it is an area where people are interested because it is within them but in some cases permits have been issued in non-permitted areas like in forest reserves but because somebody has come because it is already beyond you. Like when it comes to oil exploration itself, the community has very minimal decision on the location.

Key informant interview, Hoima district planner.

The law is not fair because of limited benefit sharing that is people were not given alternatives livelihood because most people depend on fish and in some areas of oil exploration refinery, people were never consulted during the compensation rates. The

compensation for destruction of crops which provide income to the local people were not considere

Key informant Interview.

Table 13: Environmental resources responsive to the needs of local population

Perception on decisions Involving environmental resources responsiveness	Number of respondents	Percent
Not Responsive to local population	3	10
Responsive to local population	27	90
Total	30	100

The table 13 above shows the thinking of respondents on whether environmental resources were responsive to the needs of local population. The majority of the respondents(90%) thought that the environmental resources were responsive to the needs of local population.

Table 14 shows the benefits of environmental resources being responsive to the needs of the population. A high number (25.5%) of the respondents highlighted the protection of wetlands as one of the benefits of environment resources being responsive to the needs of the local population. Other benefits that were highlighted were good weather to protection of forest, protection of water bodies like lakes, rivers and wetlands, reduction in over fishing because water bodies are protected, among others.

The findings from key informant interview was cemented the above results from key informant interview. Respondents from key informant interviews stated that laws are good, but the problem was man’s demand, they were far away from implementors own. Hoima district land official states,

“

For instance, Bugoma is very good for our environment but people encroach. We are convinced that if we implement these decisions/laws we can address needs of the local po

Another employee from NAVODA said that

“yes, there has been efforts to ensure that they protect environment and the people. Recently Total Oil Company organized a local meeting and sensitized people on how

they would protect the environment. So, such sensitization meetings are stakeholders like NAVODA are ensuring that the community needs are addressed in the course of oil and gas activit

Table 14: Benefits of environmental resources being responsive to the needs of local population

Benefits of involving environmental resources that are responsive to the needs of the local population	Number of responses	Percent
Good weather because of protection of forest	12	21.8
Protection of wetland	14	25.5
Protection of forest and lakes	11	20.0
Tree planting	8	14.5
Reduction in over fishing	3	5.5
Reduced environmental degradation	3	5.5
Informed on benefits of oil	1	1.8
Increased production in animal and fish products	2	3.6
Grass for hatching their houses	1	1.8
Total	55	100.0

4.5 Social-Economic and Environmental impacts of oil exploration in Albertine region.

The last objective of the study was to find out the social-economic and environmental impacts of oil exploration in Albertine region. Data collected was both qualitative and quantitative and was obtained from households and key informant interviews respectively. Tables represent data that was collected from households.

Regarding socio-economic changes brought by emerging of oil and gas sector to the economy of Uganda and in Albertine region in particular, the table 10 below shows different changes. Higher number (29.5%) of the respondents highlighted establishment of infrastructures like health Centre, roads, among others and this is a positive change, construction of roads connecting exploration area to small towns is another positive change and they gave an example of Hoima Kaiso-Tonya road. Although there are positive changes, there also negative changes due to emerging of oil and gas sector and these include but don't limited to; increased cost of land (17per cent), increased land conflicts (09 per cent).

In this study, key informant interviews have revealed that discovery of oil has brought about both positive and negative socio- economic changes, among the positive changes highlighted in a key informant interview with Hoima district Planner he said that,

there are changes in housing, infrastructure development like roads, commercialization of fishing among others.

While interviewing Hoima land officer in the key informant interview, he concurred with some of the household results in table 15. He said that, there has been infrastructural development, increase in cost of land which was previously customary owned but now it's individually owned and this is because of influx of people coming from other areas to Hoima. Increase in people's income has also been mentioned as one of the social economic changes due to discovery of oil and gas. Increase in income has been attributed to increase in various opportunities like increase in number of tourists, hotels among others

There has been influx of people with consequent causes and social behavior. So, for the people where the activities are taking place there has been really change. So there has been both negative and positive changes. For instances, at that time 90% of the households were grass thatched but now that has changed because now there are more iron sheet houses. Transport has eased with buses going to the landing sites and to Kampala, which has eased trade. The most significant change is the cost of land. Before oil discovery and all the oil activities started, you would get a plot of land at just 5 million in Hoima municipal but now you cannot, and it is in the range of 300 million. But even in the villages, before you would even get free land in the village

Key Informant Interview, Hoima district planner.

Table 15: Socio-economic Changes that have emerged due oil and gas exploration in albertine region

Socio-economic livelihood changes due to oil exploration	Number of responses	percent
Establishment of infrastructure like health centers and schools	23	29.5
Construction of roads connecting exploration areas to small towns	12	15.4
Increased cost of land	17	21.8
Increased employment opportunities	6	7.7
Increased land conflicts	7	9.0
Increased population	2	2.6
Intermarriages	9	11.5
Increased in business opportunities due to increased demand for commodities	2	2.6
Total	78	100.0

Regarding the Environmental impact of oil discovery in Albertine region, majority (29.6 per cent) of the respondents said that oil discovery has led to pollution of natural resources like water, Air and wetlands due to waste generated during exploration and lasting rocks, soil erosion was also highlighted due to clearing of vegetation during road construction exploration facilities, and this was highlighted by 20.5% of the total sample. 14% sighted climate change and drought as one of the environmental impacts since oil and gas discovery, this might be due to loss of wetlands especially when constructing roads.

Table 16: Environmental impacts since the discovery of oil and gas.

Environmental impacts have been observed since oil discovery in this region	Number of responses	percent
Climate change and increased drought	6	13.64
Establishment of infrastructure like health centers and schools	2	4.54
high temperatures	3	6.82
Pollution of natural resources like water, Air and wetland due to waste generated during exploration and blasting of the rocks.	13	29.55
Soil erosion due to clearing of the vegetation during road construction	9	20.45
Wetland loss due infrastructure development and settlements	2	4.55
Wild life disturbance due to increased human activity	4	9.09
Soil erosion due to clearing of vegetation during exploration and road construction	4	9.09
Noise from blasting blocks	1	2.27
Total	44	100.00

When respondents were asked the could be impacts of oil fishing sector, a higher number (27.7%) of the sample were worried because of the increase in fish prices, the increase in prices of fish could have be because of reduced fish catchment area as highlighted by some of the respondents. Due to increased fish prices, many people engaged themselves in fishing which has led to over fishing. In key informant interview, change of rain patterns was seen as one of the environmental changes.

Table 17: effects of oil sector on fishing in Albertine area

Effects of oil sector fishing in this area	Number of responses	Percent
Destroyed the catchment areas of fish due to bomb blasting	6	13.64
Increased price of fish	12	27.273
Over fishing	7	15.91
Reduction in fish catch	9	20.45
Stopped people from fishing during exploration activities	6	13.63
It has not affected fishing	4	9.09
Total	44	100

Talking about effects of oil sector on agriculture sector, from household survey, it was shown that oil discovery led to high prices of food due to increased population that migrated to the area looking for employment opportunities, the research has shown that 50 percent responses from the people highlighted increased prices of food in the area. Other effects highlighted was lack of pastures for animals like cows and goats, this may be attributed to increased deforestation in area.

Qualitative information from key informant interviews concurs with results in table 17, almost in every key informant in interview that was held, they did mention reduction in fish catchment area, and due to increase in population, there has been over fishing. One of the employees from MIRAC mentioned that,

Some the activities in some of the lake bodies is affecting how the communities use this resource to fish. People say the fish catch has reduced. The massive land acquisition around the shores has belong to any person but now people have processed land titles of these shores. The increased population has also increased pressure on the fish which has led to reduction in fish and more so, increase in the price of fish.

ACODE Official stated that

“The fish harvests have declined, there has been a tendency of having more people in areas especially during oil and gas exploration activities the vibrations, bombs that was

put in the lake and strong lights that were being used reduced the fish catch because they scare fish

Table 18: Effects of Oil sector on Agriculture in this area

Effects of oil sector agriculture	Number of responses	Percent
Increased food prices due to increased population	8	50
Created markets for agricultural produce	1	6.25
Improved for crops due to easy transportation	1	6.25
We don't do agriculture	1	6.25
Lack of pastures for the animals like cow and goats	3	18.75
Reduced agricultural production due to loss of land that would have been used to cultivate Crops turns out as oil activities	1	6.25
Degradation of land	1	6.25
Total	16	100

A half proportion (50%) of respondents from the household survey mentioned in increased food prices and this was attributed to influx of people. 19% highlighted lack of pastures for their animals as another effect because of oil and gas sector in Albertine region. This has led to reduction land for agriculture. More so, construction infrastructures like roads and hospitals have also reduced the land for farming. This is in line with findings from key informant interviews.

Having carried out key informant interviews, here I present some of the finding from key informant interview about effect of oil sector on agriculture in Albertine region. Hoima district lands officers raised a concern that *“Due to increased immigration into the area, there has been limited land for agriculture* while Hoima district planner said that due to oil and gas discovery, there has been intervention by district official in order to increase quality and quantity of what is required by people working in oil and gas sector and thus quality and quantity have greatly improved. He also did mention that there has been value addition on agricultural products so as to get market. However, a respondent from MIRAC had a different view though his argument agreed with other respondents.

The effect on agriculture is twofold; to some it has been a catalyst, to some it has affected their land rights. In communities which used to do agriculture they no longer do so because their land was bought. But to other people, they have seen the oil sector as an opportunity to provide market for their produce.”

Another respondent from NEMA said that,

“increased migration of people from different rural areas to urban areas of Hoima in order to get employment in the oil industry has led to the abandonment of agriculture thus leading to low crop production.

Table 19: Effects of Oil sector on tourism in Albertine region

Effects of oil sector tourism in this area	Number of responses	Percent
Cultural sites were destroyed	2	7.41
Increase in number of tourists	25	92.59
Total	27	100.00

During household survey, when respondents were asked about the could be effects of the sector on tourism, they highlighted increase in numbers of tourists as the major (95.6%) effect basing on number of responses that highlighted the same and this is important to the development of the economy.

Findings from key informant interviews concur with results from household survey in table 14 above, an employee from BAPENCO cemented the results by saying that oil sector has led to increased number of that tourists. Even though findings from key informant interviews show that there is increase in number of tourists, an employee from MIRAC was worried that in the near future, they could reduction in the number of tourists,

We have more tourists coming to this area and possibly coming to see more the oil and gas industry. But, I see as if in the near future we are likely to see a reduction in tourists because most of the oil and gas activities are taking place in wildlife areas which is likely to affect the numbers of animals and this is the case with other tourist sites like the hot springs in Kibiro and Kigolobya sub-county. So, if the oil and gas activities are not well managed then tourism is going to be severely affected.

More so, an employee from NEMA said that,

the blasting of rocks makes the animals in the national parks to be aggressive and this scares tourists in the area.

Another respondent from JBN said that the exploration activities have led to displacement of animals in their habitats, so it is hard to find some animals in the national park. More so, he said that there are restrictions of tourists to access some areas within the national park especially where the activities of oil exploration are taking place.

Table 20: problems created by oil and gas discovery in Albertine region

Problems that have emerged due to oil and gas activities in this area	Number of responses	Percent
Population have increased	23	29.11
Cultural sites destruction	1	1.27
Depletion of natural resources	3	3.80
High crime rate	5	6.33
Increased intermarriages	1	1.27
Increased price of goods	11	13.92
Lack of employment	4	5.06
Land conflicts	5	6.33
Prolonged drought	1	1.27
Reduction in fish catch	1	1.27
Stress on few social services due to increased population	1	1.27
Cost of land increased	1	1.27
Inadequate compensation	1	1.27
Increase in diseases	4	5.06
No enough clean water	1	1.27
Over fishing	5	6.33
Soil and environmental degradation	1	1.27
Increase in prostitution	7	8.86
Cultural loss due to increased immigrants	1	1.27
Food shortage	1	1.27
Lack of awareness that is people are not aware of the oil	1	1.27
Total	79	100.00

Table 20 above shows the problems are brought by oil and gas activities in the Albertine region. The household survey that was conducted showed that, the major problem that emerged due to oil and gas activities in the region was the increased population (29.1%) that came along with dangers of high population like disease outbreak, unemployment, increased price of goods, land conflicts among others. 14% of responses highlighted increased price of goods and services as another problem caused by oil sector, this means that there is increase in cost of living.

Looking at findings from key informant, they concur with results from household findings for example employees from NEMA and Ministry of Labor and Social Development, CRED and ACODE listed the following problems; population increase, destruction of cultural site, reduction in fish catch, food shortage, increase in prostitution and many others. However, Hoima district local leader mentioned that oil and gas sector has led to increase in single mothers. He quoted saying,

“There have been cases of expatriates working for these oil companies here to pregnant women an

Land conflicts, influx of people, high cost of living and human rights abuses was also mentioned by most of respondents in key informant interviews that were conducted;

5.0 DISCUSSION OF STUDY FINDINGS

5.1 Introduction

This chapter presents a discussion of the study findings in chapter four. The chapter lay out is according to the objectives of the study.

5.2 Stakeholder involvement in oil activities

The study sought to find out if people were given a chance to participate in the oil and gas activities in the Albertine region. The findings reveal that much as some people (46.33%) are involved in one way or another, the majority (56.67%) were discovered not to participate in the gas and oil activities. In fact, the biggest number of the residents of the Albertine region claimed never to have been consulted regarding any oil exploration activities. There was therefore no systematic approach to involve stakeholders at some levels, especially the local and lower levels.

The findings do not therefore conform to the requirements of global standards of promoting inclusive development that calls for the contributions of all stakeholders in addressing development issues to promote transparency, accountability and enhancing development cooperation outcomes through collaboration between civil society, government and private sector (Oxfam, 2012). Bos & Gupta (2016) highlight the importance of stakeholder participation in the exploration and extraction industries as this can be the best approach to realise inclusive development, which focuses on social economic benefits for local communities.

Basing on inclusive development, the limited engagement of stakeholders as revealed by the study can undermine development that is all embracive and one that is owned by all the stakeholders leading to socially and economically efficient service delivery. The study findings reveal that most of the activities that were mostly involved in were meetings that were organized by oil companies such as Tullow, Total among others; this was followed by being employed as casual labourers and surveyors.

5.3 Perception of people on the benefits of stakeholders' involvement in oil activities

The study findings on the perception of people on the benefits of participation of stakeholders indicate that all the respondents (100%) think that it is beneficial to involve stakeholders in oil activities. Atacana, (2016), who stated that stakeholder engagement is important of any planned intervention as it goes a long way in shaping decisions related to such intervention, supports the

study findings; it is a continuous process that needs to be understood, as running through the lifecycle of the intervention and beyond.

This was further supported by Coleman et al., (2019), who assert that active engagement of stakeholders/communities facilitates a deeper pursuit of information on the part of local community members, which leads to other kinds of civic activity and results to community satisfaction with more important issues. Nalubega & Kanyesigye (2017) also concur with the study findings that public participation helps the community understand and own what is being done and overtime, inform choice of appropriate and realistic options for sustainable development.

5.4 Adequacy of stakeholders' involvement in gas and oil activities

The study reveals that people's perception indicate that much as it is important and beneficial to involve stakeholders at various levels, there was no adequate stakeholder involvement at the local level. Regarding the adequacy of stakeholders' involvement in the gas and oil activities, one of the respondents had this to say,

“the involvement of stakeholders in oil and gas issues has been inadequate and limited and if you talk to most of the local government officials, they will tell you that they are just spectators

People's perception in this study concurs with the findings of a study on oil and gas in the same region done by (Tumusiime et al., 2018) who also found out that there was inadequate engagement between government agencies and local communities in oil and gas activities being implemented in the region, something that brings a feeling of marginalization. A one-on-one interview with the District Land Officer, however, reveals that the situation has now changed as they now feel that there is currently reasonable stakeholder involvement of about 60% as the central and local governments endeavour to involve key stakeholders from different levels.

5.5 Perception on the effectiveness of laws governing the environment in the Albertine region

Study findings reveal that majority (83.33%) of the people perceive the laws in place to be effective and able to address environmental issues in the Albertine region for environmental

sustainability. Key informant interviews reveal that there are a number of laws and very good laws much as there has been a few challenges of implementation. The findings of the study concur with the International alert (2011) which noted that ever since oil exploration and production was officially announced in 2006, several laws have been put in place by the Parliament of Uganda to protect the environment, as well as contributing to Uganda's development. The oil and gas policy 2008 was put in place on the 1st of January 2008, to ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity. However, some of the key informants revealed that much as there are good laws in place, like the National Tree Planting Act among many others, very few people know about the presence of these laws. As was established from one of the key informants that at one time, the local people complained about the Oil and Gas policy which is in English, a language which is not understood by most local people and that it would be better if some of these laws were translated to local languages that everyone could read and understand.

The study further revealed that people think that the existence of good laws in place have enabled fairness of decisions made on forests, wetlands and other water bodies as majority of the people think that good decisions are made as far as ecosystem management of these resources is concerned during oil exploration. Majority of the people think that there are measures in place to conserve or protect these resources. Consequently, due to the above reasons, majority of the people think that generally decisions involving environment resources in the Albertine region are responsive to needs of the local population.

5.6 Socio-Economic and Environmental impacts of oil exploration in the Albertine region

The study reveals that there have been various impacts observed in the area due to oil activities in the Albertine region. These impacts witnessed have been categorised as socio-economic and environmental impacts. These impacts have been negative and positive in nature as discussed below.

5.6.1 Socio-economic changes that emerged due to oil and gas exploration in the Albertine region

The study reveals several socio-economic changes that have emerged resulting from oil and gas exploration as witnessed by the local people in the Albertine region. Among the socio-economic livelihood changes reported by study participants include; establishment of infrastructure like health centers and schools, construction of roads connecting exploration areas to small towns,

increased cost of land, increased employment opportunities, increased land conflicts due to limited land, increased population, intermarriages, increased business opportunities resulting from high demand for commodities. These changes have either brought positive or negative livelihood changes. Socio-economic resulting from oil and gas activities cover a wide spectrum, such as human rights and security, community health, revenue management and transparency, poverty alleviation (Wanger et al., 2010. (Brake & Edward, 2014)) also demonstrates that socio-economic include increases in services and facilities such as accommodation, road infrastructure and transportation, business opportunities, food commodities, entertainment among others. Furthermore, in his study (Karl, 2007) concurs with the study findings that the promise of job opportunities that oil exploration seems to offer attracts large numbers of migrants to an exploration area leading to increase in population.

Findings of their study,(Brasier et al., 2011) further are in line with the findings of this study that jobs and business activities directly related to development increase, as do jobs and business activities in the sectors that provide goods and services to the industry. According to the that study that was carried out by International Alert (2013), Oil exploration has direct impact on economic, social and cultural dimensions of the community and these impacts include changes in lively hood patterns such as fishing, agriculture, livestock rearing, hunting and eco-tourism.

On the other hand, however, the seemingly perceived opportunities brought about by oil exploration could end up bringing negative livelihood changes to the local community. For instance, as oil exploration typically stimulates the provision of goods and services by creating employment opportunities, these opportunities certainly attract migrants from other places which will consequently bring banditry, alter local life style, and increase competition for existing resources. This will also contribute to putting additional pressure on natural resources resulting in; deforestation, increased demand for water resources, food, housing among others (Amanigaruhanga et al., 2009; Chindo, 2011). This is in line with the reported negative livelihood changes like increased population, increased land conflict, increased cost of land, and general increase in demand for commodities making the standard of living high.

The study of Karl on “Oil led to development” also shows that oil attracts large number of migrants to the exploration areas. The rapid influx of people inflates the local prices of goods and services, which brings significant increase in the cost of living. They gave an example of the yopal in the state of Casanare, Columbia which was abruptly filled with the immigrants hoping to get employment (Karl, 2007).

Furthermore, other studies about oil in the Albertine region have witnessed both positive and negative expectations from the discovery (Balikuddembe & Ardalan, 2014) and (Bainomugisha et al., 2010). Many people are expecting that oil production will contribute positively to increased employment opportunities, higher incomes, improved roads, and improved access to public services. However, (Shepherd, 2013) suggests that “*oil also brings risks of the erosion of the relationship between people and government, of economic distortion, of increased corruption and of internal tensions.*”

5.6.2 Environmental changes that have been witnessed since the oil discovery in the Albertine region

The study reveals that ever since oil was discovered and subsequent oil and gas activities started, a number of environmental changes have been observed in the area. The main environmental changes mentioned by the people who participated in this study are; pollution of natural resources such as water, air and wetlands due waste generated during exploration and blasting of the rocks, soil erosion resulting from clearing of vegetation during road construction, climate change especially drought, wildlife disturbance due to increased human activity and road construction, wetland loss due to infrastructure development, land degradation, establishment of infrastructure like health centers and schools. These findings from the current study are supported by Northrup et al., (2013), who stated that development of unconventional oil and gas broadly impacts wildlife by fragmentation through the creation of road network, direct habitat conversion from the development footprint, eliciting behavioral responses, particularly avoidance, due to development-related activity (construction, increased human activities and anthropogenic noise), and inviting further fragmentation, resource extraction and direct mortality of wildlife through increased human access to wild lands.

Other studies have also identified noise pollution, habitat loss, animal disturbance, soil erosion (Jones et al., 2015; Espinosa et al., 2014; Sidle et al., 2012; Opukri et al., 2008; Sawyer et al., 2009; McCracken, 2014) as the major environmental impacts of most oil exploration projects. Findings of this nature are in line with the findings of the current study.

5.7 Impacts of oil and gas activities on tourisms in the Albertine region.

The study findings reveal that oil activities have significantly influenced the tourism sector. Majorly, the tourism sector was affected positively with an increased number of tourists

witnessed and this phenomenon certainly has its positive multiplier effects as these tourists will require accommodation, food and more other services, which provide an opportunity for the local people to earn revenue in exchange for services. Similarly, Kala (2008) concurs that oil and gas production come with other supporting economic activities such as hotel and restaurant services, banking, transport activities, telecommunication, and many other allied services that are able to benefit people.

On the other hand, however, there were a few cases that some of the cultural sites were being destroyed. Additionally, engagements with some of the participants revealed that there are worries about the wildlife, because most of the oil activities take place in wildlife areas, which scare off animals and birds. One of the participants is quoted to have said this about how oil activities affected tourism sector,

“We have more tourists coming to this area and possibly coming to see more the oil and gas industry. However, I see as if in the near future we are likely to see a reduction in tourists because most of the oil and gas activities are taking place in wildlife areas, which is likely to affect the numbers of animals, and this is the case with other tourist sites like the hot springs in Kibiro, Kigolobya sub-county. So, if the oil and gas activities are not well managed, then tourism is going to be severely affected.”

Findings of a documentary on ‘Tourism Economics’ produced after the oil spill in April 2010, differs from the findings of the current study which indicated a substantial decrease in visitor spending in the area (Brake et al., 2014). Similarly, in Alabama, USA there were incidents of negative impacts of the oil industry on tourism with one million fewer people observed to have visited Alabama’s beaches in 2010 than 2009 (Bake, 2012).

6.0 SUMMARY AND CONCLUSION.

Introduction.

This chapter presents a summary of the study major findings and general conclusion.

6.1 Summary of major findings

The major findings of the study were that, much as people think that it is of great benefit for stakeholder involvement in such an important sector of oil and gas, they reported that even if there has been various activities since oil discovery in Uganda, there has been no adequate stakeholder involvement in the oil and gas activities in the Albertine region of Uganda. The local people attributed the lack of local stakeholder involvement to majorly limited skills by the residents. However, they also reported that the residents have not been given the chance to work with tasks that do not require unique skills. These findings addressed the first study objective.

The study findings revealed that on the issue of environmental governance framework of the Albertine region, it was discovered that people think that there are laws in place that can ensure environmental sustainability in the Albertine region. However, some of the technical people at the district level had reservations with the implementation of these available laws in place. These revelations were aimed at addressing study objective two, which is to assess the current environmental governance framework of the Albertine region.

The study findings on the impacts of oil and gas sector to the community of Albertine region in Hoima district revealed that, the discovery of oil and gas in the region has led to the development of infrastructures such as roads, health centres, hotels, schools and employment opportunities. However, even though there are positive impacts that were mentioned by the people, they also mentioned the negative impacts that have come up due to the oil and gas discovery in the region. These include increased influx of people from different areas, which has increased stress on the social services, destruction of cultural site, increased land conflict, increased cost of land and general increase in demand for commodities, which is making the standard of living high. These findings aimed at addressing objective three of the study.

6.2 Conclusion

In conclusion, the discoveries of oil and gas resources in Uganda has brought both negative and positive socio-economic and environmental impacts. There is literature on how natural resources can be connected to inclusive growth and development. The dominant narrative has often highlighted the resource curse and the Dutch disease effects as associated with natural resource discoveries. In this study, the researcher made use of key informants' interviews, semi-structured interviews and household surveys.

In this study, the researcher's objectives were to find out the extent of stakeholders' involvement in the oil and gas exploration activities in Albertine region, to examine the current environmental governance in Albertine region and socio-economic and environmental impacts of oil and gas discovery in Albertine region.

From the analysis of the household data and findings from key informant interview, the following was concluded; there was inadequate stakeholder involvement in the oil and gas activities and the local population and corruption and political interests mainly attributed this to limited skills. The main activity that the local population got involved in was attending meetings that were organised by oil companies such as Total and Tullow. People in the Albertine region understand that stakeholders' involvement is beneficial.

The environmental laws that were put in place can be effective, however, the challenge is that they are not well implemented. Environmental resources are fair responsive to the needs of the local population and the main importance of this is that they have preserved water bodies and wetlands and the decisions made on natural resources such as lakes, rivers and wetlands are fair according to the findings.

The major positive socio-economic impact of oil and gas discovery in the Albertine region is infrastructural development like roads and commercialized fishing. The discovery of oil has brought the influx of people in the region, which has led to over fishing and land conflicts. The major environmental impact is pollution of natural resources such as water, air and wetlands due to the waste generated during exploration and lasting rocks. Soil erosion is also another negative impact on the natural resources due to clearance of vegetation during road construction exploration facilities.

There is also increase in fish prices, agricultural products' prices and increase in the number of tourists coming in the area. Finally, the major problem that emerged by the oil and gas discovery is increase in population that has brought habits such as prostitution. Increase in population has also led to the increase in prices of goods and services in the region.

APPENDIX

INTERVIEW GUIDE FOR NGO'S, GOVERNMENT AGENCIES AND KEY INFORMANTS

A. Stakeholders' involvement in the oil exploration activities in the Albertine region

1. What is the role of your organization in the Albertine Graben?
2. What do you think of involvement of various stakeholders in oil exploration activities in the Albertine region activities?
3. What does your organisation do to promote stakeholder involvement in oil exploration activities in the Albertine region?
4. What benefits do you think may arise from stakeholder involvement in oil exploration activities the Albertine region?
5. Do you think there has been adequate stakeholder involvement in oil exploration activities the Albertine region? please explain
6. What factors do you think have limited stakeholder involvement in oil exploration activities the Albertine region?

B. Environmental governance framework of the Albertine region

1. What is your view on the effectiveness of Uganda's policies, laws and regulations in terms of supporting environmental integrity in the Albertine region?
2. What is your view on the fairness of decisions involving environmental resources (forests, wetlands, rivers, lakes, arable land) to the local population in the Albertine region?
3. Do you think decisions involving environment resources are in the Albertine region are responsive to needs of the local population? Please explain

C. Impact of the emerging oil sector to the economy of the Albertine region

1. What are the economic, social and environmental livelihood changes since the discovery of oil?
2. How has the oil sector affected the fishing industry in Hoima district?
3. How has the emerging oil sector affected the agricultural sector?
4. How has the emerging oil sector affected the tourism sector in Hoima district?
5. What problems have emerged because of oil activity in Hoima district?
6. Where do you see Uganda's oil industry in the next five years?

HOUSEHOLD QUESTIONNAIRE

Household (Survey

No.....

This questionnaire is strictly confidential, any response or information given is solely for academic purpose

SECTION A: Demographic Characteristics

Name of the village.....

Sex: Male..... Female.....

Age

Position in the household:

Education level: Primary..... Secondary..... Tertiary.....

University..... None.....

Marital status: Married..... Single..... Divorced.....

Separated..... Widowed.....

What is your main occupation?

How many people live in this household?

SECTION B: Stakeholders' involvement in the oil exploration activities

1. Did you participate in any oil and gas exploration activity?

- a) Yes b) No

2. If Yes, please list the activities

.....
.....
.....

3. Do you think there are benefits in involving various stakeholders in oil and gas exploration activities?

- a) Yes
- b) No

SECTION C: Impacts of emerging oil sector to the economy in the Albertine region

1. Do you think the laws governing environmental management were effective in ensuring environmental sustainability in areas where oil and gas exploration activities took place?

- a) Yes
- b) No

2. Do you think the decisions made on forests, wetlands, rivers, lakes and arable land during oil and gas exploration were fair?

- a) Yes
- b) No

3. Do you think the decisions involving environmental resources in this area are responsive to the needs of the local population?

- a) Yes
- b) No

4. If yes, list the benefits

.....

.....

.....

.....

5. Do you think there has been adequate stakeholder involvement in oil and gas exploration activities in this area?

- a) Yes
- b) No

6. What factors may have limited stakeholder involvement in oil and gas exploration activities?

.....

.....

.....

.....

Section D: Socio-economic and environmental impacts of oil exploration in the Alberta region

1. What socio-economic livelihood changes have occurred in this area since oil discovery?
 - a. Construction of roads connecting exploration areas to small towns
 - b. Increased in business opportunities due to increased demand for commodities by oil exploration crews and migrants
 - c. Increased in employment opportunities
 - d. Increased cost of land
 - e. Construction and rehabilitation of primary schools
 - f. Establishment of health centres
 - g. Increased land conflicts
 - h. Inter-marriages
2. What environmental impacts have been observed since oil discovery in this region?
 - a. Air pollution to dust and fumes from vehicles/mechanery used in exploration
 - b. Water pollution from waste generated during exploration
 - c. Soil erosion due to clearing of vegetation during road/camp construction
 - d. Noise pollution due to blasting of rocks during exploration
 - e. Forest loss due to infrastructure development and settlement
 - f. Wetland loss due to infrastructure development and settlements
 - g. Wildlife disturbance due to increased human activity in the wildlife reserve and noise from blasting of rocks
3. How has the oil sector affected fishing in this area?

.....

.....

.....

.....
4. How has the oil sector affected agriculture?

.....

.....

.....

.....

Section D: Socio-economic and environmental impacts of oil exploration in the Alberta region

1. What socio-economic livelihood changes have occurred in this area since oil discovery?
 - a. Construction of roads connecting exploration areas to small towns
 - b. Increased in business opportunities due to increased demand for commodities by oil exploration crews and migrants
 - c. Increased in employment opportunities
 - d. Increased cost of land
 - e. Construction and rehabilitation of primary schools
 - f. Establishment of health centres
 - g. Increased land conflicts
 - h. Inter-marriages

2. What environmental impacts have been observed since oil discovery in this region?
 - a. Air pollution to dust and fumes from vehicles/mechanry used in exploration
 - b. Water pollution from waste generated during exploration
 - c. Soil erosion due to clearing of vegetation during road/camp construction
 - d. Noise pollution due to blasting of rocks during exploration
 - e. Forest loss due to infrastructure development and settlement
 - f. Wetland loss due to infrastructure development and settlements
 - g. Wildlife disturbance due to increased human activity in the wildlife reserve and noise from blasting of rocks

3. How has the oil sector affected fishing in this area?

.....

.....

.....

.....

4. How has the oil sector affected agriculture?

.....

.....

.....

.....

7.0 REFERENCES

- Anderson, D. M., & Browne, A. J. (2011). The politics of oil in eastern Africa. *Journal of Eastern African Studies*, 5(2), 369-410.
- Atkinson, A. A., Waterhouse, J. H., & Wells, R. B. (1997). A stakeholder approach to strategic performance measurement. *MIT Sloan Management Review*, 38(3), 25.
- Auty, R. (2002). *Sustaining development in mineral economies: the resource curse thesis*: Routledge.
- Badeeb, R. A., Lean, H. H., & Clark, J. (2017). The evolution of the natural resource curse thesis: A critical literature survey. *Resources Policy*, 51, 123-134.
- Bainomugisha, A., Kivengyere, H., & Benson, T. (2010). Escaping the oil curse and making poverty history: a review of the oil and gas policy and legal framework for Uganda.
- Balikuddembe, J. K., & Ardalan, A. (2014). DISASTER RISK MANAGEMENT AND OIL PRODUCTION IN UGANDA.
- Bategeka, L., Kiiza, J., & Ssewanyana, S. (2009). Oil discovery in Uganda: managing expectations. *Economic Policy Research Center, Makerere University*, 1-27.
- Bos, K., & Gupta, J. (2016). Inclusive development, oil extraction and climate change: a multilevel analysis of Kenya. *International Journal of Sustainable Development & World Ecology*, 23(6), 482-492.
- Brake, W., & Edward, A. (2014). Tourism and 'fracking' in western Newfoundland: Interests and anxieties of coastal communities and companies in the context of sustainable tourism. *International Journal of Marine Science*, 4.
- Brasier, K. J., Filteau, M. R., McLaughlin, D. K., Jacquet, J., Stedman, R. C., Kelsey, T. W., & Goetz, S. J. (2011). RESIDENTS' PERCEPTIONS OF COMMUNITY AND ENVIRONMENTAL IMPACTS FROM DEVELOPMENT OF NATURAL GAS IN THE MARCELLUS SHALE: A COMPARISON OF PENNSYLVANIA AND NEW YORK CASES. *Journal of Rural Social Sciences*, 26(1), 32.
- Brittingham, M. C., Maloney, K. O., Farag, A. M., Harper, D. D., & Bowen, Z. H. (2014). Ecological risks of shale oil and gas development to wildlife, aquatic resources and their habitats. *Environmental science & technology*, 48(19), 11034-11047.
- Byakagaba, P., Twesigye, B., & Ruyle, L. E. (2018). 12 Dialectics of conservation, extractives, and Uganda's 'land rush'. *Conservation and Development in Uganda*, 7.
- Chindo, M. I. (2011). COMMUNITIES PERCEIVED SOCIO-ECONOMIC IMPACTS OF OIL SANDS EXTRACTION IN NIGERIA. *Human Geographies--Journal of Studies & Research in Human Geography*, 5(2).
- Davis, G. A. (1995). Learning to love the Dutch disease: Evidence from the mineral economies. *World development*, 23(10), 1765-1779.
- Egyir, I. K. (2012). *The impacts of oil and gas activities on fisheries in the western region of Ghana*. Universitetet i Tromsø,
- Ericson, K. (2014). A crude awakening: The relationship between petroleum exploration and environmental conservation in western Uganda.
- Freeman, R. E. (2010). *Strategic management: A stakeholder approach*: Cambridge university press.
- Hickey, S., & Izama, A. (2016). The politics of governing oil in Uganda: Going against the grain? *African Affairs*, 116(463), 163-185.
- Ite, A. E., Ibok, U. J., Ite, M. U., & Petters, S. W. (2013). Petroleum exploration and production: Past and present environmental issues in the Nigeria's Niger Delta. *American Journal of Environmental Protection*, 1(4), 78-90.

- Jones, N. F., Pejchar, L., & Kiesecker, J. M. (2015). The energy footprint: how oil, natural gas, and wind energy affect land for biodiversity and the flow of ecosystem services. *BioScience*, 65(3), 290-301.
- Karl, T. L. (2007). Oil-led development: social, political, and economic consequences. *Encyclopedia of energy*, 4(8), 661-672.
- Kasimbazi, E. B. (2012). Environmental regulation of oil and gas exploration and production in Uganda. *Journal of Energy & Natural Resources Law*, 30(2), 185-221.
- Kiiza, J., Bategeka, L., & Ssewanyana, S. (2011). Righting resources-curse wrongs in Uganda: the case of oil discovery and the management of popular expectations.
- Logan, O., & McNeish, J.-A. (2012). *Flammable societies: Studies on the socio-economics of oil and gas*: Pluto Press.
- Mairal, M., Sanmartín, I., Herrero, A., Pokorny, L., Vargas, P., Aldasoro, J. J., & Alarcón, M. (2017). Geographic barriers and pleistocene climate change shaped patterns of genetic variation in the Eastern Afrotropical biodiversity hotspot. *Scientific reports*, 7, 45749.
- Manyindo, J., Van Alstine, J., AmanigaRuhanga, I., Mukuru, E., Smith, L., Nantongo, C., & Dyer, J. (2014). The governance of hydrocarbons in Uganda: creating opportunities for multi-stakeholder engagement.
- Mawejje, J. (2019). The oil discovery in Uganda's Albertine region: Local expectations, involvement, and impacts. *The Extractive Industries and Society*, 6(1), 129-135.
- Mbabazi, P. K. (2013). *The Oil Industry in Uganda; A Blessing in Disguise or an all Too Familiar Curse?: The 2012 Claude Ake Memorial Lecture*: Nordiska Afrikainstitutet.
- Moss, T., & Young, L. (2009). Saving Ghana from its oil: The case for direct cash distribution.
- Mubiru, D. (2010). Climate change and adaptation options in Karamoja. *Food and Agriculture Organization*.
- Namuyondo, E. (2014). *Sustainability and Oil Exploration in Uganda-Albertine Region*. Masters Thesis. Aalborg University. <http://vbn.aau.dk/ws/files/175503822> ...,
- Nejad, M. S., & Masoudi, A. (2013). Oil, economic development and national security of developing countries: a case study of Iran.
- Opukri, C., & Ibaba, I. S. (2008). Oil induced environmental degradation and internal population displacement in the Nigeria's Niger Delta. *Journal of sustainable Development in Africa*, 10(1), 173-193.
- Patey, L. (2015). Oil in Uganda: Hard bargaining and complex politics in East Africa.
- Peprah, J. A. (2011). Women, livelihood and oil and gas discovery in Ghana: An exploratory study of Cape Three Points and surrounding communities. *Journal of sustainable development*, 4(3), 185.
- Plumptre, A. J., Davenport, T. R., Behangana, M., Kityo, R., Eilu, G., Ssegawa, P., . . . Herremans, M. (2007). The biodiversity of the Albertine Rift. *Biological conservation*, 134(2), 178-194.
- Rosser, A. (2007). Escaping the resource curse: The case of Indonesia. *Journal of Contemporary Asia*, 37(1), 38-58.
- Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European economic review*, 45(4-6), 827-838.
- Sandbrook, C., Cavanagh, C. J., & Tumusiime, D. M. (2018). *Conservation and Development in Uganda*: Routledge.
- Shepherd, B. (2013). Oil in Uganda. *International Lessons for Success*. London: Chatham House.
- Slonecker, E., Milheim, L., Roig-Silva, C., Malizia, A., Marr, D., & Fisher, G. (2012). Landscape Consequences of Natural Gas Extraction in Bradford and Washington Counties, Pennsylvania. *US Geological Survey Open-File Report*, 1154.

- Souther, S., Tingley, M. W., Popescu, V. D., Hayman, D. T., Ryan, M. E., Graves, T. A., . . . Terrell, K. (2014). Biotic impacts of energy development from shale: research priorities and knowledge gaps. *Frontiers in Ecology and the Environment*, 12(6), 330-338.
- Sunley, E. M., Baunsgaard, T., & Simard, D. (2003). Revenue from the oil and gas sector: Issues and country experience. *Fiscal policy formulation and implementation in oil-producing countries*, 153-183.
- Tumusiime, D. M., Mawejje, J., & Byakagaba, P. (2018). Discovery of oil: Community perceptions and expectations in Uganda's Albertine Region.
- Vokes, R. (2012). The politics of oil in Uganda. *African Affairs*, 111(443), 303-314.
- Winterbottom, B., & Eilu, G. (2006). Uganda biodiversity and tropical forest assessment. *Washington DC*.