

**OIL AND GAS SECTOR IN UGANDA: ANALYSIS OF THE LEGAL AND POLICY ASPECTS ON
COMPLIANCE WITH THE CONCEPT OF RISK MANAGEMENT**

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DECLARATION

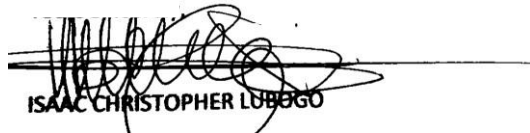
I, **Wakwale David Bryan Kusolo**, hereby declare that this dissertation is my work and it has not been submitted before to any other institution of higher learning for fulfillment of any academic award.

A handwritten signature in blue ink, appearing to read 'D. Kusolo', with a large, stylized initial 'D'.

Date: 4/22/2024

APPROVAL

This is to certify that, this proposal entitled “The oil and gas sector in Uganda: analysis of the legal and policy aspects on compliance with the concept of risk management.” has been done under my supervision and now it is ready for submission.



ISAAC CHRISTOPHER LUBBO

Date: 4/22/2024

DEDICATION

This work is humbly dedicated to my beloved family - my wife and children - for the unwavering support you have provided me throughout my career and educational journey.

ACKNOWLEDGEMENT

I have been blessed with so many wonderful people who have supported me through this journey. I first of all thank God for having kept me in proper health and provided me with wisdom and knowledge to enable me under take this Masters' degree and be able to complete it without any complications. I wake up in awe of all the people and opportunities he has put into my life that make it so fulfilling.

In the most serene spirit, I thank the Almighty God for giving me the strength, courage, wisdom and good health throughout this research. I thank my supervisor and lecturer **Mr. Isaac Christopher Lubogo** for the tireless effort and time he readily availed in supervising my research. I must confess this research would not have been a success without his treasured advice and insights.

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LIST OF ACRONYMS

EHS - Environmental Health and Safety

EIA - Environmental Impact Assessment

PEPD - Petroleum Exploration and Production

Department NEA - National Environmental Authority

NEMA - National Environmental Management Authority

CSO - Civil Society Organization

NOGP - National Oil and Gas Policy

ACODE - Advocates Coalition for Development and Environment

CISCO - Civil Society Coalition on Oil

ACME - Africa Centre for Media Excellence

BEP - Best Environmental Practices

PIL - Public Interest Litigation

MODU - Mobile Offshore Drilling

Units NGO - Non-Governmental

Organization RM- Risk Management

ABSTRACT

This study delved into the legal and policy aspects of risk management in Uganda's oil and gas sector. Through a combination of doctrinal legal research and interviews, the study investigated the unique legal frameworks and risk mitigation techniques applicable to this sector. It reviewed Ugandan laws and policies concerning risk management, such as the right to a clean and healthy environment as enshrined in the Constitution, labor laws advocating for safety and health, and international regulations binding Uganda to enforce safe working conditions. Despite the existence of these laws and regulations, the research found rampant non-compliance with risk management standards in Uganda's oil and gas industry. This non-compliance leads to occupational health and safety risks, including workers lacking protective gear, resulting in occupational diseases, injuries, and other hazards. Reasons for this non-compliance include poor enforcement of health and safety standards and institutional and legal frameworks with grey areas contributing to non-compliance. The paper concluded that there is a significant lack of risk management compliance in Uganda's oil and gas industry. To address this, recommendations were proposed, including strengthening enforcement of the legal and institutional framework, providing liability for non-compliance, offering environmental health and safety training, identifying and mitigating potential risks, and empowering civil society organizations to monitor compliance with risk management standards.

CHAPTER ONE

1.1 INTRODUCTION

This research focused on the legal and policy aspects in compliance with risk management in oil and gas sector. Its objective was to examine the legal framework that are unique to the oil and gas sector and the risk mitigation techniques which are applicable to the oil and gas sector. It will begin by providing an overview of the process of oil and gas exploration and production in relation to the Ugandan situation. The research will proceed by reviewing the roles of oil companies and institutions in compliance with risk management status of oil and gas exploration in Uganda. It will identify the potential risks that are unique to the oil and gas sector and the risk mitigation techniques which are applicable to the oil and gas sector. Risk management protection remains the number one priority for the oil and gas industry. These companies are used to dealing with stringent EHS regulations across the entire span of their activity, from exploration and production, to pipeline management, down to refinery and marketing. These regulations are not only stringent but also constantly revised to take into consideration technological development and the more extreme conditions in which oil and gas companies operate.

Risk Management is vital to the economic consequences of the huge investment the international oil and gas industry. Today, most of the oil producing countries in the world are associated with a number of uncertainties and problems that are peculiar to that area such as middle east (Iraq- terrorism); far East (East Timor-boundary disputes);¹ Latin America (Venezuela nationalization); US (Gulf of Mexico environmental, hurricanes); and the UK (North sea residual liability from mature fields and harsh operating conditions).²This scenario necessitates adoption of a formal type of risk management strategy by the oil and gas companies operating in these areas, with legal responses to the above. What the strategy will look like will largely be influenced by the type of risks they face during their operations.³Examples of such risks are Environmental risks on Lake

¹N.T Earnest, Commissioner Petroleum Exploration and Production Department presentation on: Developments in Uganda's Oil and Gas Sector at Oil and Gas Seminar Organized by ICPAU Friday 12th April 2013

²K & Spalding, An Introduction to Upstream Government Petroleum Contract; Their Evolution and current use January 2005 pg 46

³Donor Engagement in Uganda's Oil Gas Sector; An Agenda Fraction a briefing by global witness October 2010

Albert region containing 39% of Africa's mammals, and 51% of its birds therefore, loss of biodiversity could lead to loss of tourism disoriented elephants are migrating through villages and damage crops. Water pollution or oil spill could become trapped in Lake Albert since there are no clear emergency response plans for oil spill or other disaster all this could be said to be "Environmental Trap". There could also be "The Community Trap which include; Corruption existing in distribution of oil revenue and in land sales. At the national level the "positive" expectations of the discovery of oil in Uganda include those of increased national prosperity as the Government invests in roads, power plants, education and health services and other socio- economic infrastructure. The general public also expects to see the "end of donor dependence and conditionality" and the regaining of economic sovereignty. There is hope that oil exploitation will improve their quality of life. However, there is also considerable apprehension. It is important to note that many resource-rich African countries seem to have been affected negatively by oil wealth, with increasing corruption in public affairs, political instability, environmental degradation, and increasing inequality.⁴

1.2 BACKGROUND OF THE STUDY

Uganda is a landlocked country located in Africa, in the East African Region. It has a population of about 34 million people growing at an annual rate of about 3.4% per annum. It is bordered by five countries: Kenya to the East, Tanzania in the South, Rwanda and Burundi in the South West, Democratic Republic of Congo to the West and Southern Sudan to the North. Over a long period of time, Uganda has relied on imported petroleum products, constituting about 15% of her import bill because of its high petroleum consumption estimated at 935659 m³ per annum. This consumption has an annual growth rate estimated at 5%.⁵

Uganda's journey to discovering and producing its own petroleum deposits has been long and intermittent. Exploration activities date back to the 1920s when Colonial Government Geologist

W.J. Wayland documented numerous hydrocarbon seeps in the Albertine Graben. However, the

⁴Managing oil revenues in Uganda a policy note March 2009 OREA knowledge series: No.12 pg 4 ⁵Ministry of Energy and Mineral Development (2010) Strengthening the Management of the Oil and Gas Sector in Uganda. A Development Programme in cooperation with Norway, at 1

outbreak of World War II and subsequent political instabilities halted progress until the 1980s. In 1938, the first well was drilled by BP Company and the Anglo-European Investment Company of South Africa at Butiaba-Waki, confirming the presence of oil. Despite this, consistent exploration and production efforts were impeded until the 1980s when activities resumed, eventually leading to confirmation of commercially viable reserves. The Petroleum (Exploration and Production) Act of 1985 was enacted, establishing the Petroleum Unit within the Geological Survey and Mines Department. This evolved into the Petroleum Exploration and Production Department (PEPD) in 1991, signaling Uganda's formal commitment to developing its petroleum resources. With commercial production expected to commence by 2020, Uganda aims to alleviate its fuel crisis and reduce its heavy import bill through domestic oil production. However, the question remains whether this will effectively address the country's energy challenges. The Geological Survey and Mines Department intensified aeromagnetic surveys and a lot of seismic and aeromagnetic data was documented.⁶

Uganda's oil and gas sector has significant potential, with confirmed reserves of approximately 3.5 billion barrels. Exploration and production activities have been ongoing since the early 2000s, positioning Uganda as a major onshore oil producer in Africa. However, the industry faces various risks, including price volatility, operational mishaps, and environmental concerns. Risk management practices in the oil and gas sector have evolved over time, beginning with formalized studies post-World War II. Techniques have progressed from costly insurance packages to derivatives and financial management strategies. International regulations and integrated risk management became prominent in the 1990s, with a focus on creating risk management models and formulas. The industry's inherent risks, such as flash fire hazards, necessitate effective risk management. Understanding the causes of fire accidents and implementing prevention measures are crucial for worker safety. Workers face various physical hazards, making risk management vital for safeguarding their health.

⁶ Ibid

Despite global efforts to manage operational risks, incidents like the Macondo explosion underscore the need for improved fire safety measures. Risk management practices include healthy lifestyle choices, sound financial decisions, and physical security measures.

In Uganda, the enactment of regulations and licensing of companies like Heritage Oil and Gas Ltd and Hardman Petroleum Resources Ltd indicate efforts to promote petroleum potential. However, effective risk management is crucial for preventing and controlling fire accidents, safeguarding workers, and protecting the environment. Risk management cuts across in all aspects of life, every form of business and from the very simple business setups to the complex ones. However, the level of risk varies across business setups with the capital-intensive businesses facing a higher level of risk while the less capital-intensive ones tend to experience lower risk levels.⁷

The oil and gas industry, including multinational companies like CNOOC, Tullow Oil, and Total operating in Uganda's Albertine graben, faces challenges due to remote and harsh environments and the need for unconventional extraction processes. With increasing global energy demand, there's pressure to meet demands while minimizing negative environmental and societal impacts. While international and national regulations exist, site-specific risks require tailored approaches. Uganda urgently needs a comprehensive risk management policy for oil and gas operators to minimize harmful environmental impacts. Embedding environmental concerns into daily operations can lead to socially beneficial outcomes and avoid potential disasters and stricter legislation. Unsustainable practices have already harmed indigenous communities, causing environmental degradation, loss of wildlife, and pollution of water sources. Risks in oil and gas exploration include internal factors (exploration, production, contractual, financial) and external factors (environmental, social, political). These risks are diverse and challenging to formalize, requiring adaptive strategies based on fluctuating world oil prices and external pressures. Given the complexity of oil and gas companies and the need for rapid decision-making, effective risk management is crucial. This involves a proactive approach to address environmental, social, and operational risks, ensuring sustainable and responsible oil and gas operations in Uganda.

⁷Ezuma Okoronkwo. Risk Management Techniques in Oil and Gas. A focus on the risk of Oil Price Volatility. Available at <https://www.academia.edu>

1.3 STATEMENT OF THE PROBLEM

Uganda has developed policy and legal instruments regulating the oil and gas activities and the recent discovery of oil and gas in commercial quantities in Uganda has resulted in high anticipation among Ugandans of the prospects of massive makeover of the economy and a remarkable rise in the living standards particularly the people of the Western region of Uganda. According to the *Petroleum Production and Development Act, 2013*, An operator, shall take such precautions as are necessary to ensure the safety of any person employed or otherwise present at or in the vicinity of any installation in accordance with the Occupational Health and Safety Act, 2006 and any other relevant law; protect the environment and natural resources, including taking precautions to prevent pollution; and ensure that the persons referred to are duly informed of those precautions.⁸

Oil industry is a particularly risky business as it operates within a challenging international and national regulatory environment, with corporate governance and risk management becoming key priorities.⁹ The most common risks to the industry, which raise important legal implications, include market risks (changes to the oil price, interest rates and exchange rates); credit risks (default); operational risks (equipment failure); geological risks (dry wells); Environment risks (pollution) and political risks (change of government, regulatory regime and contractual arrangements). Additionally, legal risk includes the kind of conduct, at individual or corporate level, that leads to a devaluation of the company that could include loss of investor confidence; Loss of productivity and a negative public reputation. While the above problems may be common to this oil - producing areas, the companies operating in each of these countries may have to deal with some or all of these on a daily basis.

The oil and gas sector is faced with uncertainties at different levels, starting from the geological survey down to the lifting and production level. It is also a capital-intensive business to venture into. Given the aforementioned reasons, coupled with the complex nature of the oil and gas business, it is arguably the most risk plagued industry and therefore requires a significant number of risk mitigation techniques to protect the investors within this sector. The study will therefore address the risks to oil companies

which could therefore depend on the areas where they operate.

⁸ Section 141 Petroleum (Exploration, Development and Production) Act 2013

⁹K & Spalding, An Introduction to Upstream Government Petroleum Contracts: Their Evolution & current Use ,January 2005 pg 45

It will focus on the legal and policy aspects in compliance with the concept of risk management in oil and gas sector in Uganda. Therefore, companies operating in these areas should do their homework and their business adopts suitable mechanisms to mitigate and where possible prevent the legal risks before they cause serious and even at times devastating economic damage.

1.4 OBJECTIVES OF THE RESEARCH

1.4.1 Purpose of the study

The study aimed at establishing the peculiar international, regional and national legal instruments governing risk management standards in the oil and gas industry in Uganda. Any deficiencies in the management system should be identified and rectified. The study also established that the role of institutions, oil companies and government used in sync with the relevant laws and further the study identified the strengths and weaknesses/gaps in the inabilities to identify and deal effectively with the exact type of risk management which could not only result in the damage to reputation and image of the oil and gas sector in the international industry but also further result in serious penalties and fines. More important the study will examine the compliance of the risk management systems to the relevant law.

1.4.2 General objective

The study is to determine the legal and policy aspects of compliance with risk management in the oil and gas sector. The study examined the risks that are unique to the oil and gas sector and the risk mitigation techniques which are applicable to the oil and gas sector and the relevance of risk management to oil companies in Uganda.

1.4.3 RESEARCH OBJECTIVES

- To analyze the major international, regional, and national legal instruments governing risk management standards in Uganda's oil and gas industry.
- To assess the extent of compliance with risk management by oil companies, regulatory institutions, and the Government in oil and gas exploration and production.
- To conduct a comparative analysis of risk management practices between Uganda and other jurisdictions as well as international oil companies.
- To propose recommendations and mechanisms for strengthening the legal and policy aspects to enhance compliance with risk management standards in Uganda's oil and gas sector.

1.5 RESEARCH QUESTIONS

This research seeks to resolve the following questions;

- What are the major international, regional and national legal instruments governing risk management standards in the oil and gas industry in Uganda?
- To what extent have the oil companies, regulatory institutions and the Government complied with risk management in oil and gas exploration and production?
- What comparisons can be made in terms of analysis of risk management with other jurisdictions and international oil companies?
- What are the recommendations findings and conclusions that can be put in place to strengthen the legal and policy aspects in compliance with risk management in the oil and gas sector?

1.6 SCOPE OF THE STUDY

1.6.1 Content Scope

This research focused on the legal and policy aspects in compliance with the concept of risk management in the oil and gas sector. The study examined the major international, regional and national legal instruments governing risk management standards in the oil and gas industry in Uganda. It examined the extent have the oil companies, regulatory institutions and the Government complied with risk management in oil and gas exploration and production. The study, therefore, offered the recommendations and mechanisms that can be put in place to strengthen the legal and policy aspects in compliance with risk management in the oil and gas sector.

1.6.2 Geographical scope

The area of study was situated in Uganda, specifically with reference in the oil and gas sector in Uganda. Also important to note is that the researcher looked at companies that operate in Uganda who are Risk Management experts such as AON Risk Solutions and also the Ministry of Energy and Mineral Developments. But a comparison will be done with other International Oil companies such as CNOOC (Chinese National Offshore Onshore Oil) Total, as they are also involved in the operations.

1.6.3 Time scope

The time scope of the study was limited to the year 1995 up to date, this was a period to note when the Constitution of the Republic of Uganda came into force, and other oil and gas laws. However, the study was covered from June to August 2022

1.7 SIGNIFICANCE OF THE RESEARCH

From the background of this study as well as the discussion held in the objective of the study, it is important that there is enough support to warrant a study that will seek to recommend financial instruments for risk management within the oil and gas sector. It is of importance to affirm the relevance of the research study. Of utmost importance and major role was its relevance as a requirement in the fulfillment of conferment of

Master of laws in oil and gas. It's important for the researcher and the oil and gas law students to use the research as reference material as it will

enlighten them on the possible effects that international oil companies encounter in managing risks in the oil industry.

The research conducted will educate the society which will acquire knowledge with oil industry currently being a growing industry with the commercial oil discoveries in Uganda. It will contribute to the stock of emerging knowledge in the petroleum Industry in Uganda that will be useful for government, companies and researchers.

The findings of the research shall be of great use to the academia, especially to those who will carry out further research on the legal and institutional framework relating to the risk management in oil and gas sector of Uganda, as results will be of great reference to the researchers.

This study stands to be significant to stakeholders within the oil and gas sector. Private investors, executives, as well as government regulatory bodies stand to benefit from this study as it would help increase revenue by guiding the private stakeholders on investment decision within the sector and increased revenue for private investors would result in increased revenue for the government.

On the other hand, the study also serves to inform both present and future researchers to the effectiveness of the relevant instruments of risk management within the oil and gas sectors. The research will also be part of civic awareness as many people within the region have limited knowledge and yet oil and gas sector in Uganda are beneficial to the region.

CHAPTER TWO

2.0 LITERATURE REVIEW

Although there is a considerable amount of literature concerning legal aspects of environmental health and safety protection, there is a notable scarcity when it comes to the specific area of oil and gas exploration and production, particularly in the local context of Uganda. Furthermore, even the existing literature may not be easily understandable due to the novelty of its content on risk management in oil and gas exploration and production. In some cases, there are research gaps regarding legal compliance with the concept of risk management, which need to be addressed.

The purpose of this section is to critically review the literature related to oil and gas production and risk management in Uganda's upstream oil and gas sector. Despite the extensive literature on risk management, a focused search was deemed necessary. Therefore, this review will address four main issues. The first part will delve into the conceptual background of the study, exploring concepts such as risks and key terms related to risk management. The second section will analyze the extent to which risks are managed in the upstream oil and gas industry. Finally, the third section will examine the challenges faced by management in the upstream oil and gas sector.

In essence, this review aims to provide an analytical examination of the existing literature, identifying gaps, challenges, and areas for improvement in risk management practices within Uganda's oil and gas industry.

Alexandra S. Wawryk in his article *"International Environmental Standards In The Oil Industry: Improving the Operations of Transnational Oil Companies in Emerging Economies"*¹⁰ avers that emerging economies¹¹, also known as "developing countries", "Third World" countries, "emerging market economies", "emerging market systems" and "emerging markets", hold the majority of the

¹⁰http://www.ugandaoilandgas.com/linked/international_environmental_standards_in_the_oil_industry.pdf
(accessed June 18, 2022)

¹¹There is no one clear, fixed and generally accepted definition of an emerging economy. For the purpose of this article, the term "emerging economies" refers to a group of countries that includes "countries in transition" from socialist to market economies, and "developing countries", that are, generally speaking, yet to undergo the industrialisation and development of high-technology societies of the Western "developed" countries. Development Assistance Committee, *Development Co-operation Report 1997* (OECD, Paris, 1998) pA101; OECD, *External Debt Statistics* (OECD, France, 1997) at 4-5.

world's proved oil reserves, and account for the majority of the world's production of crude oil.¹² The exploitation of oil remains a priority for the governments of emerging economies, as the revenue that comes from subsurface resource exploitation is a major source of foreign income for emerging economies, of which the majority are among the poorest countries in the world, and have large foreign debts. The oil industry is also a source of taxation revenue and employment, and offers the opportunity for the transfer of technology from developed to developing countries.

He further asserts that Oil and gas exploration and production has the potential to cause severe environmental degradation, not only to the physical environment, but also to the health, culture, and economic and social structure of local and indigenous communities.¹³ However, environmental laws in emerging economies are often ineffective because they are substantively inadequate and/or because they are inadequately enforced. This has led to calls by academics, practicing lawyers and human rights and environmental activists for transnational oil companies to voluntarily improve their performance in countries with inadequate environmental laws.

Many experts have realized the need to distinguish between a hazard and a risk as the two terms are often confusing and certain activities such as oil exploration are often called high risk when they are high hazard.

In examining Alexandra S. Wawryk's insights, it's evident that emerging economies heavily rely on oil and gas exploration for revenue generation, employment, and technological advancements. However, this reliance poses significant environmental risks, which are exacerbated by inadequate or poorly enforced environmental laws. These circumstances have prompted calls for transnational oil companies to enhance their performance voluntarily in countries with deficient environmental regulations. Moreover, the distinction between hazards and risks is crucial in understanding the

¹² As a general guide, at the end of 2000 the OECD countries held 8.1% of the world's proven reserves of oil and accounted for 28.1% of world production of oil: BP Amoco,

Statistical Review of World Energy 2001, www.bpamoco.com.

¹³ In some cases, the impact of environmental degradation on the culture and traditional lifestyle of the indigenous community is so devastating that a breach of human rights occurs. Inter-American Commission on Human Rights, *Report on the Situation of Human Rights in Ecuador*, OAS Doc OEA/Serv.L/V.II.96, doc 10, rev 1, 24 April 1997, Inter-American Commission on Human Rights www.cidh.oas.org/country.htm.

complexities of activities like oil exploration. While these activities may be termed "high risk," they are, in fact, high hazard, emphasizing the need for nuanced risk management approaches.

Connecting this literature to our study, it's clear that the challenges identified are highly relevant. Uganda's emerging oil industry faces similar risks of environmental degradation and insufficient regulatory frameworks. By understanding the limitations of current practices and regulations, our study aims to propose effective risk management strategies tailored to Uganda's context. This entails not only complying with existing laws but also advocating for their improvement and ensuring robust enforcement to safeguard both the environment and local communities.

According to *L. Keng*, in his article "*A study of the factors influences the implementation of occupational safety and health program for the construction firms in Penang*,"¹⁴propositions that a hazard is the potential of a substance, activity or process to cause harm and it can take many forms including, for example, chemicals, electricity and poor working condition. It is believed that poor working conditions can affect the environment workers live in, since the working and living environments are the same for many workers¹⁵. This means that occupational hazards can have harmful effects on workers, their families, and other people in the community, as well as on the physical environment around the workplace. A classic example is the use of heavy machines in construction work. Workers can be exposed to dust and chemicals in a number of ways when spraying, clearing and applying bitumen, they can inhale the chemicals during and after spraying, the chemicals can be absorbed through the skin, and the workers can ingest the chemicals if they eat, drink, or smoke without first washing their hands, or if drinking water that has become contaminated with the chemicals. It is noted that workers' families can also be exposed in a number of ways: they can be exposed to residues which may be on the workers' clothes. Other people in the community can all be exposed in the same ways as well.

The term risk has been used by several people to mean several things which have sometimes introduced ambiguity into discussions around the concept. Risk exists where some of the possible

¹⁴ L. Keng, "A study of the factors influencing the implementation of occupational safety and health program for the construction firms in Penang," Malaysia, 2004.

¹⁵ K. A. Anaman and C. Osei- Amponsah, "Analysis of the causality links between the growth of the construction industry and the growth of the macro-economy in Ghana," *Construction Management and Economics*, vol. 25, no. 7-9, pp. 951-961, 2007.

uncertain outcomes involve a loss. Risk is higher when either negative outcomes are more probable or the losses associated with these outcomes are higher.

L. Keng's insights highlight the profound impact of occupational hazards on workers, their families, and the broader community, especially in industries like construction. Hazards, whether from chemicals, machinery, or poor working conditions, pose risks not only to workers but also to those in their surroundings. For example, exposure to chemicals during construction work can have detrimental effects on workers' health and can also contaminate their living environments, affecting their families and others in the community.

Moreover, the distinction between hazards and risks is crucial. While hazards represent the potential for harm, risks arise when uncertain outcomes involve a loss. This distinction is essential for understanding the multifaceted nature of risks, particularly in industries where workers are exposed to various hazards.

Connecting this literature to our study, we recognize the significance of identifying and mitigating hazards to minimize risks. The hazardous nature of oil and gas operations, coupled with potential environmental and health impacts, underscores the importance of effective risk management practices. By analyzing and addressing specific hazards in the sector, our study aims to propose comprehensive risk management strategies that prioritize the safety and well-being of workers, their families, and the wider community. This involves not only implementing safety protocols but also advocating for robust regulations and enforcement mechanisms to ensure the protection of all stakeholders and the environment.

According to *Megill*, in his book *“Transferring E& P Risk Assessment Expertise”*, he stated that the simplest type of risk-weighting for an investment simply multiplies the gain or the loss associated with a given outcome by the estimated probability of that outcome and then sums over all possible outcomes; in other words, it computes the expected value of profitability can have widely different variances with some investment being much more exposed to large losses or gains. For these reason more sophisticated risk weighting approaches incorporate measures of an investor's ability to tolerate a

loss of a given size.

Connecting this literature to our study, we recognize the need for comprehensive risk assessment methodologies that go beyond simple expected value calculations. Given the high-stakes nature of

oil and gas investments and the inherent risks involved, it's essential to consider factors such as variability, uncertainty, and investors' risk tolerance levels. Our study aims to analyze various risk assessment techniques, including sophisticated risk weighting approaches, to develop strategies that effectively manage and mitigate risks in the sector. By incorporating measures of risk tolerance and considering the potential for large losses or gains, we seek to provide actionable recommendations for enhancing risk management practices in Uganda's oil and gas industry. Ultimately, our goal is to ensure that investments in the sector are made with a clear understanding of the associated risks and with strategies in place to manage them effectively.

According to *Hallikas, J* in his journal "*Risk management processes in supplier networks*"¹⁶ risk management can be defined as "the process of identification, analysis and either acceptance or mitigation of uncertainty in investment decision-making." Risk management is normally carried out prior to investment decisions. He yielded that the investor or fund manager investigates and measures the potential for losses in a venture and afterward makes the suitable move (or inaction) depending on their investment objectives and level of risk tolerance. Inappropriate risk management actions can result in severe consequences for organizations as well as individuals. An example was the 2008 recession that occurred in the United States of America that came about as a result of loose credit risk management by financial firms. Risk management has evolved over the years since its conception. Certain economic, political and geographical activities can be attributed to the evolution that has occurred in risk management. The study will fill this gap by describing the level of risk management in terms of methods and strategies used or adopted to counter their effects to the oil and gas companies in Uganda.

Connecting this literature to our study, we recognize the significance of robust risk management processes tailored to the specific challenges and opportunities in the industry. By understanding and describing the level of risk management in terms of methods and strategies used by oil and gas companies in Uganda, our study aims to identify areas for improvement and provide recommendations for enhancing risk management practices. We seek to address gaps in risk management processes and ensure that organizations in the oil and gas sector are equipped to effectively identify,

analyze, and mitigate risks. Ultimately, our goal is to contribute to the

¹⁶Hallikas, J., Karvonen, I., Pulkkinen, U., Virolainen, V. and Tuominen, M. (2004). Risk management processes in supplier networks. *International Journal of Production Economics*, 90(1), pp.47-58.

development of a comprehensive risk management framework that promotes the sustainable growth and success of Uganda's oil and gas industry.

Newman, J. in his book *“Top 20 Risk Factors Facing the Oil & Gas Industry”*¹⁷ argued that Risk management is primarily aimed at developing a reference framework that will enable companies to deal with the issues of risk and uncertainty. Firms are faced with the presence of risk in any financial or economic activity they undertake. This has led to the introduction of the risk identification, assessment and management process as part of the strategic development of organizations. The process has to be designed and planned at the top echelon (board of directors) to effectively function. According to him “a well-designed management process should evaluate, control and monitor all risks and their dependences to which the company is exposed.” The primary risk management activities are diversification and risk hedging through the implementation of various instruments such as derivatives and structured products, market insurance, self-insurance and self-protection. This research will highlight the legal and policy concept of risk management in oil and gas sector and the roles played by the Ugandan government in creating a legal framework for the management of risks by oil and gas companies.

Connecting this literature to our study, we recognize the importance of understanding the legal and policy framework surrounding risk management. By highlighting the roles played by the Ugandan government in creating a legal framework for risk management by oil and gas companies, our research aims to provide insights into how regulatory frameworks can influence risk management practices. We seek to analyze the existing legal and policy concepts related to risk management in Uganda's oil and gas sector and identify areas for improvement or enhancement. Ultimately, our study aims to contribute to the development of effective risk management strategies tailored to the specific context of Uganda's oil and gas industry, ensuring sustainable and responsible operations.

Moses Okweli, Henry Alinaitwe and Denis Kalumba, in their article “Health, safety performance in Uganda”¹⁸, yielded that before examining the types of risks faced in the oil and gas sector, it is

¹⁷ Newman, J. (2014). Top 20 Risk Factors Facing the Oil & Gas Industry. [online] Energydigital.com. Available at: <http://www.energydigital.com/utilities/2259/Top-20-Risk-Factors-Facing-the-Oil-Gas-Industry> [Accessed June 16, 2022].

¹⁸ Moses Okweli, Henry Alinaitwe and Denis Kalumba, <http://researchgate.net/publications,333534028> (Health, safety performance in Uganda, 2019)

important to discuss the activities involved in the production of oil in order to gain a better understanding of the risks. The activities involved in production for oil and gas can be divided into three stages; Exploration, Development and Production. In their view like many other natural resources, oil and gas deposits are concealed beneath the earth's surface. The deposit is usually made-up of gas, oil and water contained within porous rocks to enable their movement. The oil and gas deposit experience pressure which is contained by an impermeable "cop rock". Upon the discovery of oil, the next stage involves taking a decision on whether to develop the deposit or not. This aspect is more of an investment decision which depends on several factors, primarily on the amount of deposit that was discovered.¹⁹

Connecting this literature to our study, we recognize the significance of understanding the stages of oil production for effective risk assessment and management. By delineating the exploration, development, and production stages, our research aims to identify potential risks associated with each phase. This understanding is crucial for developing comprehensive risk management strategies tailored to the specific challenges faced in each stage of oil production.

Furthermore, Okweli, Alinaitwe, and Kalumba's article underscores the multidimensional nature of risk in the oil and gas sector, ranging from geological risks associated with exploration to financial risks linked to investment decisions. By analyzing and categorizing these risks, our study aims to provide insights into how risk management practices can be integrated into each stage of oil production in Uganda. This will contribute to enhancing safety, environmental protection, and operational efficiency in the country's oil and gas industry.

Isaac Christopher Lubogo, in his book "*the Law of Oil and Gas in Uganda*"²⁰propositions that after the exploration and development stages, the next stage in the process is the production stage although the previous stages involve the production of hydrocarbons. In the production stage, certain recovery methods are applied in order to get the most out of the oil deposit beneath the earth's surface. These recovery methods can be classified under three categories; the primary, secondary and tertiary recovery methods. The primary recovery involves utilizing the natural pressure in the reservoir

to extract oil out of the well without any extra assistance. The primary

¹⁹ *ibid*

²⁰ Isaac Christopher Lubogo, *the Law of Oil And Gas in Uganda*, First Edition 2021, Jescho Publishing House <https://www.lubogo.org>

recovery method can recover approximately 20 per cent of the original oil-in-place (OOIP). The secondary recovery method is used to maintain reservoir pressure and displace oil to the wellbore. Economically, for production on any field to be maintained, the costs experience continuous increase. In other words, each production phase requires more investment. This rising cost has been managed by the technological advancement over the years.

Connecting this literature to our study, we recognize the importance of understanding the production stage and its associated challenges. Each recovery method poses unique risks, such as reservoir depletion, equipment failure, and environmental impact. By analyzing these risks, our research aims to identify effective risk management strategies to mitigate them.

Furthermore, Lubogo's discussion on the economic implications of oil production highlights the need for efficient risk management practices to ensure the sustainability of operations amidst rising costs. As Uganda's oil and gas industry evolves, effective risk management becomes increasingly vital for optimizing production, minimizing environmental impact, and safeguarding investments. Thus, our study seeks to contribute to the development of robust risk management frameworks tailored to the specific challenges faced during the production stage in Uganda's oil and gas sector.

Geoffrey Picton-Turbervill in his book *"Oil and Gas: A Practical Handbook"*²¹ listed main types of risks in the oil and gas sector include; Prospect Risk: The prospect risk has to do with the possibility of failure of the well to find hydrocarbons in commercial quantities. In other words, the wild-cat would be a dry hole. As the years go by and technology improves, the risk of a dry hole keeps reducing. He stated that for example, there is a one in two chance of finding commercial quantities of hydrocarbons in the UK North Sea today. Prospect risk matters to investors because of the high cost of drilling. The presence of prospect risk has resulted in the alteration of agreements that form the basis by which oil companies engage in exploration and production activities. In most cases, the changes are aimed at placing the burden of the prospect risk on the oil company. This implies that in the event of failure to find oil in commercial quantity, the loss falls entirely on the oil company without the government of the host nation

losing anything. Therefore, this study will fill this gap by examining the roles played by the Ugandan government in creating a legal framework for the management of risks by oil and gas companies.

²¹ Geoffrey Picton-Turbervill , Oil and Gas: A Practical Handbook © 2009 Globe Business Publishing Ltd

Connecting this literature to our study, we recognize the importance of understanding the dynamics between oil companies and the government in managing prospect risk. The legal framework established by the Ugandan government plays a crucial role in allocating and mitigating risks in exploration and production activities. By analyzing these roles and legal structures, our research aims to provide insights into how risk management practices can be effectively implemented and regulated to ensure fair distribution of risks and benefits.

Furthermore, Picton-Turbervill's discussion highlights the evolving nature of risk management strategies in response to technological advancements and changing industry dynamics. As Uganda's oil and gas industry continues to develop, it is essential to adapt risk management frameworks to address emerging challenges and opportunities. Therefore, our study seeks to contribute to the enhancement of risk management practices in Uganda's oil and gas sector, ultimately fostering sustainable development and responsible resource exploitation.

Unlike *Geoffrey Picton-Turbervill, Paterson, J. and Gordon, G* in their book "*Oil and Gas Law - Current Practice and Emerging Trends*"²², were in a view that in most countries, with the exception of the United States of America, every mineral resource beneath the ground is the property of the state. This implies that if an oil company intends to explore for the oil and gas within a country, an agreement must be signed between the government of the host nation and the company, usually based on the fiscal regime of the country. This agreement includes the profit sharing formula of both parties (the fiscal terms of the agreement). Companies face the challenge of not knowing how much of the oil or gas is recoverable from the reserve when going into the agreement. Once oil is discovered and production commences, the government has the upper-hand in relation to bargaining power. There have been cases where the governments of host nations try to strong-arm oil companies for more favorable terms once they find oil and start producing. Therefore, this study will fill this gap by examining the roles played by the Ugandan government in creating a legal framework for the management of risks by oil and gas companies.

Connecting this literature to our study, we recognize the critical role of the government

in creating a legal framework that balances the interests of oil companies and the nation. By analyzing the

²²Paterson, J. and Gordon, G. in their book Oil and Gas Law - Current Practice and Emerging Trends, Dundee Press (2007)

legal and policy concepts of risk management in Uganda, our research aims to shed light on how such frameworks can effectively regulate and mitigate risks in the industry.

Furthermore, Paterson and Gordon's discussion underscores the need for transparent and stable legal structures to foster investor confidence and ensure sustainable resource development. Our study seeks to evaluate the legal framework established by the Ugandan government, aiming to identify areas for improvement and provide recommendations for enhancing risk management practices in the oil and gas sector. Through this analysis, we aim to contribute to the creation of a conducive environment for responsible resource exploitation and equitable distribution of benefits in Uganda's oil and gas industry.

However *Newman, J*, in his journal "*Top 20 Risk Factors Facing the Oil & Gas Industry*"²³ discussed that there are order types of risks that are faced in the oil and gas sector but they are not unique to the sector. These risks include; Operational Hazards: According to *Newman*, operational hazard is "anything on or around a work site which may compromise worker safety or health if appropriate control measures are not implemented." Operational hazards are common in every sector of an economy but differ according to the sectors. In the oil and gas sector, operational hazards include explosion and oil spillage in offshore facilities. Political Risk: This could come in from regulations or nationalization, however, political risk is not restricted to these two forms. In the oil and gas sector, a company's exploration activity is managed by regulations set by the government of the host nation. These regulations could sometimes be unfavorable to the oil companies.

Connecting this literature to our study, we recognize the importance of addressing operational and political risks to ensure sustainable industry operations. By analyzing the legal and policy frameworks governing the sector in Uganda, our research aims to identify and assess these risks and propose strategies for their mitigation.

Moreover, *Newman's* discussion underscores the need for oil and gas companies to implement robust risk management practices to navigate operational and political challenges effectively. Our

²³ Newman, J. (2014). Top 20 Risk Factors Facing the Oil & Gas Industry. [online] Energydigital.com. Available at: <http://www.energydigital.com/utilities/2259/Top-20-Risk-Factors-Facing-the-Oil-Gas-Industry> [Accessed June 16, 2022].

study seeks to evaluate the current risk management strategies employed by oil and gas companies in Uganda and provide recommendations for enhancing their effectiveness.

Overall, by examining the various types of risks faced in the oil and gas sector, including operational and political risks, our research aims to contribute to the development of comprehensive risk management policies tailored to the specific context of Uganda. Through this analysis, we aim to promote sustainable and responsible oil and gas operations in Uganda while safeguarding the interests of all stakeholders involved.

Beattie, A, in her article “*5 Biggest Risks Faced By Oil And Gas Companies*”²⁴ yielded that Oil companies became conscious of the issue of political instability during the first oil shock of the 70s. The middle-east, which was the dominant oil producing region, was rocked with a series of uprising that led to the nationalization of foreign oil companies within the region and this led to massive loss of investment. These days, oil companies are careful to engage in politically stable countries in order to protect their investment. She argued that the importance of security in the oil and gas sector, just like every other economic sector, cannot be overemphasized. For economic activities to go on smoothly, the operating environment of business organizations has to be safe. In the oil and gas sector, poor security could result in dire consequences for oil companies.

Connecting this literature to our study on risk management in Uganda's oil and gas sector, we recognize the critical role of political stability and security in ensuring the sustainability of industry operations. By examining the legal and policy frameworks related to security measures in Uganda, our research aims to assess the effectiveness of current security protocols and propose enhancements where necessary.

Moreover, *Beattie's* discussion underscores the need for oil and gas companies to implement robust security measures and risk management strategies to mitigate the impact of political instability and security threats. Our study seeks to evaluate the existing security practices employed by oil and gas companies in Uganda and provide recommendations for strengthening security protocols to protect personnel, assets, and operations.

²⁴ Beattie, A. (2011). 5 Biggest Risks Faced By Oil And Gas Companies. [online] Investopedia. Available at: <http://www.investopedia.com/articles/fundamental-analysis/12/5-biggest-risks-faced-by-gas-and-oil-companies.asp> [Accessed June 16, 2022].

Overall, by analyzing the risks associated with political instability and security threats in the oil and gas sector, our research aims to contribute to the development of comprehensive risk management policies tailored to the specific context of Uganda. Through this analysis, we aim to enhance the resilience of Uganda's oil and gas industry and promote sustainable operations in a safe and secure environment.

Seth Oppong, in his article “*Common Health, Safety and Environmental Concerns in Upstream Oil and Gas Sector: Implications for HSE Management in Ghana*”²⁵ explores the literature to identify common risks and injuries, diseases, and psychological wellbeing on oil rigs as well as the negative environmental impacts of the upstream oil and gas sector. He ends by making recommendations for effective health, safety, and environmental (HSE) management. In the review of his literature he showed that contusion (bruise), cuts and laceration are the commonest occupational injuries that workers on the oil rig suffer and that the injuries mostly affect the hand and finger, leg, and eyes of the offshore workers.²⁶ These injuries were found to be caused mostly by direct stroke, jamming and overstrain. Similarly, accidental poisoning, musculoskeletal disorders, respiratory disorders and diseases of the digestive system were also documented as the commonest occupational diseases among offshore workers. The literature also shows that working offshore is associated with poorer psychological wellbeing or health; this is to say that offshore workers tend to experience higher levels of stress, burnout, anxiety, depression, low job satisfaction (particularly with the environmental conditions associated with their work), and sleep disorders. Finally, the literature review indicated that land-use problems, air pollution, acid rain, climate change, habitat disruption, environmental degradation, oil spills and leakages are some of environmental impacts of upstream oil production.²⁷ This review was concluded by recommending some measures for the management of the HSE risks associated with the oil and gas sector.

He finds that discovery of oil in Ghana has resulted in anticipation among Ghanaians of the prospects of massive makeover of the economy and a remarkable rise in the living standards as it has in Uganda. According to the *Center for Democratic Development (2008)*, Ghana's discovery

²⁵ Seth O, “Common Health, Safety and Environmental Concerns in Upstream Oil and Gas Sector: Implications for HSE Management in Ghana” Academicus International Scientific Journal (Academicus International Scientific Journal), issue: 9 / 2014, pages: 93106, on <http://www.cceol.com>

²⁶ Ibid

²⁷ Ibid

of oil has raised high hopes and expectation that Ghana's long delayed dream of "accelerated development" might soon become a reality. In 2007, Ghana discovered a significant quantity of crude oil when Kosmos Energy Ghana HC (KOSMOS) drilled the first well that unlocked the potential off Ghana's western shores, nicknamed the Jubilee Field. The field is estimated to potentially hold 1.8 billion barrels and that production of oil is expected to commence in the last quarter of 2010 with a first flow of 120,000 barrels per day output during the first quarter with the potential to increase to 200,000 barrels per day.²⁸ Indeed, on December 15, 2010, the president of the Republic of Ghana launched the commercial production of oil in Ghana.

Several accidents risks have been documented in oil and gas industry since its inception as an industry. Schouwenaars²⁹ recorded a number of fatal accidents that occurred in the oil and gas industry between 1970 and 2008. He identified the following (note that the figures in the parenthesis represent the year in which the accident occurred): Fixborough (1974), Seveso (1976), Bhopal (1984), Norco, Louisiana (1988), Henderson, Nevada (1988), Pasadena, Texas (1989), Piper Alpha (1988), Longford (1998), Grangemouth (2000), Humber Oil Refinery (2001), P36 (2001), Toulouse (2001), Skikda (2004), Buncefield, UK (2005), Texas City (2005), and Alon (2008). The most recent case is that of the British Petroleum (BP) deepwater disaster in 2010 (National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, January 2011). All these major accidents resulted in death and damage to equipment and property of the companies concerned. The rest of this paper draws on the extant literature to discuss the common occupational injuries, diseases, and psychological health problems faced by workers on the offshore oil rigs. The discussion continues with how countries and oil organizations manage these occupational health issues. This paper, therefore, draws on what is known already in the literature about occupational health and safety issues and draws lessons on it for how developing countries such as Ghana should respond to the gargantuan challenges in such business.

²⁸ Cook, N. (2010). *Ghana, an Emergent Oil Producer: Background and U.S. Relations*. Congressional Research Service, 7-5700, [www.crs.gov.RS22809](http://www.crs.gov/RS22809).

²⁹Schouwenaars, E. (2008). *The Risks Arising from Major Accident Hazards: Lessons from the Past, Opportunities for the Future*. Retrieved October 4, 2009 from World Wide Web: http://www.dnv.nl/Binaries/Paper%20Refining%20Management%20Forum%20Copenhagen_tcm141311_567.pdf

Seth Oppong's research sheds light on the common health, safety, and environmental (HSE) concerns in the upstream oil and gas sector, providing valuable insights into the risks faced by workers and the environmental impacts of oil production. His findings reveal that occupational injuries such as contusions, cuts, and lacerations are prevalent among offshore workers, often affecting their hands, fingers, legs, and eyes. These injuries are primarily caused by direct strokes, jamming, and overstrain. Additionally, he highlights the occurrence of occupational diseases such as accidental poisoning, musculoskeletal disorders, respiratory disorders, and digestive system diseases among offshore workers. Furthermore, Oppong discusses the adverse psychological effects experienced by offshore workers, including stress, burnout, anxiety, depression, low job satisfaction, and sleep disorders. Moreover, he addresses the environmental impacts of upstream oil production, including land-use problems, air pollution, acid rain, climate change, habitat disruption, environmental degradation, oil spills, and leakages.

In light of these findings, it's evident that the discovery of oil in Ghana, similar to Uganda, has raised expectations of economic development and improved living standards. The launch of commercial oil production in Ghana's Jubilee Field signifies the potential for significant economic transformation. However, the risks associated with oil and gas exploration and production cannot be ignored, as evidenced by the documented accidents and environmental impacts in the industry.

The literature review provided by Oppong underscores the importance of effective health, safety, and environmental (HSE) management in the oil and gas sector, particularly in developing countries like Ghana and Uganda. By analyzing the occupational risks and environmental impacts outlined in the literature, our study aims to contribute to the development of robust risk management strategies tailored to the specific context of Uganda's oil and gas sector. We seek to draw lessons from existing literature on occupational health and safety issues to inform the implementation of preventive measures and best practices in Uganda. Through this research, we aim to promote the well-being of oil workers, protect the environment, and ensure the sustainable development of Uganda's oil and gas industry.

Seth Oppong further discusses a range of environmental health and safety risks such as Occupational Injuries on Oil Rigs, Occupational Diseases on Oil Rigs, Psychological wellbeing of workers on Oil Rigs, the various Environmental Impacts and necessary recommendations to ensure better Health, Safety and Environmental management. The discussion concludes that workers on

oil rigs elsewhere (Uganda inclusive) have suffered and continues to suffer numerous occupational injuries, occupational diseases, and psychological problems as well as environmental effects. This call to action stems from the low priority that Ghanaian entrepreneurs currently give to workplace health and safety issues.³⁰ Studies of SMEs in Ghana show that finance, credit services, and skill development are their priorities and occupational health and safety training nowhere near their priority; again.³¹ This lack of priority to safety is contrary to research findings that management commitment to safety is one of the most important determinants of safety climate and/or culture in an organization.³² Apart from the measures recommended for the management of the HSE hazards, there is a need for attitudinal change among the government officials representing Ghana's interest in the oil and gas sector, corporate leadership of the oil companies themselves, and the employees who will work on the oil rigs.

Seth Oppong's examination of environmental health and safety risks in the oil and gas sector, including occupational injuries, diseases, psychological well-being, and environmental impacts, underscores the urgent need for comprehensive risk management strategies. His findings highlight the significant challenges faced by oil workers in Ghana and other countries, including Uganda, where similar risks exist. The lack of priority given to workplace health and safety, particularly among Small and Medium-sized Enterprises (SMEs), is a major concern, as it reflects a broader issue of inadequate safety culture and practices.

This research aligns with our work, as we aim to address the gaps in risk management practices in Uganda's oil and gas sector. By analyzing the literature on occupational health and safety issues, we seek to emphasize the importance of management commitment to safety and the need for attitudinal change among key stakeholders. Our study aims to provide insights into effective risk

³⁰Oppong, S. (2010). *Preparedness of Ghana to Manage Occupational health and Safety in the Oil and Gas Industry*. Unpublished Manuscript, Regent University College of Science & Technology, Ghana.

³¹Arthur, P. 2007. *Development Institutions and Small-Scale Enterprises in Ghana*.

Journal of Contemporary African Studies 25 (3) (From WIEGO OHS for Informal Worker Project Ghana, March 2009, Abstract)

³² Cooper, D. (2006). *The Impact of Management's Commitment on Employee Behavior: A Field Study*. Paper Presented at the 7th Professional Development Conference & Exhibition, of American Society of Safety Engineers - Middle East Chapter, Kingdom of Bahrain, March 18 - 22. See also Cooper, M. D., & Phillips, R. A. (2004). Exploratory analysis of the safety climate and safety behavior relationship, *Journal of Safety Research*, 35, 497- 512.

management strategies and recommendations tailored to the specific challenges faced by oil and gas companies in Uganda. We believe that promoting a strong safety culture, supported by government regulations, corporate leadership, and employee engagement, is essential for safeguarding the well-being of workers and minimizing environmental impacts. Through our research, we intend to contribute to the enhancement of health, safety, and environmental management practices in Uganda's oil and gas industry, ultimately fostering sustainable development and responsible resource exploitation.

Emmanuel Kaweesi, in his article “*Environmental Law Compliance and its Implications for Oil and Gas Exploration in Uganda*” connotes that risk management in oil and gas sector goes with Environmental law compliance which is a phenomenon which connotes the undertaking of all development activities in a way that conforms to environmental laws, standards, and other regulatory requirements.³³ Environmental law compliance covers a number of dimensions such as compliance with environmental quality standards, Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA); respect of environmental rights especially the right to a clean and healthy environment, transparency and accountability, public participation and many others.³⁴ Environmental compliance is ensured through the processes of environmental enforcement. Enforcement refers to a set of actions or tools that are used by the Government, either directly or indirectly through its lead agencies, to promote environmental law compliance. In brief the tools of environmental enforcement include environmental monitoring, environmental inspection, environmental audits, refundable performance deposit bonds, environmental restoration orders, deterrence fines and many others. Hence effective enforcement of environmental laws is vital in ensuring risk management compliance.³⁵

Emmanuel Kaweesi's exploration of environmental law compliance in the context of oil and gas exploration in Uganda sheds light on the critical relationship between risk management and adherence to environmental regulations. His article emphasizes that effective risk management in the oil and gas sector is closely tied to compliance with environmental laws, standards, and

³³Emmanuel K, “Environmental Law Compliance and its Implications for Oil and Gas Exploration in Uganda” at Page 13.

³⁴ Ibid

³⁵ Ibid

regulatory requirements. Environmental law compliance encompasses various dimensions, including adherence to environmental quality standards, conducting Strategic Environmental Assessments (SEA) and Environmental Impact Assessments (EIA), respecting environmental rights, ensuring transparency and accountability, and promoting public participation.

The literature suggests that environmental compliance is facilitated through enforcement mechanisms, which are essential for ensuring that companies adhere to environmental regulations. These enforcement tools, such as environmental monitoring, inspection, audits, performance deposit bonds, restoration orders, and fines, play a crucial role in promoting environmental law compliance and mitigating risks associated with oil and gas exploration.

In our research, we aim to delve deeper into the relationship between risk management and environmental law compliance in Uganda's oil and gas sector. By analyzing the literature and exploring current practices, we seek to identify gaps in compliance and propose strategies for improving risk management effectiveness. Our study aims to provide insights into how regulatory frameworks can be strengthened to enhance environmental protection and minimize the negative impacts of oil and gas operations. By aligning risk management practices with environmental compliance requirements, we aim to contribute to sustainable and responsible oil and gas exploration in Uganda.

Unlike Emmanuel Kaweesi, *Isaac Christopher Lubogo*³⁶ first concentrates on the history and current status of oil exploration and production in Uganda, and then discusses the main processes of oil exploration and production which have significant implications for environmental law compliance. It precedes on a theory that if no preventive or at least mitigation measures are taken, the activities can lead to disastrous environmental consequences. The paper further discusses the national, regional and international standards regulating the oil and gas industry in Uganda. But the only way to forecast those consequences is by ensuring a sound environmental law compliance regime for the oil industry. Hence the paper delves into the legal and policy aspects on compliance requirements for Uganda and the extent of compliance by the current operators.

Because risk

³⁶ Isaac Christopher Lubogo, the Law of Oil And Gas in Uganda, First Edition 2021, Jescho Publishing House <https://www.lubogo.org>

management compliance is very broad, the paper concentrates on those issues which in the view of the author are core.

He contends that accordingly, inquiry is made into the extent of compliance with Environmental Impact Assessment (EIA); Strategic Environmental Assessment (SEA); Environmental Quality Standards; Environmental Monitoring; Environmental Audits and Reviews; Pollution control; and Transparency and Accountability. The paper concludes that there is no environmental law compliance in Uganda's oil and gas industry despite the several national, regional and International regulation standards and proposes a number of recommendations: Operators should make sound waste management plans; come up with produced water management strategies; bio-diversity offsets can go a long way in preventing loss of fauna; employ environmentally sound technology; install air quality monitoring systems; identify potential hazards and develop hazard-specific control or mitigation mechanisms; government should take up its role; strengthen the role of civil society organizations; PSAs be made public; strengthen the legal and institutional framework; streamline national spending options and expand stakeholder participation by encouraging public participation, role of the opposition and international observers.

Isaac Christopher Lubogo is however similar to *Alexandra S. Wawryk* in such a way that he discusses in detail risk management compliance whereby he brings out that there is need to strengthen enforcement of standards in Uganda. The distinguishing factor is that this research study involves detailed analysis of standards as well as health and safety standards such as the Occupational Health and Safety Act of 2006. It has been submitted that in order to obviate the social and environmental costs of oil and gas activities, mechanisms for conflict management (conflict avoidance and dispute resolution) should be reflected in the relevant laws. Mechanisms for compensating social and economic impacts should be articulated in the laws or petroleum regulations and that there is need for strengthened capacity for environmental management and monitoring, to wit guidelines on Corporate Social Responsibility.³⁷ On this subject *Sophie Des Clers* observes that Africa has 8% of the world's oil reserves and nearly 50% of this is in Sub-Saharan Africa. That the impact of oil production on African national

economies has however been mixed with numerous instances of high environmental and social effects and records of human

³⁷ AFIEGO (2010) Proceedings Report of the Training Workshop on Oil Governance for National Development; Strengthening the oversight role of selected Members of Parliament and CSOs, at 21

rights abuse.³⁸ With due respect, although the author acknowledges possibility of environmental devastation due oil and gas exploration and production activities she offers very little guidance on how this should be ameliorated, and if anything, the study focuses on Central and West Africa but not East Africa or the Albertine Graben in particular.

The UNEP notes that oil and gas exploration and production cannot go without ecological effects. That the matrix of activities undertaken during exploration and production expose the environment risks to many deleterious incidents ranging from oil spills, damage to land (terrestrial contamination), accidents and fires, and incidents of water and air pollution.³⁹ Those environmental impacts can in broad terms be categorized into human, socio-economic and cultural impacts; atmospheric impacts; aquatic impacts; terrestrial impacts and eco-system impacts. The activities are also associated with many potential emergencies.⁴⁰

It is further observed that although national governments in different states have made some efforts towards sound oil and gas exploration and production through policy and legislative framework, more is still needed especially in practice.⁴¹ This publication is indeed very comprehensive and offered the most important guide to this research. However, it is so generalist in nature since it was intended for use by the whole United Nations International Community and to this extent it does not offer specific environmental approaches for protection of the Albertine Graben in relation to Ugandan laws and practices. Also the information in this publication is largely technical and may not be easily understood by non-experts yet the concerns of environmental protection especially implementation and enforcement, is done by those with no specific technical prowess in the area of oil and gas exploration and production.

The Ministry of Energy and Mineral Development also concedes that the development of the oil and gas sector in the country presents potential environmental risks. It observes that it is so unfortunate for Uganda and in fact the rest of Africa to note that oil activities take place in the

³⁸ Des Clers (2007) Mitigating the Impacts of Oil Exploration and Production on Coastal and Wetland Livelihoods in West and Central Africa, at 7.

³⁹ UNEP (1997) Environmental Management in Oil and Gas Exploration and Production: An Overview of Issues and Management Approaches, at 2-3

⁴⁰ Ibid, at pp 11-15

⁴¹ Ibid

most ecologically sensitive and bio-diversity rich areas.⁴² That with face of such an environmental satire, the planning efforts needed should intensify beyond ordinary. The author concedes that unregulated actions by the oil and gas industry can destroy habitats, lead to biodiversity damage and rapture important ecosystem services such as fresh water, and that bio-energy and emissions from the industry can indeed lead to the acceleration of global warming. Many negative environmental impacts are therefore identified by the Ministry as capable of resulting from unregulated oil and gas activities. These range from socio-economic and cultural changes due to alteration in land use patterns and local population levels, to increase in gaseous and aqueous waste streams which may affect plant and animal communities due to changes in their environment arising from various alterations in water, air and soil/sediment quality and disturbance by noise, extraneous light and changes in vegetation cover.⁴³

In response to this the Ministry observes that these negative risks need to be mitigated and addressed to ensure eco-system integrity by updating general management plans and developing new ones taking into account the oil exploration activities.⁴⁴ However, the author gives no guidance on how these plans should specifically be developed and/or updated. In relation to waste management, the Ministry notes that waste management in oil and gas exploration and production has emerged as a challenge. Most of the drill mud contains heavy metals and rock cuttings which render it hazardous and since there is not yet any clear mechanism of handling this, operators have been instructed to containerize their waste.⁴⁵ This however in my view seems a mere postponement of the problem rather than being the solution.

Isaac Christopher Lubogo, in his book “*The law of oil and gas in Uganda*”⁴⁶ propositions that the management of HSE risks in oil and gas environment is not an easy task according to. There are various challenges confronted in the path of implementation of safety culture in the working environment of oil and gas industry. It is an undeniable fact that exploration and exploitation of oil and gas resources does not only have economic implications for a country, but also comes with

⁴²Ministry of Energy and Mineral Development, op cit, at 3

⁴³ Ibid, at 30

⁴⁴ Ibid.

⁴⁵ Ibid, at 33

⁴⁶Isaac Christopher Lubogo, the Law of Oil And Gas in Uganda, First Edition 2021,
Jescho Publishing House <https://www.lubogo.org>

major challenges. This study will present some of these challenges with oil and gas discovery with regards to the environment. The exploration and production industry in any country is accompanied by many environmental challenges such as, seismic acquisition; drilling and occupational hazards, development, production, transportation and atmospheric emission are of great challenges to the environment. He stated that Oil and gas companies must incorporate environmental concerns into daily operations because external sources have not proven to be effective in changing corporate environmental risk valuation procedures. Over the years, international frameworks, declarations, and treaties have been developed to combat the challenges associated with protecting the environment.

Unfortunately, these international agreements have not proven to be an effective method to compel large oil and gas companies to manage their environmental impact. This is primarily due to the fact that the frameworks and treaties are not accepted and subsequently adopted by all countries. The Earth Summit UNCSD Conference held in Rio in 2012 brought together a large international audience to discuss green economies and the implementation of sustainable development⁴⁷. Without a 100 percent participation rate, agreements made at these international meetings are not strong enough to combat these global environmental issues. Similar challenges arose with the Kyoto Protocol, which was intended to cap emissions through binding reduction targets⁴⁸. Although many international players supported the protocol, several large countries, including the United States and Canada, were unwilling to accept and adopt it. The lack of unanimous voluntary participation for numerous international regulations has created gaps that minimize the effectiveness of the legislation. Discussions and revisions of programs such as the United Nations Environment Programme (UNEP) indicate there is an international agreement over the importance of addressing these environmental issues⁴⁹. However, the lack of compliance and enforcement by all countries implies that international protocols and conferences are not sufficient enough in addressing these environmental challenges.

⁴⁷ UNCSO, "United Nations Conference on Sustainable Development," 1 June 2012. [Online]. Available: <https://sustainabledevelopment.un.org/rio20.html>. [Accessed June 17, 2022].

⁴⁸ Kyoto-Protocol, 2012. [Online]. Available: http://unfccc.int/kyoto_protocol/items/2830.php. [Accessed June 17, 2022].

⁴⁹ Supra

According to *Dr. Faisaal Al Thani* in his book “The development of risk management in the GCC oil & Gas sector”, risk management is important; the risks located both upstream and downstream need to be addressed to ensure commercial viability of oil and gas projects. In the upstream sector the industry is characterized as high risk industry due to the sizable investment level, geological uncertainties under and other risks related to fiscal and political uncertainties with host producing countries. Risk management can be applied to marginal oil and gas field’s projects to improve and make them commercially viable. *Ernst and Young*, in their writing “*Strategic Risk to Insurance in the Oil & Gas Industry*”,⁵⁰ argued that whereby they examined the strategic risks facing oil and gas companies. One major concern pointed out is competition by the National oil and gas companies which is a major threat to international oil companies here the problem is one of strategy; western international oil companies will find it hard to compete as deals are struck not through bidding or tenders but state-to state level bundled with development aid. Political constraints on access to reserves were also studied as risk factor. The study will therefore examine the risks associated by oil and gas sector.

Dr. Faisaal Al Thani and Ernst and Young highlight the critical importance of risk management in the oil and gas sector, particularly in the Gulf Cooperation Council (GCC) countries. Their works emphasize the multifaceted nature of risks in both the upstream and downstream sectors of the industry and the need to address these risks to ensure the commercial viability of oil and gas projects.

In the upstream sector, characterized by high-risk factors such as substantial investments, geological uncertainties, and political complexities with host countries, effective risk management strategies are crucial. Dr. Faisaal Al Thani underscores the significance of risk management in making marginal oil and gas fields commercially viable, highlighting its potential to improve project outcomes.

Ernst and Young’s analysis further delves into strategic risks facing oil and gas companies, including competition from national oil companies and political constraints on access to reserves. They emphasize the strategic challenges faced by international oil companies, particularly in

⁵⁰ Strategic Risk to Insurance in the Oil & Gas Industry BY Ernst & Young pg39 (2010)

competing against state-backed entities that may have preferential treatment in deal-making processes.

Our study aims to build upon these insights by examining the specific risks associated with the oil and gas sector in Uganda. By analyzing the literature and studying current industry practices, we seek to identify and assess the unique challenges faced by oil and gas operators in Uganda, considering both upstream and downstream activities. Through this analysis, we aim to propose strategies and recommendations for effective risk management tailored to the Ugandan context. By addressing these risks, our research aims to contribute to the sustainable and responsible development of Uganda's oil and gas resources, ensuring their long-term viability and minimizing adverse impacts on the environment and society.

Therefore, according to *Isaac Christopher Lubogo, Isaac*⁵¹ risk analysis applied to the appraisal and development phase is a complex issue and it is no longer sufficient to quantify risk. Techniques today are pointing to: (1) quantification of value of information and flexibility, (2) optimization of production under uncertainty, (3) mitigation of risk and (4) treatment of risk as an opportunity. All these issues are becoming possible due to hardware and software advances, allowing an increasing number of simulation runs of reservoir models with higher complexity. *The National Oil and Gas policy of Uganda* provides that the role of oil companies will be to efficiently explore, develop and produce the country's oil and gas resources so as to maximize Net Present Value (NPV). In order to achieve this, the companies require highly competent staff, financial strength, ability to manage risk and ability to work with Government. The companies shall be good corporate citizens by among others, abiding by the policies and laws existing in the country as well as managing emergencies that may arise out of the oil and gas activities. *The Ministry of Energy and Energy Development report of (2020)* states that the National Environment Management Authority rules of Uganda provide a regulatory framework for the management of petroleum resource management law. The environment management pillar is aimed at achieving National objective and directive principles of state policy that promote sustainable development and public awareness of the need to manage land, air water, resource in a balanced and

sustainable manner for the present and future generations as enshrined in the (1995) constitution of the Republic of Uganda. The

⁵¹ Isaac Christopher Lubogo, the Law of Oil And Gas in Uganda, First Edition 2021, Jescho Publishing House <https://www.lubogo.org>

study will examine the effectiveness of Ugandan government in creating a legal framework for the management of risks by oil and gas companies.

Citing with approval the National Oil and Gas Policy for Uganda, Kaweesi further argues that weak public institutional setup leads to overdependence on oil, and as a result of timing, pre-existing institutions are weakened or partially formed due to the influx of rents from petroleum thus resulting into a state that depends on the profits of oil (renter state). Politically, authoritarian rulers use petro dollars to pass favourable legislation, create varsity militaries and to buy off opposition support, to wit engaging in useless and unpalatable military adventures.⁵² The above literature supposes that management of oil revenues can better be handled through transparency and accountability and establishing of institutions to handle oil wealth. However, there are other factors such as the independence, oversight and implementation capacity of institutions, the role of the media, civic competence and general awareness that play an equally important role in averting the oil curse though they have not been mentioned.

Conclusion

In light of the foregoing discussion it is clear that Uganda is soon joining the international oil producing community, with reserves going up to 3.5 billion barrels. It is also noteworthy that due to the long history of fuel scarcity in Uganda compared to the exponential consumption rates, Ugandans are so optimistic that probably the imminent production of oil at home may be a great blessing. However, it is also clear from the above that if oil exploration and production activities are not well planned and managed Uganda may just like other African countries, suffer from the oil curse which shall not only manifest through environmental health and safety degeneration but also economic retrogression. Uganda has laws and policies which can promote environmentally sound oil activities but the question is whether the players in the sector are complying. This question continues to guide this study all through the subsequent chapters.

⁵² Ibid

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

The findings of this research were facilitated by intensive desk literature reviews and readings of publications; interviews with officials, as well as other stakeholders and knowledgeable persons in oil and gas sector. The desk literature reviews have been informative in respect to general principles on oil and gas and environment as a whole. The theories and recommendations of the various authors profoundly informed and directed data collection for the research. The data collected and the literature reviewed was interpreted in line of the general principles of oil and gas and more specifically risk management.

3.2 Research strategy

Research strategy is a methodology that helped the researcher to investigate the research issue. Research strategy is a general plan that helps researcher in answering the research questions in a systematic way. The strategy for this research contains the clear objectives on assessing the concept on risk management in oil and gas sector of Uganda, the institutional and policy framework of the country with emphasis on the protection of risks, research questions, data collection resources and various constraints that affect the research in different ways such as access limitations, time limitations, location and money limitations, ethical issue constraints.

3.3 Research design

This study mainly is a qualitative in nature given that it is located within the complicated area of law that is; oil and gas sector, which requires respondents who are knowledgeable on the subject matter under discussion. The qualitative approach enabled the researcher to obtain detailed views, experiences and expressions of respondents and key informants about the subject matter of the study.

3.4 Data analysis

The gathered data was grouped, compared accordingly and critically reviewed in order to obtain authentic information. Thus through a pragmatic review of a considerable number of literature, the researcher was able to get viable information required for the study.

3.5 Data resources

The study employed both primary and secondary data resources. There was ample literature reviewed from the works of past researchers. Among the source tools, the research extensively relied on the list in appendix 1

3.6 Study Population

The study population comprised of key respondents from the Oil and Gas sector, the Judiciary, and Ministry. These institutions are directly or indirectly entrusted with the protection and enforcement of laws. Respondents were also drawn from private law firms which have been involved in oil sectors and litigation, as well as other stakeholders and knowledgeable persons in Oil and Gas sector, selected randomly and determined according to the sample determination.

The target populations for this study were the officials of international oil companies working in Uganda and also respondents from Ministry of Energy and Mineral Developments and also Risk Management Advisory Experts for example the AON. This research was a case study based in Uganda. The study is preferred since the researcher is based in Uganda and also the fact that international oil companies are very much involved in the energy sector considering the fact that petroleum is "black gold" having been discovered in commercial quantity recently.

3.7 Data collection tools

The study like earlier emphasized on the employed a qualitative research that is basically desktop based. There is ample literature reviewed from the works of past researchers. Among the primary sources, the research extensively relied on the Oil and Gas laws and regulations and other international instruments which are the main legal

instruments talking about risk management in oil and gas sector. Other sources included textbooks, reports and journals on risk management. These all provided vast information required for the research. The secondary data resource mainly

used is the internet. The internet is employed for up to date information for better results of the research.

3.8 Methods of Data Collection

The study employed qualitative methods of data collection to gather both primary and secondary data. Primary data was collected using unstructured interview method whereby the researcher will interface directly with the respondents to get in-depth insights on the subject matter of the study. Secondary data was also collected using the document analysis technique whereby international, regional and domestic legal documents that provide for Oil and gas sector and risk management. This technique was primarily used to review relevant literature such as published textbooks, published and unpublished dissertations and thesis, research reports, articles from journals and periodicals, newspapers, magazine reports, official and unofficial government publications, reported and unreported court cases, unpublished lectures and internet libraries. The research study therefore applied the following data collection methods;

3.9 Interview method

The researcher was an interview guide for interviewing the respondents from, the Ministry of Energy and Mineral resource, the Risk management Experts AON and Oil companies in order to establish their understanding of the various aspects concerning risk management in the oil sector. The researcher in the study used an interview as a tool for enlisting relevant data for conducting the study on the legal framework on the risk management in addition to library based research with respect to the relevant Laws and World Investment and Political Risk and regulations. This was the most appropriate method of data collection in the study as far as risk management was concerned.

3.10 Document analysis

The research reviewed the existing information and materials related to the study problem and variables in form of laws, reports, journals, and websites and data bases to gain information on the topic. Also inclusive of international instruments related to. Domestic policies, legislations, directives and guidelines were also used to evaluate the

adequacy and effectiveness of the existing

environment on the analysis of the efficiency on the concept of risk management in oil and gas sector in Uganda

3.11 Self-administered questionnaire

The researcher used the questionnaire technique or tool for collecting data that constructed with open ended and close ended questions and administered to the officials, as well as other stakeholders and knowledgeable persons in oil and gas sector.

The researcher opted to use the questionnaires because they were used to collect large amounts of information from a large number of people in a short period of time, and it will be able to compare the findings for clarity. Furthermore, the researcher used open ended questions. Open ended questions will help the researcher to obtain in-depth opinions of respondents. The open ended questionnaires will involve questions that require the respondent to give an opinion. The questionnaire is in appendix II

3.12 Data Collection Instruments

Interview guides were used to conduct interviews during the study. The interviews were tape recorded for reliability and accuracy. Handwritten notes were made where the respondents requested that the interviews should not be tape recorded. The research also emphasized on a qualitative research that is basically desktop based. There was because of the ample literature reviewed from the works of past researchers.

3.13 Data Collection Procedures

Letters requesting for permission to interview respondents were presented to the management of the selected institutions together with an introductory letter from the School of Law and Interview guides. After obtaining the necessary permission, appointments were made with the respective respondents for the purpose of conducting the interviews.

3.14 Data Analysis

The qualitative method of thematic analysis is used to manually analyze primary data. This is possible given that the numbers of the respondents interviewed are manageable.

3.15 Limitations of the study

This research had limitations which associates with the qualitative methodology employed in data collection and analysis. The primary limitation of this study has to do with the financial constraint of the researcher which creates boundaries to the research. However, the researcher solved the problem by using various data collection skills learned from the various authors about research methods. Also time constraint was a challenge to the study, as the researcher found it difficult to apportion time appropriately.

Extraneous variables which were beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study and also respondent's unwillingness to release company policies and information that could jeopardize the state of the company in terms of competition with other International Oil Companies. The research instruments on resource availability and utilization are not standardized. Therefore, a validity and reliability test was done to produce a credible measurement of the research variables. Not all interview guide questions were answered neither completely answered nor even retrieved back due to circumstances on the part of the respondents such as confidentiality issues and company policies.

3.16 Ethical considerations

While conducting the research, the principle of academic integrity involving the acknowledgement of sources as well as respect for the data was obtained and be used in the research process and adhered to.

3.17 Chapter Synopsis

This research will consist of five chapters. Chapter one is basically an introductory chapter to the research with a detailed background and problem statement of the research, the aims and objectives of the research, the reasons why this research is important and relevant, the scope of the research, and a detailed review of the literature on the subject of the research clearly showing how such literature informs this particular study, the research methodology and study limitations.

The second chapter discussed the major international, regional and national legal

instruments governing risk management standards in the oil and gas industry in Uganda. In the subsequent third chapter, it examined the extent of the oil companies, regulatory institutions and the Government complied with risk management in oil and gas exploration and production. Chapter

four gives a comparative study with other jurisdictions and chapter five concludes this research by making a summation of presentation of the findings and recommendations thereto.

CHAPTER FOUR

THE MAJOR INTERNATIONAL, REGIONAL AND NATIONAL LEGAL INSTRUMENTS GOVERNING RISK MANAGEMENT STANDARDS IN THE OIL AND GAS INDUSTRY IN UGANDA

4.1 Introduction

International law is a system of principles, rules and practices that govern relationships between states and other internationally recognized problems. International environmental health and safety standards therefore encompass the corpus of international law relevant to the protection of the global environmental health and safety. It was originally premised on the principle that states must not permit the use of their territory in such a way as to injure the territory of other states and today international environmental law has since been expanded by a plethora of legally-binding and non-binding international agreements/ treaties that Uganda is signatory to.

Even though there is no effective central authority, breach of international law may result in a variety of sanctions including collective sanctions under the UN or state action under the International Court of Justice system, arbitration, economic sanctions and diplomatic protests. Therefore the aim of this chapter is to discuss the international and regional environmental law compliance requirements (binding and non-binding) and their importance to the nascent oil industry in Uganda. It has five sections: international soft law principles; binding international and regional law compliance requirements; application of international environmental health and safety standards in Uganda, and conclusion.

4.3 Application of International and Regional Environmental Health and Safety Laws in Uganda

Uganda recognizes the need to participate in International Environmental Law. The Constitution provides that the president or any other person authorized by the president may make treaties, conventions, agreements or other arrangements between

Uganda and any international

organizations in respect of any matter, and that parliament shall make laws to govern ratification of any treaty, conventions, agreements or other arrangements⁵³.

The National Environment Act operationalizes the above constitutional provisions by enacting that where Uganda is a party to any convention or treaty concerning the environment, after the convention or treaty has been ratified under article 123 of the Constitution, the minister may, by statutory order, with the approval of parliament by resolution: set out provisions of the convention or treaty; give the force of law in Uganda to the convention or treaty or any part of the convention or treaty required to be given force of law in Uganda; amend any enactment other than the constitution for the purpose of giving effect to the convention; make such other provisions as may be necessary for giving effect to the convention or treaty in Uganda, or for enabling Uganda perform its obligations or exercise its rights under the convention or treaty.⁵⁴

This section applies to any convention or treaty, whether adopted before or after the coming into force of the Act and whether Uganda became party to it before or after the coming into force of the Act.⁵⁵ All treaties in Uganda are ratified according to the procedure laid down by the Ratification of Treaties Act.⁵⁶ The Act provides for the following modes of ratification: ratification by cabinet; and ratification by parliament by resolution where the treaty has the effect of amending the Constitution, or where the treaty relates to armistice, neutrality or peace⁵⁷. In case the treaty requires amendment, the Attorney General has to certify in writing that the implementation of the treaty in Uganda would require amendment. The Attorney General's certificate is presented to cabinet and subsequently a motion is tabled in parliament. If satisfied, parliament passes a resolution for the ratification of the treaty. Where a cabinet ratifies a treaty, it must lay it before parliament as soon as possible. Instruments of ratification of a treaty concluded by cabinet or parliament are signed, sealed and deposited by the minister responsible for foreign affairs to the ministry in charge of all treaties and conventions. Therefore it follows from the foregoing that all

⁵³ Constitution of the Republic of Uganda, 1995 article 123.

⁵⁴ National Environment Act, Cap. 153 section 106(1)

⁵⁵ Subsection (2)

⁵⁶ Cap 204 Laws of Uganda 2000

⁵⁷ See section 2

international and regional environmental law instruments which has ratified and domesticated are binding on her and should be complied with in all current and future oil operations.

The above compliance requirements set good international and regional binding and soft standards not only for the environment generally but also the oil and gas industry in particular. Therefore Uganda should as far as is practicable aim at complying therewith. One of the major challenges of enforcing international law is its soft character. The law does not prescribe punitive reinforcements against violators. Even where such sanctions are prescribed, there may be no clear and/ or affordable system of pursuing remedies. In addition, international and regional tribunals require that before one can approach them he/she should have exhausted all available local remedies yet in some cases these are inaccessible due to structural bottlenecks. However all this can be overcome by domesticating those standards into local oil and gas legislation which should clearly highlight environmental standards, punishments for noncompliance and the procedures for pursuing remedies.

4.4 International Hard Law Principles

Uganda has ratified a number of binding international hard law risk management, environmental health and safety conventions and treaties which have significant implications for oil and gas exploration and production in Uganda. This is more so due to the fact that they have a force of law and Uganda is obliged to abide by the environmental health and safety standards enshrined there under. They include the following:

44.1 International Labour Standards on Occupational Safety and Health

The ILO Constitution sets forth the principle that workers should be protected from sickness, disease and injury arising from their employment. Yet for millions of workers the reality is very different. An estimated 2.3 million people die every year from work-related accidents and diseases. More than 160 million people suffer from occupational and work-related diseases, and there are 313 million non-fatal accidents per year. The suffering caused by such accidents and illnesses to workers and their families is

incalculable. In economic terms, the ILO has estimated that more than 4% of the world's annual GDP is lost as a consequence of occupational accidents and diseases.

Employers face costly early retirements, loss of skilled staff, absenteeism, and high insurance premiums due to work-related accidents and diseases. Yet many of these tragedies are preventable through the implementation of sound prevention, reporting and inspection practices. ILO standards on occupational safety and health provide essential tools for governments, employers, and workers to establish such practices and to provide for maximum safety at work. In 2003 the ILO adopted a global strategy to improve occupational safety and health which included the introduction of a preventive safety and health culture, the promotion and development of relevant instruments, and technical assistance. The ILO has adopted more than 40 standards specifically dealing with occupational safety and health, as well as over 40 Codes of Practice. Nearly half of ILO instruments deal directly or indirectly with occupational safety and health issues. The following are the selected relevant ILO instruments;

4.4.2 Occupational Safety and Health Convention, 1981 (No. 155) and its Protocol of 2002 The convention provides for the adoption of a coherent national occupational safety and health policy, as well as action to be taken by governments and within enterprises to promote occupational safety and health and to improve working conditions. This policy shall be developed by taking into consideration national conditions and practice. The Protocol calls for the establishment and the periodic review of requirements and procedures for the recording and notification of occupational accidents and diseases, and for the publication of related annual statistics.

4.4.3 Occupational Health Services Convention, 1985 (No. 161)

This convention provides for the establishment of enterprise-level occupational health services which are entrusted with essentially preventive functions and which are responsible for advising the employer, the workers and their representatives in the enterprise on maintaining a safe and healthy working environment.

4.4.4 Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)

This Convention aims at promoting a preventative safety and health culture and

progressively achieving a safe and healthy working environment. It requires ratifying States to develop, in consultation with the most representative organizations of employers and workers, a national

policy, national system, and national programme on occupational safety and health. The national policy shall be developed in accordance with the principles of Article 4 of the Occupational Safety and Health Convention, 1981 (No. 155), and the national systems and programmes shall be developed taking into account the principles set out in relevant ILO instruments. A list of relevant instruments is contained in the Annex to the Promotional Framework for Occupational Safety and Health Recommendation, 2006 (No. 197). National systems shall provide the infrastructure for implementing national policy and programmes on occupational safety and health, such as laws and regulations, authorities or bodies, compliance mechanisms including systems of inspection, and arrangements at the level of the undertaking. National programmes shall include time-bound measures to promote occupational safety and health, enabling a measuring of progress.

4.4.5 Radiation Protection Convention, 1960 (No. 115)

The objective of the Convention is to set out basic requirements with a view to protect workers against the risks associated with exposure to ionizing radiations. Protective measures to be taken include the limitation of workers' exposure to ionizing radiations to the lowest practicable level following the technical knowledge available at the time, avoiding any unnecessary exposure, as well as the monitoring of the workplace and of the workers' health. The Convention further refers to requirements with regard to emergency situations that may arise.

4.4.6 Occupational Cancer Convention, 1974 (No. 139)

This instrument aims at the establishment of a mechanism for the creation of a policy to prevent the risks of occupational cancer caused by exposure, generally over a prolonged period, to chemical and physical agents of various types present in the workplace. For this purpose, states are obliged to determine periodically carcinogenic substances and agents to which occupational exposure shall be prohibited or regulated, to make every effort to replace these substances and agents by non- or less carcinogenic ones, to prescribe protective and supervisory measures as well as to prescribe the necessary medical examinations of workers exposed.

4.4.7 Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No.148)

The convention provides that, as far as possible, the working environment shall be kept free from any risk and hazards due to air pollution, noise or vibration. To achieve this, technical measures shall be applied to enterprises or processes, and where this is not possible, supplementary measures regarding the organization of work shall be taken instead.

4.4.8 Asbestos Convention, 1986 (No. 162)

It aims at preventing the harmful effects of exposure to asbestos on the health of workers by indicating reasonable and practicable methods and techniques of reducing occupational exposure to asbestos to a minimum. With a view to achieving this objective, the convention enumerates various detailed measures, which are based essentially on the prevention and control of health hazards due to occupational exposure to asbestos, and the protection of workers against these hazards.

4.4.9 Chemicals Convention, 1990 (No. 170)

The Convention provides for the adoption and implementation of a coherent policy on safety in the use of chemicals at work, which includes the production, the handling, the storage, and the transport of chemicals as well as the disposal and treatment of waste chemicals, the release of chemicals resulting from work activities, and the maintenance, repair and cleaning of equipment and containers of chemicals. In addition, it allocates specific responsibilities to suppliers and exporting states.

4.4.10 The Vienna Convention on the Protection of the Ozone Layer (1985)

Uganda acceded to this Convention on 24th June 1988. The objectives of this Convention include the protection of human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer; adoption of agreed measures to control human activities found to have adverse effects on the ozone layer; to cooperate in scientific research and systematic observations; and to exchange information in the

legal, scientific and technical fields.⁵⁸ The Convention establishes the secretariat as the regulating body. It lists the chemical substances of natural and anthropogenic origin that are thought to have the potential to modify the chemical and physical properties of the ozone layer. These include: carbon substances like carbon monoxide (CO), carbon dioxide (CO₂), methane (CH₄); nitrogen substances including nitrous oxide (N₂O); and Chlorine substances. The Convention therefore, targets the reduction in the production and use of these chemicals by the parties. These emissions are eminent in the process of oil and gas production and therefore the actors should ensure that they don't exceed the conventional limits especially when it comes to gas flaring and venting.⁵⁹

4.4.11 Basel Convention on Control of Trans-boundary Movement of Hazardous Wastes and their Disposal (1989)

Uganda signed this Convention on 11th March 1999. The overall goal of the Basel Convention is to protect human health and the environment against the adverse effects which may result from the generation, trans-boundary movement and mismanagement of hazardous and other wastes. Other objectives include reducing trans-boundary movements of wastes to a minimum consistent with their environmentally sound and efficient management and controlling any permitted trans-boundary movement under the terms of the Convention. It also aims at minimizing the amount of hazardous wastes generated and ensuring their environmentally sound management and assisting developing countries in environmentally sound management of the hazardous and other wastes they generate.

In summary, the aim of the Basel Convention is to help reduce the trans-boundary movements and amounts of hazardous waste to a minimum, and to manage and dispose of these wastes in an environmentally sound manner. The observation of this convention is so critical because oil and gas activities in Uganda have contact with Lake Albert through which river Nile (Albert- Nile) flows to other countries of Africa such as Southern Sudan, Sudan and Egypt, meaning that if waste

⁵⁸ See the Convention summary

⁵⁹ “Flaring” means the combustion of hydrocarbons without the application of the resulting heat or gases for any useful purpose; and “gas venting” means the release of gas to the atmosphere (s.2 of the Petroleum (EDP) Act, 2013). The effect of these two actions is to introduce those dangerous gases into the atmosphere with all the dangerous constituents we have seen above. These elements include Carbon monoxide, carbon dioxide, Particulate Matter, Nitrogen oxide and sometimes sulphur oxides.

is not controlled trans-boundary pollution may occur yet this may be so costly not only to the peace but also the economy of Uganda.

4.4.12 Bamako Convention on the ban of the Import into Africa and the Control of Trans boundary Movement of Hazardous Wastes within Africa (1991)

The objectives of the Bamako Convention are to protect human health and the environment from dangers posed by hazardous wastes by reducing their generation to a minimum in terms of quantity and/or hazard potential. The Convention requires that each Party adopts and implements the preventive/precautionary approach to pollution problems which entails, inter alia, preventing the release into the environment of substances which may cause harm to humans or the environment without waiting for scientific proof regarding such harm.⁶⁰ These principles are without doubt applicable to the oil industry. Firstly, the NOGP also entrenches the precautionary principle. Therefore operators should take preventive measures to contain wastes produced especially produced water and other aqueous streams to ensure that they don't escape into trans boundary water catchments especially the Albert-Nile as this can culminate into trans boundary pollution.

4.4.13 Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997)

Uganda ratified the Kyoto Protocol on 25th March 2002. This protocol sets binding numerical targets for the limitation and reduction of greenhouse gas emissions especially carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, per fluorocarbons and sulphur hexafluoride for the industrialized and transitional countries during the period 2008-2012.⁶¹ No numerical targets for the reduction of emissions were set for the developing countries, but they are required to report on their emissions. The Kyoto protocol defines three international policy instruments (Kyoto mechanisms) which provide opportunities for annex 1 parties to fulfill their commitments cost effectively. These are: the Clean Development Mechanism (CDM); International Emission

⁶⁰ Article 3(d) of the Agreement.

⁶¹ Article 3 read together with Annex A to the Protocol

Trading (IET);⁶² and Joint Implementation (JI).⁶³ From these three mechanisms, it is CDM that applies to developing countries like Uganda because JI and IET are meant for industrialized countries.

Therefore the operators in the Albertine rift should follow the CDM to make plans to minimize greenhouse and ozone depleting emissions in the process of production due to start and it started in 2020. Key emissions that should be minimized include inter alia carbon dioxide; carbon monoxide; nitrogen oxide and methane.

4.4.1.4 Conclusion

In conclusion, the international hard law principles and conventions ratified by Uganda play a crucial role in shaping and regulating the oil and gas exploration and production industry in the country. These conventions, which cover a wide range of areas including occupational safety and health, environmental protection, and waste management, provide a robust legal framework aimed at ensuring the well-being of workers, protecting the environment, and minimizing the adverse effects of hazardous activities.

The International Labour Standards on Occupational Safety and Health, as well as conventions such as the Occupational Safety and Health Convention, 1981 (No. 155), and its Protocol of 2002, set out comprehensive guidelines for promoting safety and health in the workplace. Additionally, conventions like the Basel Convention and the Bamako Convention address the management and disposal of hazardous wastes, aiming to minimize their environmental impact.

⁶² IET allows annex 1 parties to exchange part of their assigned national emission allowances. IET implies that countries with high Marginal Abatement Costs (MACs) must acquire emission reductions from countries with low MACs. Under IET system, countries that have emissions units to spare can sell this excess capacity to countries that are over their targets. This mechanism of emission trade may be called carbon market because carbon dioxide is the most widely produced greenhouse gas

⁶³ Article 6 of the Kyoto Protocol provides for JI. JI allows industrialized countries to meet part of their required

cuts in greenhouse-gas emissions by paying for projects that reduce emissions in other industrialized countries.

The sponsoring governments receive credits that may be applied to their emissions targets; the recipient nations gain foreign investment and advanced technology (but not credit toward meeting their own emission caps; they have to do so themselves).

The effectiveness of these laws and conventions lies in their ability to translate legal obligations into practical measures and tangible improvements. Uganda's adherence to these international standards, coupled with effective enforcement mechanisms and proactive measures by industry stakeholders, is essential for achieving the intended outcomes.

However, the effectiveness of these conventions depends on various factors, including the political will to enforce them, the capacity for monitoring and compliance, and the cooperation of industry stakeholders. Challenges such as inadequate resources, lack of awareness, and competing interests may hinder the full implementation of these conventions.

In the context of the oil and gas industry in Uganda's Albertine rift, the observance of these international hard law principles is particularly critical. Given the potential environmental risks associated with oil and gas exploration and production, strict adherence to safety standards and environmental regulations is paramount. The conventions provide a framework for managing these risks and ensuring sustainable development.

In conclusion, while Uganda has ratified several international conventions related to risk management, environmental health, and safety, the effectiveness of these laws ultimately depends on their implementation and enforcement. By ensuring compliance with these conventions, Uganda can mitigate the negative impacts of oil and gas activities and promote sustainable development in the region.

4.5 International Soft Law Principles

As already noted, the corpus of international environmental law is composed of legally binding (hard law) principles as well as non-binding (soft law) principles. Soft law refers to those non-binding rules or instruments that interpret or inform our understanding of binding legal rules or represent promises that in turn create expectations about future conduct.⁶⁴ Obligations are, to a large extent, in the eye of the beholder. In a legal system in which enforcement relies on self-help by the law's subjects, those subjects' perceptions as to what an obligation requires effectively

⁶⁴ A. Guzman, *International Soft Law* at p.6

define the obligation. But legal texts are often imprecise and ambiguous, and thus reasonable minds may differ over what a legal obligation requires.⁶⁵

In practice, the development of “soft” law norms with regard to the protection of the human environment began immediately after the Stockholm Conference, one of the consequences of which was the creation of a special subsidiary organ of the UN General Assembly devoted to the promotion of both universal and regional environmental law. This body, the United Nations Environment Program (“UNEP”) (with Headquarters in Kenya), has played a leading role in the promotion of regional conventions aimed at, for example, protecting the environmental health and safety against pollution, prevention of desertification and sound exploitation of natural resources.

Although it was not supposed to develop in such a manner, UNEP has also evolved into a standing structure for negotiating draft resolutions sent, after their elaboration, to the General Assembly, where their contents have been either passed as is or expressly referred to in resolutions. For purposes of this paper, the following are considered:

4.5.1 The Stockholm Declaration (1972)

Stockholm principles were adopted at the United Nations Conference on the Human Environment, at Stockholm (5th-16th June 1972). The conference was convened due to the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment.⁶⁶ The Declaration lays a number of principles relevant to the oil and gas exploration processes in Uganda. These principles provide guidance ranging from integrated planning, access to information and citizen involvement, application of environmental health and safety sound technologies in oil exploration and production, control of pollution and the need to cater for future generations.

According to the declaration, man is both a creator and molders of his environment which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to

⁶⁵ Ibid

⁶⁶ Stockholm Declaration 1972, Preamble.

transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights the right to life itself.⁶⁷

The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments.⁶⁸ It is recognized that man has experience and goes on discovering, inventing, creating and advancing. In our time, man's capability to transform his surroundings, if used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment.

We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies, harmful to the physical, mental and social health of man, in the manmade environment, particularly in the living and working environment.⁶⁹ In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment.⁷⁰

International cooperation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, requires extensive cooperation among nations and action by international organizations in the common interest. The Conference called upon Governments and peoples to

⁶⁷ Ibid, Article 1

⁶⁸ Ibid, Article 2

⁶⁹ Ibid, Article 3

⁷⁰ Ibid, Article 4

exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

Accordingly, the declaration lays down the following principles: Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations; natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate; capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved; and man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development.

4.5.2 The Johannesburg Declaration (2002)⁷¹

This declaration was adopted at the World Summit on Sustainable Development in Johannesburg, South Africa (2nd to 4th September 2002). The summit was intended to reaffirm the world's commitment to sustainable development.⁷² The importance of this declaration to oil activities in Uganda is that it lays down principles of sustainable development which should inform the management of Uganda's oil and gas resources and proceeds there from. In fact this is one of the key pillars encapsulated in the National Oil and Gas Policy, 2008. Accordingly, the declaration recognizes that the future belongs to the children of the world and thus there is a need to ensure that through our actions they will inherit a world free of the indignity and indecency occasioned by poverty, environmental degradation and patterns of unsustainable development.⁷³

There is an urgent need to create a new and brighter world of hope.⁷⁴ Hence there is need to assume a collective responsibility to advance and strengthen the interdependence

and mutually reinforce

⁷¹ United Nations A/CONF.199/20

⁷² Preamble

⁷³ Article 3

⁷⁴ Article 4

pillars of sustainable development - economic development, social development and environmental protection - at the local, national, regional and global levels.⁷⁵ The delegates reiterate that thirty years ago, in Stockholm, they had agreed on the urgent need to respond to the problem of environmental deterioration; that ten years ago, at the United Nations Conference on Environment and Development, held in Rio de Janeiro they had agreed that the protection of the environment and social and economic development are fundamental to sustainable development, based on the Rio Principles.

To achieve such development, they adopted the global programme entitled Agenda 21 and the Rio Declaration on Environment and Development, to which we reaffirm commitment. The Rio Conference was a significant milestone that set a new agenda for sustainable development.⁷⁶ It recognizes that poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of, and essential requirements for sustainable development.⁷⁷ There is need to check all development activities which an impact on the environment because according to the delegates, the global environment continues to suffer. Loss of biodiversity continues, fish stocks continue to be depleted, desertification claims more and more fertile land, the adverse effects of climate change are already evident, natural disasters are more frequent and more devastating, and developing countries more vulnerable. That in fact air, water and marine pollution continue to rob millions of a decent life.⁷⁸

Therefore the Johannesburg Summit renewed the world efforts towards protecting the indivisibility of human dignity through decisions on targets, timetables and partnerships, to speedily increase access to such basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity. At the same time, the members of the summit committed to work together to help one another gain access to financial resources, benefit from the opening of markets, ensure capacity- building, use modern technology to bring about development and make sure that there is technology transfer, human resource development,

- ⁷⁵ Article 5
- ⁷⁶ Article 8
- ⁷⁷ Article 11
- ⁷⁸ Article 13

education and training to banish underdevelopment forever. Therefore following principles of sustainable development laid in the foregoing declaration, the oil resources should be exploited having regard not only to the interests and aspirations of today's Uganda but even the Uganda of tomorrow. This calls for environmentally sound exploration and production and a clear national reinvestment strategy in resources that can survive the oil sector and support the economy long after oil production has ceased.

4.5.3 United Nations Environment Program (UNEP)

With regards to the environmental health and safety impacts management, Exploration and Production Forum and UNEP (1997) have suggested that while host governments seek to understand the environmental impacts of the industry and put in place environmental laws to regulate the activities of the oil companies, the management of the oil companies must also do their part to institute an Environmental Health and Safety (HSE) management system.

Host Governments ought to develop their own comprehensive HSE policy manuals. Exploration and Production Forum and UNEP (1997) also suggested for effective application of environmental health and safety legislations host governments are required to appropriate international and national laws, regulations and guidelines, coherent procedures for decisions on projects/activities, legislation with clearly defined responsibilities and appropriate liabilities, enforceable standards for operations, appropriate monitoring procedures and protocols, performance reporting, adequately funded and motivated enforcement authorities, existence of adequate consultation and appeal procedures, appropriate sanctions and political will for their enforcement.⁷⁹

Equally importantly, Exploration and Production Forum and UNEP (1997) identified examples of infrastructure needed for environmental protection and these include the following: Policy formulation and regulations, Baseline environmental surveys, Assessment and approvals, Inspection, monitoring, enforcement, Services, water, power, waste disposal, Emergency response, Logistics and transportation, External supplies/services, construction, materials,

⁷⁹ Op cit 74 at 10

engineering, consultants, Technical services, laboratories, laboratory supplies, and equipment's, Training institutions, standards associations.⁸⁰

In addition to risk assessment and risk management, provision of health insurance, occupational health services (in the form of medical care and rehabilitation), workplace counseling for accident victims, safety training, and relevant employee assistance programmes are all needed. Similarly, Factories Inspectorate, and the Fee Zone Board together with the National Fire Service and National Occupational Health Unit should develop a Health and Safety Performance Framework for periodic workplace safety audits and inspections. This means host governments should include health and safety performance as one of the performance metrics they use to assess companies.⁸¹

4.5.4 The Rio Declaration (1992)

In the view of the UN General Assembly, human beings are at the centre of concerns for sustainable development and they are entitled to a healthy and productive life in harmony with nature⁸². States have in accordance with the UN Charter and principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies and the responsibility to ensure that the activities within their jurisdiction don't cause danger to other states or areas beyond the limits of national jurisdiction.⁸³ In order to achieve sustainable development, environmental protection should constitute an integral part of the development process and should not be considered in isolation of it.⁸⁴ According to the Declaration, environmental issues are best handled with the participation of all concerned citizens at the relevant level. At the national level each individual should have appropriate access to information concerning the environment that is held by public authorities including information on hazardous materials and activities in their communities and the opportunity to participate in decision making processes. States should facilitate and encourage public awareness and participation by making information widely available.⁸⁵

⁸⁰ Ibid at 11

⁸¹ Ibid

⁸² Principle 1

⁸³ Principle 11

⁸⁴ Principle IV

⁸⁵ Principle X

In addition, there should be provided effective access to judicial and administrative proceedings including redress and remedy. States are also called upon to enact effective environmental legislation, and the environmental standards, management objectives and priorities should reflect the environment and development context to which they apply. This is because standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries especially developing countries.⁸⁶ Regarding compensation, states are called upon to develop national law regarding liability and compensation for victims of pollution and other environmental damage.

About Trans boundary pollution, states are duty bound to effectively cooperate and discourage or prevent the relocation and transfer to other states of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.⁸⁷ In order to protect the environment, the precautionary approach should be widely applied by countries according to their capabilities such that where there are threats of serious irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost effective measures to prevent environmental degradation.⁸⁸ National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter shall in principle bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment⁸⁹. Most importantly, Environmental Impact Assessment as a national instrument should be undertaken for proposed activities that are likely to have a significant adverse impact on the environment, being subjected to a decision of a competent national authority.

The importance of this declaration to oil activities in Uganda is that it lays down principles of sustainable development which should inform the management of Uganda's oil and gas resources and proceeds there from. In fact this is one of the key pillars encapsulated in the National Oil and Gas Policy, 2008. Accordingly, the declaration recognizes that the future belongs to the children of the world and thus there is a need to ensure that through our actions they will inherit a world

⁸⁶ Principle XI

⁸⁷ Principle XIV

⁸⁸ Principle XV

⁸⁹ Principle XVI

free of the indignity and indecency occasioned by poverty, environmental degradation and patterns of unsustainable development.⁹⁰ There is an urgent need to create a new and brighter world of hope. Hence there is need to assume a collective responsibility to advance and strengthen the interdependence and mutually reinforce pillars of sustainable development, economic development, social development and environmental protection - at the local, national, regional and global levels.

4.5.5 The Rio Declaration (2012)⁹¹

This declaration originates from an Annex to the note verbal dated 27th June 2012 from the Permanent Mission of Chile to the United Nations, addressed to the Secretary-General of the United Nations Conference on Sustainable Development. It is a Declaration on the application of Principle 10 of the Rio Declaration on Environment and Development, championed by the Governments of Chile, Costa Rica, Dominican Republic, Ecuador, Jamaica, Mexico, Panama, Paraguay, Peru and Uruguay. The declaration focuses on principle 10 of the Rio Declaration, 1992, which has significant implications for oil and gas exploration and production in Uganda. It re-echoes Principle 10 of the Rio Declaration: environmental issues are best handled with the participation of all concerned citizens. To this end, each individual should have appropriate access to information, the opportunity to participate in decision-making processes and effective access to judicial and administrative proceedings.

The declaration thus affirms that to comply with this Principle, States should facilitate and promote education, awareness-raising and public participation by making information widely available and providing effective access to the proceedings outlined above. It also recognizes and affirms that the rights of access to information, participation and justice regarding environmental risks are essential for promoting sustainable development, democracy and a healthy environment.⁹² These rights provide many benefits, such as helping to make better decisions and implement them more effectively; involving the public in environmental issues; furthering accountability and transparency in governance; and helping to change production and consumption patterns.

⁹⁰ Preamble

⁹¹ United Nations A/CONF.216/13

⁹² Ibid

Environmental challenges faced on a national, regional and global level require far more concerted, proactive and effective action from the government, civil society, international community and organizations with willingness to explore in detail various ways to enhance the exercise of principle 10 rights with the active involvement of the key stakeholders and society as a whole.⁹³

Therefore, bearing in mind that the United Nations Conference on Sustainable Development calls for firm political will to enable us to face existing and emerging challenges, it is declared that commitments must be made to ensure the full exercise of rights of access to information, participation and justice regarding environmental issues as enshrined in accordance with Principle 10 of the Rio Declaration of 1992.⁹⁴ Therefore as provided in the declaration hereinbefore and indeed as one of the key pillars of sound environmental management recognized in the NOGP, all citizens in oil affected areas should participate in the making of decisions whose implementation will have an impact on their environment. The citizens should be given access to relevant oil related information especially on establishment of significant petroleum facilities such as refineries, storage tanks and pipelines, and their views should be taken account.

4.5.6 Conclusion

In conclusion, the international soft law principles outlined, such as the Stockholm Declaration (1972), the Johannesburg Declaration (2002), the Rio Declaration (1992), and its subsequent reaffirmation in 2012, all play a significant role in guiding the management of Uganda's oil and gas resources. These soft law principles emphasize the importance of sustainable development, environmental protection, public participation, and access to information and justice. However, their effectiveness in practice depends on several factors.

Firstly, these soft law principles provide a framework for the sustainable exploitation of natural resources, including oil and gas, by emphasizing the need to balance economic development with environmental protection. They call for integrated planning, sound environmental technologies, and the safeguarding of natural resources for present and future generations. In the context of Uganda's oil and gas sector,

adherence to these principles is crucial for minimizing environmental degradation and ensuring the long-term sustainability of the industry.

⁹³ Ibid

⁹⁴ Ibid

Secondly, these principles underscore the importance of public participation and access to information in decision-making processes related to oil and gas activities. Citizens have the right to be informed about the potential environmental impacts of such activities and should be given the opportunity to voice their concerns. This transparency and engagement are essential for building trust between stakeholders and fostering sustainable development.

However, the effectiveness of these soft law principles depends on their implementation and enforcement. In many cases, soft law lacks binding legal force, making compliance voluntary and enforcement challenging. Without strong political will and effective enforcement mechanisms, these principles may remain aspirational rather than operational.

Moreover, the complexity of the oil and gas industry, coupled with competing interests and power dynamics, can complicate the application of these principles. In Uganda, where economic development is a priority, there may be pressure to prioritize short-term gains over long-term sustainability.

To enhance the effectiveness of these soft law principles, Uganda should take concrete steps to incorporate them into national legislation and policies. This includes developing comprehensive environmental laws, establishing regulatory bodies, and providing adequate resources for monitoring and enforcement. Additionally, public awareness and capacity-building efforts are needed to ensure that citizens understand their rights and actively participate in decision-making processes.

In summary, while international soft law principles provide valuable guidance for the management of Uganda's oil and gas resources, their effectiveness depends on their translation into tangible actions and policies at the national level. By incorporating these principles into national legislation and fostering transparency, public participation, and environmental stewardship, Uganda can ensure the sustainable development of its oil and gas sector while minimizing its environmental impact.

4.6 Regional Law Standards

4.6.1 The Treaty of the East African Community (1999)

The members of the East African Community (now East African Cooperation) agreed to have a concerted effort in matters of development, law development and enforcement, and environmental protection and conservation.⁹⁵ The above objectives are encapsulated in the EAC Treaty one of whose main objectives is to promote sustainable utilization of the natural resources of the partner states. It calls upon states parties to ensure sustainable management of the environment for present and future generations⁹⁶ and sustainable management of natural resources.⁹⁷ These objectives indeed tally with those emphasized by the Oil and Gas Policy 2008.

This treaty establishes the East Africa Community. It has important provisions for environmental management especially article 151(1) which provides that partner states undertake to conclude such protocols as may be necessary in each area of cooperation which shall spell out the objectives, scope of and institutional mechanisms for cooperation and integration. Article 111 and 112 of the EAC Treaty provide for conservation and management of environmental and natural resources.⁹⁸ Uganda as a member of the EAC is therefore obliged to comply with the principles of sound environmental management as prescribed in the Treaty while undertaking all development activities, which include though not limited to oil exploration and production. For example she should ensure that there is consultation and cooperation on the technologies to be adopted and prevent Tran's boundary disposal of oil related pollutants within the region.

4.6.2 The EAC Protocol on Wildlife Conservation and Law Enforcement (1999)

The protocol notes that member states have the sovereignty to manage their wildlife resources and the corresponding responsibility to sustainably use and conserve these resources⁹⁹. Article 2(i) stipulates that each party is required to ensure the conservation and sustainable use of wildlife resources in its jurisdiction. Each State is also required to ensure that activities in its jurisdiction

⁹⁵ E. Kaweesi Op cit

⁹⁶ Article 151

⁹⁷ Article 111

⁹⁸ Article 114

⁹⁹ The Preamble

or control do not cause damage to the wildlife resources of other states or in areas beyond the limits of national jurisdiction. The observation of this protocol is very instrumental in assessing environmental law compliance of the oil activities in the Albertine rift because this is the place which harbors Uganda's major wildlife National Parks and game reserves¹⁰⁰, some of which are shared among member states.

4.6.3 The EAC Protocol on Environment and Natural Resources Management (2006)

This is a protocol to the EAC treaty. It is a protocol that makes specific provisions for environmental and natural resources management in the East Africa Community (now East African Corporation). Article 2 provides for the application of the Protocol by partner states and cooperation in the management of the environment and natural resources within their jurisdiction, including Tran's boundary ecosystems and natural resources. Article 39 provides that each partner state shall take appropriate measures within its competence, including the adoption of laws and regulations, administrative and enforcement measures, to ensure compliance with this protocol. The Protocol under Article 19 requires the Partner States to promote the joint harnessing of hydropower and other potential renewable energy sources and petroleum, geology and hydrocarbon potential of the Community. This therefore means that the oil in Uganda should be exploited in the perspective of complying with the protocol since failure to take heed to the guidelines may cost not only Uganda but the entire East African community.

4.6.4 The Environmental Assessment Guidelines for Shared Ecosystems in East Africa (2007)

These environmental assessment guidelines are intended to rationalize the management, exploitation and use of natural resources in shared ecosystems amongst the EAC Partner States. They apply to all activities within the context of a trans-boundary area or cross-border area between any or all of the five East African countries, which is considered as the potential impact area for a specified activity.

¹⁰⁰ These include Queen Elizabeth National Park, Semliki Valley National Park, Semliki Valley Wildlife Reserve, Rwenzori National Park, Mgahinga Gorilla National Park, and Murchison Falls National Park and others.

4.6.5 The IGAD (Intergovernmental Authority on Development) Agreement (1996)

The ultimate goal of this organization is to achieve economic integration and sustainable development. It has the following objectives: to promote joint development strategies and gradually harmonize micro-economic policies and programmes in the social, technological and scientific fields; harmonize policy with regard to trade, customs, transport, communications, agriculture and natural resources, and promote free movement of goods, services and people within the region; create enabling environment for foreign cross-boundary and domestic trade and investment; initiate and promote programmes to achieve regional food security and sustainable development of natural resources and environmental protection to encourage and assist efforts of member states to collectively combat drought and natural as well as man-made disasters and their consequences, and to develop a coordinated and complimentary infrastructure in the area of transport, telecommunication and energy in the region. The environment created by this agreement is very important for production in Uganda especially the midstream elements of distribution and marketing. For example it is within the framework of this agreement that proposals are underway to construct a pipeline network connecting Uganda to East African markets of Rwanda and Tanzania, and development of a railway line connecting all the five countries.

4.6.6 Conclusion:

In conclusion, the regional law standards outlined, such as the Treaty of the East African Community (1999), the EAC Protocols on Wildlife Conservation and Law Enforcement (1999), Environment and Natural Resources Management (2006), as well as the Environmental Assessment Guidelines for Shared Ecosystems in East Africa (2007), and the IGAD Agreement (1996), all contribute significantly to the regulation and management of Uganda's oil and gas resources within the broader East African context.

These regional legal instruments emphasize the importance of sustainable development, environmental protection, and transboundary cooperation, reflecting similar principles found in international soft law. However, their effectiveness in practice depends on several factors.

Firstly, the regional law standards provide a framework for cooperation among East African countries, ensuring that environmental management and natural resource utilization are conducted

sustainably and harmoniously. This is particularly important in Uganda's case, given its shared ecosystems and wildlife resources with neighboring countries.

Secondly, these legal instruments underscore the need for each member state to adopt laws, regulations, and administrative measures to ensure compliance with regional environmental standards. In the context of Uganda's oil and gas sector, adherence to these standards is essential for mitigating environmental risks and promoting responsible resource management.

However, the effectiveness of these regional laws depends on their implementation and enforcement by member states. Without strong political will and effective enforcement mechanisms, these standards may remain aspirational rather than operational. Additionally, the complex nature of transboundary issues and competing interests among member states can complicate the application of these laws. To enhance the effectiveness of regional law standards, East African countries, including Uganda, should prioritize the incorporation of these standards into national legislation and policies. This includes strengthening regulatory frameworks, establishing monitoring and enforcement mechanisms, and promoting public awareness and participation in environmental decision-making processes. Moreover, enhanced cooperation and coordination among member states are crucial for addressing transboundary environmental challenges associated with oil and gas activities. This requires mechanisms for information sharing, joint monitoring, and collaborative decision-making.

In summary, while regional law standards provide a valuable framework for the regulation and management of Uganda's oil and gas resources, their effectiveness hinges on their implementation and enforcement by member states. By integrating these standards into national policies and fostering regional cooperation, Uganda can ensure the sustainable development of its oil and gas sector while minimizing environmental risks and promoting transboundary harmony.

4.7 National Framework

Uganda has introduced a national and institutional framework to ensure that the oil and

gas industry complies with risk management and environmental health and safety as will be discussed below. The legal regime governing the oil and gas industry in Uganda is constituted by locally tailored policy and legislative compliance requirements. The major policy and legislative environmental health and safety law compliance requirements were developed after 1994 with the

formulation of the National Environment Action Plan. This saw the development of the major National Environment Management Policy and the National Environment Act as Uganda's framework legislation. It is under these that subsequent sectorial policy and legislation have developed. Legislation covered in this chapter includes the Constitution, major oil and gas law and other relevant environmental health and safety laws. Compliance with these policy and legislative aspirations and standards will enable Uganda develop an environmental health and safety sound and sustainable oil and gas sector. This chapter is organized into three sections. The first section discusses the compliance standards under the National Policy Framework for oil and gas, the second section discusses the national legal framework and the third section analyses the institutional framework responsible for ensuring compliance with environmental health and safety standards in the oil and gas industry in Uganda.

4.8 Compliance risk management standards under the National Legal Framework for Oil and Gas

4.8.1 The Constitution of the Republic of Uganda (1995) (as amended)

The 1995 Constitution of the Republic of Uganda has elaborate provisions regarding environmental management. In the National Objectives and Directive Principles of State Policy, the Constitution requires the Government of Uganda to take measures to protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda.¹⁰¹ The government is also required to promote and implement energy policies that will ensure that people's basic needs and those of environmental preservation are met. It is further required to promote the rational use of natural resources so as to safeguard and protect the bio- diversity of Uganda. The Constitution also requires government to promote a good water management system at all levels;¹⁰² promote sustainable development and public awareness of the need to manage land, air, water resources in a balanced and sustainable manner for the present and future generations and to prevent or minimize damage and destruction to land, air and water resources resulting from pollution or other causes.¹⁰³

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- 101 Principle XIII
 - 102 Principle XXI
 - 103 Principle XXVII

In the substantive provisions, the Constitution has a specific provision for the right to a clean and healthy environment. Under Article 39, every Ugandan has a right to a clean and healthy environment. This provision is reiterated under section 3 of the National Environment Act Cap 153; and section 5(2) of the National Forestry and Tree Planting Act No. 8 of 2003 which all provide for the right to clean and healthy environment. The breach of the right entitles any person or responsible body to bring an action in furtherance of the right. The Constitution further imposes on the State and the citizens the duty to create and protect a clean and healthy environment¹⁰⁴ which is echoed in the Occupational Health and Safety Act of 2006. The above provisions imply that a person whose right to clean and healthy environment is violated due to oil exploration and production may take the company responsible or government to court to seek redress¹⁰⁵. The constitution vests the ownership of all minerals and petroleum in the government which is to hold the same on trust for the people of Uganda. This introduces the public trust doctrine in the management of oil and gas resources¹⁰⁶ and this was courtesy of the Constitutional (Amendment) Act of 2005.

This Amendment Act has significant implications for oil and gas management and control, and sharing of royalties from oil and gas. Part XIII and specifically section 43 amends article 244 of the Constitution by replacement. Accordingly, the entire property in and the control of all minerals and petroleum in, on or under any land or waters in Uganda are vested in the Government on behalf of the Republic of Uganda. This is however subject to article 26 of the Constitution which emphasizes the need to fairly and adequately compensate surface land owners before the Government can take over the petroleum rich lands. Parliament is mandated to make laws regulating the exploitation of minerals and petroleum; the sharing of royalties arising from mineral

¹⁰⁴ Article 17 (I) (J)

¹⁰⁵ In the case of *Environmental Action Network v. British American Tobacco*, the applicant brought an application under article 50(2) of the 1995 Constitution and rule 3 of the Fundamental Rights and Freedoms (Enforcement Procedure) Rules, for a court order compelling the respondent,

a manufacturer of “dangerous products” (cigarettes), to fully and adequately warn consumers of the health risks associated with its products. Although the order was ultimately denied, the court did confirm the *locus standoff* the applicant, that article 50(2) enabled individuals to bring public interest matters to court on behalf of those who were not in a position to do so.

¹⁰⁶ Article 244

and petroleum exploitation; the conditions for payment of indemnities arising out of the exploitation of minerals and petroleum and conditions regarding the restoration of derelict lands. Some of the laws hereinafter have therefore been enacted under this amendment.

4.8.2 Petroleum (Exploration, Production and Development) Act 2013 (PEPD)

The Petroleum (Exploration, Production and Development) Act came into force in 2013 and it is the primary law responsible for the management and regulation of Oil and Gas activities in Uganda. The major purpose of this Act is to operationalize the National Oil and Gas Policy and to achieve this many strategic approaches are identified: establishing an effective legal framework and institutional structures to ensure that the exploration, development and production of petroleum resources is carried out in a sustainable manner that guarantees optimum benefits for all Ugandans, both the present and future generations and creating a conducive environment for the efficient management of petroleum resources. The Act lays down a number of risk management, environmental, health and safety standards which include the following;

The Act enjoins players to conduct petroleum activities in a manner to enable high level of safety and maintain the level in accordance with technology developments, best industry practices, Occupational Health and Safety Act, 2006 and other laws.¹⁰⁷ The Act further stipulates that the lead agency responsible for the wellbeing of health and safety especially around the Oil rigs is the Ministry of Labour and social Development. This is in line with the United National Environmental Program requirements cited above.

The licensee is further required to identify the hazards and evaluate the risks associated with any work performed in the course of petroleum activities and steps that need to be taken to comply with provisions of the Act¹⁰⁸ as far as reasonably practicable to prevent the exposure of the persons to hazards.

The operator has duty to take precautions as a necessary to ensure the safety of any person employed or otherwise present at or in the vicinity of any installation in accordance with Occupational Health and Safety Act, 2006 and to protect the environment and natural resources,

¹⁰⁷ Section 140

¹⁰⁸ Ibid

including taking precautions to prevent pollution and ensure that persons are duly informed of those precautions.¹⁰⁹

All participants in petroleum activities have an obligation at all times to maintain efficient emergency preparedness with a view to dealing with accidents and emergencies that may lead to personal injury, pollution or major damage to property.¹¹⁰The licensee also has a duty to ensure that necessary measures are taken to prevent harmful effects and environmental restoration.

The Act calls for security measures to avoid attacks against facilities and investors must have contingency plans to deal with such attacks at all times.¹¹¹In case of accident licensee is required to suspend petroleum activities for as long as the requirement of prudent operations warrants in line with the international and regional standards on environmental health and safety.

The other strategic approaches include the establishment of institutions to manage the petroleum resources and regulate petroleum activities; regulate petroleum activities, including licensing, exploration, development, production and cessation of activities or decommissioning; ensure public safety and protection of public health and the environment in oil activities; support the development of state participation and national content in the petroleum industry and ensure transparency and accountability in all activities regulated under the Act.¹¹²

The Act calls upon all actors to carry on their operations in compliance with environmental principles. In this vein, a licensee or any other person who exercises or performs functions, duties or powers under the Act in relation to petroleum activities shall comply with environmental principles and safeguards prescribed by the NEA and other applicable laws.¹¹³ A licensee is obliged to ensure that the management of production, transportation, storage, treatment and disposal of waste arising out of petroleum activities is carried out in accordance with environmental principles prescribed under the NEA and other applicable laws. To effectuate this, a licensee is required to contract a separate entity to manage the transportation, storage, treatment

¹⁰⁹ Section 141

¹¹⁰ Section 142

¹¹¹ Section 143

¹¹² Section 1

¹¹³ Section 3

or disposal of waste arising out of the petroleum activities. However the licensee shall remain responsible for all the activities of the entity so licensed. A person contracted by the licensee shall not undertake the above activities without obtaining a licence issued by the NEMA. The Act makes provision for punitive reinforcements where one violates the environmental principles therein contained. Accordingly, a person who carries on the production, transportation, storage, treatment or disposal of waste arising out petroleum activities without a licence or fails to comply with the conditions prescribed in the licence commits an offence and is liable on conviction to a fine not exceeding one hundred thousand currency points (2 Billion Uganda Shillings) or imprisonment for a term not exceeding ten years or both.

The Act also mandates the NEMA to make regulations for the management of production, transportation, storage, treatment and disposal of waste arising out of petroleum activities. These regulations shall prescribe, in case of contravention, penalties not exceeding a fine of five thousand currency points or imprisonment for a term not exceeding ten years or both, and may also prescribe that the court which convicts the person shall order the forfeiture of anything used in the commission of the offence. However these regulations shall have to first be laid before parliament for approval. A person shall not be granted a petroleum production licence unless their development plan takes proper account of best petroleum industry practices and safety factors¹¹⁴. This is however largely vague because the Act does not satisfactorily define what amounts to “best petroleum industry practices”.¹¹⁵

The petroleum production licence granted under the Act must expressly require the licensee to undertake Environmental Impact Assessment prior to commencing production activities¹¹⁶. The minister is also empowered to make regulations relating inter alia to the conservation and prevention of the waste of natural resources, whether petroleum or otherwise, and the carrying out of environmental impact assessments for that purpose¹¹⁷ Regarding access to information by the

¹¹⁴ Section 74 (1) (B)

¹¹⁵ The Act merely defines “best petroleum industry practices” to mean the best available practices that are generally accepted as good, safe, transparent and efficient in carrying out petroleum activities and that can be applied globally under similar circumstances, something which leaves a lot to be desired since environmental compliance is best achieved through strong local regulation.

¹¹⁶ Section 76 (1) (f)

¹¹⁷ Section 183 (3) (f)

public, the Act empowers the Minister, in accordance with the Access to Information Act, 2005, to make available to the public details of all agreements, licenses and any amendments to the licenses or agreements whether or not terminated or valid; details of exemptions from, or variations or suspensions of the conditions of a licence; approved field development plan; and all assignments and other approved arrangements in respect of a licence. The information referred to above shall be available to any person upon payment of the prescribed fee.¹¹⁸ This seems to be a good guarantee for transparency and accountability in the sector. However it has been restricted by the stringent confidentiality provisions under S152 and other express restrictions in S153.

4.8.3 The National Environment Act, 2019

The National Environment Act (NEA) is Uganda's framework environmental law and its central tenet is sustainable environmental management. It prescribes a set of environmental management principles which include:¹¹⁹ to assure all people living in the country the fundamental right to an environment adequate for their health and well-being; encourage the maximum participation by the people of Uganda in the development of policies, plans and processes for the management of the environment; use and conserve the environment and natural resources of Uganda equitably and for the benefit of both present and future generations, taking into account the rate of population growth and the productivity of the available resources; conserve the cultural heritage and use the environment and natural resources of Uganda for the benefit of both present and future generations; maintain stable functioning relations between the living and nonliving parts of the environment through preserving biological diversity and respecting the principle of optimum sustainable yield in the use of natural resources and reclaim lost ecosystems where possible and reverse the degradation of natural resources.

Further principles include, to establish adequate environmental protection standards and to monitor changes in environmental quality; publish relevant data on environmental quality and resource use; require prior environmental assessments of proposed projects which may significantly affect the environment or use of natural resources; ensure that environmental awareness is treated as an integral part of education at all levels; ensure

that the true and total costs of environmental pollution

¹¹⁸ Section 151

¹¹⁹ The National Environment Act, Section 2

are borne by the polluter; and to promote international cooperation between Uganda and other states in the field of the environment.¹²⁰ It establishes the National Environment Management Authority (NEMA) as a body responsible for coordinating, monitoring and supervising all environmental matters in Uganda.¹²¹ The NEA confers on every person has a right to a healthy environment and obligates every person to maintain and enhance the environment, and where need arises inform the authority or the local environment committee of all activities and phenomena that may affect the environment significantly.¹²²

In furtherance of the right to a healthy environment and enforcement of the duty to maintain and enhance the environment, the authority or the local environment committee is entitled to bring an action against any other person whose activities or omissions have or are likely to have a significant impact on the environment to prevent, stop or discontinue any act or omission deleterious to the environment; compel any public officer to take measures to prevent or to discontinue any act or omission deleterious to the environment; require that any ongoing activity be subjected to an environmental audit or require that any ongoing activity be subjected to environmental monitoring or request a court order for the taking of other measures that would ensure that the environment does not suffer any significant damage. NEMA or the local environment committee proceeding is entitled to bring an action notwithstanding that the person cannot show that the defendant's act or omission has caused or is likely to cause any personal loss or injury.

The Act further requires that Environmental Impact Assessment be undertaken by a developer where the lead agency, in consultation with the executive director, is of the view that the project may have an impact on the environment; is likely to have a significant impact on the environment; or will have a significant impact on the environment.¹²³ The NEA prescribes the requirement to observe environmental quality standards. In this vein, it prohibits any person from carrying out any activity which is likely to pollute the air, the water or the land in excess of standards or guidelines prescribed or issued under Act. Thus a person requires a pollution licence to carry out a polluting activity. A pollution licence cannot be issued unless the licensee is

capable of

¹²⁰ Ibid section 5

¹²¹ Ibid Sections 8 and 9

¹²² Section 3

¹²³ Section 111

compensating the victims of the pollution and cleaning the environment in accordance with the “polluter pays” principle.

NEA requires NEMA to establish standards for air quality,¹²⁴ water quality,¹²⁵ the discharge of effluent into water, the control of noxious smells,¹²⁶ the control of noise, vibration and pollution,¹²⁷ soil quality¹²⁸ and standards for minimization of radiation.¹²⁹ Section 54 prohibits any activity not being a traditional activity, in a wetland without the prior written approval of the Authority given in consultation with the lead agency responsible. Section 68 of the National Environment Act provides for the protection of natural heritage sites. It provides that NEMA, with the assistance of Local Environment Committees, District Environment Committees and the lead agency, identify those elements, objects and sites in the natural environment which are of cultural importance to the various peoples of Uganda.

4.8.4 Occupational Safety and Health Act (2006)

The Act was intended to consolidate, harmonize and update the law relating to occupational safety and health; repeal the Factories Act Cap.220 and provide for connected matters.¹³⁰ The Act makes provisions for the protection of the health, safety and welfare, and provision of appropriate training of persons employed in work places. Section 18 (1) of the Act requires the employer to monitor and control the release of dangerous substances into the environment.

Thus where there is major handling of chemicals or any dangerous substance which is liable to be airborne or to be released into rivers or lakes or soil and which are a danger to the animal and plant life, it shall be the duty of the concerned employer to arrange for equipment and apparatus to monitor the air, soil, and water pollution and to arrange for the actual monitoring of these mediums, with a view of rendering them safe from the dangerous undertaking. Subs. (2) states that the records of monitoring in subsection (1) shall be kept and made available to the inspector. These provisions

¹²⁴ Ibid Section 103

¹²⁵ Ibid Section 52 and 53

¹²⁶ Ibid Section 104

¹²⁷ Ibid Section 107

¹²⁸ Ibid Section 108

¹²⁹ Ibid Section 31

¹³⁰ Long Title

are applicable to all Oil Companies and Mining Companies in respect of Oil and Gas exploration and mining because of the danger they expose to the environment and human safety.

4.8.5 Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016

One of the regulations aimed at promoting health and safety is the Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016. It confers a responsibility upon a licensee and any person working for him or her to ensure compliance to the Act as well as regulations and any other applicable law. This presupposes that a licensee must ensure that the operations undertaken do not endanger life.

Regulation 4 of the Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 provides general duties to a licensee which include preventing incidents, accidents and hazards and limit their consequences to human health and environment, prevent and reduce the number of accidents among employees that are likely to result into loss of time for work, disability or fatality to the employees, to ensure that occupational safety and health in all midstream operations is satisfactory for the health and safety of employees and the environment, to ensure that the level of safety and health is at all times concurrent with the technological development and to comply with the requirements under the Occupational Safety and Health Act, 2006.

Regulation 5(2) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 provides that the licensee shall ensure that process and auxiliary facilities are free from failure during operation that is likely to lead to hazardous situations, incidents or accidents. Regulation 6(a) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 requires the licensee to comply with requirements of the Occupational Safety and Health Act, 2006 and in addition ensure that the management of health, safety and the environment comprises the operations,

resources, processes and Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 organization necessary to ensure prudent operations and continuous improvement.

Regulation 7(a) Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 provides that the licensee shall ensure that all offices, warehouses and process buildings within a facility are constructed in accordance with standards approved by the Authority and best petroleum industry practices. Premises safe Regulation 7(b) Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 requires a licensee to ensure that the laboratory building construction takes into account the safety of employees and provision of adequate ventilation and measures for proper disposal of waste. Regulation 7(d) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 requires the licensee to ensure that the emergency alarm system and evacuation programs within the facility conform to standards approved by the Authority and best petroleum industry practices.

Regulation 8(1) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 confers a responsibility on a licensee to ensure that risk assessment on health, process, safety and working environment is planned, carried out and used. Regulation 8(2) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 provides that the risk assessment carried out under Sub regulation (1) shall identify the likely incidents, hazards or accidents that may occur during midstream operations or in the operations of a facility and their consequences to human life , environment and the facility.

Regulation 16 of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 requires a licensee to reduce risk by selecting technical, operation and organizational solutions that reduce the probability of harm, errors, hazard,, incidents or accident situations that may occur, establish barriers among other measures. Regulation 19 of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 requires the licensee to take measures to protect the community where the facility is located or where the midstream operation is taking place from

impacts of a facility or midstream operations during the construction, operation and decommissioning of facilities. Regulation 20 of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 requires the licensee to put in place safety signs at the entrance to rooms, zone or equipment where employees are likely

to be exposed to incidents, hazards or accidents at the restricted areas, ensure that there is adequate response and rescue against incidents, hazards or accidents among other measures.

Regulation 21(1) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 provides that the licensee shall ensure that every employee has the competence necessary to carry out his or her duties in accordance with the occupational Safety and Health Act 2006 and the regulations. Regulation 21(2) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 provides that an employee shall have training in occupational health and safety and in handling incidents, hazards and accidents. John Ridley has noted that the training may take the following form; At induction training for all employees would cover all aspects of employment including: fire precautions and evacuation drill, details of company products, tour of the premises to identify location of facilities, occupational health facilities such as first aid arrangements, accident prevention activities, safety rules to be obeyed, fire and security arrangements, who to contact if in doubt. In respect to a contractor and his employees: the training would include local safety rules to be obeyed, any special hazards in their area of work, safe systems of work and permit to work systems procedures, emergency and evacuation procedures, allowed access routes, permitted use of welfare facilities, canteen, toilets, first aid to mention but a few.

Ongoing health and safety training for all employees: would include reaffirmation of safety rules, risks likely to be met in the work and techniques for avoiding them, safety devices and how to use them, reaffirmation of emergency and evacuation procedures, action in the event of an accident as well as procedure on identifying a risk. Regulation 25 of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016 places a responsibility on employees to cooperate on implementation of measures put in place by the licensee to create a satisfactory and safe working environment. Regulation 83 of Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment)

Regulations, 2016 requires the licensee to provide respiratory protective device where an employee or person having access to a facility is exposed to the risk of an airborne hazardous substance or an oxygen deficient atmosphere in the workplace. Another regulatory framework is to be found under the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Regulations, 2016.

Regulation 34(1) of Petroleum (Refining, Conversion, Transmission and Midstream Storage) Regulations, 2016 confers a duty on the licensee to report any accidental spillage of petroleum commodities, petroleum products or chemicals inside a refinery conversion plant to the Authority immediately but in any case not later than 24 hours from the time of the spillage. This would be to mitigate the possible disastrous consequences that may arise and endanger human life where if not prevented. Regulation 34(2) Petroleum (Refining, Conversion, Transmission and Midstream Storage) Regulations, 2016 requires the licensee within 14 days after the accidental spillage occurs under sub regulation (1) to submit to the authority a written report describing the cause and nature of the spillage, the amount of spillage, precautionary measures taken since the spillage to prevent any hazard that may arise from the spillage and precautionary measures taken to prevent such spillage in the future. All the above is to ensure safety of not only employees but the surrounding communities. Oil spills have in the past caused devastating consequences.

4.8.6 Conclusion:

The legal framework governing oil and gas activities in Uganda, as outlined in the Constitution of the Republic of Uganda (1995), the Petroleum (Exploration, Production and Development) Act 2013 (PEPD), the National Environment Act (NEA) 2019, the Occupational Safety and Health Act (2006), and the Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016, reflects a comprehensive approach to compliance, risk management, and environmental protection.

Firstly, the Constitution of Uganda establishes the right to a clean and healthy environment and vests ownership of all minerals and petroleum in the government on behalf of the people. This framework establishes the legal basis for environmental protection and ensures that the management of oil and gas resources is governed by principles of sustainability and public interest.

The PEPD Act 2013 focuses on risk management, environmental protection, and public safety in the oil and gas sector. It mandates licensees to conduct petroleum activities

with high levels of safety, identify hazards, evaluate risks, and maintain emergency preparedness. The Act also emphasizes compliance with environmental principles and requires Environmental Impact Assessments (EIAs) before commencing production activities.

The NEA 2019 provides a framework for sustainable environmental management, ensuring the right to a healthy environment and promoting public participation in environmental decision-making. It mandates the National Environment Management Authority (NEMA) to enforce environmental standards, conduct EIAs, and regulate pollution, with penalties for non-compliance.

The Occupational Safety and Health Act (2006) focuses on protecting the health and safety of workers in all industries, including oil and gas. It requires employers to monitor and control the release of dangerous substances into the environment, ensuring that operations do not endanger human health or the environment. Furthermore, the Petroleum (Refining, Conversion, Transmission and Midstream Storage) (Health, Safety and Environment) Regulations, 2016, provide detailed guidelines for ensuring health, safety, and environmental protection in the midstream sector of the oil and gas industry. These regulations set out specific duties for licensees, including the prevention of incidents and accidents, risk assessment, employee training, and reporting of spills.

In conclusion, the legal framework for oil and gas management in Uganda demonstrates a strong commitment to compliance, risk management, and environmental protection. However, the effectiveness of these laws depends on their enforcement, adequate resources for regulatory agencies, and ongoing monitoring and evaluation. There may be challenges in interpretation and implementation, especially regarding the definition of "best industry practices" and the practical application of punitive measures. Therefore, continuous review and improvement of these laws, along with stakeholder engagement, are essential to ensure the sustainable development of Uganda's oil and gas sector while minimizing risks and protecting the environment and public health.

4.9 Risk management compliance standards under the National Policy Framework for Oil and Gas

In addition to the international and regional risk management compliance requirements, legal regime governing the oil and gas industry in Uganda is also constituted by locally tailored policy and legislative compliance requirements. The major policy and legislative environmental law compliance requirements were

developed after 1994 with the formulation of the National Environment Action Plan. This saw the development of the major National Environment

Management Policy and the National Environment Act as Uganda's framework legislation. It is under these that subsequent sectorial policy and legislation have developed. Legislation covered in this chapter includes the Constitution, major oil and gas law and other relevant environmental laws. Compliance with these policy and legislative aspirations and standards will enable Uganda develop an environmentally healthy and safe, sound and sustainable oil and gas sector.

4.9.1 The National Oil and Gas Policy for Uganda (2008)

The goal of this policy is to use the country's oil and gas resources to contribute to early achievement of poverty eradication and create lasting value to society.¹³¹ The policy recognizes the need to protect the environment and health during oil exploration. Principle 5.1.5 specifically provides for protection of the environment and the conservation of biodiversity. It provides that the environment, human development and biodiversity should be neatly balanced for mutual benefit and survival and that the policy should contribute to and promotes this balance to ensure sustainable development. It imposes a responsibility on oil companies to protect the environment in which they work or any areas in the country affected by their operations while the government is required to legislate regulate and monitor compliance.

Health and safety measures are crucial in oil exploration and production because of the nature of the activities involved. Under Principle 6.2.5, the Oil and Gas Policy makes provisions for protection against activities that negatively affect health. It thus recognizes several potential causes of negative risks on human health from oil and gas activities such as oil spills, which can contaminate water sources leading to sickness and disease; gas blowouts, which can result in fires that destroy property and may lead to loss of human lives; and gas flares and dust, which result in air contamination leading to sickness. The policy seeks to promote prevention and rapid emergency response mechanisms and efforts to construct roads in a manner that reduces or prevents dust pollution.

The policy further recognizes that drilling in settled communities and water bodies used by the population can be hazardous. It requires that where deviation/directional drilling

can minimize these hazards and achieve the desired results of the drilling objective in an efficient manner,

¹³¹The Republic of Uganda, National Oil and Gas Policy for Uganda (2008).

deviation drilling should be promoted. This minimizes risks such as water pollution that impacts the health of the workers and the people in the surrounding communities especially those around water bodies such as Lake Albert in the Albertine region of Uganda.

The policy also recognizes that health risks do not occur in isolation of each other. While pollutants and toxins are directly inhaled by humans, causing disease, they also invade the food chain, entering fish, animals and vegetables. Thus, monitoring of the quality of water and food is needed to test for unacceptable levels of pollutants and toxins such as lead and mercury. It affirms the need to collaborate with other relevant policies, to support the review, updating and implementing the waste disposal standards, together with the establishment and enforcement of the necessary monitoring, evaluation and control mechanisms.

4.9.2 The Energy Policy (2002)

In 2002, the Energy Policy (2002) for Uganda¹³² was published. The goal of the policy is to ensure that the energy needs of the Ugandan population in terms of social and economic development are met in an environmentally sustainable manner. The national Energy Policy objectives to this end include the following: to establish the availability, potential and demand of the various energy resources in the country; to increase access to modern and reliable energy services as a contribution to poverty eradication; to improve energy governance; to stimulate economic development; and to manage energy-related environmental impacts. In pursuit of these objectives, the government of Uganda is required to ensure that environmental considerations are given priority by energy suppliers and users to protect the environment, and should put in place a monitoring mechanism to evaluate compliance with established environmental protection guidelines. The policy makes provisions for the management of upstream and downstream in the industries of the oil sector in Uganda. The objective for upstream management is to establish the petroleum potential of the country and to promote its exploitation, while for downstream to ensure an adequate, reliable and affordable supply of quality petroleum products for all sectors of the economy at internationally competitive and fair prices within appropriate health, safety and

environmental standards. The policy proposes general strategies that are necessary for environmental regulation. It requires the

¹³² The Republic of Uganda, 'The Energy Policy for Uganda'

development of a mitigation plan to reduce environmental hazards in all oil operations and improvement of the management and safety measures of the national strategic reserves.

4.9.3 The National Environment Management Policy (1994)

The National Environment Management Policy is an output of the National Environment Action Plan (NEAP) process. The overall goal of the policy is to establish sustainable social and economic development, which maintains or enhances environmental quality and resource productivity on a long-term basis that meets the needs of the present generation without compromising the ability of the future generation to meet their own needs¹³³. Specifically, the policy seeks to meet the following objectives:¹³⁴ to enhance the health and quality of life of all people in Uganda and promote long-term sustainable, socio-economic development through sound environmental and natural resource management and use; integrate environmental concerns in all development policies, planning and activities at national, district and local levels, with full participation of the people; and conserve, preserve and restore ecosystems and maintain ecological processes and life support systems, especially conservation of national biological diversity. This is geared at ensuring that there is adequate environmental health and safety.

The policy also seeks to optimize resource use and achieve a sustainable level of resource consumption; raise public awareness to understand the appreciate linkages between environment and development; and ensure individual and community participation in environmental improvement activities. Underlying these broad policy objectives are certain key principles which guide policy development and implementation strategies:¹³⁵ Every person should have a constitutional right to live in a healthy environment and the obligation to keep the environment clean; the development of Uganda's economy should be based on sustainable natural resource use and sound management; security of land and resource tenure is a fundamental requirement of sustainable natural, resource management; and that the utilization of non-renewable resources should be optimized and where possible their life extended by recycling. Environmentally friendly, socially acceptable and affordable technologies

should be developed and disseminated for efficient use of natural resources; full environmental and social costs or benefits foregone as a

¹³³ Chapter 2 part 2.1 of the policy

¹³⁴ Part 2.2

¹³⁵ Part 2.3

result of environmental damage or degradation should be incorporated in public and private sector planning and minimized where possible; priority should be given to establishing a social and economic environment which provides appropriate incentives for sustainable natural resource use and environmental management; and an integrated and multi-sectorial systems approach to resource planning and environmental management should be put in place. Regular monitoring and accurate assessment of the environment should be carried out and the information widely publicized; increased awareness and understanding of environmental and natural resource issues by Government and the public should be promoted; social equity, particularly when allocating resource use should be promoted; and sub-regional, regional and global environmental interdependence should be recognized.

4.9.4 The National Water Policy (1999)

The overall objective of the policy is to manage and develop the water resources of Uganda in an integrated and sustainable manner. This is to be done in a manner that ensures and provides water of adequate quantity and quality for all social and economic needs of the present and future generations, with the full participation of all stakeholders. The water policy requires application of Environmental Impact Assessment in all water related projects and for integration of the water and hydrological cycle concerns in all development programmes. With respect to oil exploration the policy provides for: upstream and downstream water use relationships; regulation of industrial discharges of effluents to water; use and sharing of water resources by various stakeholders; and international cooperation of trans-boundary water resources. This policy is crucial for oil exploration and production because it emphasizes water quality and quantity. Hence in light of the policy the operators should ensure that their activities do not lead to pollution of neighboring waters for example through discharge of aqueous wastes. According to a survey done in Bunyoro area the oil wells were found to have spilled into neighboring areas causing pollution of the land. This was contrary to The National Water Policy as pointed out. Henceforth the oil and gas industry is to some extent non-compliant to these standards.

4.9.5 Uganda Forestry Policy (2001)

The objective of the Uganda Forestry Policy is to establish an integrated forest sector that achieves sustainable increases in the economic, social and environmental benefits from forests and trees by

the people of Uganda, especially the poor and vulnerable. The policy provides for: the protection of Permanent Forest Estate (PFE) under government trusteeship and the development and sustainable management of natural forest on private land and a wider cross section of stakeholders' participation in the management of the forest estate and in the conservation and sustainable use of forest biodiversity. Maintenance of the forest cover is crucial for oil exploration and development. This is more so because it is already reported that a number of forests have been destroyed during site clearing operations. Some of the affected or at least threatened forests include Budongo Forest Reserve, Itwara Forest Reserve, Kagombe Forest Reserve and many others.

4.9.6 Uganda Policy Framework for Industry Sector (2008)

The vision of the policy is to build the industrial sector into a modern, competitive and dynamic sector fully integrated into the domestic, regional and global economies. The policy objectives include the exploiting and developing natural domestic resource based industries such as petroleum and promotion of competitive industries that use local raw materials. The main features of this Policy Framework, drawn in line with objectives of PEAP, PMA and Strategic Exports Programme (SEP), among others are to: create a business friendly environment for private sector- led industrialization in which industries will develop, improve productivity and the quality of products through, inter alia, creativity and innovation and become more competitive in the global economy; improve infrastructure development for effective and efficient industrialization program; promote environmentally health and safe sustainable industrial development to reinforce national goals of long-term growth and development and promote safe work place practices in all industry sub-sectors.

4.9.7 Disaster Management and Preparedness Policy

The overall policy goal is to promote, in relation to disasters, prevention, preparedness, mitigation, response and recovery measures to be implemented in a manner that integrates disaster management with development planning. The policy provides for: land use planning to minimize degradation and conservation of the environment through rational exploitation of resources and integration of gender, education, training and public awareness and public participation in disaster management and water resources

conservation. With respect to oil exploration there is need to make provisions for disaster management and preparedness on risks and matters such as oil spills,

gas flaring, land use, resettlement of displaced people, compensation of lost investments and opportunities, among others should be taken into account. Hence there is need to do what is referred to as oil contingency planning.

4.9.8 Conclusion

The various policy frameworks and legislative measures outlined above demonstrate Uganda's commitment to managing risks and ensuring compliance in the oil and gas sector. The National Oil and Gas Policy for Uganda (2008) emphasizes the protection of the environment and human health during oil exploration and production. It recognizes potential risks and mandates prevention measures. However, its effectiveness relies on strict enforcement and monitoring to ensure compliance by oil companies and the government. Similarly, the Energy Policy (2002), while primarily focused on meeting energy needs sustainably, also addresses environmental concerns in the oil sector. It emphasizes environmental protection and the need for monitoring mechanisms. However, its effectiveness depends on the implementation of strategies for environmental regulation. The National Environment Management Policy (1994) sets broad objectives for sustainable development and environmental management. It prioritizes environmental health and safety and emphasizes public participation. Its effectiveness hinges on the integration of environmental concerns into development policies and robust monitoring mechanisms.

Given the importance of water resources in oil exploration, the National Water Policy (1999) is crucial. It mandates Environmental Impact Assessments for water-related projects and emphasizes integrated water resource management. However, its effectiveness may be compromised if not rigorously enforced, as seen in instances of water pollution from oil activities.

The Uganda Forestry Policy (2001) aims to promote sustainable forest management and biodiversity conservation, which is vital for environmental sustainability, including in the oil sector. Its effectiveness relies on enforcement to prevent deforestation during oil exploration and development.

While not specific to the oil sector, the Uganda Policy Framework for Industry Sector

(2008) promotes environmentally sustainable industrial development. Its effectiveness in the oil sector depends on its integration into sector-specific regulations and enforcement mechanisms.

Lastly, the Disaster Management and Preparedness Policy addresses the need for disaster preparedness in the oil sector, including oil spills and other risks. Its effectiveness depends on the development and implementation of comprehensive disaster management plans tailored to the sector's specific risks.

Overall, these policy frameworks and legislative measures provide a comprehensive foundation for managing risks and ensuring compliance in Uganda's oil and gas sector. However, their effectiveness ultimately depends on robust enforcement mechanisms, stakeholder collaboration, and continuous monitoring and evaluation to address emerging challenges and adapt to changing circumstances.

5. The Regulatory Institutions and the Government in Compliance with risk Management Standards in Oil and Gas Exploration and Production

5.1 Introduction

The health and safety legal regime in Uganda is governed by the Petroleum Exploration, Development and Production Act 2013 and the Occupational Health and Safety Act 2006. The purpose of the latter is to regulate health and safety standards in workplaces, requiring employers to monitor and control the release of dangerous substances into the environment. This applies to oil exploration companies due to the potential environmental and safety risks posed by their operations.

Recent trends in the industry have prompted the government of Uganda to develop a new legal framework for regulating the oil sector, aligning with the Oil and Gas Policy, national environmental laws, and international standards. The Petroleum Exploration, Development and Production Act 2013 introduces governance conditions for oil and gas exploration and production, vesting petroleum rights in the government and requiring licenses for exploration activities.

The institutional framework emphasizes clear separation of roles among different actors, including the executive, legislature, judiciary, regulatory institutions, oil companies, and other stakeholders. This ensures accountability and defines responsibilities within

the oil and gas sector. These roles are defined below;

5.2 The Roles of Government

Cabinet authorizes the drafting and approves submission of the required legislation to Parliament; approves petroleum administration and consents to PSAs, and issues licenses. Parliament enacts petroleum legislation including legislation on petroleum revenues and monitors performance in the petroleum sector through annual policy statements and budget approval processes. The Ministry Responsible for Oil and Gas with a Directorate of Petroleum gives policy guidance and monitors the work of the oil and gas agencies placed under it, namely; Petroleum Authority of Uganda and National Oil Company. The policy recommends the setting up of the three separate institutions with the following roles: - The Directorate of Petroleum in the Ministry responsible for policy making, monitoring and evaluation and will coordinate the development of the sector, undertake licensing and national and capacity building. The Petroleum Authority of Uganda will handle regulatory aspects including monitoring of operations of oil companies; National Oil Company as a separate commercial entity will be responsible for aspects of state participation in the licences and other related business aspects.

5.2.1 Ministries

Ministry of Gender, Labour and Social Development

The Ministry, in collaboration with other stakeholders, is responsible for community empowerment, protection and promotion of the rights and obligations of the specified vulnerable groups for social protection and gender responsive development.¹³⁶ The Ministry of Gender, Labour and Social Development in Uganda plays a crucial role in ensuring health and safety standards in workplaces, particularly in the oil and gas sector. Through inspections and engagement with employees, the Ministry addresses various health and safety concerns, such as lack of protective gear, exposure to dangerous substances, and inadequate health services.

Under the Occupational Safety and Health Act of 2006, the Ministry ensures compliance with safety and health measures, including workplace registration, plant examination, and approval of architectural plans. The Act mandates the Commissioner for Occupational Safety and Health to

¹³⁶<http://www.mglsd.go.ug/> accessed on June 28, 2022

maintain a register of workplaces and requires fees for workplace registration and equipment inspection.

The Ministry recognizes the importance of collaboration with stakeholders to improve workplace safety and health. It emphasizes the need for collective effort to minimize work-related incidents and ensure a healthier workforce, leading to increased productivity and competitiveness.

In recent years, there have been numerous occupational accidents, particularly at construction sites, due to inadequate safety measures. The Ministry underscores the importance of incorporating safety and health considerations in architectural designs to mitigate risks.

The Ministry also highlights the importance of compliance with the Occupational Safety and Health Act to avoid closure of businesses and emphasizes the role of employers in ensuring pollution-free workplaces and the welfare of employees.

Overall, the Ministry is committed to enhancing occupational health and safety services, promoting compliance with regulations, and fostering a safer and healthier work environment for all stakeholders. Employer must ensure safe working environment including its vicinity. Proper arrangements should be made to ensure safety and absence of health risks related to the use, handling, storage and transport of articles and substances. Provision and maintenance of workplace which is adequate regarding facilities and arrangements for the welfare of worker is also important. Employer should provide and maintain safe and risk free means of access to and exit from the workplace. Workers must be well informed of the real and potential dangers associated with the use of the substance or machinery and they must be well equipped with personal protective equipment's to prevent the risks of accidents or of adverse effects on health.¹³⁷

(i) Free Protection

In accordance with the provisions of the Occupational Safety and Health Act, it is the responsibility of employer to provide free protective equipment including clothing to

the workers involved in hazardous work. The type of PPE needed varies depending on the nature of work being performed. The right use of PPE reduces risk of accident and the adverse effects on health. It is

¹³⁷S13 of Occupational Safety and Health Act 2006

also a duty of the employer to provide instructions for the use of personal protective equipment and make sure that they are used whenever required.¹³⁸

(ii) Training

In accordance with the Occupational Safety and Health Act, it is the responsibility of an employer to provide instruction, training and supervision as is necessary to ensure health and safety at work of his workers.¹³⁹

(iii) Labour Inspection System

Labour inspection system is present in Uganda. Occupational Safety and Health Act provides for a vibrant labour inspection system (part II). The Commissioner is responsible for the administration of Occupational Safety and Health Act to improve and ensure health, safety, security and good working conditions at the enterprises, inspecting enterprises and ensuring the law enforcement.

The national legislation provides inspectors the power to enter, inspect and examine the work premises at any time during day or night; inspect any machinery, plant, appliance, fitting or chemical in the workplace; take measurements, photographs, samples and make recordings for the purpose of examination and investigation; ask for registers, documents, certificates and notices to inspect, examine and copy them; interview any one; make all the necessary examination and inquiry; if the inspector is a medical practitioner he/she may carry out medical examinations; and may take police officer along with him/her if necessary. The Labour inspector is also authorized to dismantle the substance or to subject it to any process or test if it appears to have caused or likely to cause danger to safety and health.

If an employer or his representatives do not facilitate the inspector and obstruct the execution of his duties, he/she commits an offence and is liable to a fine up to forty eight currency points or to imprisonment up to one year or to both. The Inspector must not disclose any information obtained during the course of his/her duty.

¹³⁸S 13(2g), 19, 91 & 95(7) of Occupational Safety and Health Act 2006

¹³⁹S 13(2c) of Occupational Safety and Health Act 2006

Ministry of Energy and Mineral Development

The Ministry of Energy and Mineral Development (MEMD) in Uganda oversees the management, regulation, and development of the Oil and Gas industry. One of its key functions is issuing petroleum licenses to Oil and Gas companies, contingent upon meeting mandatory requirements outlined in the Petroleum (Exploration, Development and Production) Act of 2013. These requirements include conducting Environmental Impact Assessments (EIAs) to address environmental health and safety impacts. For example, in 2016, the Ministry granted petroleum production licenses to Total E&P Uganda B.V and Tullow Operations Uganda Pty.

Through data obtained from officials in these ministries, it was revealed that the government, with support from the Norwegian Government, is enhancing state control and management of the Oil and Gas sector, particularly in Environmental Management. Key initiatives include conducting a Strategic Environmental Assessment (SEA) for the Albertine Graben, capacity development programs, updating environmental policies and regulations, strengthening hazardous waste management systems, and developing a national oil spill contingency plan.

The Ministry of Water and Environment (MWE) holds overall responsibility for environmental management in Uganda, indicating its crucial role in overseeing environmental aspects related to the Oil and Gas industry. These efforts demonstrate Uganda's commitment to addressing environmental risks associated with oil and gas exploration and production.

5.3 The Roles of Oil Companies

Efficiently explore, develop and produce the country's oil and gas resources; and being good corporate citizens by among others, abiding by the policies and laws existing in the country as well as managing emergencies that may arise out of the oil and gas activities. They play a role in advocating, mobilizing and holding dialogue with communities; contributing to holding the different players accountable with regard to oil and gas issues; participating in getting the voices of the poor into designing, monitoring and implementation of programmes in the oil and gas sector. Oil companies may also be

contracted in the delivery of various services, especially in the communities where oil and gas activities will be undertaken.

5.4 Authorities and Agencies

National Environmental Management Authority (NEMA)

The National Environmental Management Authority is a tool for monitoring all activities that affect the environment in Uganda provided for in the National Environment Act (NEA). This Act defines environmental monitoring to mean the continuous determination of actual and potential effects of any activity or phenomenon on the environment, whether short term or long term. The general objective of monitoring is to establish the status of environment and to evaluate the impacts of various activities on the environment in general and natural resources in particular.

The specific objectives are: to understand the present levels of degradation by various agents so as to judge whether the abatement policies, projects and programmes are succeeding; identify environmental risks and impacts not previously known so that they can be brought under control; follow the movement of harmful agents through the environment into living creatures and man himself; and to identify activities that are beneficial to the environment and ensure sustainable use of natural resources.

NEMA is required, in consultation with a lead agency, to monitor all environmental phenomena with a view to making an assessment of any possible changes in the environment and their possible impacts; and the operation of any industry, project or activity with a view to determining its immediate and long-term effects on the environment. For this purpose, an environmental inspector appointed may enter upon any land or premises to monitor the effects upon the environment of any activities carried out on that land or premises. This is to ensure that there is proper use of the environment such that it is not depleted totally because there has to be sustainable development which enables future generations to use the same environment as well.

5.5 Judiciary

The Judiciary is the body responsible for administration of justice. It is indicated in the Constitution of the Republic of Uganda that judicial power is derived from the people and shall be exercised by the courts established under in the name of the people and in

conformity with the law and with the

values, norms and aspirations of the people.¹⁴⁰Henceforth the judiciary is responsible for bringing to justice those who are guilty of breaching the environmental health and safety regulations and laws as above discussed. This is aimed at deterring people and oil and gas companies from violating these laws and regulations especially during the oil and gas exploration and production activities.

Moving forward, with effect from August 2017, perpetrators of environmental degradation will be tried in a new specialized court called: Utility, Standards, Wildlife and Environment. The creation of the court is a culmination of years of protracted negotiations between Judiciary and environment ministry. The creation of a specialized court, a departure from the normal court system, rests on the allegations that the status quo has delayed cases and yet the environment is degraded at a faster rate.¹⁴¹

The Judiciary spokesperson¹⁴² said that the new court seeks to lessen issuance of court injunctions against agencies like the National Environment Management Authority (NEMA) and Uganda Wild Life Authority (UWA), since their cases will be handled expeditiously.

5.6 NGOs

Nongovernmental organizations such as Advocates Coalition for Development and Environment (ACODE) and TEAN have contributed massively to environmental health and safety standards. ACODE for example is an independent public policy research and advocacy think tank based in Uganda but working in Eastern and Southern Africa. One of the core pillars of ACODE is to transfer evidence based research findings and alternative policy options from research papers and books into civic spaces that generate public debate to promote pro-poor policy making and effective policy implementation.

These organizations have gone to courts of law where there have been cases of violation of the environment and this has led to a plethora of cases such as *Advocates Coalition for Development and Environment (ACODE) v Attorney General*¹⁴³ where ACODE sought orders and a declaration

¹⁴⁰ Article 126 (1) The 1995 Constitution of the Republic of Uganda

¹⁴¹ P. Tajuba, “Judiciary okays environmental court” Saturday Monitor (Uganda February 18th, 2017) 5.

¹⁴² Ibid

¹⁴³ HCMC No. 0100/2004

that issuing a private company (Kakira Sugar Works) a 50 year forest permit by government in a forest reserve for the purpose of growing sugarcane was in contravention of the Constitution because there was no project brief provided by the private company and that the views of the communities were never sought. It was held in the favour of the applicants and the license was revoked basing on the private company failing to provide the project brief.

These NGOs however face a huge financial challenge and in most cases there is no proper mechanism to enforce the court ruling. This is because they are limited in terms of resources and authority. For example in the above cited case although ACODE was successful they were unable to enforce the judgment as it was merely declaratory.¹⁴⁴ The permit was merely revoked and the developer, Kakira Sugar Works is still occupying the forest, which it cut down and planted sugar cane in blatant violation of the law.

This was also witnessed in high profile case of *Green watch and ACODE v Golf Course Holdings*¹⁴⁵ where judgment was passed against the applicants. However this had grave financial repercussions to the extent that Green watch ceased operating in Uganda as a result of the heavy financial burden incurred from the costs awarded to the respondents. However these nongovernmental organizations remain relevant in ensuring that environmental health and safety standards are complied with especially through Article 50 of the 1995 Constitution of the Republic of Uganda which allows them to represent a large number of people that could be affected by the inevitable impacts of oil and gas operations that cause to people's environment, health and safety. This is through a procedure termed *public interest litigation*.

5.7 Conclusion

The discussion highlights the significant occupational injuries, diseases, psychological problems, and environmental effects faced by workers on oil rigs. The low priority given to workplace health and safety by investors and entrepreneurs is concerning, despite research indicating that management commitment to safety is crucial. Apart from recommended measures for managing

¹⁴⁴ Ibid

¹⁴⁵ HCMA No. 390/2001

environmental health and safety hazards, there's a need for attitudinal change among government officials, corporate leadership, and employees in the oil and gas sector.

Several laws and regulations aim to ensure environmentally healthy and safe working conditions, particularly around oil and gas exploration and production sites. Additionally, a specialized court has been established to expedite environmental degradation cases, demonstrating the government's commitment to addressing environmental issues.

With these standards in place, the oil and gas industry in Uganda is better equipped to handle risk perceptions, safety climate, safety motivation, and compliance with safety regulations, ensuring an efficient environmental health and safety system.

CHAPTER FIVE

COMPARATIVE ANALYSIS OF RISK MANAGEMENT BY INTERNATIONAL OIL COMPANIES IN UGANDA AND OTHER JURISDICTIONS

6.1 Introduction

Big oil multinationals such as Chevron, Total, BP, Shell, and ExxonMobil are widely recognized industry leaders, known not only for their significant oil production but also for their extensive refining and distribution networks through petrol/gas stations worldwide. These giants form the upper tier of a global industry landscape characterized by a relatively small number of very large companies, often referred to as the "Premier League." Alongside them are thousands of smaller companies involved in various aspects of oil exploration, production, and related services.

While these major companies are household names in many countries, there are also lesser-known but equally significant players in the industry. Companies like Petrobras in Brazil, Petrochina, and CNOOC in China, and Lukoil and Gazprom in Russia have become increasingly prominent, not just domestically but also on the global stage. Other notable players include Italy's ENI and Repsol of Spain.

These "oil majors" operate across the entire oil value chain, from upstream exploration to downstream retailing, making them vertically integrated entities. Below them are numerous smaller but still substantial players, mainly focused on exploration and processing. Tullow Oil PLC is a notable example, operating in various regions worldwide, including Uganda. Additionally, there are many smaller companies, often referred to as "Independents," that engage in oil and gas exploration and production, sometimes taking on higher risks in pursuit of lucrative opportunities.

In our comparative analysis, we will delve into the risk management practices of international oil companies, including both the major integrated firms and smaller Independents, across different jurisdictions. We will explore how these companies address various risks associated with their operations, including environmental, health, safety, and financial risks, and examine the effectiveness of their risk management strategies in diverse regulatory environments. By comparing the approaches taken by

oil companies in Uganda and other jurisdictions, we aim to

identify best practices and areas for improvement in managing the complex risks inherent in the oil and gas industry.

6.2 International Oil Companies

6.2.1 The China National Offshore Oil Corporation

(CNOOC) was established by China's State Council (cabinet) in 1982, to serve as the Chinese partner of international oil companies exploring and extracting oil and gas in Chinese waters. The corporation and its numerous subsidiaries have grown steadily and strongly, to become one of the world's largest "integrated" oil companies, working in all aspects of the industry, from upstream exploration, to refining, processing, storage and retailing. In 1994, the CNOOC made its first venture overseas, joining the U.S. Company, ARCO, in a project in Indonesian waters. In 2002, it expanded its Indonesian operations by buying the interests of the Spanish company, Repsol.¹⁴⁶

The same year, CNOOC bought into upstream production off the coast of Australia. In 2005 it began to operate in Vietnam and Burma. The following year, it moved beyond Asia, starting operations in offshore Nigeria. It has since also begun production in Iraq (2010) and the U.S.A. CNOOC is a "state-owned company" in that the Chinese state owns a controlling stake in it. However, in 2001 it was listed on the New York and Hong Kong stock exchanges, and shares in the company are owned by private and institutional investors across the world. In 2010, CNOOC reported revenues of 354.8 billion Chinese yuan (US\$ 56 billion) and profits of 97.7 billion yuan. (US\$ 15.4 billion) According to a case study of china's investment in Uganda's oil and gas sector environmental and community risks can harm a business.

CNOOC International is one of the largest oil and gas companies in Uganda's energy sector and owns one-third interests in each of Exploration Areas (EA) EA1/1A, EA2 and Kingfisher. Our partners are Total E&P Uganda (33.3%) and Tullow Oil (33.3%). CNOOC International operates the Kingfisher production license. These blocks, located in the Lake Albert Rift Basin, are in one of the most promising basins for oil and gas resources in Africa. In 2016, development and production licenses for eight oil fields in the EA 1 and EA 2 blocks were issued by the government.

¹⁴⁶Kirk, H ;World Resource Institute: A case study of China's Investment in Uganda .pg 23

In 2017, the front-end engineering design (FEED) of the blocks was initiated and the intergovernmental agreement for an oil pipeline was signed and the FEED was completed.

CNOOC International also completed the FEED for ground construction and drilling on block EA 3A in 2017. *On an interview with Paul Walusimbi*¹⁴⁷ he stated that the risks involved by China's investment in Uganda include; Reputational risks for example international and local media criticism, Legal risks for example company enters long, costly litigation. Construction and operational risks for example local conflict slows operation, Host government risks for example government withdraws permits and license. Political risks JSO for example National opposition to the company prevents future business opportunities and Financial Risks for example companies loose access to finance.

According to his interview there are some tools to improve risk management.¹⁴⁸ Some important tools include:

- Environmental and social impact assessments- to identify risks of the project
- Strategic environmental assessments- to understand the impacts on a broader ecosystem (beyond artificial boundaries of specific oil blocks)
- Community engagement- to build mutual trust with communities living near the project
- Grievance mechanisms- to provide communities with a way to raise concerns directly with the company
- Disclosure of information- to avoid rumors and promote understanding.

6.2.2 Total

It was incorporated in 1924, when it was known as the French Petroleum Company. Within two decades it had become an "integrated" company, involved in exploration, production, refining and marketing of oil and gas products. After World War II it began extensive operations in French colonies in Africa-notably Algeria and the Gulf of Guinea- where it remains a major oil player. In 1999 Total took over Petrofina (originally, the Belgian Petroleum Company), which, earlier in the '90s, had briefly held an exploration license in Uganda. The following year Total also took over its rival French company, Elf Aquitaine. Today, Total has operations in more than 130 countries,

¹⁴⁷ Interview held on Wednesday June 29, 2022

¹⁴⁸ *ibid*

and is one of the world's "super major" energy companies. It engages in all aspects of the petroleum industry, including petrochemicals and fertilizers for industrial and consumer markets.

It also has interests in the coal mining and power generation sectors, including renewable energies, notably solar-photovoltaic power. Total is an important player in East Africa's Great Lakes region. In addition to its recently acquired interests in Uganda, it has stakes in exploration and production in Kenya, Tanzania and the Democratic Republic of Congo. In 2010 the company reported revenues of 159 billion Euros (US\$ 209 billion) and profits of 10.6 billion Euros (US\$ 13.9 billion). Total is listed on the Paris and New York stock exchanges. By working closely to a broad variety of customers - producers and consumers of oil and gas, financial institutions involved in energy and oil financing as well as investment funds.¹⁴⁹

Total Energies EP Uganda is working with CNOOC Uganda and Uganda National Oil Company (UNOC) through a Joint Venture Partnership in which the Companies hold 56.67%, 28.33% and 15% respectively in the upstream development of Uganda's Lake Albert oil resources. The upstream project comprises the Tilenga project operated by TotalEnergies EP Uganda, and the Kingfisher project operated by CNOOC Uganda. The Tilenga project is located in Buliisa and Nwoya districts and will produce 190,000 bopd (at peak). The project covers 6 fields with over 400 wells to be drilled on 31 well pads in line with the company's commitment to limit social, environment and biodiversity impacts.

Other main project installations include a Central Processing Facility, flow lines, lake water abstraction facility, a feeder line and construction camps and support bases. Some of the Lake Albert resources will be transported through a 1,443km East African Crude Oil Pipeline (EACOP) from Kabaale, Hoima in Uganda to the Chongoleani Peninsula near Tanga port in Tanzania for export to the international market. The pipeline has the capacity of transporting 216,000bopd and is operated by EACOP Ltd whose shareholders are Total Energies East Africa Midstream (62%), UNOC (15%), CNOOC (8%) and the Tanzania Petroleum Development Corporation (TPDC) (15%). Total Energies EP Uganda is committed to undertaking the Tilenga project in accordance with national

regulations, the UN Guiding Principles on Business and Human Rights and the IFC Performance Standards. On 28th May 2021, Total, the parent company of Total Energies EP

¹⁴⁹<http://www.totsa.com/pub/risk/about.php?rub=3> accessed on June 30, 2022

Uganda changed its name to Total Energies as part of its strategy and journey to becoming a broad energy company that is committed to producing and providing more affordable, reliable, and clean customer solutions.

It has indeed been successful in setting up a variety of risk management systems in client-specific contexts that are currently used by Risk Managers for day-to-day risk follow-up and operational hedging decisions. A recent example of risks faced by such companies working in the oil and gas sector especially offshore drilling operations is that of Total's Elgin platform off the coast of Aberdeen, which was reported to be leaking methane gas and oil. Total, the operator of the Elgin platform 140 miles east of Aberdeen, confirmed that in addition to a growing methane gas "cloud", a 4.8sq km sheen of oil "condensates" had covered the surface of the water near the platform. But the company played down risks of major marine or air pollution. Marine pollution specialist and honorary research fellow at the University of Liverpool, Martin Preston said that from an environmental standpoint, both greenhouse gas emissions and local fish deaths were a concern. "The methane release represents a very significant explosion hazard, and of course methane is a potent greenhouse gas. The gas in this field is 'sour gas' - i.e. it contains hydrogen sulphide which is very poisonous to humans and aquatic life- so localized risks to marine life are likely. The hydrogen sulphide content of the current release is unclear at present. Localized fish kills cannot be ruled out. "In risk management by Total, The oil is either coming from the drilling mud or from the well head because there is always some oil in natural gas reservoirs. This is a spill that can be managed by mechanical methods as soon as the danger of explosion due to the emitted methane gas is dealt with.¹⁵⁰The twin Elgin and Franklin gas fields, discovered in 1991, are in a geologically complex area of the North Sea around 5km deep below the sea bed. Average daily production is around 230,000 barrels of oil equivalent. Two connected platforms are used by Total, one of which is reserved for drilling, the other for separating the oils and gases which are sent directly through a BP-operated pipeline to Kinneil in Scotland and Bacton in Norfolk.

With effective risk management viewed as an intrinsic part of good corporate governance, companies have to demonstrate that they are taking a sophisticated

attitude to risk and fully understand their insurance needs. At the same time, developments in the energy insurance industry

¹⁵⁰Report by John Vidal environmental guardian.co.uk Wednesday 28th march 2014 14.01
BST 70

mean oil and gas companies are facing increasing risks. The energy insurance market has seen a substantial increase in asset values over this period. Meanwhile, many operate in very testing environments^{19s}

6.3A Comparative Analysis of the Regulatory Frame Work of Uganda and Ghana

Uganda just like Ghana has oil deposits that are being developed and as such, Ghana adopted the Petroleum (exploration, Development and production) (health, safety and environment Regulations 2017 which legal instrument provides for safety and regulation 10(1) requires the operator to prepare and submit a safety case to the commission before the commencement of an operation of a petroleum facility which shall ensure the management system and enhance health and safety performance in compliance with the relevant enactments. Under regulation 51(1), a contractor, subcontractor, licensee, the corporation or any other person engaged in petroleum activity is required to ensure that a passive fire protection is designed to ensure that in event of a fire load, it provides efficient fire resistance to the relevant structures and equipment with regards to the load capacity, integrity and insulation properties.¹⁵¹

A fire load according to the law means the maximum degree a fire system is designed to handle or accommodate; and passive fire protection means a group of systems that compartmentalizes structures and equipment through the use of fire resistant related walls or floors. The regulations also provide for fire divisions where the operator/contactor is required to ensure that the main area on a petroleum facility is separated by a fire wall that has the capacity to withstand the designed fire load and explosion load, and at least satisfies the fire rating standards if exposed to hydrocarbon fires.¹⁵² The above regulations are similar with Uganda's Petroleum (exploration, Development and production) (health, safety and environment Regulations 2016 and both emphasize fire and health safety. However, in both countries educational campaigns and sensitization on safety are recommended for workers to understand the relevance of risk management in a bid to reduce the bad attitude of workers towards risk management¹⁵³ and these

¹⁵¹Regulation 51(1)

¹⁵²Regulation 52(1a)

¹⁵³Osabutey, D, Obro- Adibo, G, Agbodohu, and Kumi, P. Analysis of Risk Management Practices in the Oil and Gas Industry in Ghana. European Journal of Business and Management www.iiste.org ISSN 2222- 1905 (Paper) ISSN 2222-2839 (Online)Vol.5, No.29, 2013

have been proven to be highly effective in ensuring environmental health and safety during and after the operations in Ghana's oil refinery project. The governments have very good fire safety laws but they have a duty to make sure that such laws are brought to the attention of the workers and fully enforced which will help to achieve maximum efficiency in ensuring fire safety.

In light of the above, it can be concluded that there are accidents like fire and explosions which are the major accidents in the petroleum industry that come as a result of combustible gasses that come as a result of the reaction of air and mostly during the process of drilling. These are usually caused by negligent or improperly trained workers are the cause of fire accidents in the petroleum industry and combustible gasses that come as a result of the reaction of air. There are also several risk management strategies that have been put in place to prevent and control fire hazards for example, removal of all combustibles from the area before conducting hot work, training workers on how they can prevent and control fire outbreaks and employing people with the right expertise in the oil and gas industry and putting in place laws like the Occupational Safety and Health Act 2006. However, the implementation of these has been a challenge due to lack of enough resources both skilled workers and financial plus the weak implementation of the law which need to be critically analyzed by the stakeholders.

Furthermore, from the study findings, it can be concluded that there are several risk management strategies that have been put in place to prevent and control fire hazards for example, removal of all combustibles from the area before conducting hot work, training workers on how they can prevent and control fire outbreaks and employing people with the right expertise in the oil and gas industry, putting in place fire controlling tools like fire extinguishers in all corners of the companies, putting in place fire watches who can always sound an alarm when there are fire outbreaks, improvising personal protective equipment's for all their employees so that they do not get injuries in case fire accidents happen and offering effective monitoring by hiring people to always keep a watch and 3sometimes even outsource companies that are specialized in prevention and control of fire outbreaks in the petroleum industry among others.

There is a legal framework that has been put in place by the government of Uganda for example the Occupational Health Act, No 9, 2006 which requires registration of work places, inspection and monitoring of OSH activities at workplaces, education, training and creating awareness

through dissemination of information on occupational safety and health among workers, employers and the general public all intended to reduce cases like those of fire outbreaks/ accidents in the petroleum industry. However, it was noted that these laws have been effective to a low extent because most of the petroleum companies do not follow these laws ignorant about the laws by the workers and low implementation of the laws by the government.

6.4A comparative analysis of Risk Management in the Oil and Gas Sector in different Countries

Project risk management in the oil and gas industry involves the identification, assessment, and prioritization of risks through coordination and economic application of resources in minimizing, monitoring and controlling the probability consequences of unfortunate events that hopefully, will maximize the success of a project in addition to environmental sustainability.¹⁵⁴ The following countries have done the following practices to this effect. It should be noted that the oil and gas operations and the risk management strategies considered below are countries with offshore operations unlike Uganda which has just realized the viability of the resource which is onshore (located on the shores of Lake Albert) and is yet to start production but operations are ongoing.

6.4.1 Canada

There are also several safety concerns discovered by *Verma, Johnson and Maclean* who undertook research on the benzene and total hydrogen exposures in the upstream petroleum oil and gas industry.¹⁵⁵ The study was based on the Canadian oil and gas industry and total of 1547 air samples taken by oil companies in various sectors were evaluated and the outcome of the research can be generalized for the whole oil and gas industry around the world. For instance, it was discovered that the percentage of samples are over the occupational exposure limit (OEL) of 3.2 mg/m³ or one part per million for benzene for personal long-term samples range from 0 to 0.7% in the different sector, and area long-term samples range from 0 to 13%.¹⁹⁵ The findings assist to establish a precaution to the global oil and gas industry that certain operations such as glycol dehydrators

¹⁵⁴Isaac Christopher Lubogo, the Law of Oil And Gas in Uganda, First Edition 2021, Jescho Publishing House <https://www.lubogo.org> accessed on June 30, 2022

¹⁵⁵Verma DK et al, Benzene and Total Hydrocarbon Exposures in the Upstream Petroleum Oil and Gas Industry. AIHAJ.2000 Mar-Aril;61(2):255-63

should be carefully monitored and there should also be based monitoring program along with the traditional long and short-term personal exposure sampling.

6.4.2 United States of America

There have also been various ongoing projects and organization trying to reduce the rate of emission. For instance, in the United States of America, the Obama administration has engaged in different steps to reduce the harmful emissions into the environment such as: the international climate negotiations, the clean energy ministerial, climate and clean air coalition, Montreal protocol, and APEC summit.¹⁵⁶ The governments have done things like: legislative restrictions on coastal oil drilling, which have kept valuable oil reserves undeveloped; creation of a far-reaching air regulatory system prior to the Federal Clean Air Act and establishment of statewide appliance and building efficiency standards.

6.4.3 Nigeria

In Nigeria, the Federal Ministry of environment initiated a program called the “clean energy initiative” as part of African strategy on voluntary emission reduction, and program implementing Clean Development Mechanism (CDM).¹⁵⁷ Considering a case study of the Tema Oil Refinery (TOR), recommendations were made that Casual workers and contract workers engaged by TOR had to go through thorough training in risk management prior to their engagement as it became necessary because the management saw no need to spend scarce resources on casual workers who were always blamed for failing to observe basic safety rules in the refinery. Educational campaigns on safety were also recommended for workers to understand the relevance of risk management in a bid to reduce the bad attitude of workers towards risk management and these proved to be highly effective in ensuring environmental health and safety during and after the operations in the country’s oil refinery project.

¹⁵⁶F. AdejohOgwu, S. Badamasuiy, and C. Joseph. Environmental Risk Assessment of

Petroleum Industry in Nigeria International Journal of Scientific Research and Innovative Technology ISSN: 2313-3759 Vol. 2 No. 4; April 2015.

¹⁵⁷F. AdejohOgwu, S. Badamasuiy, and C. Joseph. Environmental Risk Assessment of Petroleum Industry in Nigeria International Journal of Scientific Research and Innovative Technology ISSN: 2313-3759 Vol. 2 No. 4; April 2015

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

7.1 Summary of findings

This study was premised on the following research questions;

The central research question is “Is the legal and policy aspects in compliance with risk management in oil and gas sector?” The specific research questions are:

1. To examine the major international, regional and national legal instruments governing risk management standards in the oil and gas industry in Uganda?
2. To what extent have the oil companies, regulatory institutions and the Government complied with risk management in oil and gas exploration and production?
3. To evaluate a comparative analysis of risk managements with other jurisdictions and international oil companies?
4. To offer recommendations and mechanisms that can be put in place to strengthen the legal and policy aspects in compliance with risk management in oil and gas sector?

The findings were as follows:

Uganda is about to commenced commercial oil and gas production at least by 2020. This follows the discovery of oil deposits worth about 3.5 billion barrels. In the course of this research it was found that the oil industry of Uganda has reached the midstream stage. This is a stage of development and production, storage, distribution and marketing. The ongoing stage now is development of structures and facilities for commercial production. The main of these is the plan to construct a refinery. It has been established that the oil and gas exploration and production process involves a number of activities which have implications for environmental health and safety law compliance. These activities include exploration surveying, exploration drilling, appraisal, development and production, transportation of oil and gas, storage and site decommissioning and rehabilitation. However, if these processes are not properly

managed under a regime that respects environmental law compliance, Uganda may suffer an environmental curse.

That the above activities can lead to degeneration of the environmental health and safety risks through occupational injuries and diseases and other related health and safety hazards which affect

wellbeing of workers caused by lack of protective gear while working on the oil fields, atmospheric/ air pollution; soil/ terrestrial pollution; degradation of the aquatic environment; human, socio-economic and cultural impacts, ecological interferences and emergencies such as oil spills. It was also established that Uganda has sound policy and legislative environmental health and safety law compliance regime which if enforced can lead to risk management in an environmentally healthy and safe sound oil and gas sector. This composed of a matrix of international and regional binding and nonbinding instruments which Uganda has ratified, and national enactments. Whereas some laws and regulations especially on environmental health and safety standards need to be made more effective, the present legal regime is good enough to start with. Furthermore a court has been set up to handle environmental concerns to ensure that they are handled expeditiously.¹⁵⁸ This and other structural, legal and institutional changes should be implemented to ensure effective compliance with environmental health and safety standards as will be pointed out in the recommendations below.

So far, the performance of the actors as regards environmental health and safety risk management law compliance is not desirable. Though some progress was made for example by formulating the Environmental Sensitivity Atlas for the Albertine Graben; Albertine Graben Monitoring Plan and conduct of EIA and SEA, there is still a lot to be desired despite efforts to ensure that the workers in Oil and gas industry especially within the oil rigs have basic necessities to ensure that they work in a safe and healthy environment. Weaknesses stem right from the government which is being too slow in enacting new required laws and Regulations and/or updating existing ones. There is also a problem with implementation of EIA and enforcement of occupational safety and health standards as baseline studies and reports prepared by operators are still facing a lot of criticism.

The multi-sectorial monitoring system proposed is not operating to the required standards due lack of clarity of duties and responsibilities especially as between the central government sectors and local governments. The companies have also not yet published their waste management plans, something which still poses a future threat to the environmental health and safety status in the oil and gas industry of Uganda.

¹⁵⁸ Op Cit 158

Laws should furthermore be made to provide for liability for damage arising from the risks of environmental health and safety noncompliance such that the defaulters are made liable for their actions. Aside from finding companies liable for noncompliance, regardless of fault, both the upstream and midstream laws (Section 130 and Section 58 (1)) fail to provide for a compensation regime for victims of such pollution or any losses resulting from poor management of petroleum operations, in particular, the unforeseeable long term damages such may have on the environment and human health. It would appear that according to Section 131 there is no liability for pollution damages if caused with a licence, which legalizes pollution. Liability for pollution damage should accrue with and without a licence. However, there are more clear and detailed provisions in the draft National Environment Management Bill currently under review (clauses 95-100). Clause 100 states that a person (including a legal company) who pollutes the environment is strictly liable for the damage caused to human health or the environment regardless of fault. Therefore there is need to harmonize the upstream legal provisions on pollution control with the principle legislation on environmental management such that the existing laws on risk management are given effective enforcement.

7.2 Conclusion

The existing oil activities are an important progress towards development in Uganda. Oil is a resource that can create lasting value for the Ugandan people. However, if the resource is not properly managed it can bring a curse rather than a blessing. The research concludes that there is no environmental health and safety risk management law compliance in Uganda's oil sector. This because of the failure to fulfill the above underscored standards. Firstly the EIA conducted has been criticized for lacking full appreciation of the problem and full public participation. In addition, there was no area specific EIAs for sensitive areas such as Lake Albert. The SEA conducted is criticized for not covering the entire Albertine Graben. When it comes to audits and reviews, the government has not come up with Audit plans for oil sector.

The risk management standards in the law currently are also outdated and need review. Although there is a monitoring plan, the implementation is still weak for example it is

suggested that there needs to be a law in place to ensure that the National Oil and Gas Policy of 2008 is enforced. This is due to the fact that the monitoring role is concentrated in the hands of the central government

through NEMA and other agencies at the expense of local governments especially District Environmental health and safety Officers yet these are the ones on the ground. If anything, all these monitoring agencies are not only understaffed but also poorly funded. The laws enacted also have a general weakness.

Companies operating in the oil and gas industry in Uganda have to a large extent failed to comply with international health and safety risk standards. Often this demands a significant investment from local service providers in improving their systems to meet requirements. Health and safety courses include: emergency first aid, fire training, manual handling skills, risk assessments, working at heights, and lifting operations. Occasionally in Uganda complaints of pollution of land and water whereby the crude oil escapes from containment into the neighboring land thereby making the land poor for planting crops arise against Oil and Gas companies especially in Bunyoro Region where the exploration and production process is actively taking place.

The provisions in the Occupational Safety and Health Act 2006 to do protection of workers from hostile working risks and conditions by providing protective wear during working hours are often ignored by the oil and gas companies due to weak enforcement of these standards and a poor institutional framework which does not seek to ensure that there is practical compliance to safety and health standards in the oil and gas industry. This has increased the number of occupational injuries and other related occupational hazards in and around the work places. This led government into undertaking local training content¹⁵⁹ whereby Uganda is in the process of increasing its own training capacity, and plans soon to employ more Ugandan trainers to conduct the courses. Currently, to ensure that the courses meet the highest standards, the company draws on its network of experienced consultant trainers, but it expects to have four Ugandan trainers by the end of 2012.

The fines prescribed are not deterrent enough to scare away polluters. Hence pollution is already recognizable in the Albertine Graben in the form of noise, bad smell; un rehabilitated abandoned wells and the like which have negatively impacted the environmental health and safety status of the region. In fact, no company has up to date published a clear waste management plan. While the government confirms its

commitment to transparency and accountability under the National

¹⁵⁹<http://www.oilinuganda.org/oil-industry-2/other-insurance-distribution-associations-training/petroleum-skills-uganda-ltd.html>

Oil and Gas Policy (NOGP), these standards are not implemented in practice. To date PSAs have not been made fully public despite campaigns by CSOs. The oil and gas industry is further hampered failure of the existing laws to establish liability for damages due to pollution during the upstream and midstream stages of oil and gas production.

Uganda has further not joined EITI. In addition, there has not been clear accountability for the signature bonuses received by the Government. A signature bonus is a one off upfront payment made by an oil company to a government in return for rights to explore or exploit oil. In a Report compiled by Platform and CISCO (Civil Society Coalition of Oil), Uganda received USD 500,000 in signature bonuses in its exploration areas but this money cannot be traced to any public account.¹⁶⁰ A Report compiled by Global Witness reveals that there has not been enough communication to manage public expectations. Throughout the interviews conducted in oil affected areas, it became clear during discussions that not enough information was in the public domain regarding the timing of oil production; the feasibility and locations of the proposed refinery and pipelines; the beneficiaries of the oil, in particular the role of the traditional authority vis-à-vis government authority and information about the ways in which oil revenues are likely to be shared.¹⁶¹

Furthermore, the exploration and production of oil today in Uganda is still faced with a number of environmental health and safety management risks such as occupational injuries, diseases and other related health and safety hazards, effective implementation of EIA principles, threats to humans, animals, ecology, atmosphere and culture, air , water and land pollution. All these risks have implications on environmental health and safety law compliance in the oil and gas sector. In order to address the above challenges there should be commitment of all companies licensed to carry out exploration and production. Similarly, the Uganda government needs to have a solid understanding of exploration and production operations and how they may affect the environmental health and safety status of communities within. The activities of these two camps should be complementary and geared towards achieving the most cost effective and environmentally healthy and safe sound petroleum sector.

¹⁶⁰ Global Witness Uganda's Petroleum Legislation: Safeguarding the Sector (Feb.2012)
at pp. 12-14

¹⁶¹ Ibid

The risk management and safe sound oil and gas sector envisaged here should be one which systematically integrates environmental health and safety issues into business decisions; integrates health, safety and environmental management into a single system; considers all environmental health and safety components that is soil, air, water, plants, people and animals in decision making at strategic planning and operational levels, prevents waste at its source through pollution prevention techniques and making maximum re-use of waste components rather than installing treatment for discharges; evaluates alternatives on a cost/benefit/risk basis that includes environmental health and safety values and aims at minimizing resource inputs.¹⁶²

From the investigations it can be concluded that, As some investments analyst says: “nothing goes up faster than when you announce a major oil find in some geopolitical backwater” which is precisely what happened with the discovery of oil, an estimated billion barrels, at Lake Albert, one of Great African Lakes- Debate rages over what effect the new oil economy will have on Uganda's wider economic, social, and political development and risk management control systems which will be installed. The legal perspective of risk management by International Oil companies for example CNOOC as we have been discussing should be seen to be applicable. According to the Uganda Wildlife Society, Uganda's legal framework related to oil and gas shows a number of lacunas that may create conditions similar to those in the Niger Delta. A report by the United Nations Development Programme (UNDP) indicates that there were more than 6,800 spills in the Niger Delta between 1976 and 2001. The National Association of Environmental Professionals (NAPE) in its study of January 2011 called for measures such as effective law enforcement and compliance to environmental laws and policies. The lack of an oil and gas waste management specific law is also another 97 matter to be absorbed. As it is, the Uganda government's eyes are only for the oil dollars; wild and marine life can choke. There are many other risks in the oil industry in Uganda including political risks, economical risks, oil price fluctuations and others as discussed in the thesis report. To be able to deal with the risk there is need for sound management systems and set of appropriate laws. This is the crux of this thesis.

¹⁶² UNEP, *op cit*, at 27

7.3 Recommendations

- a) Strengthen legal and institutional frameworks through adoption of an enforcement policy

There is need to enhance risk management compliance with environmental health and safety principles through strengthening the legal framework such that it is preventative in nature as opposed to being reactive. For example the Petroleum (Exploration, Development and Production) Act, 2013 charges the National Environment and Management Authority (NEMA) with the responsibility of making regulations for the management of the production, transportation, storage, treatment and disposal of waste arising out of petroleum activities. However, the prescribed fine of five thousand currency points in Section 3 (9) is not dissuasive enough. Raising the fine to one hundred thousand currency points as prescribed in Section 3 (7) could guard against non-compliance by licensees.

The Minister of Energy and Mineral Development should also publicly disclose the outcomes of an assessment of the risks of the petroleum activities on trade, industry and other risks such as occupational health and safety hazards, pollution, or economic and social costs. Although risk assessment is required under Section 47 (3) for new licensing areas, there is no provision for similar assessments provided for in the other stages of resource development for interested stakeholders to comment. Even though the affected communities are accorded an opportunity to express their views on new areas of exploration, their fate is left in the hands of the Minister who may disregard their interests (Section 47 (6)). There is need for reassertion in the form of a constitutional amendment to eliminate any suspicions between the people and their government about benefits of petroleum.

There is need for Uganda to join the Extractive Industries Transparency Initiative (EITI) and form the Oil and Petroleum Uganda Association to oversee activities in Uganda. There should further be an enforcement policy whereby inspectors are appointed whose main objective is to stimulate compliance with health and safety legislation and to ensure that a good standard of protection is maintained. Inspectors have, and make use of, important statutory powers. They can enter any premises where work is carried out

without giving notice, although they will often visit by prior arrangement. They can talk to employees and safety representatives, take photographs and

samples, and impound dangerous equipment and substances. If they are not satisfied by the levels of health and safety standards being achieved, they have several means of obtaining improvements

Furthermore Government should create a legal and policy framework ensuring that exploitation of natural resources is conducted in a manner that respects human rights and freedoms especially rights of workers at work places basing on the right to a healthy and safe environment. Oil companies are equally enjoined to respect, protect and provide remedies to victims of their corporate quest for the exploitation of natural resources in Uganda. Before issuing a certificate of compliance in accordance with the provisions of Section 13(6) of the Public Finance Management Act, 2015, the National Planning Authority (NPA) should demand that the Ministry of Energy and Mineral Development provides for the review of the Upstream and Midstream laws to make them human rights compliant in the subsequent National Budget Framework.

The legal framework should provide for public disclosure of contracts and environmental impact assessments for accountability purposes and a demonstration by government and international oil companies to provide remedies to those affected by the negative social and environmental externalities of the petroleum industry in Uganda. International oil companies should work closely with government and civil society to consult and secure free, prior and informed consent through community engagement in the conduct of environmental impact assessments in addition to making them and other contracts such as production sharing agreements and signature bonuses publicly accessible without superfluous bureaucratic limitations.

b) Safe and Healthy working conditions to avoid risks

The Ugandan Government should ensure that there is safe and healthy working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health; and for other purposes.

c) Waste Management Planning

It has been observed that one of the major challenges to risk management compliance in Uganda's oil and gas sector is pollution due to poor waste management. It was overwhelmingly pointed out

by the respondents in Bulisa that the waste products which is the crude oil and other related chemicals as a result of the production process pollute the land and make it unfit for growing crops. This waste is also harmful to the health of the workers in the oil rigs and the surrounding communities hence there is need to develop a waste management plan identifying anticipated solid and liquid waste streams and addressing determination, inspection and waste minimization procedures, storage locations, and waste-specific management and disposal requirements. Include a recycling strategy to be practiced by workers during all project phases; minimize the generation of both solid and liquid wastes (including produced water) from well drilling and well development operations that are potential environmental health and safety contaminants and employ drilling and recovery systems that recycle drilling fluids, and minimize the amount of final disposal of contaminated fluids and materials.

d) Corporate Social Responsibility

There is need for the government to ensure that oil and gas companies practice corporate social responsibility such that they are able to give back to the communities within which they operate by maintaining a good healthy and safe environment for the workers and conserving the environment. Activities such as tree planting, provision of safe working gear, health clinics, setting up on-site and off-site emergency plans, social meetings between people, government and oil and gas companies to harmonize the working and living conditions of workers especially should be encouraged to ensure that there is compliance with environmental health and safety standards. This also creates a good and healthy relationship among the main players involved.

There is further need to embrace bio-diversity offsets through corporate social responsibility such that plant and animal life is also protected especially in communities which widely embrace agriculture. These are biodiversity conservation management or improvement actions considered to counterbalance impacts to biodiversity resulting from development. This can be achieved through purely voluntary measures taken by corporations, conservation management or other actions negotiated between decision-makers and developers.

e) Environmental health and safety Sound Technology

Utilize of efficient and Environmental health and safety Sound Technology. This technology ensures health and safety, protects the environment risks, is less polluting, uses all resources in a

more sustainable manner, recycles more of the waste and products, and handles residual wastes in a more acceptable manner than the technologies for which they were substitutes. Environmental health and safety sound technologies in the context of pollution are "processes and product technologies" that generate low or no waste that could cause harm to the health or wellbeing of the workers and also for the prevention of pollution. They also cover "end of the pipe" technologies for treatment of pollution after it has been generated.

f) Air Quality Monitoring Systems

Implement air quality monitoring systems. There is need to have mitigation measures to avoid or reduce air quality risks from oil and gas production. Examples of such measures include: fugitive dust, air releases, process emissions and secondary emissions. Many impacts can be reduced or avoided when considered during the siting and design phase.

g) Environmental health and safety Training and Awareness

There is need for environmental health and safety training and awareness so that potentially affected people can know their rights, the relevant legislative requirements, detailed procedures and work instructions for key activities and tasks, risks and emergency plans and the means of responding to incidents. Such training should also go towards the bodies responsible for enforcement of environmental health and safety standards to ensure that they are able to effectively implement these standards such that occupational hazards in the oil and gas industry are avoided. There is further need to employ these people after the training as per Article 21 of the Petroleum (Exploration, Production and Development) Act, 2013 which provides for Training and Employment. It is to the effect that "train and employ suitably qualified Ugandan citizens following commencement of Production and undertake the schooling and training of Ugandan citizens for staff positions, including administrative and executive management positions, provide grants to support the training of government officials on matters related to the management and oversight of the petroleum sector. However, these laws lack provisions that ensure that Ugandans employed by the

transnational oil companies receive the same treatment, pay and opportunities at their work place with their foreign counterparts.⁴¹ A recent report by the Office of the Auditor

general¹⁶³ revealed that Ugandans working in three transnational oil companies (CNOOC and Total) were being underpaid compared to their foreign counterparts. The report discovered that expatriates on average earned five to ten times more than nationals, while other expatriates were found to have overstayed past the due dates for the nationalization of their positions. Henceforth there is need to employ the trainees such that they serve in the best interests of the nation by upholding the environmental health and safety standards.

h) Identification of potential risks

Oil companies should maintain procedures to identify systematically the environmental health and safety hazards and effects which may affect or arise from their activities, and from materials employed in them such as injuries and diseases on the oil rigs and other occupational health and safety risks as well as the various environmental impacts to human life and animal life. The scope of the identification should encompass all activities from inception oil activities through to decommissioning.

This can be achieved through a Health, Safety and Environmental Impact Assessment (HSEIA) which is a systematic process of identifying the impact of existing, new or substantially altered projects on health, safety and the environment. Identifying potential HSE risks and taking the necessary measures to deal with them quickly and effectively can result in cost savings by avoiding preventable injuries and environmental disasters.

i) The role of Government

The role of government in setting and enforcing environmental health and safety regulations is crucial to minimizing the potential environmental health and safety impacts. The trend towards performance-based regulations, rather than the traditional command and control approach, has the potential to stimulate more innovative and effective environmental management in all areas of the world including Uganda.

¹⁶³ Keith Muhumuza, “Auditor General Faults and Government and Oil Companies on skilling Locals.” <http://www.monitor.co.ug/Business/Auditor--General--faults--government-oil/-/688322/2687092/-/af385ez//index.html>(accessed June 28, 2022)

Government should ensure that concrete strategies for transparency, in line with international best practice on "combating the resource curse", are enshrined in the new legislative framework for oil. This should include transparency in new contracts and licenses; institutional mechanisms for revenue collection and management; management of any Ugandan oil fund to be set up; and clarity on the respective roles and responsibilities of different oversight agencies.

The capacity and independence of government agencies critical to successful management and improved transparency of oil should be strengthened, particularly that of the National Environmental Management Agency (NEMA), the Petroleum, Exploration and Production Department (PEPD), the Ministry of Energy (including through creation of a functioning information officer and a petroleum database), and of local government officials in oil affected districts and Initiatives should be implemented by government and companies to ensure wide public Consultation on specific issues that arise, such as the current oil production feasibility studies; any new licenses; as well as any upcoming Environmental Impact Assessments (EIAs).

j) The role of Civil Society Organizations

Civil society organizations and the Government of Uganda have a shared interest in ensuring that oil exploitation activities are undertaken in a manner that is consistent with national policy, legislation and promoting sustainable and equitable development in Uganda. Hence there is need to shift from politicization to strengthening CSOs and supporting their works. Where there a criticism by a CSO the government should feel advised rather than insulted, and the recommendations should be implemented.

l) Expansion of stakeholder participation

The law should provide for oversight committees that comprise of the ruling party, the opposition party, civil society, and parliament to jointly undertake the scrutinizing the oil contracts, national oil receipts and national expenditure. In this context government should not be worried of civil society and the opposition but treat them as partners in avoiding the resource curse. Public participation in oil and gas activities should also be enhanced especially when it comes to decisions that may affect them. It is very crucial

that the policy goals envisaged in the oil and gas policy are implemented before oil production starts.

m) Recommendations for operational risk management

The following recommendations came out for consideration for operational risk management; IDC Energy Insights recommends the following to oil and gas companies:¹⁶⁴

- Consider developing a corporate-wide approach to managing information in the plant. Best practices cover use of technology to support operations, business analytics, application integration, EHS compliance and enterprise content management.
- Work to develop business processes for operations and identify document control workflow for approvals within the organization, including a transmittal process. Determine how often you wish to share documents with vendors, partners, regulators, and others. Work together to develop a coding standard for components/documents to ensure that there is consistent master data management.
- Participate in industry associations and user communities to help arrive at standards for the sharing of content and to support well and plant workflows.
- Look to areas of high vulnerability in your operation such as current processes that still rely on paper files that can potentially be difficult to find and update and may be misfiled or lost and ultimately expose your company to regulatory or internal audit Failures.
- Focus on process improvements that will allow more effective sharing of content both inside and outside the firewall. A good area to start would be the transmittal process.
- In this time of increased regulatory pressure, to look at solutions that will optimize the way you manage, share, store, and archive content to comply with environmental, health, and safety regulations.
- Look at deploying information rights management tightly integrated with content management to ensure that only authorized recipients can view, copy, print, or edit confidential information.
- Reassess customer communications capabilities to ensure timely and

personalized correspondence tailored to the delivery requirements of the recipient, including customers and regulatory agencies.

¹⁶⁴Minimizing Operational Risks in the Oil and Gas Industry White paper sponsored by EMC July 2011

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APPENDICES

APPENDIX I: QUESTIONNAIRE

QUESTIONNAIRE

UGANDA CHRISTIAN UNIVERSITY.

**OIL AND GAS SECTOR IN UGANDA: ANALYSIS OF THE LEGAL AND POLICY ASPECTS ON
COMPLIANCE WITH THE CONCEPT OF RISK MANAGEMENT**

ADMINISTERED BY: WAKWALE DAVID BRYAN KUSOLO

Section 1

Background Information:

Name: Sex:

Male: Female:

Occupation:

Level of Education:

1. Introduction:

This questionnaire is aimed at enabling the researcher to uniformly gather field data from sample participants. The researcher is a student at Uganda Christian University pursuing a Master of Laws Oil and Gas. The particular research (dissertation) is undertaken as part of the requirements for the award of a Master of Laws Oil and Gas degree. The information shared through answering questions is confidential and purely for academic purposes only.

1. How do you manage risk in the oil industry?

2. What do you consider to be the significance of risk management?

3. What are some of the policies considered to counteract situations of risk management?

4 Are you following proper rules and regulations in mitigating the risks?

5. How does the Ministry of Energy and Mineral Development enable the oil companies in Uganda in managing risks?

2. Any other comments:

.....

(Interviewee)

..... Signature

Date

Thank you for your time!

APPENDIX III: WORK PLAN (TIME SCHEDULE)

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Research proposal												
Research writing (Dissertation)												
Submission												

APPENDIX VI: BUDGET

S/N	Item	Total Cost Shs. (UGX)
1	Travel costs	100,000
2	Questionaries and interview schedules	200,000



UGANDA CHRISTIAN UNIVERSITY

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UGANDA CHRISTIAN UNIVERSITY

SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 6/20/2024

Name of Candidate: WAKWALE DAVID BRYAN KUSOLO

Reg. No: REG. NO: S22/M23/033

Title of Dissertation: OIL AND GAS SECTOR IN UGANDA: ANALYSIS OF THE LEGAL AND POLICY ASPECTS ON COMPLIANCE WITH THE CONCEPT OF RISK MANAGEMENT

SN	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	The topic is relevant.		
2	The thesis has no author. The first page should include the student's name.		
3	The abstract should spotlight the main issues		

	relating to your subject matter.		
4	The thesis should be signed by the student and supervisor.		
5	The research objectives in Section 1.4.3 should be clear. At the moment, they are framed as research questions. This section should be revised.		
6	The introductory chapter one, specifically section 1.2 should be precise.		
7	Chapter two on literature review refers to various scholarly work. However, the aim should not be to quote what the scholars wrote, but rather, analyse the literature and connect it to your work. This chapter should be revised to ensure that it is more analytical.		
8	Chapter three on Methodology is good, but it should include the context analysis for employing the suggested methodology in the research.		
9	Chapter four is un-necessarily long. You do not have to discuss the sources of international law. Simply highlight the relevant international instruments regarding your subject matter.		
10	Chapter four is very descriptive, especially the part discussing the international and regional legal framework.		
11	The focus in chapter four should be to analyse the effectiveness of the laws you		

	discuss.		
12	Chapter five could be summarised and easily combined with chapter four, to analyse the role of the relevant institutions in enforcing the laws.	Revised	
12	Chapter six has good information. However, note that, when employing a comparative analysis, you should clearly mention what you are comparing.	Revised	
13	The thesis contains good information. But it should be more analytical	Revised	

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	The topic is relevant.		Cover page
2	The thesis has no author. The first page should include the student's name.	Included	Cover page
3	The abstract should spotlight the main issues relating to your subject matter.	Revised	Page 12
4	The thesis should be signed by the student and supervisor.	Signed	Page 2 & Page 3
5	The research objectives in Section 1.4.3 should be clear. At the moment, they are framed as research questions. This section should be revised.	Revised	Page 19
6	The introductory chapter one, specifically section 1.2 should be precise.	Revised	Page 13
7	Chapter two on literature review refers to various scholarly work. However, the aim should not be to quote what the scholars wrote, but rather, analyse the literature and connect it to your work. This chapter should be revised to ensure that it is more analytical.	Revised	Chapter 2 - Page 22 to Page 46
8	Chapter three on Methodology is good, but it should include the context analysis for employing the suggested methodology in the research.	Revised	Chapter 3 - Page 47 to Page 52
9	Chapter four is un-necessarily long. You do not have to discuss the sources of international law. Simply highlight the	Revised	Chapter 4 - Page 53 to Page 105

	relevant international instruments regarding your subject matter.		
10	Chapter four is very descriptive, especially the part discussing the international and regional legal framework.	Revised	Chapter 4 - Page 53 to Page 105
11	The focus in chapter four should be to analyse the effectiveness of the laws you discuss.	Revised	Chapter 4 - Page 53 to Page 105
12	Chapter five could be summarised and easily combined with chapter four, to analyse the role of the relevant institutions in enforcing the laws.	Revised	Page 97 to Page 105
12	Chapter six has good information. However, note that, when employing a comparative analysis, you should clearly mention what you are comparing.	Revised	Chapter 6 - Page 115 to Page 128
13	The thesis contains good information. But it should be more analytical	Revised	Page 1 to Page 140

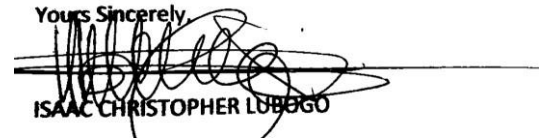
SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR
1			e.g. Cover page
2			e.g Page 1, etc

			corrected
3			
4			
5			

WAKWALE DAVID BRYAN KUSOLO



ISAAC CHRISTOPHER LUBOGO

Yours Sincerely,

ISAAC CHRISTOPHER LUBOGO

Candidate's Name

Signature

Supervisor's Name

Signature