EFFECTS OF OIL AND GAS EXPLORATION ACTIVITIES ON PEOPLE'S LIVELIHOODS IN THE ALBERTINE GRABEN IN WESTERN UGANDA: A CASE STUDY OF HOIMA DISTRICT

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UGANDA CHRISTIAN UNIVERSITY
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DECLARATION

I, Eria Kisambira declare to the best of my knowledge that this research report is truly my original and has not been submitted in the fulfillment for any award of a degree in any other Institution of Higher Learning or University, so it is entirely out of my own efforts.

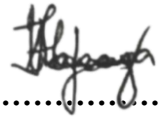
Signature:  Date: 5th June, 2025

Eria Kisambira

APPROVAL

This research report has been successfully done under my supervision and in accordance with the relevant institutional rules and regulations. I thus recommend that it be accepted by the Board of Examiners for an Award of a bachelor's science in oil and gas management.

Name: Mugerwa James



Signature …… **Date:** **31/03/2025**

DEDICATION

This piece of work is dedicated to my beloved mum for the love holistic moral, financial and social support throughout my education and life in general and also my siblings for their endless prayers for me.

ACKNOWLEDGMENT

With a grateful heart I thank the Almighty Allah for the gift of life, good health and the grace for better days.

I wish to express my profound gratitude to my supervisor Mr. Mugerwa James for the expertise and valuable time amidst the busy schedule, to guide and mould me into a great legal researcher.

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SPSS	Statistical packages for social scientists
PSAS	Production sharing agreements
UBS	Uganda bureau of statistics
GDP	Gross domestic production
PEPD	Petroleum exploration production and development
CVI	Content validity index
PAU	Petroleum authority of Uganda
MEMD	Ministry of energy and mineral development
NOGP	National oil and gas policy
BDLG	Buliisa district local government

ABSTRACT

The examined the effects of oil and gas exploration activities on people's livelihoods in the Albertine Graben in western Uganda Hoima District . With a growing focus on natural resource extraction in the region, understanding the implications of exploration activities on local communities' livelihoods is imperative for sustainable development. This was guided by the following objectives;- to characterize the dominant oil and gas exploration activities, to examine the effects of oil and gas exploration activities on people's livelihoods, to analyze the mitigation measures by oil & gas companies, government, and non-governmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima. The Oil and Gas industry everywhere faces problems and challenges. However, in the developing countries, these difficulties and challenges are present alongside a general situation of socio-economic stress, chronic resource shortages, institutional weaknesses and a general inability to deal with the key issues. The researcher adopted a descriptive research design. This is done to identify and obtain information on the characteristics of a particular issue (Kothari,

2008). The sample involved 33 respondents and determined by Slovene's formula. Findings indicate that the males were the most at 23(69.7%) with the females being the least at 10(30.3%). Results also indicates that government has conducted surveying of the land with mean 3.36 std.54 surveying is one of the oil and gas exploration activity taking place in Butiaba Sub country, 3.39 mean indicates that there is site clearance including the surrounding areas of communities in Butiaba sub county and it is what guided for the establishment of the oil and gas plant. The study also found out that livelihood sources were engaged in before and after commissioning of oil and gas exploration activities. Mean 3.48 indicated that people access to safe water for domestic use in the community. In summary, the exploration activities undertaken in Butiaba sub county have provided helpful insights into the region's geological composition and potential resource reserves. This entails strengthening oversight mechanisms to enforce compliance with environmental regulations and best practices, including rigorous environmental impact assessments (EIAs) throughout the exploration process.

CHAPTER ONE

1.0 Introduction

The study examined the effects of oil and gas exploration activities on people's livelihoods in the Albertine Graben in western Uganda Hoima District.

1.1 Background to the Study

This background of the study was presented in four areas that is historical perspective, conceptual perspective and contextual perspective**.**

1.1.1 Historical perspective

Oil and gas had already been used in some capacity, such as in lamps or as a material for construction, for thousands of years before the modern era, with the earliest known oil wells being drilled in China in 347 AD. The modern history of the oil and gas industry started in 1847, with a discovery made by Scottish chemist James Young. He observed natural petroleum seepage in the Riddings coal mine, and from this seepage distilled both a light thin oil suitable for lamps and a thicker oil suitable for lubrication. Following these successful distillations, Young experimented further with coal and was able to distil a number of liquids including an early form of petroleum. He patented these oils and paraffin wax, also distilled from coal, in 1850, and later that year formed a partnership with geologist Edward William Binney. From these initial discoveries, new businesses were created, with the coal industry now also seeking to create the oils developed by Young and Gesner. Polish engineer Ignacy Łukasiewicz improved Gesner's method to more easily distil kerosene and petroleum in 1852, opening the first 'rock oil' mine in Bóbrka, Poland in 1854. The first oil well drilled was in the town of La Brea, Trinidad in 1857. It was drilled to a depth of 280ft by the American Merrimac Company. (Wenrui et al., 2013; Evans, 2009).

In Africa, considerable oil and gas resources are believed to exist thus providing the potential to spar growth of the continent (Demierre *et al*., 2015). However, 38 out of 53 African countries still depend on oil imports from elsewhere because of limited exploration and exploitation of this resource (Jiang, 2009). Oil fields only exist in Libya, Nigeria, Angola and Algeria (African Development Bank and the African Union, 2009).

In Uganda, the most prospective area with potential for petroleum is the Albertine Graben. E.J. Wayland, a Geologist with the Colonial Government made the first assessment of the Oil and Gas (O&G) potential of Uganda, and documented hydrocarbon occurrences in the Albertine

Graben in the 1920s. This was followed by drilling of many shallow wells around Butiaba and Kibiro localities, with the deepest well called Waki-B-1 drilled in 1938. There was no activity until the 1980s because of political instabilities due to the Second World War and the postindependence turmoil in Uganda (Ericson, 2014; Manyak, 2015). There was renewed interest in the region in the early/mid-eighties. Subsequently, in 1983/4, aero-magnetic surveys were undertaken to quickly identify potential areas with hydrocarbons in the western part (Rift System) (Manyak, 2015). In 1984 a Petroleum Unit under the Department of Geological Survey and Mines was created, and in 1985 the first legislation for petroleum exploration and production was enacted (Muyombwa et al., 2014). In the 1990s, the acquisition of additional geological and geophysical data which was used to promote oil exploration in Uganda in International Fora was undertaken (Baineomugisha et al., 2006).

1.1.2 Conceptual Background

As far as the conceptual definition is concerned, this study has the following independent variables (gas exploration activities) and dependent variables (people's livelihoods).

Gas exploration activities refer to the processes and techniques used to search for and assess natural gas deposits beneath the Earth's surface. These activities are a crucial part of the energy industry, as they help identify potential sites where natural gas can be extracted for use in energy production, heating, transportation, and other industries.

People's livelihoods refer to the means by which individuals or communities secure the resources they need to sustain their daily lives, such as food, shelter, and income. Livelihoods are deeply tied to the economic, social, and environmental systems people live within. These can vary widely depending on the region, the available resources, and the types of work people are engaged in.

1.1.3 Contextual Background

In 1983 geologists resumed exploration activities in the Albertine Graben, revealing reasonable oil presence. This led to the creation of the Petroleum Unit in 1985, in the Geological Survey

and Mines Department to spearhead exploration promotion; in 1985 the Petroleum (Exploration and Production) Act was enacted to make provision for the exploration and production of petroleum and related matters. The Petroleum unit was replaced by the Petroleum Exploration and Production Department which commenced aeromagnetic surveys. Activities such as seismic data collection, drilling and extraction of oil and gas samples affect human beings both directly and indirectly (Dowokpor, 2015;). With the recent commissioning of large-scale oil and gas exploration activities in Uganda, it is anticipated that the effects of oil and gas exploration witnessed in Ghana, Nigeria and elsewhere are likely to emerge in here to (Hansen et al., 2016). However, this information is limited in Uganda. The situations therefore warrantee studies to be conducted in specific areas of oil and gas exploration in Uganda on how the activities have affected people's livelihoods.

1.2 Statement of the Problem

In the event of oil and gas discovery and related activities such as drilling, surveying, mapping, production, and transportation, these livelihood activities are likely to be affected as it has been the case with most African countries where oil and gas exploration has taken place (African Development Bank and the African Union, 2009). However, different exploration activities and techniques are employed in other localities, which can also account for differences in the emerging effects. According to Louis (2015), a shift 6 in government policy from wildlife conservation to oil and gas exploration, whose intention is to offer Ugandans economic and social benefits, could impart devastating pressure on soils and ecological units of flora and fauna, hence affecting people's livelihoods both directly and indirectly.

1.3 Purpose of the study

The study's main objective was to ascertain the oil and gas exploration activities in Hoima District in the Albertine region of Uganda and their effect on people's livelihoods.

1.4 Specific Objectives

i. To characterize the dominant oil and gas exploration activities in Hoima District.
ii. To examine the effects of oil and gas exploration activities on people's livelihoods in Hoima.

iii. To analyze the mitigation measures by oil & gas companies, government, and nongovernmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima.

1.5 Research Questions

i. What are the characters the dominant oil and gas exploration activities in Hoima District. ii. What are the effects of oil and gas exploration activities on people's livelihoods in Hoima.

iii. What are the mitigation measures by oil & gas companies, government, and nongovernmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima.

1.6 Scope of the study

1.6.1 Geographical scope

The study was carried out in Hoima, located on the eastern shores of Lake Albert in the Albertine region, which was initially found with traces of hydrocarbon deposits in the Albertine region.

1.6.2 Content scope

The study established the effects of oil and gas exploration activities on the people's livelihoods. In this content the study considered two variable which bridged the gap. This included independent variable (effects of oil and gas exploration) and the dependent variable (people's livelihoods). The attributes are well outlined in the conceptual framework.

1.6.3 Time scope

The study covered a period between 2019 and 2024; this period is selected because it was within the time frame within which Hoima District experienced increased oil and gas exploration activities. However, field data collection was conducted within four months (September, 2024 – May, 2025).

1.7 Significance

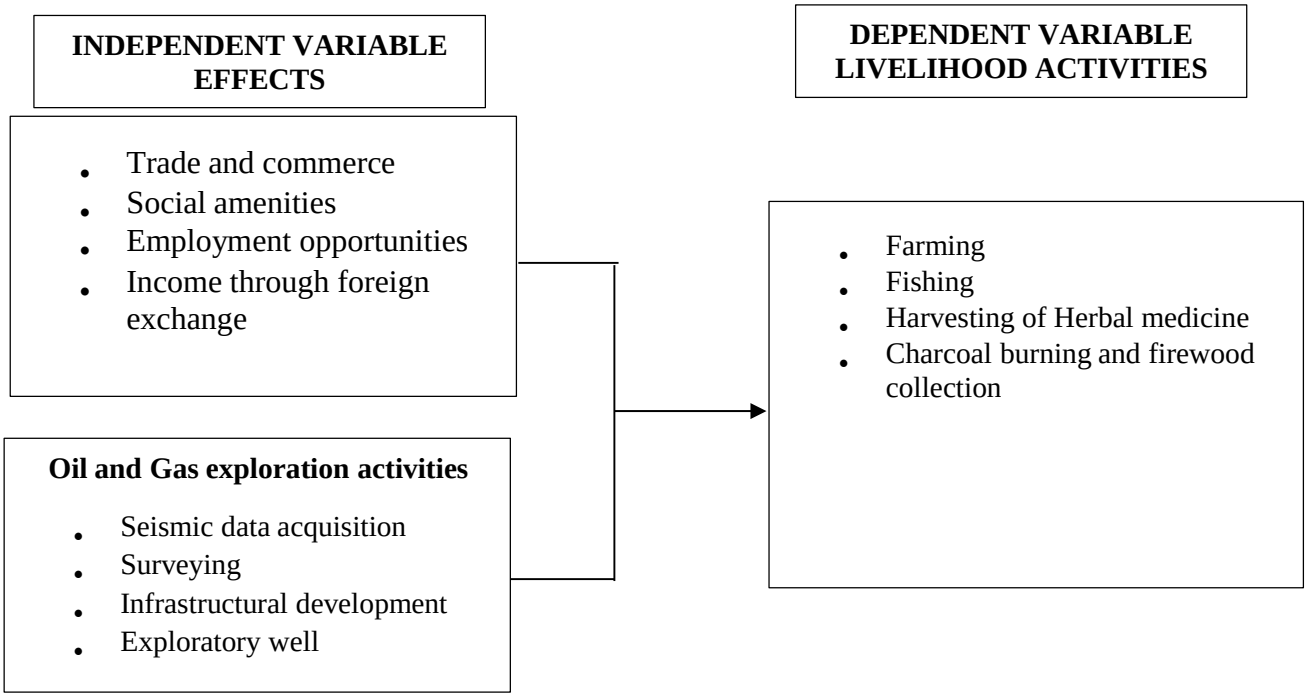
The Oil and Gas industry everywhere faces problems and challenges. However, in the developing countries, these difficulties and challenges are present alongside a general situation of socio-economic stress, chronic resource shortages, institutional weaknesses and a general inability to deal with the key issues. However, regarding EACOP, it is estimated that Uganda will realize between US$350 and US$400 million from the 15% equity shareholding. Production Sharing Agreements (PSAs) between the Government and international oil companies guide the sharing of proceeds from the crude oil. However, revenue from EACOP is linked to the total Upstream projects revenue because the pipeline is an enabler. It will also create employment, contracts for goods and services and generate tax for both Governments (Uganda and Tanzania).

The impoverished and underdeveloped countries and regions experience the worst and extended periods a there is a lack of management approach, response strategy and policy enforcement. This oil spills have affected the environment. With the petroleum exploitation activities have affected the environment and ecosystem based services and have raised poverty and physical, mental and occupational mobility. The impact is that people have suffered and loss livelihood, which generates a significant case of unemployment.

Many topical issues which have implications for the Oil and Gas industry have, so far, only been discussed to a significant extent in the general context of what has been or what happened in Oil cursed nations like Nigeria and Chad rather than what should have been done differently. This therefore has caused concern in understanding the basis of petroleum exploration activities to effect people living around the Butiaba Sub County.

This study will therefore empirically study the impact of exploration on people's livelihoods in Butiaba, while also citing ways in which Uganda is to normalize Oil & Gas availability.

Figure 1: Showing a conceptual framework



1.8 Conceptual framework

Source: *Adopted from Nyombi, (2023) and modified by the researcher, (2025)*

Description of Conceptual Framework

Components of people's livelihoods as the dependent variable include activities such as fishing, hunting, farming and wood fuel harvesting. Oil and gas exploration and related activities is conceptualized as the independent variable that affects people's livelihoods in in the Albertine graben in western Uganda (dependent variable). It is hypothesized that undertaking oil and gas exploration activities such as mapping, surveying, seismic data acquisition and exploratory well drilling, is associated with both negative and positive effects on people's livelihoods. However, without mitigation measures, the effects on livelihoods are largely negative since oil and gas exploration takes place on the land from which the community undertakes livelihood activities. The mitigation measures can be undertaken by companies involved in oil and gas explorations, government, local community or non-government organization.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter provided literature by scholars in areas related to the current study. This was presented in accordance to the impact of exploration on people's livelihoods in Butiaba. Literature inclined to the above guidelines will be searched from published documents, journals, conference papers and the internet.

2.1 Theoretical Review

The adopted the Economic Theory by Adma Smith (1776) the theory states that wealth is created via labor, and self-interest spurs people to use their resources to earn money (Smith, 1779). Smith published his first notable body of work, *The Theory of Moral Sentiments*, in 1759. In it, Smith discussed the idea that self-interested people naturally end up working toward an outcome that benefits everyone. He described this idea as an "invisible hand" that guided individuals toward paths that simultaneously improve their lives and the lives of the people on the other side of a trade. This concept of natural liberty leading to optimal outcomes is perhaps the most significant contribution to what we now call economic theory.

In 1776, Smith published an *Inquiry into the Nature and Causes of the Wealth of Nations*.

Smith's ideas in these works and others helped develop the foundation of political economics, inspired policies that shifted away from mercantilism, established the concepts of specialization and the division of labor, and laid the groundwork for macroeconomic theory.

Before the Industrial Revolution, most of the population lived and worked on farms. Skilled artisans handcrafted most of the products that people used. These craftsmen were often part of a guild, which controlled the manufacturing and sale of products. Smith critiqued the monopoly power of the guild system, as well as the protectionist policies in which the government intervened to direct commerce (Adam Smith, 2001). He pointed out that allowing individuals to decide how to use their money, land, equipment, and labor how they saw fit would generate the most benefit for the nation. His work suggested that allowing people to pursue their selfinterest would result in a self-organizing system that was better for everyone.

At the same time, the Industrial Revolution turned manufacturing into a centralized process with the help of machinery and steam power. Factories could make products faster and cheaper than individuals could. Consequently, a significant portion of the population transitioned from cottage industries into new urban factories (Robbins, 1952).

Smith studied the motivations and natural tendencies of human beings. He observed that people were primarily driven by self-interest committing their resources to those things that most benefited them. He argued that all trade was mutually beneficial (Sen's, 2011). If one person in the exchange didn't come out better off, they would simply decline the deal. Therefore, Smith observed, all voluntary trade resulted in increased wealth, and therefore regulating trade was unnecessary and potentially damaging.

There are several indications in the text of the Wealth of Nations that Smith would indeed attach greater weight to the losses of the poor than to the gains of the rich. A reasonable interpretation of his postulate that competition works in the interests of society is that in the long run, everyone would benefit from living in a wealthy society. This interpretation receives support from another use that Smith makes of the metaphor of the invisible hand. Therefore, the theory is relevant in the way that it's an important role for government was to design an economic system that as far as possible discouraged the creation of private cartels and monopolies. With exploration activities going on in Buliisa District can be able to help improve on the livelihoods of people since they support society gains in the long run.

2.2 Related literature

2.2.1 Exploration activities taking place in Buliisa District

According to (Ukoli, 2001), Oil and gas exploration activities include surveying, exploratory drilling, and seismically resilient land acquisition. Its purpose is to identify areas with oil and gas reserves by measuring and mapping surface and underground geological features. Seismic data collection is used to assess the amount of oil and gas that can be economically recovered, determine the best locations to drill exploratory wells, and test geological formations. In these global activities, engineers determine access to oil and its quality. When determining oil and gas reserves, drilling and delineation operations are always performed to measure the area and thickness of the deposits containing the oil and gas.

The (OIIE&PF, 1997) According to the report, the oil and gas industry consists of an upstream segment that deals with exploration and production, and a downstream segment that deals with

refining, processing, distribution and marketing of crude oil and gas products. The document also shows that in order to understand the causes of impacts that oil production may have on the environment, it is important to understand the activities involved. Identify exploration activities, including exploration surveying. Exploration drilling Evaluation; Development and Production and decommissioning and rehabilitation.

Activities related to exploration include site preparation, clearing a large area the size of a soccer field for an oil rig. Oil rigs are always fenced to prevent trespassing, protect expensive equipment and people, and safely transport livestock distance (Byakagaba, 2019). There are also other processes and activities that involve the movement of drilling rigs and equipment, which require the construction of access roads and the transport of 100 to 150 trucks or truckloads, which are typically less convenient for local communities. It's inconvenient is recommended to raise awareness about road safety in the local community.

According to (Omorede, 2014) Exploration is assumed to be an advanced technique, including gravity surveys, passive seismic surveys, or area seismic reflection surveys, based on the principle of how long it takes for reflected sound waves to pass through materials (rocks) of different densities doing. Profile the substructure using the process of depth conversion. To (Cordaid, 2016), Aerial photography is used in oil and gas exploration. This involves flying planes or helicopters equipped with specialized equipment over areas where mineral deposits may be located and gathering information about the type of rock beneath the surface. This includes seismic data collection, which uses a technique called seismology to understand what's happening underground. Exploration drilling also includes drilling exploration wells after a seismic survey. Well drilling procedures require government approval, which assesses whether the drilling activity is likely to impact the environment, and local communities must also be informed.

In the past, surface features such as tar seeps or gas pockmarks provided initial clues to the location of shallow hydrocarbon deposits, but today, a series of surveys, starting with broad geological mapping through increasingly advanced methods such as passive seismic, reflective seismic, magnetic and gravity surveys give data to sophisticated analysis tools that identify potential hydrocarbon bearing rock as "prospects" (Ablo, 2015). Ablo states that logging and coring wells to measure the permeability, porosity and other properties of the geologic formation (s) are carried out during gas and oil exploration. He further asserts that well

completion is sometimes considered first stage of drilling or development phase that normally affect the environment and terrestrial lives.

The studies cited above indicate that oil and gas exploration involve varying activities which depend on the geographic location, the level of technology and technical expertise available, the time frame among other factors. Explorations for oil and gas resources in Butiaba Sub County were officially commissioned over two decades ago and since then, the activities have been ongoing. However, limited documentation of the information on the specific exploration activities is available and yet understanding these would help to understand the likely effects on the environment and thus prescribe apt mitigation measures. The present study was therefore undertaken to profile the major oil and exploration activities that oil and gas companies are undertaking in Butiaba Sub County.

2.2.2 The impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County.

Livelihood refers to a set of activities that involve securing water, food, medicine, shelter; and the capacity to acquire the above necessities by individuals, a group or community using endowments for meeting requirements of people's households on a sustainable basis with dignity (Batool, 2016). The activities are usually carried out repeatedly to maximize an angler's livelihood that depends on the fishing and availability of fish in waters and a farmer available on land.

In (Cordaid, 2016) notes that land and water are among the most important resources for communities, which don't only provide a place to live and source of livelihood, but for many communities, they are also directly related to their culture and identity. It further indicates that oil and gas or mining projects will always require access to land and water for example, for drilling sites, mine, camps for housing workers and equipment as well as access roads.

According to the 20 years of NAPE's environmental advocacy in Uganda (2016) document, land constitutes the main asset from which people or communities are able to derive their livelihood and that land represents a very valuable economic asset source of identity and culture. The document further states that in Uganda, many investments have resulted in dispossession, deception, violation of human rights, and destruction of livelihoods. It continues

to note that land in rural areas comes under multiple pressure because of large-scale commercial farming, and mineral resource extraction.

Considerable evidence from oil producing countries such as Nigeria, Gabon, Angola, Sudan, Chad and others in Africa clearly indicate that oil is a resource of both great opportunity and peril (Ericson, 2014). It is an opportunity because it brings huge revenue for the country's economic development indicated by social services such as schools, hospitals and roads. On the other hand, it is a problem when the revenue is misused hence causing conflicts. Uganda is one of the African countries that have been infested with corrupt officers; yet according to Ericson indicates that countries whose officers are corrupt cannot receive anticipated benefits from oil and gas exploration. This is due to the fact that multinational companies which might have led to development become insolvent to serve the interest of the business entrepreneurs so grassroots people remain poor.

Ofuoku *et al* (Ofuoku, 2014) studied the social impact of oil production on smallholder farmers in oil-producing communities of the Central zone of Delta State, Nigeria. However, they were rather interested in environmental problems experienced in the communities. Using data collected from a sample of 120 respondents with the use of questionnaires, they identified soil erosion, noise pollution, bush burning, land degradation/pollution, water pollution, air pollution, massive deforestation and acid rain as the major environmental problems experienced in the study area.

Studies conducted from West African countries by (Olaniyi, 2011) show that one of the socialeconomic effects of oil exploration to the nearby communities are on cultural practices, specifically ways in which cultural practices are rendered problematic in the face of changes resulting from the discovery of oil. For example, Jike (2010) found that most men in Mali and Ghana did not wish the intercourse between foreigners and the African women. However, the African women from both countries found sexual intercourse with the company workers lucrative because African men could not provide such amount of money.

Besides, it was found out that oil and gas exploration lead to the destruction of structures that once provided livelihoods for women in oil- producing communities, which puts an undue burden on women in these communities forcing them to turn to commercial sex.

2.3 Gap of the literature

In (Plumptre, 2016) report "Documentation of existing and potential oil/geothermal projects, mapping their likely adverse negative effects on the biodiversity conservation and community livelihoods in the Greater Virunga Landscape" focuses on Species likely to be affected by oil/gas and geothermal activities which is does not indicate the potential effect on mammals and their habitats. The same study just documents and maps the existing and potential oil projects but does not quantify the extent of the impacts.

In (Plumptre A. J., 2015) he highlights issues and documents the potential effects of exploration on species, sites and habitats as per observation and where possible use quantitative representation to highlight the magnitude of the problem which is a bit general and neglects animal habitats. In the same report he highlights potential and resultant effects of approving the development of the golf course in Chobe sector which is not enough to show the effects of oil and gas exploration on animals and their habitats. The study is broad covering the whole Albertine Rift thus giving less focus to Murchison Falls National Park.

Andren (1994) assessed the effects of habitat fragmentation focusing on birds and mammals in landscapes with different proportions of suitable habitat. The study looked at the scale of habitat fragmentation and population responses to habitat fragmentation while identifying the factors influencing the abundance and distribution of species in landscapes with different degrees of habitat fragmentation but the study does not specify the causes of mammal habitat fragmentation in relation to the oil industry.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter contained the research design, sampling design and type, and different methods that the researcher used to collect data from various sources and interpret the data to reach a conclusion on the impact of exploration on people's livelihoods in Butiaba Sub County.

3.1 The Research Design

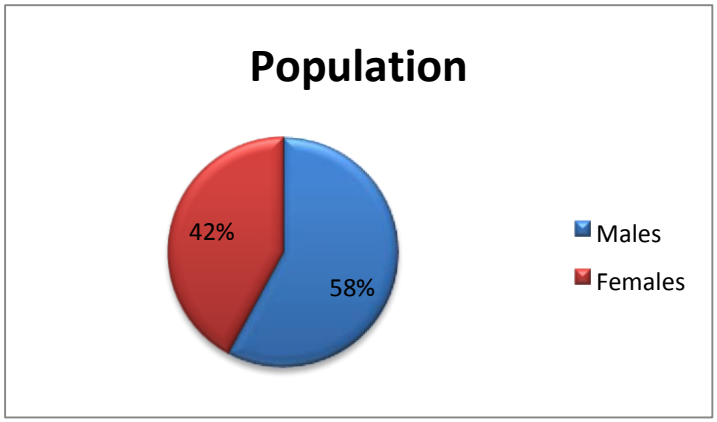
The researcher adopted a *descriptive research design* to identify and gather information on the characteristics of a specific issue (Kothari, 2008). A descriptive design was chosen because the researcher aimed to describe and understand the current nature and extent of the impact of exploration on the livelihoods being studied. This design was deemed appropriate since the researcher is primarily interested in exploring the viable relationship and illustrating how the factors support the two variables under investigation. The study was utilized a descriptive approach, as it enables the researcher to discover patterns in respondents' thinking and describe issues from their own perspectives.

The quantitative approach was justified on the grounds that some effects of oil and gas exploration can be quantified and presented statistically. Qualitative data was collected from respondents' views, opinions, and comments, with interpretations and presentations best suited for narrative formats. Qualitative data involved analyzing statements obtained from key informants, while quantitative data utilized statistical techniques to collect, analyze, and communicate study findings in the form of frequencies and percentages. This approach allowed for the triangulation of results, enhancing the validity and reliability of the study.

3.3 Study Population

The study population refered to large groups of people, considering a total of 38,300 for this research.

Figure 2: *Showing the general population of Butiaba Sub County*



3.3.1 Target Population

This study included oil and gas company workers, District officials, local leaders, and household heads in Butiaba Sub County. Since exploration activities in the area affect their livelihoods either positively or negatively, all household heads in Butiaba Sub County were form the main target population. The other target respondents involved in making decisions on development activities in the area, including oil and gas exploration. Generally, there were 25 household heads, 5 oil and gas company workers, and 5 local leaders.

3.4 Sample Size

This sample involved 35 respondents and were determined using Slovin's formula. The formula selected a sample to represent the entire population, and this particular sample size was applied be generalized to a larger population. The table for sample determination was utilized because it provides a sample size aligned with a specific degree of reliability and population size based on a 95% confidence and a 5% margin of error.

The sample size was determined using Slovene's formula as expressed below;

$$n = \frac{35}{1 + N\,(0.05)2}$$

$$\frac{35}{1 + 35(0.0025)}$$

$$\frac{35}{1 + 0.0875}$$

$$\frac{35}{1.0875}$$

33 Respondents

Table 1: Sample Size distribution for respondents / key informants

Category	**Target Population**	**Sample Size**	**Sampling Techniques**
Local Leaders	5	4	Purposive sampling
Oil and Gas company workers	5	5	Purposive sampling
Household Heads	25	25	Simple Random
Total	35	33	

Source: *Primary Data, 2024*

3.6 Sampling Techniques

Sampling involved simple random sampling to select household heads in each village across the four parishes of Butiaba Sub County. This category of respondents was preferred due to its cost-effectiveness in terms of both money and time savings for data collection, high flexibility, accuracy, and lack of bias.

Purposive sampling was used to select 10 oil and gas sector workers, 4 district officials, and 5 local leaders. The targeted oil and gas sector workers included the human resources officer, field supervisors, and engineers at exploration sites. The district officials targeted were considered knowledgeable about oil and gas exploration activities and their impact on people's livelihoods in Butiaba Sub County.

3.7 Data Collection Methods

Data was collected from both primary and secondary sources. Primary data was collected from households in Butiaba Sub County, officials from the Buliisa District in natural resources management and planning offices, and local leaders (local council and opinion leaders).

Questionnaires were distributed and interviews were conducted.

Additionally, direct observation and photography of the exploration activities, livelihood pursuits, and infrastructural developments in the study area were conducted. Secondary data was collected through a review of existing documents aligned with the study's objectives. Key documents were included oil and gas sector policies and performance reports available in online repositories, the Hoima public library, Buliisa District Local Government archives, and newspapers. The review encompass recent journal publications and oil sector bulletins.

3.8 Data collection instruments

3.8.1 Questionnaire

The questionnaire were collected by both quantitative and qualitative data from household heads on the oil and gas exploration activities taking place in their areas, the effect of these activities on their livelihoods, and the mitigation measures being implemented in Butiaba Sub

County. The questionnaire were non-structured, with mainly pen-ended questions requiring respondents to write short notes to respond (*Appendix I*).

The open-ended questions in the questionnaires allowed respondents to express their opinions freely and in detail about the subject under study without bias from pre-determined answers set by the researcher. However, some close-ended questionnaire items were utilized due to their ease of coding, which facilitates simple statistical analyses. The questionnaires were handdelivered by the researcher and the research assistants, who waited for them to be duly completed by the respondents and returned. This method is preferred for this group of respondents because it involved keeping a record of the data collected for future reference. Additionally, it is an effective method for gathering large amounts of data over a wide area and from a large sample in the shortest possible time.

3.8.2 Interview Guide

During the study, interviews were conducted with district officials, the oil and gas sector, and local leaders using interview guides (*Appendix II*). Interviews were used to collect data on oil and gas exploration activities, their effects on people's livelihoods, and the mitigation measures implemented to address the adverse effects.

The interview method was used in this study because it provides an opportunity to interact with respondents who may not be able to complete the questionnaire due to a lack of time, yet they have very critical information about the subject of investigation. Interviews helped create a link with the data collected using questionnaires by clarifying details that would not be offered using questionnaires.

3.9 Validity of the Instruments

3.9.1 Validity

This indicated how well the results from the data analysis accurately represent the phenomena under study (Mugenda & Mugenda, 2003). Data validity was assessed using the Content Validity Index (CVI). To achieve this, a copy of the questionnaire were distributed to the supervisors and field experts to evaluate the relevant items/questions in relation to the research objectives; the relevant questions was then be divided by the total number of items. Validity will be tested as follows:

$$CVI = \frac{\text{valid Items}}{Total\ Number\ of\ Items}$$

The acceptable rate that the researcher preferred is 0.5, which resulted from dividing the corrected questions by the total number of questions.

3.9.2 Reliability

According to Kasomo (2006), reliability refers to how consistent a research procedure or instrument is. It signifies the extent to which research instruments yield consistent results or data after repeated trials. The test-retest method was used to assess the reliability of the instruments. This involves administering the same questionnaires twice to 25 respondents in the region and correlating their responses independently. After administering the questionnaires, a correlation coefficient was calculated using the appropriate formula to establish the relationship between the two sets of scores. Spearman's Brown Prophecy formula were applied as shown below:

Reliability of the entire test = (Reliability of 0.5 test) (r)
1+ (Reliability of 0.5 test) (r)
Where r, is Coefficient of correlation

The reliability mean is established at 0.79, confirming the instrument's internal consistency (Reliability). A coefficient of 0.7 and above would mean that the research instruments are reliable, displaying consistency in the research findings. The reliability test produces a coefficient of correlation of 0.79, meaning that the data collection instruments was reliable enough to give consistent findings.

3.10 Data Analysis

3.10.1 Quantitative data analysis

Data collected using questionnaires were coded and analyzed using statistical techniques. The computer program Statistical Packages for Social Scientists (SPSS) version 23.0 were used to code the data. Responses were transformed into numeric data, such as 1, 2 …etc. Relative percentages were enabled comparisons between and among the study variables.

Characterizing the dominant oil and gas exploration activities in Butiaba Sub County in terms of the procedures undertaken, intensity, and spatial coverage utilized SPSS. MCA is applicable when the responses obtained from the study variables are measured on a nominal scale or categorized as "Yes" and "No" (Johnson & Wichern, 2006), as the case in the current study. The results were presented as a percentage of variance in a tabular format and visualized on a scree plot.

3.10.2 Qualitative data analysis

Data collected from the field in the form of verbal responses from key informants were primarily be qualitative in nature and analyzed accordingly. The responses was transcribed, organized, and categorized under the themes of the study's objectives. This process involved identifying common responses in line with the study's objectives. Qualitative data analysis included descriptions, either as direct quotations or narratives derived from the interviews.

The Spearman rank correlation co-efficient were used to test the direction and the magnitude of the relationships, this was because the researcher used ordinal scale of measurement; the 5-Likert Scale. The findings were presented in tables and narrations. Qualitative data from the open ended items were analyzed through content analysis; organizing based on the emerging themes.

Table 2: Mean Rang of a five-level Likert scale

Scale	Mean range	Interpretation
Strongly agree	4.20-5.00	Very high
Agree	3.40-4.19	High
Not sure	2.60-3.39	Moderate
Disagree	1.80-2.59	Low
Strongly Disagree	1.00-1.79	Very low

Adopted from Renis Likert (1932)

3.11 Ethical Considerations

This study followed ethical procedures governing social research studies. An introductory letter was obtained from Uganda Christian University, introducing the researcher to the respondents and seeking assistance in conducting the survey. Consent was sought from respondents before

the questionnaire is handed to them or before interviews are conducted. Attention was also be given to the rules governing photography in the area of study for the observable elements of the study.

The questionnaire included an introductory statement asking for the respondent's cooperation in providing the necessary information for the study. Respondents further ensured the confidentiality of the information provided and that the study findings are intended for academic research purposes only. Plagiarism was avoided by properly acknowledging secondary sources through referencing.

3.12 Limitation of the study

The major limitations of this study are expected to be time constraints and a lack of firsthand writings. To obtain accurate data, it considered that entrepreneurs' lack of time and willingness to complete questionnaires might create problems in obtaining a representative sample.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.0 Introduction

This chapter analyzes the data collected from the respondents, presents and interprets and discusses it. The chapter comprises the questionnaire response rate and objective specific themes. The chapter found out results on impact of exploration on people's livelihoods in the Albertine Graben in Western Uganda. The subsections here include: Demographic information, to characterize the dominant oil and gas exploration activities, to examine the effects of oil and gas exploration activities on people's livelihoods, to analyze the mitigation measures by oil & gas companies, government, and non-governmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima.

4.1 Demographic Information

This section analyses, presents and interprets the findings on the respondent's age in completed years, their gender, level of education, how long they have worked within the Albertine Graben in Western Hoima, Uganda.

4.1.1 Age of the respondents

The respondents were asked to state their age in completed years. The results are as shown in table.

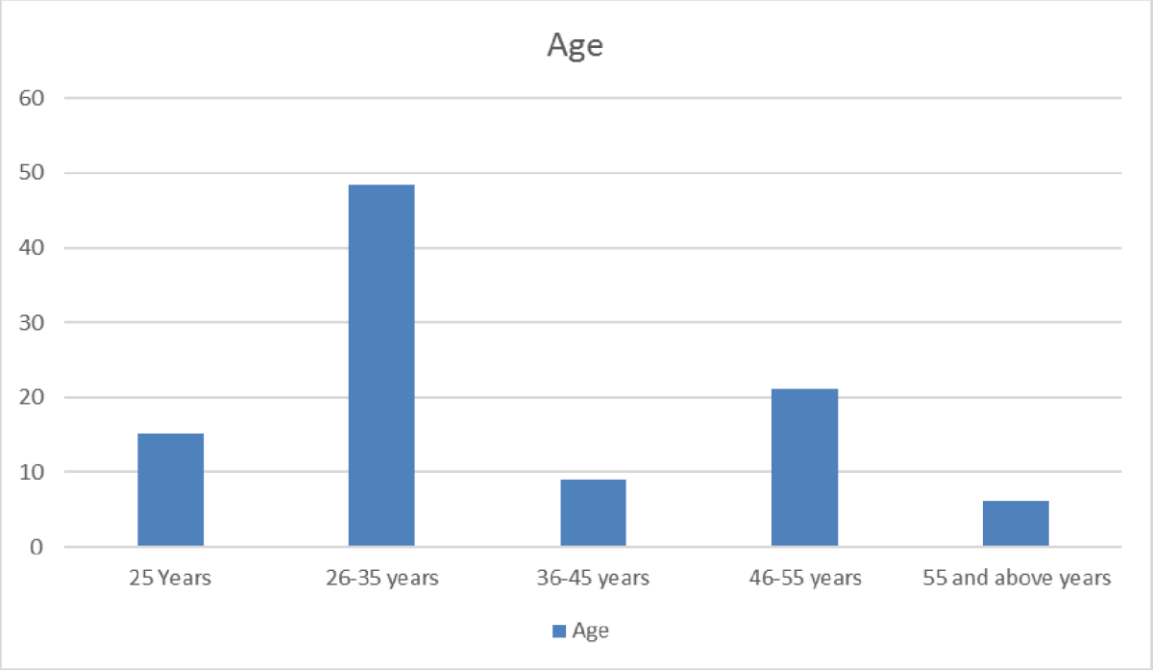
Table 3:Age of respondents

Category	*Frequency*	*Percent*
25 years	5	15.2
26-35 years	16	48.5
36-45 years	3	9.1
46-55 years	7	21.2
55 and above	2	6.1
Total	33	100.0

Source: *Primary Data, 2025*

The average age of the respondents was 36-45; the oldest respondent had 55 years with the youngest respondent having 25 years. Most of the respondents at 16(48.5%), were between ages 26-35 years closely followed by 7(21%) falling between 46-55 years, 3(9.1%) falling between 36-45 years, 5(15.2%) between 25 years with the least number of respondents falling between the ages 55 years at 2(6.1%).

Figure 3: The respondent's age



4.1.2 The respondents' gender

The respondents were asked to state their gender. The results are as shown in table

Table 4: Respondent's gender

Category	Frequency	Percent
Male	23	69.7
Female	10	30.3
Total	33	100.0

Source: *Primary Data, 2025*

The males were the most at 23(69.7%) with the females being the least at 10(30.3%).The respondents were selected randomly, this therefore implies that there were more male stakeholders than the female.

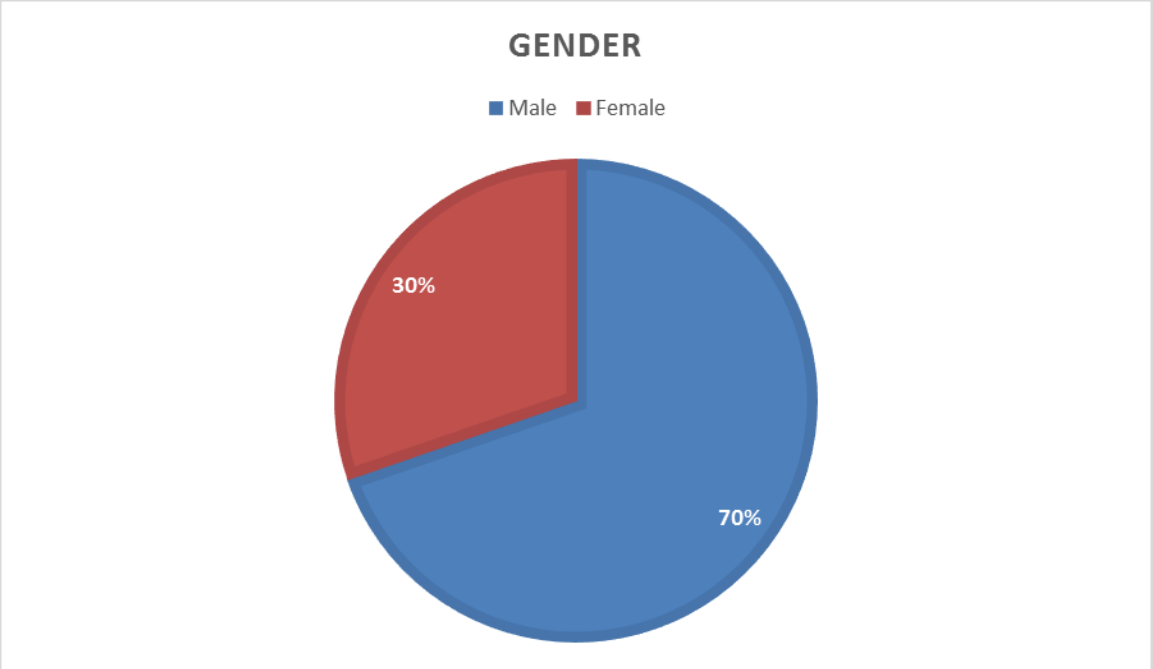


Figure 4: ***The respondent's gender***

4.1.3 Level of Education

The respondents were asked to state their level of education and the results are as shown in table

Table 5: Respondent's level of education

Category	*Frequency*	*Percent*
Diploma	9	27.3
Degree	11	33.3
Post graduate	7	21.2
Masters	6	18.2
Total	33	100.0

Source: *Primary Data, 2025*

The highest level of education for the most of the respondents was degree holders at 11(33.3%), followed by Diploma holders at 9(27.3%), post graduate at 7(21.2%) with the minority being masters' holders at 6(18.2%).

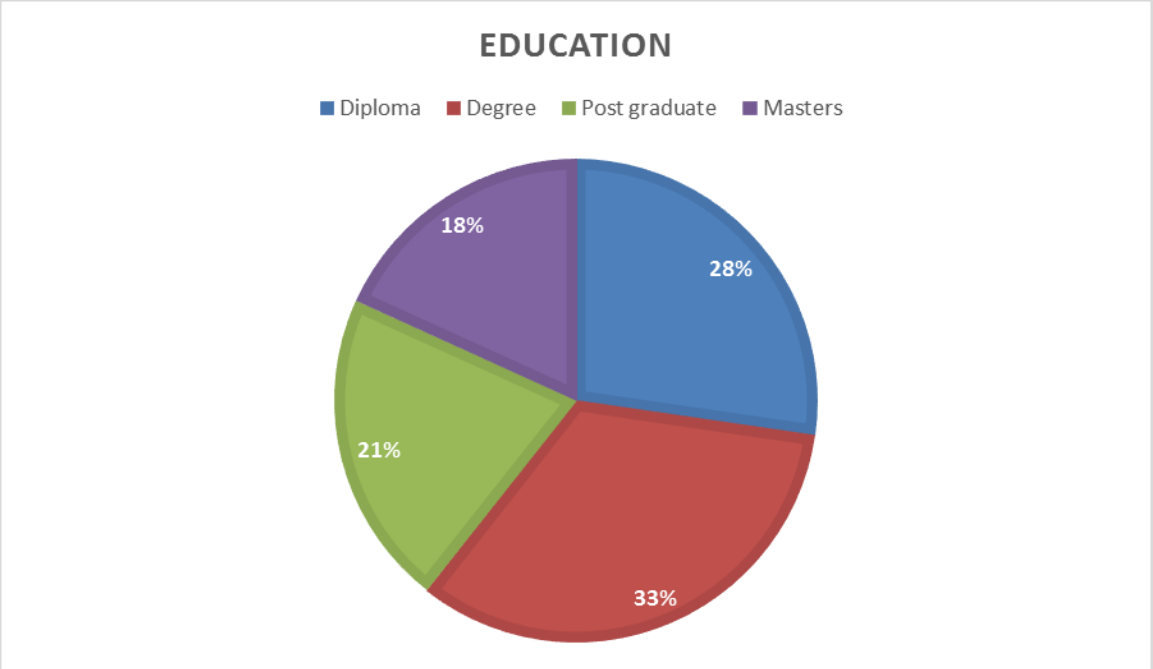


Figure 5: ***The respondents education***

4.2 The effects of oil and gas exploration activities on people's livelihoods in Hoima

This section presents the opinions on main exploration activities taking place in Butiaba sub county, Uganda.

Table 6: Descriptive statistics showing main exploration activities taking place in Butiaba Subcounty Buliisa district

	Mean	Std. Deviation
The government conducts surveying of the land	3.36	.54876
There is site clearance including the surrounding areas of communities	3.39	.70442
The government conducts mapping of the area	2.66	.98953
Government conducts land acquisition, construction and drilling for oil and gas	2.96	.88335
Average Mean	3.09	0.78

Source: ***Primary Data, 2025***

From the table above, results in the table indicates that government has conducted surveying of the land with mean 3.36 std.54 surveying is one of the oil and gas exploration activity taking place in Butiaba Sub country, 3.39 mean indicates that there is site clearance including the surrounding areas of communities in Butiaba sub county and it is what guided for the establishment of the oil and gas plant. 2.66 mean of the respondent cited mapping of the oil fields as one of the activities oil and gas companies are involved in. In the course of finding the activities, there is land acquisition, construction and drilling activities with mean 2.69.

These results signify that oil and gas companies in Butiaba Sub County were more involved in surveying compared to other oil exploration activities. Apart from surveying, the respondents also identified mapping as another major exploration activity in the study area. This was followed by oil and gas sample drilling and testing followed by site clearance. Construction works and land acquisition are indicated as the least engaged-in activities by oil and gas companies.

4.3 People's livelihoods in Butiaba Sub County

This section analyses, interprets, presents and discusses findings on People's livelihoods in Butiaba Sub County

Table 7: Descriptive statistics showing people's livelihoods in Butiaba subcounty

Category	*Mean*	*Std. Deviation*
There is crop farming conducted by the communities	3.06	1.14
There several livestock farming in the communities	3.00	1.00
Community members tend to conduct finishing while using ponds and lake albert	2.90	1.01
There is sand mining and stone quarrying	2.87	1.05
Members of the community conducts trade and commerce	2.93	1.02
Average	2.952	1.044

Source: ***Primary Data, 2025***

From the findings it indicates that majority of the respondents moderately agreed that there is crop farming conducted by the communities with mean rate of 3.06, results further indicates

that there are several livestock farming in the communities with mean 3.0, Community members tend to conduct finishing while using ponds and lake albert with mean 2.90, results also shows that there is sand mining and stone quarrying from which the community benefits from.

4.4 The impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County.

This section analyses, presents and interprets and discusses the findings for the second objective of the study: To establish the impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County.

Table 8: Descriptive statistics showing the impact of oil and gas exploration activities on people's livelihoods

Category	*Mean*	*Std. Deviation*
People access to safe water for domestic use in the community	3.48	.56
There is access to health care extended to people in the community	2.90	.87
There is reduction of food crop farming	2.36	.96
There is low grazing land	3.48	.56
The place tend to decline in flora and fauna resources	3.06	.74
Within the communities, there is displacement of people	3.24	.93
Average Mean	3.08	0.77

Source: *Primary Data, 2025*

From the table above, respondent's livelihood sources were engaged in before and after commissioning of oil and gas exploration activities. Mean 3.48 indicated that people access to safe water for domestic use in the community. This clearly shows that people in Butiaba Sub County benefited positively. Results with mean 2.9 shows that respondents had improved access to health care extended in the community.

A result with mean 2.36 also shows that there is reduction of food crop farming. This implies that oil and gas exploration activities have been associated with negative impact on people's

livelihoods. The study results also shows that there is low grazing land at mean 3.48, as oil and gas exploration activities continue to expand, there is decline in flora and fauna resources with mean 3.06. Results also show that there is there is displacement of people with mean 3.24. The study also found out that oil and gas exploration activities made it impossible for some people living in the area to access their livelihood locations. That is, where they used to derive livelihoods, such as hunting grounds, and firewood collection.

The results from interviews with key informants too did not differ so much from what was revealed by quantitative data analysis. During an interview session with the District Agriculture Officer, he had this to say,

Cotton production has reduced from 80% to 2% as a result of oil and gas exploration activities. Likewise, fish production has reduced from 10 tons to 3 tons per boat per month while the fish prices have increased. The cost of a kilogram of Nile perch for example, has risen from Shillings 5,000 to Shillings. 7,500.

The Butiaba Sub District Nearby Government report (2023) appears that individuals who depend on the Lake Albert have been unfavorably influenced by lessening angle capture numbers. The locale fisheries officer's sees in any case, contrasted marginally from the current think about since to him most individuals migrated to the Lake for the angling movement after they were evacuated from other exercises and however in this think about, it was appeared that those locked in in angling has decreased.

Respondents famous a decay in trim yields due to arrive securing for oil and gas investigation exercises, as well as soil defilement from exploration-related chemicals conjointly Animals proprietors expressed unsettling influences in brushing lands and water sources, driving to a decay in animals wellbeing and efficiency.

Community individuals communicated concerns over deforestation and living space misfortune coming about from arrive clearance for framework advancement related with oil and gas investigation.

It was moreover famous that earlier to the graduation of oil and gas investigation exercises, the essential sources of business for inhabitants in Butiaba Sub-County included subsistence

horticulture, angling, small-scale exchanging, and artisanal exercises such as creates and vessel building though with the start of oil and gas investigation, there has been a discernible move in the major sources of job in Butiaba Sub-County. Whereas conventional exercises such as farming and angling still continue, there has been a noteworthy increment in business openings within the oil and gas segment, as well as related businesses such as development, transportation, and neighborliness. In any case, these changes have too brought around challenges, counting natural debasement, social disturbance, and financial imbalance.

4.5 The mitigation measures by oil & gas companies, government, and non-governmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima.

Table 9: Showing the mitigation measures by oil & gas companies, government, and non-governmental organizations

Category	*Mean*	*Std. Deviation*
There are measures taken by oil and gas companies to mitigate the negative effects on local communities in Hoima	3.48	.56
The community is involved in consultations with oil and gas companies regarding mitigation efforts	2.58	1.14
There are government policies or initiatives aimed at reducing the negative effects of oil and gas exploration in Hoima	3.27	.814
The government provided compensation, relocation assistance, health programs to affected local communities.	2.58	1.05
The government has been transparent in addressing the concerns of local communities regarding oil and gas exploration activities	2.82	1.14
There is Environmental education and awareness programs	3.23	.76
Average Mean	**3.00**	**1.00**

Source: *Primary Data, 2025*

The data reflects the community's perspectives on the efforts made by oil and gas companies, the government, and other organizations to mitigate the negative effects of exploration

activities in Hoima. On average, respondents seem to acknowledge the measures taken by oil and gas companies to reduce the adverse impacts on local communities, with a mean score of 3.48, indicating a relatively positive view, although there is some variability (standard deviation of 0.56). However, the involvement of the community in consultations with these companies is perceived less favorably, with a mean score of 2.58 and a higher standard deviation of 1.14, suggesting that many individuals may feel excluded or inadequately consulted in decision-making processes.

Government actions are also viewed with mixed feelings. While respondents recognize the presence of policies aimed at mitigating the effects of oil exploration, reflected in the mean score of 3.27 (SD = 0.814), there is less confidence in the government's provision of compensation, relocation assistance, or health programs, with a similar mean score of 2.58 (SD = 1.05). The government's transparency in addressing local concerns about exploration activities is also rated somewhat low, with a mean score of 2.82 and a higher standard deviation, indicating that some people may feel the government is not adequately addressing their issues. Furthermore, environmental education and awareness programs are somewhat acknowledged, as reflected in a mean score of 3.23 (SD = 0.76).

Overall, the average mean of 3.00 with a standard deviation of 1.00 suggests that while there is a recognition of the efforts made, there is a significant variation in how these measures are perceived, with many community members expressing concerns about the effectiveness and inclusivity of these efforts.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.0 Introduction

The chapter discussed the results in relation to the study objectives; - *to find out the main exploration activities taking place in Butiaba sub county, Uganda, to establish the impact of*

oil and gas exploration activities on people's livelihoods in Butiaba Sub County, Uganda and lastly to examine the mitigation measures by oil & gas companies, government, and nongovernmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima.

5.1 Discussion of results

5.1.1 The main exploration activities taking place in Butiaba sub county

Results an average mean of 3.0 indicates that exploration activities taking place signify that oil and gas companies in Butiaba Sub County were more involved in surveying compared to other oil exploration activities Although in agreement in as far as surveying is concerned, the findings above diverge a bit from the observation by (Omorede, 2014) who noted that the major oil and gas investigation exercises include looking over, exploratory well boring and seismic information securing. The discoveries on oil investigation exercises taking put within the ponder region are be that as it may, in dispute with Devold (2013) who famous that surface highlights such as tar leaks or gas pockmarks given starting clues to the area of shallow hydrocarbon stores.

Comes about are too in line with (Byakagaba, 2019) who expressed that exercises related to investigation incorporate location planning, clearing a huge region the estimate of a soccer field for an oil fix. Oil rigs are continuously fenced to avoid trespassing, ensure costly hardware and individuals, and securely transport animals remove.

5.1.2 The impact of oil and gas exploration activities on people's livelihoods

In Butiaba Subcounty, livelihoods are deeply tangled with the rich natural resources and community spirit. Situated in a scenic region of Uganda, the livelihoods here reflect a blend of traditional practices and modern endeavors. Fishing is a cornerstone, with many residents relying on the bountiful waters of Lake Albert for their sustenance and income. Agriculture also plays a significant role, with fertile lands supporting crops like maize, cassava, and beans. Beyond these primary occupations, small-scale businesses and service-oriented ventures contribute to the economic landscape, fostering a diverse and resilient community. Butiaba Subcounty booms on the resourcefulness and resilience of its people, shaping a dynamic tapestry of livelihoods.

The study also found out that oil and gas exploration activities made it impossible for some people living in the area to access their livelihood locations with mean 3.08. Residents report that there has been rising demand for fish and charcoal. Cattle farmers were also reported to have benefited from the high demand for meat cattle in the area. It was also noted that, oil and gas exploration activities have led to employment opportunities especially to those people who are engaged in providing casual labor mainly in the exploration activities. The key informants noted that oil and gas exploration has directly and indirectly created employment opportunities and that the youth in particular have benefitted.

The above results reflect the arguments by Boohene (2011) who while referring to some African oil producing countries such as Nigeria, Gabon, Angola, Sudan and Chad indicate that oil is a resource of both great opportunity because it brings huge revenue for the country's economic development indicated by social services such as schools, hospitals and roads.

Results found out that 2.36 mean indicated there is reduction of food crop farming. The study was in line with (Cordaid, 2016) notes that land and water are among the most important resources for communities, which don't only provide a place to live and source of livelihood, but for many communities, they are also directly related to their culture and identity.

The findings further concur with those reported by the (Vokes, 2012), which state that due to different businesses, which open up in the area of oil and gas, the populations tend to increase through immigration and therefore market for products like fish, crop and animal products, charcoal and firewood widen. However, the study results show that whereas oil and gas exploration activities have contributed positively to peoples' livelihoods in Butiaba Sub County. Most healthcare and school infrastructure were however, just renovated and three new structures established. This means that only those people who had access to the formerly existing hospitals and schools are being served whilst areas formerly without these remain unsaved hence no significant improvement in peoples' wellbeing.
The findings also relate Dowokpor (2015)'s findings that fishing communities in Ghana were benefiting from oil companies' Corporate Social Responsibilities projects including infrastructural development and contribution towards community development activities.

5.1.3 The mitigation measures by oil & gas companies, government, and nongovernmental organizations against the adverse effects of oil and gas exploration activities on people's livelihoods in Hoima.

The results of the current study indicate that there is a mixed perception of the mitigation efforts implemented by oil and gas companies and the government in Hoima. The relatively positive mean score of 3.48 (SD = 0.56) for the measures taken by oil and gas companies aligns with findings from similar studies, which have also noted the presence of mitigation strategies aimed at minimizing environmental and social impacts of exploration (Okello et al., 2022). However, the lower mean score of 2.58 (SD = 1.14) for community involvement in consultations with oil companies suggests that while efforts may exist, they are perceived as insufficient or inaccessible by local communities. This finding is consistent with recent studies in the region, which emphasize the limited engagement of local populations in decision-making processes, a gap that undermines the effectiveness of these measures (Kabwegyere & Tumwesigye, 2023).

Regarding government interventions, the mean score of 3.27 (SD = 0.814) for the existence of policies aimed at reducing the negative effects of oil exploration aligns with findings from previous research indicating the government's role in creating legal frameworks and guidelines to manage the oil and gas industry in Uganda (Kibirige et al., 2023). However, the low scores for compensation, relocation assistance, and health programs (mean = 2.58, SD = 1.05) highlight concerns about the adequacy and implementation of such policies, which have been similarly noted in studies where affected communities reported insufficient compensation and a lack of timely relocation assistance (Mutumba, 2022).

The transparency of the government in addressing community concerns (mean = 2.82, SD = 1.14) also reflects broader concerns about governance in the sector, with some studies pointing to a lack of effective communication between the government, oil companies, and local communities (Nabongo & Nkunda, 2022). Finally, the presence of environmental education and awareness programs (mean = 3.23, SD = 0.76) is somewhat positively received, aligning with ongoing initiatives by both the government and NGOs to increase environmental literacy in affected areas (Nuwagaba & Nyombi, 2023). However, while these programs exist, the overall average mean score of 3.00 (SD = 1.00) underscores the need for greater improvement in the effectiveness, transparency, and inclusiveness of mitigation measures.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.0 Introduction

The study presented the conclusions, recommendations arrived at and contribution to body of knowledge. It also gives suggestions for further research.

6.1 Conclusion

In summary, the exploration activities undertaken in Butiaba subcounty have provided helpful insights into the region's geological composition and potential resource reserves. In spite of critical steps in understanding the affect of investigation on people's jobs in Butiaba subcounty, there stay very some roads for advance inquire about as seen underneath;

There ought to be a comprehensive examination of the dispersion of financial benefits inferred from investigation exercises, analyzing how income created from the oil and gas division is apportioned and whether it satisfactorily contributes to nearby improvement. Additionally, investigating the elements of business creation, aptitudes advancement, and nearby commerce openings coming about from investigation exercises may give bits of knowledge into the degree to which these wanders contribute to destitution lessening and socio-economic strengthening. Furthermore, examining the recognitions and encounters of marginalized bunches, such as ladies, youth, and inborn communities, in getting to and profiting from exploration-related openings may offer a more understanding of value issues and advise focused on intercessions to address incongruities and advance comprehensive advancement.

Moreover, there ought to be center on longitudinal examination, looking at the long-term socioeconomic and natural results of oil and gas advancement. This think about might include observing changes in work designs, wage conveyance, and community well-being over an expanded period to evaluate the maintainability of vocations within the confront of fluctuating oil costs and showcase flow. Moreover, investigating the viability of relief measures and community improvement activities in relieving negative impacts and improving strength seem give profitable bits of knowledge for future arrangement mediations and industry hone.

The study also elucidates how these activities have brought both opportunities and challenges to the community, influencing their socio-economic landscape. While oil and gas ventures have provided employment and economic growth, they have also disrupted traditional livelihoods, heightened environmental concerns, and posed socio-cultural changes. This comprehensive understanding underscores the necessity for balanced and sustainable development strategies that prioritize the well-being of local residents while harnessing the benefits of oil and gas extraction in Butiaba Subcounty

6.2 Recommendations

Based on our study, it is suggested to prioritize the establishment of robust regulatory frameworks and monitoring mechanisms to ensure environmental sustainability and mitigate potential adverse impacts. This entails strengthening oversight mechanisms to enforce compliance with environmental regulations and best practices, including rigorous environmental impact assessments (EIAs) throughout the exploration process. Moreover, fostering proactive engagement and consultation with local communities is crucial to address concerns. Furthermore, investing in capacity-building initiatives for local stakeholders, including training programs and knowledge transfer, can enhance their participation and empower them to actively engage in decision-making processes related to exploration activities on the ecosystem and livelihoods of local residents.

Ultimately it is also authoritative to implement a holistic approach towards mitigating adverse effects and maximizing benefits. This entails fostering community engagement and participation in decision-making processes concerning oil and gas projects, ensuring transparent communication channels between stakeholders and the industry. Furthermore, robust regulatory frameworks must be enforced to safeguard environmental integrity and protect the socio-cultural fabric of the community. By prioritizing sustainability, inclusivity, and resilience, Butiaba Subcounty can navigate the challenges posed by oil and gas activities while harnessing their potential for long-term socio-economic development.

6.3 Area for Further Research

In spite of critical steps in understanding the affect of investigation on people's jobs in Butiaba subcounty, there stay very some roads for advance inquire about as seen underneath;

There ought to be a comprehensive examination of the dispersion of financial benefits inferred from investigation exercises, analyzing how income created from the oil and gas division is

apportioned and whether it satisfactorily contributes to nearby improvement. Additionally, investigating the elements of business creation, aptitudes advancement, and nearby commerce openings coming about from investigation exercises may give bits of knowledge into the degree to which these wanders contribute to destitution lessening and socio-economic strengthening. Furthermore, examining the recognitions and encounters of marginalized bunches, such as ladies, youth, and inborn communities, in getting to and profiting from exploration-related openings may offer a more understanding of value issues and advise focused on intercessions to address incongruities and advance comprehensive advancement.

Moreover, there ought to be center on longitudinal examination, looking at the long-term socioeconomic and natural results of oil and gas advancement. This think about might include observing changes in work designs, wage conveyance, and community well-being over an expanded period to evaluate the maintainability of vocations within the confront of fluctuating oil costs and showcase flow. Moreover, investigating the viability of relief measures and community improvement activities in relieving negative impacts and improving strength seem give profitable bits of knowledge for future arrangement mediations and industry hone.

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APPENDICES: APPENDIX I

INTRODUCTORY LETTER FOR THE RESPONDENTS

Dear Sir/ Madam, Greetings!

My name is **Eria Kisambira** am conducting a bachelor's of Science of Oil and Gas of Uganda Christian University. Part of the requirements for the award a dissertation. My study is entitled,

"***effects of oil and gas exploration activities on people's livelihoods in the Albertine Graben in Western Uganda with a case study of Hoima District"***

Within this context, may I request you to participate in this study by answering the questionnaires? Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

Thanking you in advance for your cooperation.

Yours faithfully,

APPENDIX II: QUESTIONNAIRE

Please tick in the appropriate box and also fill in the blank spaces provided for those questions where elaborate answers are required. You are requested to complete this questionnaire as honestly and objectively as possible. Use the space at the back of this questionnaire if you need more space for your responses.

SECTION A: SOCIO-DEMOGRAPHICS

1. Gender of the respondent

Male [ ]

Female [ ]

3. Indicate your Age group

25 years or less [ ]

26-35 years [ ]

36-45 years [ ]

46-55 years [ ]

With 55 years and above [ ]

4. Education Level

Diploma [ ]

Degree [ ]

Masters [ ]

PhD [ ]

None of the above [ ]

5. How many years have you worked in oil and gas industry?

2 – 4 years [ ]

5 - 7 years [ ]

8 - 10 years [ ]

11 and above [ ]

SECTION B: THE MAIN EXPLORATION ACTIVITIES TAKING PLACE IN BUTIABA SUB COUNTY, BULIISA DISTRICT.

This section analyses, presents and interprets and discusses the findings for the second objective of the study: the main exploration activities taking place in Butiaba Sub County, Buliisa District.

	Description	Response				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	The government conducts surveying of the land					
2	There is site clearance including the surrounding areas of communities					
3	The government conducts mapping of the area					
4	Government conducts land acquisition, construction and drilling for oil and gas					

SECTION C: THE IMPACT OF OIL AND GAS EXPLORATION ACTIVITIES ON PEOPLE'S LIVELIHOODS IN BUTIABA SUB COUNTY.

This section analyses, presents and interprets and discusses the findings for the second objective of the study: impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County.

a) People's livelihoods in Butiaba sub county

	Description	Response				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	There is crop farming conducted by the communities					
2	There several livestock farming in the communities					
3	Community members tend to conduct finishing while using ponds and lake albert					
4	There is sand mining and stone quarrying					
5	Members of the community conducts trade and commerce					

b) The impact of exploration activities on people's livelihoods

	Description	**Response**				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	People access to safe water for domestic use in the community					
2	There is access to health care extended to people in the community					
3	There is reduction of food crop farming					
4	There is low grazing land					
5	The place tends to decline in flora and fauna resources					
6	Within the communities, there is displacement of people					

SECTION D: THE MITIGATION MEASURES BY OIL & GAS COMPANIES, GOVERNMENT, AND NON-GOVERNMENTAL ORGANIZATIONS AGAINST THE ADVERSE EFFECTS OF OIL AND GAS EXPLORATION ACTIVITIES ON PEOPLE'S LIVELIHOODS IN HOIMA

	Description	**Response**				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	There are measures taken by oil and gas companies to mitigate the negative effects on local communities in Hoima					
2	The community is involved in consultations with oil and gas companies regarding mitigation efforts					
3	There are government policies or initiatives aimed at reducing the negative effects of oil and gas exploration in Hoima					

4	The government provided compensation, relocation assistance, health programs to affected local communities.					
5	The government has been transparent in addressing the concerns of local communities regarding oil and gas exploration activities					
6	There is Environmental education and awareness programs					

APPENDIX III:

INTERVIEW GUIDE FOR KEY RESPONDENTS

1. Are there specific effects that you know of in the areas of crop farming, animal rearing, fishing, trade, forest resource harnessing?
2. Have the oil and gas exploration activities negatively affected the livelihood of the people in Butiaba Sub County? If yes, explain what effects are.
3. Have there been changes in the people's livelihood in Butiaba Sub County after the oil and gas exploration activities? If yes, what are the changes that have occurred?
4. What were the major sources of livelihood of the people in Butiaba Sub- County, Buliisa District **before** the oil and gas exploration activities?
5. What were the major sources of livelihood of the people in Butiaba Sub- County, Buliisa District **after** the oil and gas exploration activities?