

**ASSESSING THE IMPACT OF EXPLORATION ON PEOPLE'S LIVELIHOODS: A CASE STUDY
OF BUTIABA SUB COUNTY**

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**UGANDA CHRISTIAN
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DECLARATION

I, Asimwe Shanita declare to the best of my knowledge that this research report is truly my original and has not been submitted in 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 ... 

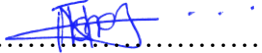
Date: 24th April, 2024

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SUPERVISOR'S APPROVAL

This is to certify that this report is compiled under my supervision. It is now ready for submission to the University Board of Examiners for review.

Date: 24th April, 2024

Signature 

Mrs. Nantongo Monicah

DEDICATION

This piece of work is dedicated to my beloved mum Ms. Kugonza Beatrice Abwooli for the love holistic moral, financial and social support throughout my education and life in general and also my siblings Kabahuma Sandrah Abwooli, Nganzi Eric Apuuli and Agasa Ahurra Ketra Atwooki for their endless prayers for me.

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

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LIST OF ACRONYMS

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 impact of exploration on people's livelihoods in Butiaba Sub County. 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 find out the main exploration activities taking place and to establish the impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County, Uganda. 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 study adopted an economic theory by Adam Smith (1776) the theory states that wealth is created via labor, and self-interest spurs people to use their resources to earn money. This was relevant since it is an influential figure of the Industrial Revolution in Uganda. Oil and gas exploration activities are an indication to the revolution of the sector. 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

INTRODUCTION

1.0 Introduction

The study examined the impact of exploration activities on people's livelihoods in the Butiaba Sub County. With increasing oil and gas prices worldwide, regions endowed with this finite and nonrenewable resource continue to reap the benefits of the profitable businesses associated with the resource development.

1.1 Background of the study

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 Lukasiewicz 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, substantial oil and gas resources are believed to exist hence providing the potential to boom 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 post-independence 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).

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; Ayuba, 2012; Thompson, 2011; Ifunoya, 2010; Aigbedion and Iyayi, 2007). 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 warrant 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

The discovery of oil in Uganda presents a unique opportunity to transform the economy through infrastructure development and poverty alleviation. Oil is expected to contribute an average net present value of US\$ 2 billion (10 per cent of GDP) for at least 26 years. However, different exploration activities and techniques are employed in different localities are expressed in activities at 2.8 percent in 2019/20 compared to 33.4 percent in the previous year (Uganda Bureau of Statistics, 2020) and construction activities which registered a growth of 5.4 percent which can account for differences in the emerging effects too. The activities have greatly affected farming since communities take it as its commercial sector, as of 2020, approximately 7.4 million households (Ugandan Bureau of Statistics, 2020) operate agricultural land and rear livestock in Butiaba. The Albertine Rift, consisting of more than half of Africa's birds, 40% of Africa's mammals, and about 20% of amphibians and plants, is a biodiversity hotspot. With exploration it comes with noise pollution, soil erosion, wildlife habitat fragmentation and disturbance as well increased human access into the Reserve were the major environmental problems. There was a decrease in Tropical High Forest well stocked, woodland and grassland cover and an increase in Bush land, Subsistence and Tropical High Forest Low Stocked before upstream oil and gas activities, hence affecting people's livelihoods both directly and indirectly. There is limited information on exploration activities taking place in Butiaba Sub County, their effects on people's livelihoods and whether or not various stakeholders provide for mitigation of the adverse effects.

1.3 Purpose of the study

To examine the impact of exploration on people's livelihoods in Butiaba, Uganda

1.3.1 Research Objectives

- i. To find out the main exploration activities taking place in Butiaba sub county, Uganda
- ii. To establish the impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County, Uganda.

1.4 Research questions

- i. What are the main exploration activities taking place in Butiaba Sub County, Buliisa District?
- ii. What is the impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County?

1.5 Justification of the study

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 as 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.

The 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.

1.6 Significance of the Study

Insights into the common exploration activities of oil and gas companies in Butiaba Sub County and the measures taken to reduce the negative impacts of these activities will enable ministries to improve the legal and policy framework for the oil and gas sector. The study will be able to determine compliance or non-compliance. This will enable the review and introduction of new policies and regulations to reduce the sector's negative impact on people's lives.

The results of this study will provide exploration companies operating in the Butiaba sub-county with insight into the benefits that the local community expects from their companies.

This will encourage companies in the future to develop regions with the necessary resources to escape the oil curse, just as some parts of Africa, the archenemy of the oil curse, are suffering from its effects. The study will be incorporated into the company's social responsibility policy. The results of the current study will contribute to the existing body of knowledge on the livelihood impacts of the oil and gas sector in Uganda, where this field is relatively new. Therefore, this result can serve as a reference for future researchers in oil-rich regions.

1.7 Scope of the study

1.7.1 Geographical Scope

The study was conducted from Butiaba Sub County, Buliisa District, formerly a county under Masindi District delineated in 2006. The Sub County has physical presence of oil and gas exploration infrastructure and with limited information of how the activities have affected people's livelihoods.

1.7.2 Content Scope

The study assessed impact of exploration on people's livelihoods in Butiaba. This was guided by two variables independent variable (exploration) and the dependent variable (people's

livelihoods). It specifically focused on the oil and gas exploration activities in the area, the livelihoods before and after commissioning of oil and gas exploration.

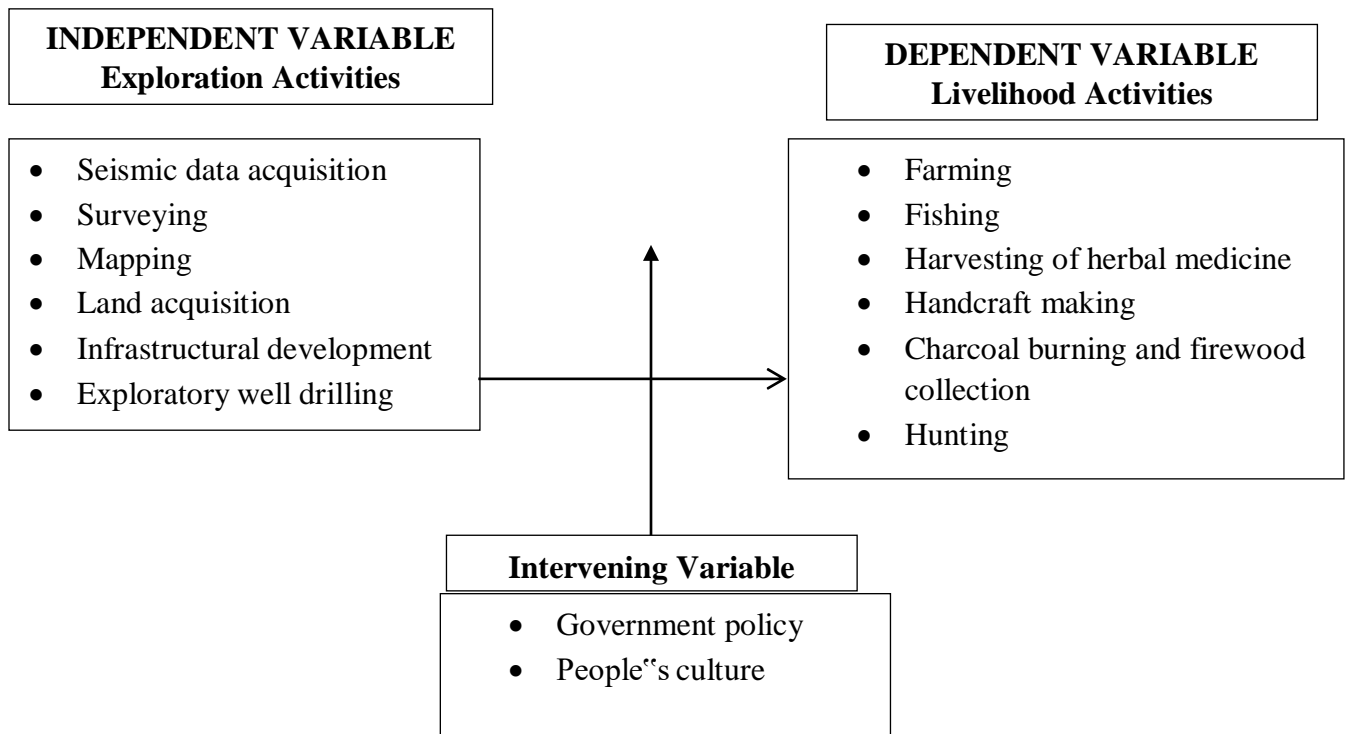
1.7.4 Theory of the study

The study adopted an economic theory by Adam Smith (1776) the theory states that wealth is created via labor, and self-interest spurs people to use their resources to earn money. This was relevant since it is an influential figure of the Industrial Revolution in Uganda. Oil and gas exploration activities are an indication to the revolution of the sector.

1.7.3 Time Scope

The study covers a period between 2006 and 2024; this period was selected because it was within the time-frame within which Butiaba Sub County experienced increased oil and gas exploration activities. However, field data collection was conducted within a period of 6 months gathering information and arrangement within the duration that is September 2023- April, 2024.

1.8 Conceptual Framework



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 the community of Butiaba Sub County (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 and was searched from published documents, journals, conference papers and the internet.

2.1 Theoretical Review

The adopted the Economic Theory by Adam 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 self-interest 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 Butiaba 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 Butiaba

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 text 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 discharging and restoration.

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 (Omoredede, 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.

Vocation alludes to a set of exercises that include securing water, nourishment, medication, shield; and the capacity to procure the over necessities by people, a gather or community utilizing blessings for assembly prerequisites of people's family units on a feasible premise with respect (Batool, 2016). The exercises are ordinarily carried out over and over to maximize an angler's vocation that depends on the angling and accessibility of angle in waters and a agriculturist accessible on arrive.

Employments are necessarily to the texture of social orders around the world, reflecting the differing ways in which individuals secure their fundamental needs and seek after their desire. Analysts such as Amartya Sen have emphasized the multidimensionality of employments, enveloping not as it were financial viewpoints but moreover social, social, and natural measurements. This point of view underscores the association of vocations with broader socio-economic structures and forms. Within the field of improvement considers, job approaches have picked up unmistakable quality, with analysts like Robert Chambers supporting for participatory strategies that center on nearby information and strengthening. Besides, the concept of economical vocations, popularized by the United Nations and organizations just like the Worldwide Labor Organization, underscores the significance of guaranteeing that job techniques are naturally sound, financially reasonable, and socially evenhanded. (Chambers, 2015). The address on jobs helps the complex transaction between people, communities, and bigger socio-political settings in forming people's well-being and openings for progression.

In (Cordaid, 2016) notes that arrive and water are among the foremost imperative assets for communities, which do not as it were give a put to live and source of job, but for numerous communities, they are too specifically related to their culture and personality. It encourage shows that oil and gas or mining ventures will continuously require get to to arrive and water for case, for boring locales, mine, camps for lodging laborers and hardware as well as get to streets.

Agreeing to the 20 a long time of NAPE's natural promotion in Uganda (2016) document, arrive constitutes the most resource from which individuals or communities are able to derive their job which arrive speaks to an awfully important financial resource source of personality and culture. The archive advance states that in Uganda, numerous ventures have come about in dispossession, duplicity, infringement of human rights, and annihilation of vocations. It proceeds to note that arrive in rustic ranges comes beneath different weight since of large-scale commercial cultivating, and mineral asset extraction.

Significant prove from oil creating countries such as Nigeria, Gabon, Angola, Sudan, Chad and others in Africa clearly demonstrate that oil could be a asset of both extraordinary opportunity and danger (Ericson, 2014). It is an opportunity since it brings gigantic income for the country's economic development demonstrated by social administrations such as schools, healing centers

and streets. On the other hand, it may be a issue when the income is abused subsequently causing clashes. Uganda is one of the African nations that have been plagued with degenerate officers; however concurring to Ericson shows that nations whose officers are degenerate cannot get anticipated benefits from oil and gas investigation. This is often due to the fact that multinational companies which might have driven to advancement gotten to be wiped out to serve the interest of the business entrepreneurs so grassroots individuals stay destitute.

Ofuoku et al (Ofuoku, 2014) examined the social affect of oil generation on smallholder agriculturists in oil-producing communities of the Central zone of Delta State, Nigeria. In any case, they were or maybe curious about natural issues experienced within the communities. Utilizing information collected from a test of 120 respondents with the utilize of surveys, they identified soil disintegration, commotion contamination, bush burning, land degradation/pollution, water contamination, discuss contamination, enormous deforestation and corrosive rain as the major natural issues experienced within the ponder range.

Thinks about conducted from West African nations by (Olaniyi, 2011) appear that one of the social-economic impacts of oil investigation to the adjacent communities are on cultural practices, particularly ways in which social hones are rendered risky within the face of changes coming about from the revelation of oil. For case, Jike (2010) found that most men in Mali and Ghana did not wish the intercut between nonnatives and the African ladies. Be that as it may, the African ladies from both nations found sexual intercut with the company laborers lucrative because African men may not give such sum of cash.

Other than, it was found out that oil and gas exploration lead to the pulverization of structures that once given jobs for ladies in oil- creating communities, which puts an undue burden on ladies in these communities constraining them to turn to commercial sex.

2.3 Gap of the literature

In (Plumptre, 2016) report “Documentation of existing and potential oil/geothermal ventures, mapping their likely unfavorable negative impacts on the biodiversity preservation and community jobs within the More prominent Virunga Landscape” centers on Species likely to be influenced by oil/gas and geothermal exercises which is does not show the potential impact on

well evolved creatures and their living spaces. The same consider fair archives and maps the existing and potential oil ventures but does not measure the degree of the impacts.

In (Plumptre A. J., 2015) he highlights issues and records the potential impacts of investigation on species, destinations and territories as per perception and where conceivable utilize quantitative representation to highlight the size of the problem which may be a bit common and ignores creature territories. Within the same report he highlights potential and resultant impacts of endorsing the advancement of the golf course in Chobe division which isn't sufficient to show the impacts of oil and gas investigation on creatures and their living spaces. The consider is wide covering the full Albertine Fracture hence giving less center to Murchison Falls National Stop.

Andren (1994) surveyed the impacts of environment fracture centering on fowls and well evolved creatures in scenes with diverse extents of reasonable environment. The consider looked at the scale of territory fracture and populace reactions to territory fracture whereas distinguishing the components affecting the plenitude and distribution of species in scenes with diverse degrees of living space fracture but the consider does not indicate the causes of well evolved creature living space fracture in connection to the oil industry.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter contained the research design, sampling design and type, different methods that the researcher collected data from various sources and also to interpret the data so as to come up with a conclusion on this topic of impact of exploration on people's livelihoods in Butiaba Sub County.

3.1 The Research Design

The researcher adopted a *descriptive research design*. This is done to identify and obtain information on the characteristics of a particular issue (Kothari, 2008). A descriptive design is applied on grounds that the researcher wants to describe and understand the current nature and extent of impact of exploration on people's livelihoods under study. The plan was regarded suitable since the most intrigued of the analyst investigated the reasonable relationship and portraying how the components bolster the two factors that are beneath examination. The researcher utilized expressive since it permits the analyst to find designs in respondents considering and portray issues from their possess point of see.

The quantitative approach was advocated on grounds that a few impacts of oil and gas investigation are quantifiable and displayed measurably whereas subjective information is since the researcher collected respondents' sees, conclusions and comments whose elucidation and introduction suits bests utilizing stories. Subjective information included examination of information in shape of explanations as gotten from key witnesses whereas quantitative information included the use of measurable technics to gather, analyze and communicate think about discoveries in shape of frequencies and rates. This permitted for triangulation of comes about, which was upgraded the legitimacy, and unwavering quality of the study.

3.3 Study Population

The study population was referred to the large groups of people or the study population for this research was considered 38,300.

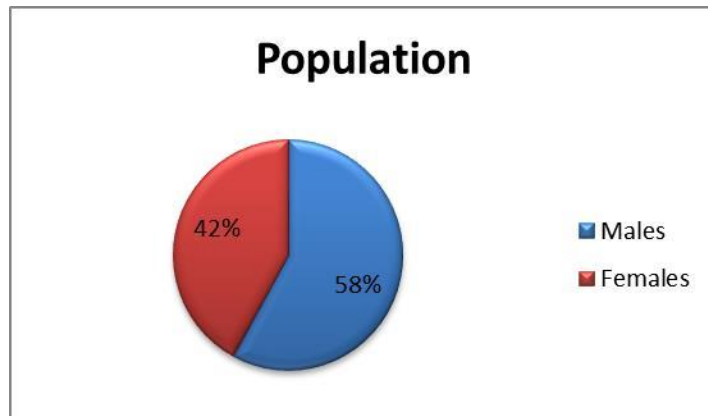


Figure 1: *Showing the general population of Butiaba Sub County*

3.3.1 Target Population

This study comprised of oil and gas company workers, District officials and local leaders, as well household heads in Butiaba Sub County. All house households in Butiaba Sub County were form the main target population since exploration activities in the area affect their livelihoods either positively and/ or negatively. The other target respondents involved in making decisions on development activities in the area including oil and gas exploration. Generally, 25 household heads, 5 oil and gas company workers, and 5 local leaders.

3.4 Sample Size

The sample involved 33 respondents and determined by Slovene's formula. The sample was selected by the researcher to be the representative of the entire population. This particular sample size was selected because it was easier to manage and it was enough to generate findings as well as to generalize the findings to a bigger population. The table for sample determination was adopted because it presents a sample size in line with a certain degree of reliability and population size based on confidence level of 95% and 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, 2023

3.6 Sampling Techniques

Sampling Simple random sampling was used to select household heads in each of the villages in the four parishes of Butiaba Sub County. The category of respondents was targeted because they are the inhabitants of Butiaba Sub County at the grass root level who have faced the effects of oil and gas. The sampling technique was preferred because of being cost effective in terms of money and time saving in terms of collecting data, high level of flexibility, accurate and free of bias.

Purposive sampling was used to select the 10 oil and gas sector workers, 4 District officials and 5 local leaders using purposive sampling. The targeted oil and gas sector workers included the human resources officer, field supervisors and exploration sites engineers. Whereas the District officials targeted included, the district environmental officer, District Agriculture officer, District fisheries officer, District planner and the district natural resources officer. These were considered

knowledgeable in oil and gas exploration activities and how the activities have affected 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, Buliisa district officials in natural resources management and planning offices, local leaders (local council/opinion leaders). To these, questionnaires were presented and interviews were conducted.

In addition, direct observation and photography of the exploration activities, livelihood activities and infrastructural developments in the study area was undertaken. Secondary data was collected from review of existing documents in line with the objectives of the study. Key documents were reviewed including oil and gas sector policies and sector performance reports available in online repositories, Hoima public library, Buliisa District Local Government archives and newspapers. It was also involve reviewing recent Journals publications and oil sector bulletins.

3.8 Data collection instruments

3.8.1 Questionnaire

The questionnaire was used to collect both quantitative and qualitative data from household heads on the oil and gas exploration activities taking place in their areas, the effect of oil and gas exploration activities on their livelihoods and the mitigations measures being put in place in Butiaba Sub County. The questionnaire was non-structured with mainly pen-ended questions requiring respondents to give responses by writing short notes (*Appendix I*).

The open-ended things within the questionnaires empowered respondents to precise their conclusions unreservedly and in detail almost the subject beneath think about without biasing them with pre-determined answers by the analyst. Be that as it may, a few close-ended survey things were too utilized since of the ease with which they can be coded hence encouraging simple measurable investigations. The survey duplicates were hand-delivered by the analyst and the inquire about associates who held up assist to be bluntly filled by the respondents and returned them. This strategy is favored for this category of respondents since it includes keeping

a record of data collected for assist reference. Other than, it may be a reasonable strategy for collecting expansive information over a expansive region and from a huge test inside the most brief conceivable time.

3.8.2 Interview guide

During the study, interviews were conducted with district officials, oil and gas sector employees and local leaders using interview guides (*Appendix II*). Interview were used to collect data on oil and gas exploration activities, their effects on people"s livelihoods and the mitigation measures put in place to overcome the adverse effects.

Interview method were used in this study because it provides an opportunity to interact with the respondents who may not be in position to fill the questionnaire because of lack of time and yet they have very critical information in relation subject of investigation. Interviews helped to create a link with data collected using questionnaire by clarifying the details that would not be offered using questionnaires.

3.9 Validity of the Instruments

3.9.1 Validity

This indicates the degree to which results obtained from the analysis of the data actually represent the phenomena under study (Mugenda & Mugenda, 2003). Data validity was tested by using the Content Valid Index (CVI). To achieve this, a copy of the questionnaire was distributed to the supervisors and field experts to rate the relevant items/questions in relation to the research objectives, the relevant questions will be then divided by the total number of items. Validity was tested as follows:

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

The acceptable rate that researcher preferred is 0.5 that resulted from the division of the corrected questions out of the total questions.

3.9.2 Reliability

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

$$\text{Reliability of the entire test} = \frac{(\text{Reliability of 0.5 test}) (r)}{1 + (\text{Reliability of 0.5 test}) (r)}$$

Where r, is Coefficient of correlation

The mean of the reliability is established at 0.79 therefore the internal consistency (Reliability) of the instrument is confirmed. A coefficient of 0.7 and above would mean that the research instruments are reliable hence a display consistence in the research finding. The reliability test produces a coefficient of correlation of 0.79, this meant 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 was coded and analyses using statistical techniques. With the help of a computer program, Statistical Packages for Social Scientists (SPSS) version 23.0. Data coding involved transformation of responses into numeric data that is, 1, 2 ...etc. Relative percentage enabled comparison between and among the study variables.

To characterize the dominant oil and gas exploration activities taking place in Butiaba Sub County in terms of procedures undertaken, intensity, and spatial coverage was used in SPSS. MCA is applicable where the responses obtained from the study variables are measured on a

nominal scale or as categorical, like “Yes” and “No” (Johnson & Wichern, 2006) just like it was in the current study. The results were shown as percentage of variance in a tubular form and visualized on a „scree“ plot.

3.10.2 Qualitative data analysis

Information collected from the field in form of verbal response from the crucial informer were mainly qualitative in nature thus analyzed accordingly. The responses were transcribed, organized and categorized under themes objectives of the study. This identified common responses in line with the objectives of study. Qualitative data analysis involved the use of descriptions as either direct quotations or narratives of the responses from the interviews

The Spearman rank correlation co-efficient was 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 range of 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

The study was conducted following ethical procedures governing social research studies. An introductory letter was obtained from Uganda Christian University, introducing the researcher to the respondents as seeking assistance in conducting the survey. Consent was sought from respondents before questionnaire is handed to them or before interviews is conducted. Attention was also given to the rules governing photography in the area of study for the observable elements of the study.

The questionnaire contained an introductory statement requesting for the respondent's cooperation in providing the required information for the study. The respondents were further assured of the confidentiality of the information provided and that the study findings are meant for academics' research purposes only. Plagiarism was avoided by acknowledging secondary information sources through referencing.

3.12 Limitation of the study

Our research faced limitations due to restricted access to primary data sources, hindering the depth of our analysis. However, we overcame this challenge by leveraging secondary data sources and collaborating with local institutions to gather supplementary information. Additionally, language barriers posed difficulties in communicating with certain stakeholders, impeding data collection efforts. To address this, we solicited the help of translators and employed culturally sensitive approaches to ensure effective communication. These proactive measures enabled us to navigate the limitations and enhance the forcefulness of our research findings.

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 Butiaba, Uganda. The subsections here include: Demographic information, *to find out the main exploration activities taking place in Butiaba sub county, Uganda, and to establish the impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County, Uganda.*

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 for the organization.

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

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
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, 2024*

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%).

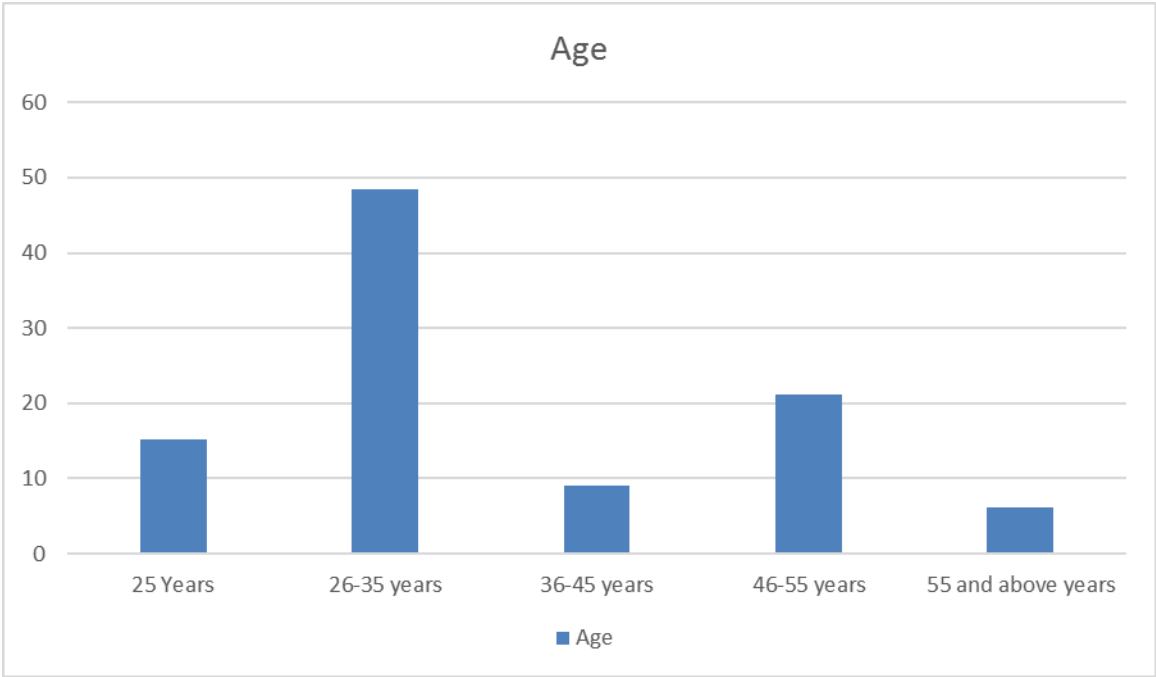


Figure 2: The respondent's age

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, 2024*

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.

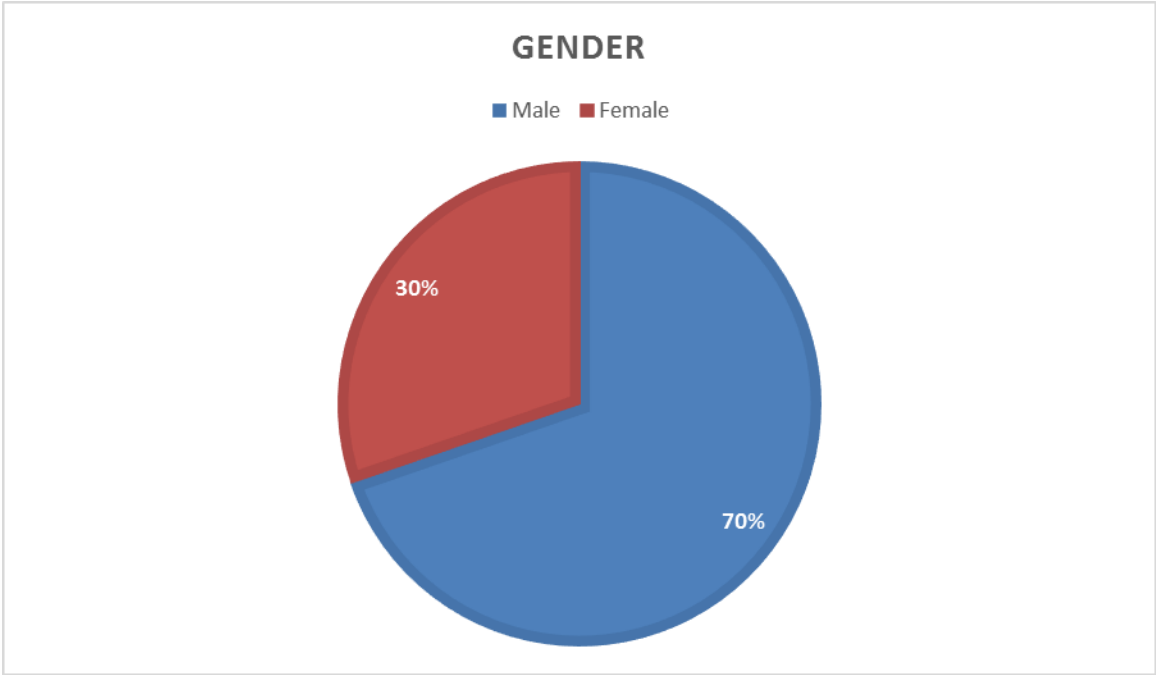


Figure 3: The respondent’s gender

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

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Diploma	9	27.3
Degree	11	33.3
Post graduate	7	21.2
Masters	6	18.2
Total	33	100.0

Source: *Primary Data, 2024*

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%).

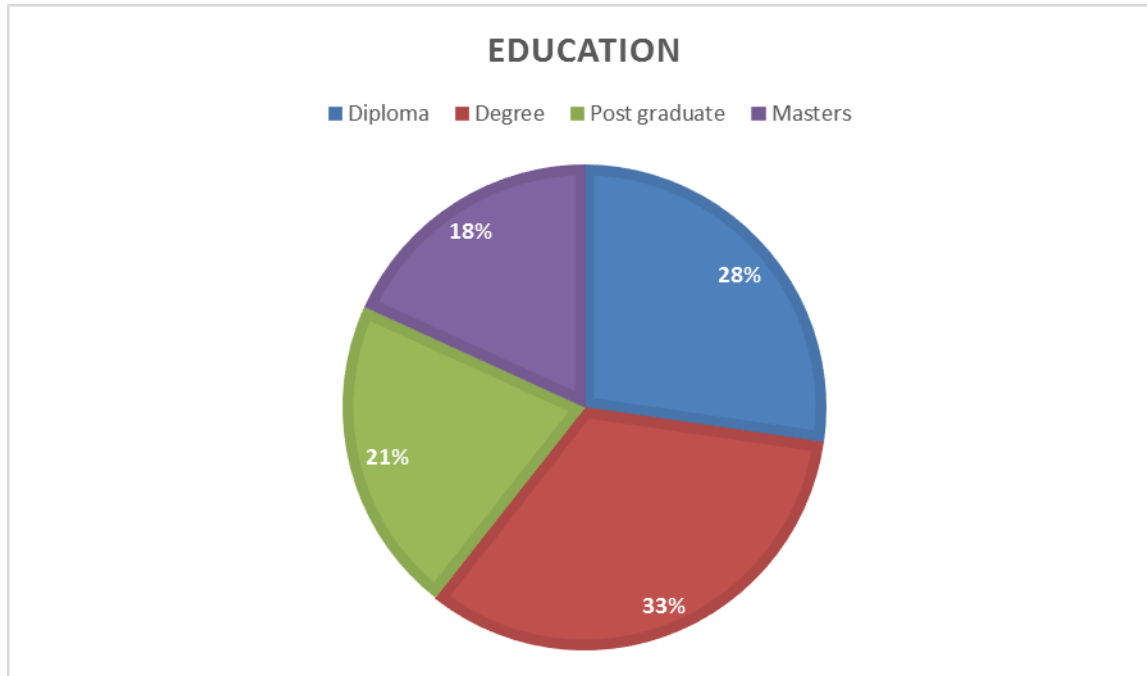


Figure 4: *The respondents education*

4.2 The main exploration activities taking place in Butiaba sub county, Uganda.

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, 2024

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

<i>Category</i>	<i>Mean</i>	<i>Std. Deviation</i>
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, 2024

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

<i>Category</i>	<i>Mean</i>	<i>Std. Deviation</i>
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, 2024*

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.

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, and to establish the impact of oil and gas exploration activities on people's livelihoods in Butiaba Sub County, Uganda.*

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 (Omoredede, 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 unserved 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.

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 socio-economic 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.

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APPENDICES:

APPENDIX I

INTRODUCTORY LETTER FOR THE RESPONDENTS

Dear Sir/ Madam,

Greetings!

I am 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,

“Assessing the impact of exploration on people’s livelihoods: a case study of Butiaba sub county”

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					

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					

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?

Thank you for your cooperation