THE EFFICACY OF THE REGULATORY SYSTEM IN UGANDA'S HEALTH AND SAFETY PROGRAMME IN THE OIL AND GAS SECTOR

A CASE STUDY OF THE ALBERTINE GRABEN IN WESTERN UGANDA

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A DISSERTATION
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JULY 2020.

DECLARATION

I, **BAKIZA JOHN CHRIS,** 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.

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Signed ……

Date …….

APPROVAL

This is to certify that, this dissertation entitled **"THE EFFICACY OF THE REGULATORY SYSTEM IN UGANDA'S HEALTH AND SAFETY PROGRAMME IN THE OIL AND GAS SECTOR",** ***A case study of the Albertine Graben in Western Uganda*** has been done under my supervision and now it is ready for submission.

……...

George WKL Kasozi – Associate Professor

(**SUPERVISOR**)

Date …….

DEDICATION

This dissertation is dedicated to my children to whom I have commended that education is the master key to success in a modern world. Anything else is a given by the grace of God. This work is particularly dedicated to all my Children, especially the young ones; Blessing, Ashley and Franklin who became conditioned to my constant absence from home at their time of need for a supportive father but I was then away for studies. Above all, I thank the almighty God for the gift of life just as he has graciously given to my 98-year-old father, Erinesti Bakiza.

The completion of this dissertation was partly interrupted by the lockdown of all institutions of higher learning due to the COVID-19 pandemic. Every aspect of ordinary life suddenly became virtualized. Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time. My singular resolve was the completion of this study at all costs. So I did.

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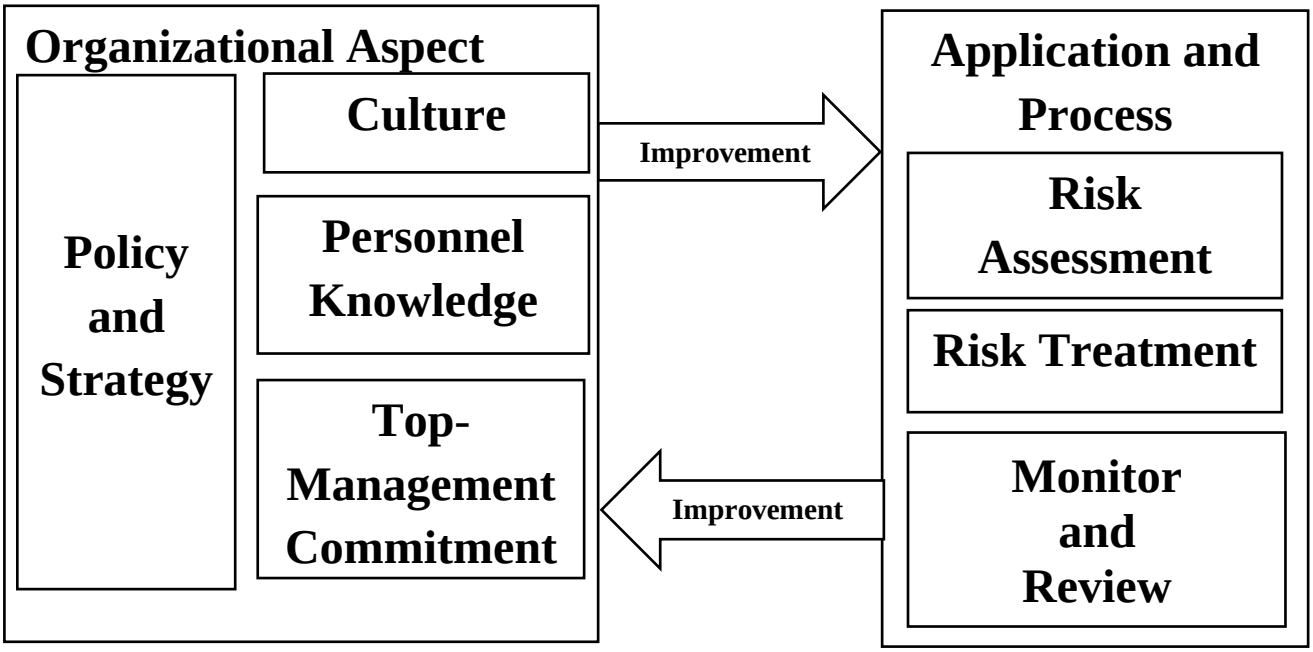
I acknowledge the invaluable and scholarly suggestions made by my academic Supervisor; Associate Professor George WKL Kasozi towards the completion of this study. I also acknowledge the tremendous encouragement and care given to me by my wife, Robinah during the whole period of my study. Without such encouragement and support this research study would have remained a dream. I will always remind my friend Paul Barigye that, if it had not been for his awakening and ceaseless persuasion, I would have probably remained a mere tourist guest at the beautiful IPSK Campus. While I can never forget the adrenaline rush for the evening classes at 6:00p.m, the outcome of the dedication has become an infinitely rewarding investment.

It would be a grave omission not to mention the kind words of encouragement from my office workmates, Wasswa Simon, Nassozi Rebecca and Rutembana Patrick. They became a source of my inspiration in efficiently running the office during my sabbatical absence.

LIST OF CHARTS



ABBREVIATIONS /ACRONYMS

AAC	Assessment Agency of Canada
CEAA	Canadian Environmental Assessment Agency
CER	Canadian Energy Regulator
DOSH	Department of Occupational Safety and Health
EAC	East African Community
EG	Equatorial Guinea
EFQM	European Foundation for Quality Management
GDP	Gross Domestic Product
GPF	Government Pension Fund
GPV	General Purpose Vehicle Company
GRMM	Generic Risk Management Model
HG	Host Government
HIV	Human Immune Virus
HSE	Health Safety and Environment
ILO	International Labor Organization
IOCs	International Oil Companies
JLOS	Justice, Law and Order Sector
MGLSD	Ministry of Gender, Labor and Social Development
NCS	Norway's Continental Shelf
NDP	National Development Plan
NEA	National Environment Act
NEAP	National Environment Action Plan
NEB	National Energy Board
NEMA	National Environmental Management Authority
NFA	National Forestry Authority
NGO	Non-Governmental Organization
NNOC	Nigerian National Oil Corporation
NOC	National Oil Company
NOGP	National Oil and Gas Policy

NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Act
PAU	Petroleum Authority of Uganda
PEDPA	Petroleum (Exploration, Development and Production) Act.
PEDP-HSE	Petroleum (Exploration, Development and Production) (Health, Safety and Environment Regulations)
PSA	Production Sharing Agreement
PSM	Process Safety Management
RMM	Risk Management Model
SHE	Safety, Health and Environment
UK	United Kingdom
UN	United Nations
UNEP	United Nations Environment Programme
USA	United States of America.
UWA	Uganda Wildlife Authority
WCA	Workmen's Compensation Act
WWF	World Wide Fund for Nature

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ABSTRACT

The Piper Alpha oil blow out disaster in the North Sea in the United Kingdom in 1988, the Gulf of Alaska blow out in 1989, the 2010 Deepwater Horizon disaster in the Gulf of Mexico and the Niger Delta Oil Spills in Nigeria in the 1990s all provide lessons concerning high end risks associated with oil and gas extractive activities. The finds, in Uganda, of commercial quantities of oil in 2006 renew the inevitable debate of whether Uganda, a new entrant into the global oil producing club, is ready to face the challenges of hazardous risks prevalent in the oil and gas industry. This research study interrogates the efficacy of the environmental management, Occupational Health and Safety in Uganda's Health and Safety programme in the Oil and Gas Sector. The study makes a case for review of the existing regulatory approaches, elimination of regulatory gaps/overlaps, and adoption of a risk management model. The study makes recommendation for adoption of a combination of prescriptive, performance- based and safety case regulatory approaches.

CHAPTER ONE: GENERAL INTRODUCTION

2.0 History and Background to the Study

Health and safety Risk/ concerns relate to asset damage, pollution, explosions that injure people, and damage to properties. Petroleum[1] is a major source of global energy and earner of revenue for oil and gas producing countries. However, petroleum exploration and production operations leave a significant project foot print on the environment. The discovery of oil in commercial quantities in Uganda in 2006 raised prospects of increased revenues needed to achieve sustainable development. On the other hand, oil development and production in the Ugandan Albert Basin[2] raises concerns on the ecosystem including decommissioned oil installations in the area.

Research studies and analytical processes show environmental and human health impacts from the oil and gas projects. Such studies evaluate alternative designs of appropriate mitigation, management, and monitoring measures associated with risks in the industry.

Uganda has confirmed extractable commercial oil of approximately 6.5 billion barrels.[3] However, about 1.1 billion of the hydrocarbon reserves are located around Lake Albert,[4] African's Seventh largest Lake that borders Uganda and Congo.[5] The oil reserves are both on shore and off-shore.[6] Developments in off-shore and on-shore operations influence policy and regulatory tool formulation and design.

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[1]Omorogbe .Y, (2003), Oil and gas law in Nigeria, p.3; Petroleum and oil and gas are used interchangeably; https://www.abebooks.com>plp, accessed 6 September 2019

[2] The Albertine Graben partly boarders with South Sudan, https://wwwsearchanddiscovery.com/documents/2010/10284abeinomugisha/images/abeinomugisha> Accessed 9 September 2019

[3] Report on the progress of the implementation of the National Oil and Gas Policy for Uganda, (February, 2017) https://www.petroleum.go.ug/uploads/resources/statusof -policy-2017, last accessed 6 September, 2019.

[4] https://www.tullowoil.com/media/does/default-source/3-investors2013-tullow-ugandacountryreport.pdf, last accessed 16 September 2019

[5] Lake Albert, Encyclopedia. Britannica. https://www.britannic.com/place/Lake-Albert, last accessed 6 September 2019

[6]Rwakakamba et al, (2014) Tourism in Uganda oil. https://www.agency.org/wp-content/uploads/2014/oil/tourism-in-uganda-oil-economy-Deal-or-no-deal-pdf, last accessed on 6 September 2019

Uganda has been referred to as Africa's hottest inland exploration frontier[7]. Exploration activities are taking place across the entire five blocks out of nine Oil-producing blocks allocated to the International Oil Companies (IOCs).[8] The prospects for oil revenues will significantly boost Uganda's national income. This will provide a unique and exciting opportunity for Uganda's social and economic transformation. However, global experience suggests that there are challenges that tend to associate oil resource-rich developing countries with the 'resource curse'.[9]

One of the ways to ensure that the oil resource will yield lasting benefits for Uganda's present and future generations is to put in place an effective regulatory framework that fosters transparency in equitable resource utilization. Hence the need to balance the need for petroleum production with conservation of the unique bio-diversity and the wider environmental well-being. [10] The other challenge may be political interference. Parliamentarians may face challenges of effectively discharging their oversight responsibility. They may be put under pressure by the incumbent executive or the ruling party against exercising Parliamentary Independence. There may be political uncertainty.

The anticipated economic benefits cannot vitiate negative environmental, health and safety ramifications that may arise from oil and gas production. While off-shore oil activities may result in environmental pollution, the activities may result into negative effects to the Albertine Graben, a rich biodiversity area. On the other hand, the anticipated decommissioning activities (both on-shore and off-shore) should account for possible impacts to the safety of personnel and other uses of the lake and land.

Most of the risky and hazardous operations from which health, and occupational safety regulatory regimes have evolved are off-shore located in remote locations that experience extreme weather conditions. Uganda is lucky to be a tropical country located on the edge

[7]Banfield .J, (2011), Oil and Gas Law in Uganda, A legislator's Guide, Oil Discussion Paper No. 1 May 2011 Understanding Conflict, Building Peace, International Alert, https://www.Internationalalert.org>PDF, accessed 29 September 2019

[8] Ibid.

[9] Ibid.

[10]Ibid.

of the Equator and is replete with water, many shallow lakes and natural forests with a large variety of wild life.[11]

Development of oil industry can bring great benefits, but it comes along with great risks to the environment. The Deepwater Horizon blowout in the Gulf of Mexico has important lessons to teach about environmental conservation and protection. In 2010 a series of explosions ripped through the Deepwater Horizon oil rig leaving eleven people dead in the explosions and the ensuing fire.[12] Over the next 87 days five million barrels of oil spilled out of the Macondo well into the Gulf of Mexico. Thousands of law suits were filed against BP the operator of the oil rig. By agreement with the US Government, BP established a trust fund of US$ 20 billion to satisfy claims arising from the wide spread disaster to the environment. The main cause of the explosion was systems malfunction. Uganda will have to watch out for this.

The Piper Alpha oil rig disaster which occurred in 1988 in the North Sea Coastal Shelf of UK left 167 men working on the oil rig platform dead and the operating company liable to pay $180million in compensation to the families of the victims.[13] The main cause of the disaster was miscommunication between system operators.

In the 1990s Oil conflicts in the Niger Delta State of Nigeria saw Islamic terrorist attacks ravage oil installations such as drill sites, pipelines, oil tankers in order to stifle oil production and cripple the Nigerian government economically.[14] The main cause of the conflict in Nigeria was the question of perceived unfair sharing of the national oil resource.

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[11] Geography of Uganda landforms- World Atlas.com. https://www.worldatlas.com>uganda. Last accessed 6 September 2019

[12] Lehner .P, and Deans .B, (2010), In Deepwater: The Anatomy of a Disaster. The Fate of the Gulf, and Ending our Oil Addiction, USA Today, Oct.25.2010, https://www.researchgate.net>, accessed 28 June 2020.

[13] piper Alpha: (06 July 1988), The Disaster in Detail Features, www.thechemicalengineer.com, accessed 27 June 2020

[14] Hallmark .T, (2017), Oil and Violence in the Niger Delta isn't Talked About much , but it has A Global Impact, www.forbes.com, accessed 28 June 2020

The discovery of commercial oil in Uganda and the associated exploration studies have shown that oil in the Albertine Graben straddles across the boarder with DRC Congo and perhaps Southern Sudan. These are areas reputedly playing host to rebels hostile to the government of Uganda in power.[15] It is not clear how the transboundary dimensions of crises and potential disasters affecting the neighbouring countries will be managed. The DRC Congo and Uganda signed a co-operation agreement for the exploitation of the trans-boundary fields,[16] but no detailed study of the costs and unitization processes has been rendered. The two parties have not agreed on a risk management framework that will be followed in the exploitation of the trans-boundary hydrocarbons.

Risk can be defined as the possibility or probability of not achieving the desired result, or the extent to which the adverse outcomes of an event may negatively affect the expected outcome.[17] The most common risks to the oil and gas industry are several. They include operational risks such as equipment failure. Risk includes environmental risks such as the pollution that resulted from the Deepwater Horizon blow out affecting the entire Gulf of Mexico Coast line and causing extensive damage to the ecosystem. Risk includes War/terrorism, expropriation and change of regime like happened in Nigeria in 1990s. Risk includes political risks such as change of government. The legal risks such as, contractual, tort and statutory duties, consequential loss, exclusion of negligence, liability and indemnities.[18] Risks also include management failures or breakdown in organizational communication such as what triggered the Piper Alpha rig disaster.

The current development stage for Uganda's oil industry makes a case for interrogation of readiness to venture into the Petroleum activities at the level of world class industry standards. The high potential for occurrence of hazardous incidents in the oil and gas

[15] The Arusha Pact between Uganda and DRC Congo, New Vision 12 September 2007 The Rebel forces mentioned include Lords Resistance Army (LRA), The Allied Democratic Alliance (ADF), People's Redemption Army (PRA), National Liberation Army (NALU) https://www.newvision.co.ug>news accessed 28 June 2020.
[16] Ibid.
[17] Brends .K, (2007), Engineering and Construction Projects for Oil and Gas Processing Facilities. Constructive, Uncertainty and Economic Information, 35 Energy Policy 4260, Mj Greaves, Understanding and Managing Risk and real Estate Investments (1963)/surveyor and Valuer (SISV) 21 https://ideas.repee.org>eee>encepsl, accessed 28 June 2020
[18] Brends (2007), Ibid.

operational activities should give Uganda sleepless nights.

Although Uganda has not experienced any significant risk or hazard in her developing oil and gas sector, it is important to put in place an effective regulatory framework that has capacity to address potential hazards and risks within her nascent industry. Different regulatory entities share similar obligations and mandates within the HSE regulatory regime. This in itself has potential for regulatory over laps and uncoordinated approaches to HSE management.

Petroleum activities are likely to expose the surrounding communities to potential health and safety hazards. From 2010 to 2013, Uganda was beset with a series of fuel tanker health and safety concerns that claimed 60 lives and at least 79 severe injuries.[19]

1.3 Statement of the Problem

Uganda's Petroleum sector is regulated by several policies and regulatory frameworks. The grand norm, the 1995 Constitution[20] provides for various health and safety rights. Article 39 of Uganda's Constitution provides for and guarantees the right to a clean and healthy environment. Section 3 of the National Environment Act (NEA) 2019 makes a comprehensive provision for the right to a decent environment. The regulatory frameworks relate to the environment, occupational health and safety. The policies and frameworks aim to ensure effective exploitation of petroleum without leaving a footprint on the bio-diversity. The constitutional mandate is overarching.

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[19] Fuel health and safety: 33 and more burnt by a New Vision Reporter Available at https://www.newvision.co.ug/new_vision/news/1325028/fuel-burnt-death. Accessed on 30 September 2019

[20] Article 77(1) of the 1995 Constitution of Uganda. The Constitution http://statehouse.go.ug>files.PDF, accessed 29 September 2019 establishes the Parliament of Uganda, vesting parliament with powers to make laws on any matter for the peace, order, development and good governance of Uganda. The roles of Parliament can be summarized as legislation, oversight and representation.

The state shall protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda.[21] The state shall take all practical measures to promote a good water management system at all levels.[22] The state shall 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 generation.[23]

Uganda subscribes to and is signatory to some international and regional legal instruments as well signed some agreements such as the Rio Declaration 2012 on sustainable development.[24] In spite of these laws, Uganda has not yet achieved an integrated regulatory framework for enforcing environmental health and occupational safety compliance. What is not clear is whether the diverse regulatory systems can be integrated and efficiently co-ordinated. The effectiveness of the regulatory framework regime is doubtful. Hence, the justification for the study.

In spite of the rich Legal and Regulatory Frameworks in place, it is not clear whether or rather when Uganda will achieve the desired degree of best Industry practices expected of a member of the developing oil producing countries?

1.4 Purpose of the study

The aim of the study is to analyze the efficacy of the legal framework of the regulatory system in Uganda's health and safety programme. The study aims to demonstrate that Uganda's regulatory framework for HSE should be regulated to the expected best industry practices.

1.3 Significance of the study

The study questions the effectiveness of Uganda's regulatory regime in Health and Safety.

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[21] XIII, National Objectives and Directive Principles of State Policy, Constitution of Uganda 1995, Protection of Natural Resources, Ibid

[22] XXI, Ibid, Clean and safe water, Ibid

[23] XXVII, The Environment, Ibid

[24] The United Nations Conference on Sustainable Development, Rio de Janeiro, Brazil 20-22 June 2012, https://sustainableDevelopment.un.su>, 28 June 2020

The outcome of the study will contribute to a better understanding of the regulatory regime. It is envisaged that the findings of this research might be of interest to legislators and stakeholders in the industry. The study will further inform the process of identifying regulatory challenges in order to advance appropriate reforms in the sector.

In addition, the study would provide a supplementary source of study material for scholars and academicians in the very area of the study.

1.4 Research Justification

Uganda recently embarked on a commercial oil exploration and production. The fact of Commercial oil deposits confirmed in 2006 raises concerns of environmental health and safety standards within the extractive industry.

Despite improvements and growth in international environmental agreements, very little of their actual contribution to sustainable development is known. Effectiveness issues have occasionary attracted the attention of international lawyers.[25] The existing literature mainly focuses on conceptual concerns,[26] largely on case studies.[27] rather than on the development of a common and practical methodological framework to assess the performance of the legal aspects of environmental governance.[28] There is moreover lack of global consensus on the meaning of effectiveness in the context of international environmental agreements.

Against this international discourse, Uganda which is a signatory to several international agreements, such as the Rio Declaration of 2012 and several others on sustainable development, would be expected to meet similar challenges in the legal interpretation of the effectiveness of the national environmental laws.

This research study, therefore, assesses the effectiveness of Ugandan laws in enforcing compliance in line with the recommended international industry standards. The research

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[25] Weiss .E.B et al (2000), Engaging countries, strengthening compliance with International Environmental Accords, https://academic.oup.com/yielaw/article/doi/10.1093/yei/yvy086/5310015, accessed 28 June 2020

[26] Mehling .M.A et al (2002), The context of Effectiveness in International Environmental law, 13 Finaish YB Intl L 129, https://academic.oup.com, accessed 28 June 2020

[27] Imperiali .C, et al (1998), The Effectiveness of International Nature Conservation Agreements, https://academic.oup.com, accessed 28 June 2020

[28] Martin .B et al (2016), Framework for Assessing and Improving law for sustainability, https://www.iucn.org>201606>ne, accessed 28 June 2020

study exposes wider thinking for stakeholder institutions in ensuring compliance with oil and gas industry standards. This study is therefore, contextually and legally justifiable.

1.5 Objectives of the study

1.5.1 General Objective

The general objective of the study is to assess and analyze the efficacy of the legal framework adopted for the oil and gas sector in Uganda.

1.5.3 Specific Objectives

i) To identify the regulatory framework adopted for the oil and gas sector in Uganda.
ii) To analyze the efficacy of the law in preventing and controlling the health and safety concerns /risks.
iii) To identify the challenges faced in the implementation of the law in ensuring health and safety concerns/risks.
iv) To make a comparative analysis of the legal/regulatory frame work among other countries that Uganda can adopt in order to ensure an effective healthy and safe system.
v) To make recommendations that can be helpful to the stakeholders.

1.6 Research Questions

The overall research question, therefore, focuses on the efficacy of the regulatory system in addressing the present and future gaps. Specifically, the following research questions are posed:

i) What regulatory framework should effectively address HSE Concerns/risks in the Albertine Graben?
ii) What are the challenges of implementation of the legal framework in ensuring health and safety concerns/risks?
iii) What recommendations can be adopted in ensuring an effective framework?

1.10 Scope of the study

The study examines the extent of compliance, discusses environmental health and safety rights and obligations of stakeholders and proposes mechanisms aimed at improving HSE compliance.

1.10.1 Conceptual scope

Conceptually this study is located within the discipline of contract law, specifically analyzing the laws that regulate the extractive activities and bearing in mind the rights of contracting parties. This study focused on the regulatory framework particularly analyzing effectiveness of the legal framework on risk management in ensuring health and safety during field operations. In addition, the study also looks at what measures have been adopted in trying to address challenges identified in the industry.

1.10.2 Geographical scope

The study geographically focuses on the Albertine Graben in Western Uganda.

1.10.3 Time scope

The time scope was, due to the nature of documentary data referred to, suitably placed between 2010 and 2019.

1.7.4 Methodology

The study was conducted through a qualitative doctrinal legal research methodology. A doctrinal method was a suitable research design because this study was based on theoretical concepts concerning environmental health, safety and the risks so associated

A doctrinal method was used to carry out comparative analysis of selected country regulatory approaches based on the stakeholder and risk management theories. Comparative and qualitative analyses basing on the effectiveness or failures of regulatory approaches in the sample countries were used. The analyses were organized around the two doctrinal theoretical concepts as opposed to individual hypotheses. Through the use of the theoretical constructs, I found that Uganda's legal and regulatory models are very much

similar to some of those in the selected countries. I also found that in the presence of certain conditions there is a likelihood of successfully applying a risk management model to treat the occurrence of risks.

A desk research method was employed to review government reports, audits, policy statements, legislations/regulations, textbooks, journal articles, dissertations, conference reports, scholarly reviews through peer journals, relevant news reports and websites. In the review, the strengths and weaknesses of the legal frameworks were analyzed. A comparison was therefore made in determination of effectiveness of regulatory approaches in the selected countries.

In the application of the doctrinal method a comparative study of the regulatory frameworks in eight (8) different countries was made and the outcome of the analyses resulted into the final recommendations of the study. Comparative research offers an opportunity to address a particular set of questions that are of crucial importance in understanding a range of processes.[29]

Comparative research differs from non-comparative work in that it attempts to reach conclusions beyond single cases and explains differences and similarities between objects of analysis and relationships between objects against the backdrop of their contextual conditions.[30]

Comparative analysis enhances the understanding of one's own perspective by placing its familiar structures and routines against those of other systems (understanding); Comparison heightens our awareness of other systems, cultures and patterns of thinking and acting.[31] Comparison allows for testing of theories across diverse settings and evaluating the scope and significance of given phenomena.[32] Comparison contributes to the development of universality and acceptability of a theory (generation).[33] Comparison

[29] Esser .F, et al (2012), Handbook of Comparative Communication Research, London, Routledge, https://www.zora.uzh.ch>emprit>E, accessed 28 June 2020

[30] Ibid.

[31] Esser .F, (2012) on the way and how of comparative Inquiry in Communication Studies; https://www.researchgate.net>2817 accessed 28 June 2020

[32] Ibid.

[33] Ibid.

prevents scholars from over-generalizing based on their own experiences and challenges.[34] Comparison provides access to a wide range of alternative options and problem solutions that can facilitate or reveal a way out of similar dilemmas at home.

1.11 Conceptual frame work

A conceptual framework is a researcher's design according to a researcher's perspective or understanding of the relationships that tend to explain the researcher's hypothesis. Researchers oftentimes use a model or symbols to illustrate how the variables connect to give result to a logical conclusion. In a conceptual framework reliance may be made on statistical analysis of empirical data in order to make deductive conclusions that will either confirm or negate a concept. The process of arriving at the researcher's hypothesis is usually through a quantitative method.

1.8.1 Theoretical Framework

A theoretical framework is normally founded on the use of theories which explain a certain trend of a phenomenon. While theories are themselves theoretical but logical constructs explain the significance of a hypothesis. Different theories can be used to justify or investigate a certain trend or scope of a research objective. The theory then becomes the roadmap to establish the justification for the occurrence or trend of things.

This study relied on the use of a theoretical framework. Two theories were explored and principally relied on to explain the objectives of the study. Stakeholder Theory and Risk Management Theories were the preferred conceptual theories.

A theoretical framework provides the grounding base, or the landing site for the literature review. It sets a clear direction for the research methods and analysis. Lysaght (2011)[35] points out importance of a theoretical framework in a research study. A theoretical framework of a study is no different from an architectural building plan of a house. Eisenhart (1991)[36] defines a theoretical framework as a method that guides research by

[34] Ibid.
[35] Ibid.
[36] Eisenhart .M (1991) p. 203, Conceptual Frameworks for Research, https://scholar.google.com. Last accessed 30

relying on a formal theory constructed by using an established, coherent explanation of certain phenomena and relationships. For Dooye Weerd (cited in Sire, 2004).[37] It is a personal selection and conviction formulation. Theory – driven thinking keeps generating relevant questions that must be answered in order to identify potential validity threats to the conclusions in the study.

The Stakeholder Theory was developed by Freeman (1984)[38] as an effective management tool for putting into equilibrium different stakeholder interests as a main determinant for corporate policy. As a theory behind environmental health and safety it was used to balance or explain the stakeholder relationships in the oil and gas sector in Uganda. The theory has a high explanatory potential for balancing stakeholder interests including statutory obligations.

Rwakakamba .T.M, (2009),[39] argues that the livelihood of most Ugandans, including the Albertine Graben, intimately depend on the environment; both as a source of subsistence and as a basis for production. On the other hand, Kasimbazi (2010)[40] observes that there is a relatively high risk of harm to the environment during the exploration and production of oil unless measures for minimizing harm to the ecological biodiversity are put in place. In effect of both authors agree that the Albertine Graben is a confluence of stakeholder interests.

The key stakeholders in Uganda's oil industry context include; International Oil Companies (IOCs) Host Government (HOG), National Oil Company (NOC), Line Ministries, Operators, Contractors, Employees, Local Councils and Communities. The Stakeholder Theory fits well in balancing the different interests of the parties to the Petroleum activities. Additionally, the Stakeholder Management Theory conceives an organisation with a complex dynamic and interdependent network of multidimensions

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August 2019

[37] Sire .N. (2004) p.3, Group randomized Trial comparing radiotherapy Journal of Clinical Oncology 22(1), p.69-76, Last Accessed on 30 August 2019

[38] Freeman .R.E, (1984) Stakeholder Theory. The state of Art https://.researchgate.net>2354, accessed 28 June 2020

[39] Rwakakamba .T.M, (2009), How Effective are Uganda's Environment Policies; https://bioone.org> accessed 29 September 2019

[40] Kasimbazi .E.B, (2010), Environmental Regulation of oil and gas Exploration and Production in Uganda, https://www.taudfonline.com>abs, accessed 26 June 2020

relationships with a wide variety of stakeholder. Loosemore (2006) [41] found that communication is essential for maintaining the support and commitment of all stakeholders. Understanding Community protests from a project management perspective constitutes a relationship-based approach. In a new oil industry such as in Uganda, communication and protests from the local communities should be an expected phenomenon. Loosemore [42] proposed integration of risk management and stakeholder management. Thus, the relevancy of the Stakeholder Theory cannot be over emphasized.

The other value of stakeholder theory is its extension into and balancing potential in the mechanisms of contractual risk allocation in oil field services (Zulhafiz 2016).[43] Risk can be allocated in a contract if the contractual terms do set out which party will be liable for or exempted from certain risks. The contract could use exculpatory provisions such as limitation of liability, exemption or indemnity clauses (Gordon 1977).[44] In theory, the rationale behind risk allocation is that the party with the most control over the risk is responsible for any loss incurred (O'Neil 1999).[45]

In the case of Uganda, a critical and objective utilization of the Production Sharing Agreements (PSAs) should effectively allocate project risks to the parties that are best able to mitigate the risks. For instance, under a typical knock for knock regime, parties agree that the loss lies where it falls, irrespective of fault and without recourse to other parties (Saraceni 2016).[46] In the Deepwater Horizon blowout, BP the respondent in the numerous suits for recovery of damages arising from the disaster, relied on Knock to Knock Clauses. In doing so, BP successfully excluded their liability for loss and damage other than to their own employees and property.

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[41] Loosemore .M, et al (2005), Framework for Stakeholder Management in Construction Projects, https://scholar.google.com; accessed 28 June 2020.
[42] Ibid.
[43] Zulhafiz .W.Z, at al (2016) Risk allocation in oil and gas contracts, irep.iium.edu.my>, accessed 28 June 2020
[44] Gordan .G, et al (1977); Risk Allocation in Oil and Gas Contracts, https://extractiveshub.org>(PDF), accessed 28 June 2020
[45] O'Neil .W.E, (1999) Insuring Contractual Indemnity Agreements, https://www.academia.edu>on-the--, accessed 28June 2020
[46] Saraceni, et al (2016), Reviewing Knock for Knock clauses, www.austilii.edu.au>3.PDF accessed 28 June 2020

The proponents of Risk Management Theory argue that risk is everywhere and around mankind in the environment.

Work in the oil field is a dangerous proposition. Labour intensive, and employing large pieces of machinery to displace enormous quantities of earth and rock while managing high pressures and temperatures, the risk of bodily injury even death or loss or damage to equipment is always present (Pugh, et al 2018).[47] In order to develop an effective risk management approach, it is imperative to identify the potential risk threats to the organisation (Spikin 2013).[48] Organisations need a tool that can help them identify the areas of improvement and to measure the progress in improving risk management (Yeo and Ren 2008).[49] A Risk Management Model (RMM) is a tool that can be used to identify the risk (Yeo and Ren 2009).[50] A Risk Management process can evolve risk to maturity by applying a Generic Risk Management Model tool (Hoseini 2019).[51]

Risk Management Literature shows that two conditions should be present in order to a successfully apply risk management in a project (Hoseini 2019). First, the presence of activities that ensure that risk management can be performed in a project such as training, cultures, policy and commitment towards risks management. Second, the presence of activities related to applying risk management such as; identifying risks, applying control measures, monitor and review, (see Figure 1).[52]

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[47] Pugh .W.W, (2018), Oil and Gas operational contracts – a Look at the major Risk Allocation Issues, https://Scholar.google.com accessed 26 June 2020

[48] Spikin .I.J.C, (2013) Developing a Risk Management Maturity Model, A Comprehensive Risk Maturity .. https://research.utuente.nt>develop, accessed 26 June 2020

[49] Yeo and Ren (2008), Risk Management Capacity Maturity Model for Complex Organisations, https://www.researchgate.net>4131, accessed 26 June 2020

[50] Yeo and Ren (2009), Ibid

[51] Hoseini .E (2019), scholarly articles, Risk Management Model, Scholar.google.com>citations, accessed 26 June 2020

[52] Hoseini .E (2019), Ibid

1.12 Literature Review

1.12.1 Introduction

There is very little literature regarding enforcement of HSE industry in the area of petroleum production in Uganda. Much of the literature available leaves research gaps and questions. However, there are many theories that tend to explain factors that influence organizational effectiveness and performance. Literature review reveals gaps that exist in the area of the research study. A number of theories were examined in order to identify the research gaps and or overlaps to be addressed. Publications on environmental and ecological management in Uganda points out that the periodical reports contain information that is too technical and may not easily be understood by non-experts in the area of oil and gas exploration and production (UNEP 1991).[53]

The regulation of oil and gas activities in the Albertine Graben pauses unique environmental challenges because of the sensitivity of the bio-diversity rich area. Many authors acknowledge the high possibility of negative impacts that need to be mitigated and addressed to ensure eco-system integrity. In the implementation and monitoring of environmental management of risks in the Oil and Gas industry, UNEP recommends that the implementation responsibility rests with the line managers. They should ensure that themselves understand and subscribe to the obligations. This research study was conducted by applying two theoretical concepts hereinabove shown.

Kasimbazi .E.B, (2010),[54] observes that there is a relatively high risk of harm to the environment during exploration and production of oil unless measures for minimizing harm to the ecological biodiversity are put in place. He did not propose the type and nature of the measures that should be put in place.

Kityo .R.M, (2011)[55] in his research work, assessed the risks of impacts of oil exploration and restoration on wildlife in Murchison Falls conservation area. The recommendations

[53] United Nations Environment Programme (UNEP)2 1991, https://wedocs.unep.org>rest PDF, accessed 26 June 2020

[54] Kasimbazi E.B (2010), Environmental Regulation of Oil and Gas Exploration and Production in Uganda, https://www.taudfonline.com>abs, accessed 26 June 2020.

[55] Kityo .R.M, (2012), The Effects of Oil and Gas Exploration in the Albertine Rift Region on Bio-diversity,

were restricted to raising awareness and advocacy to the stakeholders on the environment. He did not address the impacts on the health and safety of employees at the work place in the conservation area.

Shepherd .B, (2013),[56] recognizes that whereas oil has potential to accelerate development oil brings risks of erosion of the relationship between the people and government because of economic distortion, increased corruption and internal tensions. Shepherd proposes lessons to be learnt of oil resource governance in countries such as Norway, Chile, Botswana and Indonesia. He offers no practical guidance on the nature of mitigation measures for intergenerational equity.

Bainomugisha .A, et al (2006)[57] pointed out economic and political risks as downturn associated with oil and gas exploration and production capable to trigger the 'oil curse', paradox as it has happened in a few African Countries. The authors argue that political power and economic power tend to revolve around the same individuals who are the principle beneficiaries of the oil resource. However, they did not propose practical steps to escape the 'oil curse', rather than referring to prudent utilization of resources.

Kaweesi .E, (2013)[58] observes that the 'oil curse', if not well planned against and managed is likely to result in environmental degradation of the bio-diversity hot spots. The researcher did not articulate the steps for avoiding environmental degradation risks.

Johnson .L, (2007)[59] posits that for Uganda to sustainably benefit from its commercial oil discoveries, there should be careful exploitation which takes due consideration of the beauty and vulnerability of the environment within which the oil reserves are found. He

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scholar.google.com>citations, accessed 26 June 2020

[56] Shedherd .B, (2013) The Guardian March 2013, Oil in Uganda: International lessons for success, https://www.cathamhouse.org>, accessed 26 June 2020

[57] Bainomugisha .A, et al (2006), Escaping the Oil Curse and Making Poverty History: A review of the Oil and Gas Policy Framework for Uganda, https://www.africaportal.org/publications, accessed 26 June 2020

[58] Kawesi .E, (2013), Uganda Security Amidst Oil Exploration; Development and Production, https://www.bing.com/search?q-kawesi, accessed 26 June 2020

[59] Johnson .L, (2007), Assessing the Impacts of Energy Development and Developing Appropriate Mitigation in Uganda Portion of the Albertine Rift; https://www.bing.com/search?q-johnson, accessed 26 June 2020

offers no proposals for practical tools of precaution in mitigation of the environmental risks.

Spikin .I.C, (2013)[60] reechoes that risk is not only everywhere, but so is risk management. The article discusses gaps found in the risk management models. According to Voetch et al, (2004),[61] there is a significant relationship between the risk managing approach of a business's management and the success of the project. According to Acharrya (2008),[62] every business function is associated with risks, and this risk can affect the business to a large extent. Risk can be seen as a possible chance of injury, damage or loss (Webster, 1983).[63] Risk management increases the possibility of project success (Ren and Yeo 2004).[64] Over the past decades, risk management has increasingly received attention (Raz and Hillson 2002).[65] Organisations that have tried to integrate risk management into their business processes have reported various degrees of success (Bosler 2002).[66]

From a sociological perspective, entrepreneurs and investors remain liable for the risk to society while remaining responsible to share it in the proportion to their respective contributions (Olson and Desheng, 2008).[67]

While economics and finance study risk by examining the distribution of corporate returns (Fisher, 1996); psychology, sociology and philosophy interpret risk in terms of behavioral components (Olson and Desheng, 2008).[68]

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[60] Spikin .I.E, (2013), Risk Management Theory: The Integrated Perspective and its application in public sector, https://scholar.google.com, accessed 26 June 2020

[61] Spikin I.C, (2013), Ibid

[62] A Charrya .M, (2008), An Empirical study on Enterprise Risk Management in insurance, https://link.springer.com>chapter, accessed 26 June 2020

[63] Webster .M (1983), Definition of Risk, https://www.merriam.Webster.com, accessed 26 June 2020

[64] Ren and Yeo (2004), Ibid

[65] Raz, et al (2002), Understanding the Impact of Project Risk Management on Project, https://scielo.conicyt..cl>art.06.PDF, accessed 26 June 2020.

[66] Bosler .C.W, (200), Risk Management Maturity Level Development – Model-based Risk Management, https://www.cin.ufpe.br>anisque-se, accessed 28 June 2020

[67] Oslon and Desheng (2008), Enterprise Risk Management: Coping with Model risk- https://www.researchgate.net>3195, accessed 28 June 2020

[68] Olson and Desheng (2008), Ibid

In terms of risk management, Spikin (2013)[69] states that in order to develop an effective, risk management approach, it is imperative to identify the potential risk threats to the organization. Some researches propose that organisations should develop a Risk Management Model as a management tool (Yeo and Ren 2009, Hoseini et al 2019).[70]

The Stakeholder Theory was developed by Freeman (1984)[71] as an effective management tool for putting into equilibrium different stakeholder interests as a main determinant of corporate policy. As a theory behind health and safety it can be used to balance or explain stakeholder relationship in the oil and gas industry. The theory has a high explanatory potential for balancing stakeholder interests including risks (Freeman 1984).[72]

Stakeholder management Theory conceives an organisation with a complex, dynamic and interdependent network of multidimensional relationships with a wide variety of stakeholders (Loosemore, et al 2005).[73] In stakeholder management, performance depend on how well companies manage and nature the strategic relationships in order to achieve corporate objectives and other stakeholder interests. From a health and safety perspective the benefits of consulting stakeholders can be numerous. They include high levels of trust between decision takers of the stakeholders and the implementers of decisions. Stakeholder management includes a wider understanding of the community within which entitles operate and are prepared to provide greater collective responsibility in managing risks that may occur (Loosemore, et al, 2005)[74] there are many related management theories such as; Public interest theory, Organizational Effectiveness Theory and Compliance Theory.

[69] Spikin (2013), Ibid
[70] Hoseini, et al (2019) Developing a Generic Risk Maturity (GRMM) for Evaluating Management in Construction Projects, https://scholer.google.com, accessed 26 June 2020
[71] Freeman (1984), Ibid
[72] Ibid
[73] Loosemore, et al (2005), Ibid
[74] Loosemore, et al, (2005), Ibid

1.10 Limitations of the Study

There is limited published material on the topic of research. The economic and political nature of the oil resource renders disclosure of information sensitive. This was a purely doctrinal legal research based on desk and library materials so the researcher did not physically collect data from respondents. The study was restricted to analysis of theoretical concepts and principles of law, statutes, cases, rules, data and reports concerning the area of study. The literature was limited to what was available to the researcher and not what is wholly available in the industry.

1.12 Dissertation Structure

This dissertation comprises five chapters as explained bellow;

Chapter one is the introduction. It comprises of the general introduction, background of this study, the statement of the problem, purpose of the study, significance of the study, General and Specific objectives of the study, research questions, justification of the study, the scope of the study, methodology, conceptual/theoretical framework, Literature Review, Limitations of the study and Chapter Synopsis.

Chapter two comprises a discussion on the national frameworks for health and safety in the oil and gas sector in Uganda.

Chapter three discusses the international framework for environmental health and safety in the oil and industry.

Chapter four discusses eight selected country comparative analysis of selected country legal and regulatory frameworks for health and safety in the oil and gas industry.

Chapter five comprises a summary of the overall conclusions and recommendations of the study.

1.12 Conclusion

Uganda's Albertine Graben is an area with high potential for risk after the discovery of oil in commercial quantity.

The anticipated economic benefits of the hydro-carbons cannot reverse the likely environmental, health and safety ramifications associated with extractive activities unless

the resources are effectively managed for Ugandans and the posterity.

Petroleum production in Uganda has hardly been tested for efficacy or effectiveness of the industry practices in a regulated Health and Safety environment.

The Literature review shows that, Uganda needs a comprehensive and effective regulatory framework for her HSE programme based on a comparative analysis of successes in other oil producing countries.

Uganda's regulatory regime needs a co-ordinated and integrated regulatory system involving NEMA, UWA, OSH, NFA, and the Petroleum Authority of Uganda (PAU). Other regulatory mechanisms may depend on the degree and extent of stakeholder interests.

There is a need to identify and deal with the specific regulatory challenges faced by OSH and HSE in the implementation of the respective regulatory frameworks.
Risk Management is positively related to effectiveness in stakeholder interests and relationships.

CHAPTER TWO: HEALTH AND SAFETY LEGAL FRAMEWORK IN UGANDA'S PETROLEUM SECTOR

2.0 Introduction

Uganda has introduced a national and institutional framework health and safety as will be discussed below. It is important to discuss HSE within which two components are located. This chapter shows current national legal framework for compliance with environmental health and safety and its detailed analysis. The legal regime applicable to the sector 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 (NEAP).

As a policy framework NEAP gave birth to the National Environment Act (NEA) and its legal framework. Legislation covered in this chapter include the Constitution, the oil and gas law and other relevant environmental health and safety laws. Compliance with the policy and legislative aspirations and requisite standards will enable Uganda develop a sound and sustainable bio-diversity.

This chapter highlights the institutional framework of the regulatory system in Uganda's Petroleum Industry.

2.1 The Constitutional Legal Framework

Uganda's grand norm, the Constitution 1995 contains directives to all stakeholders on their obligations regarding natural resources and also the national objectives and state policy.[75] Government is required to promote rational use of natural resources so as to safeguard and protect the bio-diversity of Uganda including a clean and healthy environment. Parliament of Uganda is required to enact laws that ensure optimum and equitable resource utilization for all Ugandans.[76]

The Constitution of Uganda establishes a Parliament vested with powers to make laws for the peace, Order, development and good governance of Uganda. The role of Parliament manifests

[75] Principle XIII of Uganda's Constitution 1995, https//washington.mofa.go.ug>dat, accessed 29 September 2019
[76] Article 77(1) of Uganda's Constitution 1995, Ibid

in three tiers; legislation, oversight and representation of the people of Uganda. The legislative framework should ensure that risks are minimalized as natural resources are managed in the best interest of the needs for the present and the future generations of Ugandans. Thus, the Constitution provides for the right to a clean and healthy environment.

The Ugandan Constitution further makes provision for other natural laws that aim at conservation of Water resources, Wild life, Forestry resources and the rest of the flora and fauna.

2.2 The Petroleum Exploration, Development and Production Law

The Petroleum law came into force in 2013[77] and it is primarily for regulating the extractive activities of the hydrocarbons. The law aims to regulate petroleum production activities. Besides operationalizing the NOGP the law makes provision aiming to establish a regulatory framework for effective resource exploitation. The exploitation of Petroleum resources is to be done in accordance with internationally accepted best industry practices. Equally, the law establishes obligations to license holders as prerequisites to compliance with industry standards. There is a whole legal framework attaching to the principal law but altogether forming the Petroleum legal regulatory regime.

The Petroleum Law enacts and requires operators of extractive processes of taking necessary precaution in ensuring safety of all persons at the workplaces. Thus, the law requires the maintenance of efficient emergency preparedness associated with the level of industry risks and accidents. The law therefore provides for legal and institutional frameworks for ensuring regulatory compliance. The law provides for contingency plans to deal with hazardous incidents and attacks. In the event of an accident a licensee is required to suspend relevant petroleum activities and deploy measures necessary to control, prevent or mitigate the occurrence and consequences of harmful incidents. Thus, petroleum activities must be conducted in strict compliance of established industry standards.

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[77] Petroleum (refining, Conversion, transmission and midstream storage) Act, 2013, Petroleum (Exploration, Development and Production) Act, 2013, The Petroleum (Refining, Conversion, Transmission and Midstream Storage), (Health, Safety and Environment) Regulations, 2016, nnoc.co.ug>2018/06>1496..PDF, accessed 29 September 2019

The PEDPA and all the regulations falling thereunder operate a prescriptive legal regulatory regime like that operated in USA before the Deepwater Horizon blowout. After the blowout and the establishment of the causes, there were calls for adopting the U.K type of the safety case regulatory regime in addition to the prescriptive and the performance – centered approaches. The key provisions under PEDPA controlling licensing, Health and Safety are prescriptive in nature. This suggests that the prescriptive regulations under which risks and causes that triggered the Deepwater Horizon catastrophe occurred are similar to Uganda's legal and regulatory regime under PEDPA. This also suggests that the prescriptive regulations characterizing Uganda's Petroleum regulatory regime would potentially be ineffective to prevent a blowout. A combination of the prescriptive and other regulatory approaches would have to be considered.

2.3 The National Environmental Law

Rwakakamba, T.M, (2009), argues that the livelihoods of most Ugandans intimately depend on the environment, both as a source of subsistence and as a basis for production.[78] Environmental degradation in the country-including wetland encroachment and contamination of water resources is critical.[79] The alarming rate at which natural resources are being depleted shows that these laws and policies are not enforced effectively.[80] There is documented evidence of failure of the regulatory system in the protection of the environment.

One of the principles behind the establishment of NEMA aimed at promoting co-operative governance while ensuring that the rights of citizens are upheld. This means, that the importance of economic development should equally be a key focal point. It has often been stated that developing Uganda's oil and gas resources must never compromise the long-term conservation of the special environments and natural places where these resources have been found.[81] NEMA should co-operate with other stakeholder players.

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[78] Rwakakamba, T.M, (2009), How effective are Uganda's Environmental Policies, bioone.org, accessed 29 September 2019

[79] Ibid.

[80] Ibid.

[81] Ibid.

Oil and gas exploration and production processes started in 2003 but as extraction commences it is expected that the industry will be faced with challenges with environmentalists and other oil producing countries. The challenges are expected to get worse as production processes advance unless prevention and mitigation measures are put in place.

Article 39 of Uganda Constitution 1995, guarantees every Ugandan a right to a safe and healthy environment. Other rights include, the right to a pollution free, environment from degradation, and activities which threaten life, health or livelihood. The right to healthy food and water and a healthy working environment. Thus, natural resource extraction holds a heavy potential for negative impacts on the environment. The researcher found it difficult to identify meaningful enforcement challenges and impacts in the Albertine Graben due to infancy of the sector. The researcher found that NEMA's enforcement framework is weak and insufficiently funded to execute its mandate.

NEA further requires that Environmental Impact Assessment, a prescriptive regulation, be undertaken by a developer to ensure that no development activity is undertaken without due regard to the preservation of the environment.[82] The NEA prescribes the requirement to observe environmental quality standards. The principle that the polluter pays is emphasized. The regulatory regime should aim to ensure compensation to persons affected by the pollution. At grass root level, Local Environment Committees, District Environmental Committees, and other lead agencies are established for the effective enforcement of environmental principles and standards. No clear guidelines have been out for the committees to know how to function. To that extent the regulation is not performance-based as applied in USA. However, NEA in some of the provisions has some features of the U.K safety case regulatory approach.

[82] Section 111 (3) National Environment Act, 2019, Laws of Uganda, envalert.org>2019/04>Nation PDF, accessed 29 September 2019

2.4 The Occupational, Safety and Health Law

The Ministry of Gender, Labour and Social Development (MGLSD) enforces labour Laws in Uganda.[83] Uganda is signatory to and has ratified numerous International Labour Organisations (ILO) conventions providing a data base for International Labour Standards on OSH. The principle objectives of the OSH department are three-fold: First, to ensure safety at workplace. Second, to carry out inspections and monitor OSH compliance with ILO Standards. Third, enforcement of OSH Standards.[84]

Enforcement of standards is carried out through inspections of workplaces, advising and creating awareness among employees and employers and the public about occupational concerns.[85] Through investigations and Surveys measures may be prescribed by the Inspector to improve the quality of the working environment in order to prevent disease or impairment to health or restoration of the working environment. In the case of Petroleum installations, it is doubtful whether the OSH inspector would be better suited to determine the restorative measures than the technical experts within the IOCs. It is equally doubtful whether the Inspector under NEMA would authoritatively impeach the pollutative activities of the powerful IOCs relying on the general provisions under the NEA. The approach by the Inspector is to enforce the prescriptions of the law with no involvement or in-put of the regulated. The approach remains typically prescriptive in nature.

2.5 Other Natural Laws Applicable in the Oil and Gas Sector

Other laws with relative regulatory frameworks are in place as part of the legal regulatory regime in the sector. They all provide for different but related regulatory functions in the sector. The laws include; Land Act, 1998; National Forestry and Tree Planting Act, 2003; Public Health Act,[86] Wild Life Act,[87] and Penal Code Act.[88] All these laws are interchangeably applicable to the enforcement of the different legal and regulatory frameworks in the sector. The laws confer different mandates to the respective lead

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[83] Occupational Safety and Health Act, No. 9, 2006, Laws of Uganda. www.org>docsPDF, accessed 29 September 2019.
[84] Occupational Safety and Health Country Profile: Uganda (2006), https://www.ilo.org, 29 September 2015
[85] Sections 5-11, (2006) Act, Ibid.
[86] Public Health Act, Chapter 281, Laws of Uganda, Library. Health.go.ug>publications accessed 14 July 2020
[87] Wild Life Act Chapter 200 Laws of Uganda, https://www.unodic.org>cla-PDF, accessed 14 July 2020
[88] Penal Code Act, Chapter 120, Laws of Uganda, https://www.parliament.go.ug>PDF, accessed 14 July 2020

enforcement agencies or regulators. They operate different legal frameworks within the sector.

2.6 Uganda's Oil and Gas Regulatory Framework

The national Oil and Gas Policy (NOGP) in Uganda has transitioned from efficient licensing regime to stakeholder relationship. The policy was approved in 2008. Uganda is in the development and production stage and needs a strong legal framework for sustainability. Two new Laws were enacted in 2013[89] providing for a legal frame work. Uganda's NOGP provides both for the legal and structural frameworks.

While the principle source of regulation is Article 79 of the Constitution of Uganda[90] it further mandates Parliament to make laws regulating the exploitation of Petroleum and the sharing of economic rents from the activities. The case of Mwanguhya Mpagi V The Attorney General[91] where disclosure of copies of Production Sharing agreements (PSA) became a litigation issue can point to the weakness rather than strength in the legal framework. Careful utilization of Knock to Knock clauses in PSAs can mitigate some operational risks in the oil industry. This approach was used in USA to defend some of the numerous claims for damages brought against the operator in the Deepwater Horizon oil blowout.

In his Seminal Paper, Onyango, O.J (2018),[92] opines that the government of Uganda has not largely complied with the best practice in the oil sector. There is wide space for abuse and misappropriation of the oil funds[93] and this points to evidence of elements of the "Oil Curse'. The dangers and effects of 'Oil Curse' lessons are seen in Nigeria and Equatorial Guinea.

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[89] The Petroleum (Exploration, Development and Production Act, 2013. The petroleum (Refining Conversion, Transmission and Midstream Storage) 2013; and seven (7) sets of Regulations were enacted to operationalize the principle laws, https://ulli.org>legislation>act, accessed 29 September 2019

[90] Global Witness (2014), A Good Deal Better? Uganda's secret oil contracts explained https://www.globalwitness.org/en/reports/good-deal-better?, accessed 29 September 2019

[91] Mwanguhya Mpagi and Zama .A, v Attorney General, https://www.rightinformation.org>cases, accessed 30 September 2019

[92] Onyango, J.O (2018), Courting the Oil Curse or Playing by the rules? An Analysis of the Legal Regulatory Framework Governing Oil in Uganda, https://www.business.humanrights.org, accessed 29 September 2019

[93] Ibid.

2.7 The Role of the Judiciary

The principal goal of the National Development Plan (NDP) is to propel the country to middle income status. The growth areas, inter alia, include; human capital, Oil and Gas in accordance with vision 2040. The focus of the Justice Law and Order Sector (JLOS) is to enhance access to justice by all persons in Uganda. The rule of law is the anchor to attainment of the national development plan objectives.[94] A strong legal regime would a form of insurance against contractual risks.

The rule of law cannot be effectively achieved in absence of meaningful and enforceable laws. This means that the judicial process must be transparent, fair and predictable in decisions and confidence. When there is no basis security or easy accessibility to justice then the constitutional safeguards to the citizens become meaningless.

The Judiciary has reputably set up a new court that seeks to lessen issuance of court injunctions against agencies like the NEMA and UWA, since their cases will be handled more expeditiously and specifically as a matter of law.

2.8 The Role of Public Interest Groups

Petroleum discovery has the potential of raising millions of Ugandans out of poverty but it can also plunge the country into a resource curse. A robust legislative framework and Parliamentary oversight can provide transparency and accountability. However, the Civil Society, International partners, relevant stakeholders and members of public can play a very strong role in ensuring a solid regulatory framework and structure for the sector.

One of the concerns oftentimes raised by the public interest groups is absence of clear regulatory policies between different government institutions. The existing law fails to ensure that the institutions execute effectively their different statutory roles. Hence, a weakness in the current regulatory and enforcement strategies.

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[94] The 2nd National Development Plan for Uganda (2015/16-2019/20), www.judiciary.go.ug. Accessed 29 September 2019

The public trust doctrine requires the government to preserve the natural environment for future generations. Rwakakamba, et al (2014) argues that the difficulty in protecting the fragile ecology is that having technological advantage over the host government.[95]

Public interest groups have raised concerns that waste disposal from oil production activities could seriously contaminate underground aquifers and fishing grounds.[96] Through public interest litigation, NGOs and Public Interest Groups have challenged various activities within the Oil sector that have potential for environmental or harmful impacts on humanity. The presence of a strong appetite for Public Interest representation in Uganda is evidence of challenges and shortcomings in the legal regulatory regime.

2.9 Conclusion

The chapter has examined the legal and regulatory frameworks under the different departments of the Uganda government. Principally, the sectoral policies are targeted to alleviate problems related to health and safety of employees in the respective departments. It is concluded that the respective sectoral policies and legislations are not necessarily enforced to ensure the health and safety of employees in the oil and gas industry specifically but for the entire labour market.

The regulatory legal framework in the Health and Safety areas is weak and uncoordinated.

There is a clear lack of an enforcement framework in the legislation/rules and this demonstrates weaknesses and inconsistencies in the application of legislation. Laws alone without sufficient enforcement mechanism cannot show effectiveness in the regulation of health and safety. While the legislation remains highly prescriptive there is nothing to show that it has been effective.

Whether punitive sanctions can deter violation of the standards and principles remains a matter for further research.

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[95] Rwakakamba .M, (2014) Tourism in Uganda's Oil Economy – Deal or no Deal, https://goxi.org>member>monison, accessed 29 September 2019

[96] Ibid.

The law does not define what amounts to best industry practices. Both the legal and regulatory frameworks provide for compliance with self-regulating best industry practices but provide for no detailed monitoring and enforcement mechanisms.

While NEMA bears the ultimate statutory and constitutional mandate it lacks the necessary resource to protect the environment. Recent cases of violation of the environment suggest that private initiatives such as those made by Public Interest Groups have taken more robust action for protecting the environment than NEMA. This shows weakness in law enforcement.

There is no uniform approach for implementing and enforcing Health and Safety industry standards in the oil and gas sector.

There is a need for establishment of an Occupational Safety and Health Authority up to a comparative level of the Petroleum Authority (PAU) and NEMA. The authority, rather than the Commissioner, should exercise over-sight functions for enforcement, regulating and monitoring of Occupational Safety and Health needs at work places including at oil and Gas Installations.

Parliament should take a robust oversight role in ensuring that NEMA, PAU, UWA, NFA and OSH are vertically integrated as by law established. A hybrid of several regulatory approaches should be adopted and enforced to achieve best industry practices.

This chapter should be read together with Chapter four on comparative research analysis.

CHAPTER THREE: INTERNATIONAL FRAMEWORK FOR ENVIRONMENTAL HEALTH AND SAFETY IN THE OIL AND GAS INDUSTRY

3.0 Introduction

Every oil producing country has laws that govern the resource extraction.[97] Host countries endeavor to adopt uniform industry standards. In the early 1990s, Standard Oil Company of New Jersey held monopoly on domestic oil supply and price.[98] The major oil companies from USA and Europe sought to capitalise on oil development opportunities beyond their territorial boarders. They obtained concessions which authorized the IOCs to explore, develop, and market oil for host countries for specified long periods of time.[99]

The IOCs must recognize that the existence of the sovereign power of the host country. They must assume the political risk that its interests and investments might be expropriated with or without compensation. IOCs would expect that host government might be overthrown rendering necessity for protection of their employees and assets.

The NEA (2019) provides for promotion of cooperation between Uganda and other states in matters of environment.[100] The law further provides that the implementation of the environmental obligations and principles should be done in accordance with the international environmental law. Equally, environmental management and human development must have due regard to the international human rights standards.

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 chapter discusses international and regional 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

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[97] Lake, L.W.(2007) PEH: International Oil and Gas Law, Petroleum Engineering Handbook, Chapter 17 Pgs 809-830, Dustin M. Anmons, Chevron USA Ins, https://petrowiki.org>PEH.Intern accessed 29 September 2019

[98] Ibid.

[99] Ibid.

[100] Section 5(q), The National Environment Act, 5, 2019 Laws of Uganda, https://www.lexology.com.detail, accessed 29 September 2019

compliance requirements; application of international environmental health and safety standards in Uganda, and conclusion.

3.1 Compliance with International Law

The NEA[101] introduces a need to comply with international environmental principles. A licensee must have regard to international human rights standards. These include the International Conventions such as the Kyoto Protocol and the Rio Declaration.[102] The use of the words with due regard is clearly an understatement, given the importance of the obligation that must be attached to the compliance with International human rights standards.

Compliance with set human standards, arguably, by civilized nations of the world cannot be an optional choice. The Minister, may, in consultation with the authority (NEMA) make regulations operationalizing the principle law. In particular, the regulations should prescribe articulate or define in subtle terms the term 'due regard' for ease of guidance to the respective licensees.

3.2 International Best Practice

Many international organisations are concerned about compliance with industry best standards in oil and gas. Amongst such international agencies include the United Nations Environment Programme (UNEP), Greenpeace, Global Witness and the World Wide Fund for Nature (WWF). Many IOCs have adopted internal (HGG) best practices, after ensuring that they will meet the criteria set at the International level. This implies that the host countries themselves have adopted the industry best practices and incorporated them into national legislations. Thus, the compliance, by host, emerging oil producing countries, with international environmental law is a sine qua non. It has been argued that when IOCs are bidding for exploration blocks, priority should be given to companies which put high considerations on

[101] Section 5, National Environment Act, 2019 Ibid
[102] Oil and Gas Laws in Uganda (May, 2011), Oil Discussion Paper No. 1, International Alert, https//www.ogel.org>article, accessed 29 September 2019.

corporate biodiversity considerations.[103] This can promote, just like Statoil of Norway, a strong culture of 'zero harm to the environment'.[104]

Therefore, it follows from the foregoing that all International and regional environmental law instruments which are ratified and domesticated are binding on Uganda and should be complied with in all current and future oil operations.

The above compliance requirements set good international and regional binding and soft principles are binding on the industry in general. 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 legislation which should clearly highlight environmental standards, punishments for noncompliance and the procedures for pursuing remedies.

3.3 International Hard Law Principles

Uganda has ratified a number of binding international hard law environmental health and safety conventions and treaties which have significant implications for Uganda. 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:

3.4 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

[103] Ibid.
[104] Ibid.

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.[105]

3.5 Regional Law Standards

3.5.1 The Treaty for East African Community (EAC)

Members of the EAC agreed to have a concerted effort in matters of development, law development and enforcement, and environmental protection and conservation.[106] The above objectives are encapsulated in the EAC Treaty. They call upon states parties to ensure environmental sustainability for present and future generations.[107] Uganda should ensure that there is consultation and cooperation on the technologies to be adopted and prevent transboundary disposal of oil related pollutants within the region.

3.6 Conclusion

This chapter has explored the international and regional standards used to protect employees and other people from unhealthy and unsafe environment or work places. The sets of global standards set by ILO and UNEP are enforceable by Uganda as a signatory of the International Instalments.

The above compliance requirements set good international and regional binding and soft law standards. Uganda should as far as is practicable aim at complying with the standards. One of the major challenges of enforcing international law is its soft character. The law does not prescribe punitive measures against violators enforceable by national courts. 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

[105] Guzaman .A.T, et al (2011), International Soft Law, The journal of Legal Analysis, Volume 2, No 1, UC Berckeley, https://www.ssrn.com, accessed 27 September 2019 Public Law Paper No. 135344, P.6, https://paperssrn.com, accessed 29 September 2019.
[106] Kaweesi .E.K, (2014) Environmental Law Compliance and its Implications for Oil and Gas Exploration and Production in Uganda, https://www.academia;edu>enviro, accessed 2 December 2020.
[107] Article 151, East African Community Treaty, (1999), https://www.cac.int>overview-of-eac, accessed 2 December 2020

overcome by domesticating those standards into national legislation which should clearly highlight environmental health and safety standards, punishments for noncompliance and the procedures for pursuing the remedies.

There seems to be no guidelines as to how Local Occupational Safety and Healthy Committees should enforce international standards.

For instance, countries have adopted compensation recommendations but unwilling to pay Employment Injury Benefits. Employers are generally unwilling to compensate.

National states have a duty and responsibility to ensure safety and the well-being of its citizens, whether at the work place or in any other occupational environment. The failure to do so constitutes a breach against international standards should be actionable. It is a breach of a public duty to the citizens requiring enactment of appropriate national laws.

CHAPTER 4: COMPARATIVE ANALYSIS OF SELECTED COUNTRY LEGAL AND REGULATORY FRAMEWORKS FOR HEALTH AND SAFETY IN THE OIL AND GAS INDUSTRY WITH UGANDA'S REGULATORY SYSTEM

4.1 Overview of Health and Safety in the Oil and Gas Industry.

Oil and gas extractive activities involve many different types of equipment and materials, identifying and controlling hazards is critical to preventing injuries and death. The production of oil and gas will unlikely lessen the possibility of serious accidents and environmental impacts. The indigenous as well as tribal people are likely to be the population that will always be more adversely affected than the employees of the high-income oil companies. The environment in general is potentially at high risk.

The IOCs will continue to be the architects of comprehensive analytical investigations and reports of industry accidents. The term 'accident'[108] represents hazardous situations which have developed into harmful accidents. On the other hand, the term 'incident' refers to situations that have not developed into hazardous accidents. Equipment or systems malfunctions have tended to become the highest cause of accidents in the petroleum industry. Lessons from accident analysis in Europe shows that incidents/hazardous situation are a much more frequent occurrence than actual accidents.[109] This would show that in Europe industry employees are significantly more enlightened about safety systems than Sub-Saharan Africa.

The ILO provides the labour standard data base for minimum legal framework in promoting OSH. It has become a rule of the thumb that ILO expects that workers should be protected from sickness, disease and injury at the work place. Despite the different levels of regulatory and preventive measures, hazardous accidents in the oil and gas industry have remained a high-risk concern for stakeholders.

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[108] ILO (2016), Occupational safety and health and skills in the oil and gas industry, https://www.ilo.org>sector, PDF, accessed 29 September 2019.
[109] ILO (2016), Ibid.

4.2 Norway's Regulatory Framework

It is often times stated, and quite rightly that Norway has attained its high economic status because of oil and gas.[110] Norway started its existence as a small fishing nation in the North Sea but has become the 8th largest producer of oil in the World.[111] The major source of Norway's wealth is oil and gas in Norway's Continental Shelf (NCS)[112]. Norway has domesticated a strong culture of saving oil revenues and this has promoted robust capacity for risk assessment and strategic risk management.

The state owned, Statoil, was established in 1972 with a principle that 50% of every oil license be state-owned. Norway has enjoyed economic surplus for all the years it discovered commercial oil. The Norwegian government established an oil Fund the 'Government Pension Fund' (GPF-G).[113] Government is by law only allowed to spend to a maximum of 3% of the Fund. This financial strategy enables the Norwegian government to effectively deal with any economic downturn arising from low global oil prices. The regulatory framework ensures availability of the oil resources for intergenerational equity. On the other hand, Uganda's Petroleum fund is not provided for in the Petroleum Law. It is however, established under the Public Finance Management Act (PFMA), 2015.[114] The Ugandan Government licenses oil and gas exploration and extraction through Production Sharing Agreements (PSAs). None of the PSAs have been made public by either the government or the oil companies. Uganda's oil agreements place profit before the citizens.[115]

Section 56 PFMA establishes a Petroleum Fund for collection of revenues accruing to Government from the Exploitation of the Petroleum reserves in Uganda. The Minister responsible for Finance is responsible for the overall management of the Petroleum Fund and oversees the transfer into and the disbursements from the Petroleum Fund unlike the Norwegian pro-people approach to disbursements out of the Petroleum Fund. The Ugandan

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[110] Mckay .A, (2019) Black Gold: Norway's Oil Story, https://www.lifeinnorway.net, accessed 27 September 2019.
[111] Ibid.
[112] Ibid.
[113] Ibid.
[114] Section 56, Public Finance Management Act, 2015 Laws of Uganda, https://www.parliament.go.ug>PDF, accessed 27 September 2019
[115] civil Society Coalition on oil in Uganda (2010), www.carbonweb.org/Uganda, accessed 27 September 2019

approach grants the minister overriding powers over the Petroleum Fund. Only Parliament can control the powers of the minister through exercise of its expropriation powers.

The Norwegian approach to risk assessment and the treatment of the Petroleum Fund in this regard is in tandem with Hoseini's Risk Management Model. Uganda's approach is not.

4.3 Australia's Petroleum Regulatory Regime

Petroleum development and production activities in Australia are regulated under a single offshore Petroleum and Greenhouse Gas storage law.[116] Among the four activities regulated, includes environmental management, occupational, health and safety. The National Offshore Petroleum Safety and Environmental Management authority (NOPSEMA) regulates offshore oil and gas, health and safety, as well as the integrity of environmental management.[117] Australia operates a joint authority regime made up of two regulatory regimes. Before any oil and gas activities are approved by NOPSEMA an environmental assessment plan must be presented by the applicant. Thus, NOPSEMA is the single assessor for the environmental approvals for the petroleum activities in Australia.

According to the Australian regulatory framework, it is the responsibility of the license holder to make contingency plans for stopping any oil spill, clean up or compensating for any environmental damage. The community have to be consulted on the impacts of the extractive activities. The government and oil companies consult each other at various licensing stages. This stakeholder consultation strategy offers good opportunities for balancing stakeholder interests. In the case of Uganda, all the petroleum licensing powers are vested in the Minister. It is not a legal obligation to consult stakeholders.

The Australian regulatory approach shows that organizationally, NOPSEMA implements a Policy strategy which emphasizes top-management commitment to involve stakeholders in

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[116] Australia, Offshore Petroleum and Greenhouse Gas Storage Act 2020, https://www.informea.org>legislation, accessed 29 September 2019

[117] Australian Government Department of Industry, Science, Energy and Resources, (February 24, 2020), Regulating Offshore Oil and Gas in Australian Commonwealth Waters; https://www.industry.gov.au, accessed 29 September 2019

risk assessment and treatment needed by the oil and gas industry. Just like NEMA in Uganda, NOPSEMA discharges a dual function over environmental matters and occupational, health and safety. However, NOPSEMA has developed an organizational culture as a policy strategy for involving stakeholders including the local community in the assessment and monitoring of industry risks. In the case of Uganda, the management of the Environmental Impact Assessment is the sole responsibility of NEMA. NEMA is not obliged to consult the stakeholders and it is not their strategic policy to do so. In the same way as the Minister with Petroleum extractive activities in Uganda, NEMA wields overarching powers over environmental impacting activities. NEMA's powers are potentially overlapping with the powers of the Minister responsible for Petroleum activities.

With regard to health and safety the oil and gas companies are obliged to develop a safety case just as it is done in the UK. A safety case must identify possible hazards and risks in addition to how they should be managed. In short, Australia relies on the promotion of a performance-based regulatory regime. Research findings show that health and safety performance in Australia significantly improved largely on account of promoting attainment of high industry standards through bench making and sharing of lessons learned as best practice in occupational health and safety.[118] NOPSEMA has a policy strategy of promoting personnel knowledge as a mechanism for improving overall capacity to assess and treat organizational risks. While the Ugandan National oil and gas policy, 2018 emphasizes stakeholder relationship, it does not hold achievement of best industry standards as one of its key strategic objectives. Uganda needs to develop a performance-based regulatory approach.

4.4 Oil and Gas Exploitation in Equatorial Guinea

Equatorial Guinea (EG) is a small a population of approximately 800,000 and 3rd largest producer of Petroleum on the African Continent. While Equatorial Guinea has one of the highest average GDP on the African Continent, the wealth is unevenly distributed. The country is one of the least developed nations of the world. EG is often referred to by scholars

[118] Australian Government Law Reform Commission Report (2010), Regulatory Framework for occupational health and safety, https://www.alrc.gov.au, accessed 28 September 2019

as a case of resource curse or the paradox of plenty. Economic activities in EG suffer from excessive bureaucratic governance. Political leadership is in the hands of brutal dictators. The major industry for the country is oil and gas accounting for 96% of the export economy. With the discovery of oil in 1990s, Equatorial Guinea (EG) because one of the leading oil producing countries in Africa. Frynas (2004) posits that EG registered one of the world's fastest growing economies at a staggering average of 41.6 percent per year (1997-2001).[119]

Rapid economic growth was associated to the discovery of oil in 1980s but upon the fall of oil prices on the international market the economy was worst hit. EG is no longer an admired petro-state as it was. The oil boom and mismanagement of the oil resources has seen a systematic break down of institutions. The oil industry is rife with patronage. Taylor (2019) argues that political risk associated with unstable policies makes Equatorial Guinea unattractive to investors.[120] Equatorial Guinea provides learning lessons on the downward ends of the resource curse and political risk in the oil industry. Uganda has nothing positive to learn from the mismanaged oil and gas industry in Equatorial Guinea. A report on the state of Uganda's Petroleum Fund, however, showed that there was no more money in the Petroleum Fund as all of it had been appropriated in the financial year 2019/2010.[121] These are potential signs of a 'resource curse'.

4.5 The Oil and Gas Exploitation in Nigeria

Petroleum operations in Nigeria are regulated on the basis of an Act of parliament. The law vests exclusive ownership of the hydrocarbon resources in the government. A major stake in Nigeria's petroleum resource is held by the government company, Nigeria National Oil Corporation (NNOC). While the petroleum activities are regulated through the principal law with regulations thereunder the government body responsible for the regulation is the ministry responsible for Petroleum Resources, headed by the Minister.[122]

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[119] Frynas .J.G, (2004), The Oil Boom in Equatorial Guinea, Royal African Society, African Affairs, 103/413, p.527-546, https://academic.oup.com>articles, accessed 28 September 2019

[120] Taylor .F (2019), Equatorial Guinea prepares for new era for oil, Petroleum Economist, https://petroleum-economist.com accessed 29 September 2019

[121] Chemonges .M.T, Chairman Budget Committee 10th Parliament, (2019), The state of Uganda's Petroleum Fund, Parliament Watch. www.independent.co.ug, accessed 29 September 2019

[122] Udoma, u at al (2019), Oil and Gas Regulation in Nigeria, https://www.lexology.com, accessed 29 September

When the price of oil short up, it accounted for About 98.2 per cent of total government revenue.[123] The Nigerian government retained 60 percent equity shares in all the oil companies, except Shell.[124] The main policy behind the exploitation of oil in Nigeria is maximization of revenues from the oil. Little mention is made about concerns of the employees within the industry. Nigeria does not fully control all the oil exploitation processes within her oil industry. This means that a fall in oil prices can have significant effects on the Nigerian economy. This affects the capacity of the national economy to fulfill the social and policy objectives. Issues of health and safety in the industry have tended to be secondary.

Nigeria is the 9th largest producer of oil in the World, but the majority of the population live in abject poverty. The oil wealth is largely blamed for funding military campaigns and persistent violent conflicts due to perceived unfair sharing of the oil revenues. The local communities become the victims of the conflicts. The Niger delta conflicts are a case in point. The wave of banditry attacks and kidnappings devasted Nigeria's oil wealth. There are hardly any good lessons to learn from the Nigeria's regulatory regime. Countries which have reputedly survived the resource curse include Canada, Chile, Norway and Botswana. Nigeria cannot justifiably distance itself from the 'resource curse'. Nigeria provides a resourceful benchmark for 'resource curse' and risk associated with terrorist conflicts. Uganda has potential for terrorist risks arising from sharing borders with DRC Congo and Southern Sudan. Nigeria enacted several prescriptive laws and rules for regulating the Petroleum industry. A plethora of laws without top management commitment to assess and treat industry risks has not achieved sustainable development goals for Nigeria.

In spite of unique similarities in the legal and regulatory regimes, Uganda should adopt a risk management model, if sustainable development is to be achieved unlike Nigeria.

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[123] Ibid.

[124] Ibid.

4.6 The Canadian Oil and Gas Regulatory Framework

Canada is reportedly the fourth largest producer of crude oil in the World.[125] The National Energy Board (NEB) exercised regulatory oversight for the Petroleum activities in Canada. Approximately 81 per cent of proven reserves are located in offshore formations in Alberta.[126]

Canada has distinct regulatory regimes for the Federal government and the Provinces. The regulatory regime is operationalized by different sets of laws and regulations governing the Petroleum Sector. The role of NEB has been taken over by the Canadian Energy Regulator (CER) but complimented by Canadian Environmental Assessment Agency (CEAA). The mandate of CEAA can be likened to NEMA in Uganda while that of NEB likened to PAU. CER which consists of seven full time commissioners, enjoys exclusive and adjudicative functions. It can hear and determine issues concerning environmental activities within the Canadian energy sector. The Assessment Agency of Canada (CEAA) operates under a specific law and is responsible for approving all the impact assessments. These include environmental, health, social and economic impacts of designated projects. In carrying out the assessments CEAA takes into account the rights and interests of the indigenous peoples of Canada. These functions are carried out by NEMA in Uganda.

However, by contrast, NEMA and PAU co-exist with different statutory roles and mandates just as CEAA and CER in Canada. NEMA enjoys quasi-judicial functions especially in exercise of power over environmental issues.

Just like Uganda, the Oil and Gas regulatory regime in Canada are governed by laws, regulations, executive guidelines and policy directives. NEMA has a wide role to pray in the environmental sector but lucks quasi-judicial powers just as CER does in Canada to enforce environmental standards.

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[125] Manning .L, et al (2019), Oil and Gas Regulation in Canada: overview, https://uk.practicallawthomsenreuters.com, accessed 30 September 2019

[126] Ibid.

Secondly. the regulatory regime in Canada demonstrates features of regulatory competition between the Federal and Provincial regulatory entities. Alberta has achieved some of the highest standards of and also one of the most complex environmental and regulatory regimes in the world.[127] Canada's experience shows that a competitive policy in regulatory frameworks is a worthwhile innovation that can rip significant economic benefits. Uganda not being a Federal State, the regulatory competition that can be talked about would be between NEMA, PAU, UWA, NFA and OSHA. However, the Canadian regulatory bodies are better funded than the Ugandan regulators. It is arguable however, that competition gap can create uncertainty in the Industry and cause an erosion in investor confidence. On the other hand, competition can also promote reforms in the various areas of the sector.

4.7 The United States Prescriptive and Performance- based Regulatory Approach

The US regulatory system in the Petroleum industry is a combination of prescriptive and performance – based approaches.[128] The existing safety regulations known as the Process Safety Management (PSM) regulations were promulgated in 1992.[129] After review of a series of catastrophic oil spill and other global blow out accidents, the US adopted the U.K safety case in addition to the existing approaches.

The Deepwater Horizon explosion in the Gulf of Mexico and the investigations that followed showed that the prescriptive and performance-based or goal-setting regulatory regime was ill-prepared for taking into consideration of the extensive damage affecting the entire echo-system on the entire Coastline of the gulf. This triggered calls for the adoption of a new approach which is uniquely similar to the UK safety case. After the Macondo well incident USA adopted, in addition to the goal-setting approach, the U.K safety case approach.

The experience of the Deepwater Horizon tragic incident and the subsequent inquiry and recommendations that ensued triggered reforms and further developments in the US

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[127] A Competition Policy and Regulatory Framework for Alberta's upstream Oil and natural Gas Industry (2018), https://www.capp.ca.accessed 30 September 2019

[128] Jain .P, et al (2017). Regulatory Approaches- Safety Case V. US Approach: Is there a best solution today? Journal of Loss Prevention in Process Industries, Volume 46, March 2017, P 154 – 162, https://www.sciencedirect.com, accessed 30 September 2019

[129] Ibid.

regulatory regime. Uganda and USA share similarities in the prescriptive style of regulation before the Deepwater Horizon incident. The organizational failures that culminated into a major blow-out showed that the prescriptive regulations failed to provide an effective mechanism against a blowout. The example and lesson learnt by US was a trigger to add the safety case regime to its existing approaches. This should be a lesson for Uganda's nascent Oil and Gas industry. It can be postulated that after the Deepwater Horizon Inquiry, the US's monitoring and review approaches promoted improvement in the organizational culture of risk assessment and treatment. This supports a case for Uganda adopting more than one regulatory approaches in preparation for a possible future oil spill or blowout.

4.8 The United Kingdom Safety Case Regulatory Approach

Jain .P, et al (2017) posits that; a safety case approach which is also used in Australia and Norway requires a detailed analysis of hazards and steps considered for addressing those hazards. A safety case entails identification of hazards and assessment of attendant risks in designated documentation; failing of which an application for a license is denied by the licensing authority. A safety case approach fits very well in the Generic Risk management Model.

The safety case regime of regulation holds that the safety regulator provides independent assurance to the public, the government and stakeholder companies that the license holder has identified the risks to health and safety.[130] The license holder pledges to take necessary measures to control or deal with the risks. In practice, it is the regulator who determines what is safe or not for the industry. The Cullen report of the oil spill, following the 1988 Piper Alpha disaster in the North Sea, provided a much more carefully considered set of lessons to be learn in the format of a safety case.

The Piper Alpha disaster left 167 deaths and considerable economic and financial losses to the U.K government and the industry. The main cause of the disaster was found to be failures in organizational communication although the design and installation materials were up to the

[130] NOPSEMA (2020), safety Case Approach, https://www.nopsema.gov.au>safety, accessed 30 September 2019

industry standards. That meant there were failures in the management processes. The failure was not in the rules but in communication and coordination of management processes.

The U.K safety case regulations (2015) aim to take account of risks exposed to the offshore installations and associated activities. The safety case is not a political imperative but safety efficacy. It may also be practically difficult to provide evidence of non-occurrence of a hazardous risk merely because of compliance with the safety case rules. The U.K approach has championed and tested the safety case regulatory approach. The safety case approach takes on another level of personnel knowledge and top management commitment to organizational policy (rules) and strategy for improvement of risk assessment and treatment. However much the Ugandan Petroleum laws may be comprehensive, if they have no effective application policy and strategy, industry risks will not be mitigated.

Under the traditional UK prescriptive rules, liability for failure to assess and therefore prevent or mitigate risks was placed on the holder of a licence. Reliance was made so much to the common law principle of foreseeability of damage arising from the risk.[131] Uganda's prescriptive regulatory rules have tended to follow this traditional common law principle. Economic and financial losses were mainly at the heart of the precedent.

Under the safety case (UK) regime, the operator rather than the holder of the licence is liable. There was a whole change of policy and strategy. Damage or injury caused by the assessed or non-assessed risk does not have to be foreseen as long as it occurred. The Ugandan law, NEA; defines a licensee to include an operator and a licence holder to be it a natural or corporate person. The spirit of the Ugandan law is to hold the holder of a licence liable on account of a contractual relationship between the licensing authority and the licence holder, usually a Company. The Ugandan Law leans to holding the oil company liable rather than a natural person like the installation engineer or operator.

To the extent that the Ugandan petroleum law, PEDPA provides for a definition of a licensee as a person who holds a licence under the law but it should include an operator of any

[131] Hadley v Baxendale (1854)9 Exchaquer 341, https://www.lawteacher.net>cases, accessed 29 September 2019

installation in the oil industry. The safety case regime targets the operator and not necessarily a licensee, who is held vicariously liable. This is important because some provisions of NEA concerning the conservation of the environment hold the safety case model as the basis for effective regulation. This makes a case for adoption of the safety case approach in addition to other regulatory approaches. There is a need for a hybrid of regulatory approaches in Uganda.

4.9 Findings and Conclusion

In conclusion, this chapter demonstrates the underlying problems behind the fragmentation and the inconsistency in Uganda's regulatory framework for Health and Safety in the Oil and Gas Sector. There is no clear co-ordination between OSH, HSE and NEMA. There are no clear operational guidelines or culture for the enforcement of the cross-cutting regulatory mandates amongst the existing regulatory agencies

There are severe gaps, such as the lack of a clear occupational health and safety policy. There is severe deficiency in the enforcement mechanism of the several frameworks. While there may be a positive step in the overall legislative provision of the sector, there are glaring enforcement weaknesses and challenges that ought to be addressed. The confusion over who should regulate safety and health activities at petroleum workplaces and or installations is glaring under the existing legal framework. They should be reviewed.

There seems to be a recognition that laws alone will offer some coherent protection to the employees or persons who come in contact with the operational environment. The experience of Nigeria shows that several legislations enacted to deal with a problem cannot be the solution without a functioning risk management framework.

The comparative analysis of the different legal and regulatory regimes in different countries shows that Uganda can learn some lessons from some of the successes and avoid incidences of failed stories such as in Nigeria and Equatorial Guinea.

Nigeria, the largest oil producing country in Africa in spite of a plethora of legislations of OSH and HSE the 'oil curse' has not been avoided. There are no better lessons to learn from Nigeria and Equatorial Guinea.

In Nigeria greed and corruption is rife, bad management, and government's permissive and passive attitude towards employers who ignore health and safety laws are partly contributory to the state of the industry.

Norway's strict application of safety regulations is a work culture to be emulated. Their success story is hinged on a strict application and enforcement of the concept of HSE risk assessment culture. Norway strictly observes a savings culture of the oil revenues for the Intergenerational Resource Fund.

While the Norwegian approach is significantly prescriptive, it as well utilizes risk assessment that represents an alternative approach to the safety case and goal -setting approach employed in the U.K as well.

Both the U.S.A and Australia apply a hybrid of the safety case and the prescriptive approaches. UK's safety case approach shifts the compliance responsibility to the operator who must then show cause why risks have not been prevented.
Countries which have successfully implemented the Generic Risk Management Framework have experienced varying degrees of improvement in organizational policies and strategies for risk assessment, risk treatment, monitoring and review. They have also experienced varying degrees of improvement in organizational culture, personnel knowledge and top-management commitment to risk management.

While Uganda's regulatory regime is largely prescriptive, there is evidence of components of the safety case and goal-setting approaches shown in NEA. A hybrid of approaches should then be more clearly adopted. Guide lines should be made to effectively guide the industry in that regard. However, the regulatory authorities, NEMA, UWA, NFA, and PAU are neither structurally co-ordinated nor vertically integrated and are susceptible to regulatory overlaps.

While there appears to be heavy reliance on NEMA as the lead regulatory agency, there is neither a structural framework for co-ordinating other agencies nor an operational fund for

financing related regulatory activities. There is no clear policy and strategy for the development of a Risk Management Framework in the oil and gas industry.

The regulatory framework is weak and insufficiently funded. For instance, the proposed National Environment (Oil Spill Prevention, Control and Management Regulations (2014) emphasizes the leading role of NEMA as the lead responder but without a budget.

There is no supervisory or monitoring mechanism suggested in the rules. The rules emphasize the preventive role of the employer/licensee but provide no practical guidelines for management of an oil spill of whatever magnitude.

The contingency plan proposes prescriptive rules and obligations without a monitoring and enforcement framework.

There is a need for an independent command agency even if it was to remain NEMA as it is but, adequately funded and vested with statutory authority to co-ordinate all the OSH and HSE activities in Uganda's oil and gas sector. The powers of PAU over petroleum activities should be restricted to PAU and removed from NEMA's operational roles. On the other hand, NEMA should be strengthened with quasi-judicial powers to more effectively enforce environmental health and safety standards.

There is need for establishment of a comprehensive National Oil Spill Contingency Plan. This is already provided for in the law but a specialised body not established. There is therefore, a need to enact regulations establishing a body under NEMA but associated to PAU responsible for Oil Spill Prevention, Detection and Response. The body should be independent and self-accounting. The body should comprise a Command Centre manned by specialists in the relevant field of enforcement.

CHAPTER 5:SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions and Findings

There is a need for a regulatory environment that fosters transparency in the utilization of oil revenues for the present and future generations in Uganda. The importance of balancing petroleum production with environment conservation of the unique biodiversites cannot be over emphasized. There is a need for monitoring and enforcing high standards of corporate responsibility and compliance on the part of investor countries. The oil sector comprises many stakeholders whose interests need to be equitably balanced.

Risk management Models have been successfully applied in various Oil and Gas producing countries.

There is a need for insuring that the anticipated wealth from Uganda's oil does not trigger insecurity, sectarian competition and other forms of internal conflicts. It is important to build public participation and capacity in order to understand and benefit from the new sector. Above all, Parliament has a pivotal obligation to fulfil its oversight function in a pro-people manner.

5.2 Recommendations

The Ugandan law should be reviewed to make provision for a national body to implement and control functions over oil spills, prevention, detection and response. The body which should be independent of NEMA but operate under the oversight of both PAU and NEMA. Should be comprised of specialists or technical personnel constituted to manage and control the national oil spill contingency plan.

The national body should develop a technical contingency plan and actively involve all stakeholders. Managers of lead agencies should develop appropriate Risk Management Models and used them to monitor and review the effectiveness of regulatory system.

There should be a review of the Worker's compensation law to ensure that compensation for loss of life, limb or occupational illnesses is in conformity with the ILO standards and principles. The international principles and standards should be domesticated and public awareness be culturalized.

While NEMA may take lead in monitoring of environmental issues at national level but issues related to SHE in the petroleum industry are specialised and deserve special attention. This by PAU as a corroborative regulatory body requires specialised regulations and specialist regulators in order for the industry to be effective and kept in check with global industry standards.

The provisions of OSHA should be reviewed so as to be harmonized with the NEA, PEDPA and employment laws. The review should be in conformity with the ILO principles and occupational best practices. Compensation in all aspects should be fair and adequate.

OSHA aims to consolidate, harmonize and update laws relating to occupational safety and health, as a national body. A National Occupational Safety and Health Authority should be established to efficiently and effectively undertake the target objectives.
The functions and powers of the Commissioner and the inspector in OSHA should be reviewed and shared with PAU in a clear and regulated manner. The current law and regulations are vague and inadequate.

The powers conferred on the inspector in OSH are excessive, highhanded and create a situation of possible conflict of interest.
The functions of NEMA should be reviewed with regard to regulation of SHE in the petroleum industry. An independent commission or authority comprising of experts but operationally independent of NEMA should be established to regulate SHE activities within the petroleum industry under the oversight of NEMA.

Competition between regulatory bodies should not be seen as negative. Research studies have shown that regulatory competition can positively influence organizational effectiveness. NEMA can for instance compete with PAU and any other established body or commission. Resource allocation should depend on regulatory effectiveness and compliance by the respective institutions hence.

Finally, the review should address the apparent regulatory overlaps existing between NEMA, PAU, UWA, NFA and OSH and aim to achieve harmonized and integrated regulatory approaches.

Regulatory agencies in the oil and gas sector should adopt a hybrid of performance-based, prescriptive and safety case regulatory approaches.

Enforcement mechanisms or tools should developed for effectiveness under appropriate risk management model. The Generic Risk Management Model which has been successfully applied in several Oil and Gas producing countries, should equally be applied in Uganda's Oil and Gas Industry. A compliance culture in the extractive industry should be inculcated on a normative basis. Under the Risk Management Model regulatory monitoring and rule enforcement should not become an exception but a rule of the thumb.

Parliament should take a more formidable and robust oversight role in ensuring proper utilization of revenues from oil for intergenerational equity.

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