DECOMMISSIONING OF OIL AND GAS PROJECTS IN UGANDA: AN ANALYSIS OF THE LEGAL AND REGULATORY FRAMEWORK

By

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DECLARATION

I, Francis Buwule Kabonge declare that I am the author of this dissertation and that any assistance received in its preparation is fully acknowledged and disclosed. I have also cited any sources from which I used data, ideas or words, either quoted directly or paraphrased. I also certify that this dissertation is my original work and has never been submitted to any other institution or forum for any award or otherwise.

Signed: ……..

Francis Buwule Kabonge

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APPROVAL

Submitted with my consent:

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Date…….

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DEDICATION

I dedicate this dissertation to my wife and children.

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LIST OF ACROYMNS

NEMA - National Environment Management Authority

NEMP- National Environment Management Policy

UWA- Uganda Wildlife Authority

International Instruments

1. Convention on International Trade in Endangered Species of Wild Fauna and Flora
2. United Nations Convention on the Law of the Sea (UNCLOS)

Domestic Instruments

1. The Constitution of the Republic of Uganda, 1995
2. The National Environment Policy, 1994
3. The National Environment Act, Cap. 153
4. The Ugandan National Oil and Gas Policy 2008
5. The Petroleum (Exploration, Development and Production) Act, 2013
6. The Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act 2013
7. The Production Sharing Agreements
8. The Uganda Wildlife Policy, 2014
9. The National Environment Management Policy (NEMP)

Case law

1. *Wiwa v. Royal Dutch Petroleum Co., 2002 WL 319887 (S.D.N.Y. 2002)*

Abstract

Oil exploration activities have been ongoing in Uganda resulting in discovery of a huge amount of oil deposits. However, very little research has been conducted on the legal and regulatory framework governing Oil and gas production facilities decommissioning process. The study analyzed the efficiency and effectiveness of the legal and regulatory frameworks governing the decommissioning process of Oil and gas production facilities in Uganda. It particularly sought to find out the impact of Oil and Gas exploitation on the environment and the communities in the affected areas in Uganda; to examine the level of compliance to international and national regulatory frameworks in the decommissioning process of Oil and gas production facilities in Uganda; evaluate the adequacy of the regulatory framework of the decommissioning processes of the oil and gas projects in ensuring effective protection of the environment as well as the protection of the fundamental human rights in Uganda; and find out the regulatory frameworks of the decommissioning process in the Oil and gas sector in other jurisdictions in order to draw lessons for Uganda. Following a largely qualitative as well as exploratory and cross-sectional descriptive study design, the study collected qualitative data with a sample size of 13 respondents. The study employed interviews guided by an interview guide as means of data collection. The study found that oil and gas exploitation activities are having negative impacts on the environment; the level of compliance to international regulatory framework on decommissioning of oil and gas facilities is wanting; the regulatory frameworks on decommissioning of oil and gas projects in ensuring effective protection of the environment are inadequate. The study concluded that the regulatory framework for decommissioning of the oil and gas projects in Uganda are not adequate to the extent that will guarantee that taxpayers do not bear the cost of decommissioning, and the consequences of insolvency on residual liabilities. The study recommended that the Parliament of Uganda reviews the laws that regulate the decommissioning process of oil and gas facilities early in time; amend the laws to address the new elements of management of decommissioning in the oil and gas sector in Uganda.

CHAPTER ONE

GENERAL BACKGROUND

1.1 Introduction

Decommissioning is a process involving the removal of industrial installations and all relevant structures which have ended their productive life in a certain industry and the subsequent restoration of the industrial site to its previous status.[1] The function of the legal and regulatory frameworks is to ensure the efficient management and to guarantee that the processes of decommissioning are not detrimental to the environment and are able to restore the environment to as a natural state as possible[2] and that the affected communities receive the necessary and appropriate rehabilitation to adjust to the life after the project. This study focused on analyzing the legal and regulatory framework governing Oil and gas production facilities decommissioning process in the Albertine region in Uganda. Purposely, the study looks at the efficiency and effectiveness of the said framework in protecting the environment and the affected communities.

1.2 Background

Oil exploration started way back in the early 347 A D in China with the first well drilled.[3] Since then the world has been in the business of oil exploration and production. In East Africa, oil exploration started in early 1930s by the British colonialists although they faced many challenges until around 1990s when few first oil wells were discovered.[4] The discovery of oil in South Sudan, then Sudan, in 1987 brought many prospects of oil discoveries in East Africa. Since then, a number

[1] Martins, I. D., Moraes, F. F., Távora, G., Soares, H. L. F., Infante, C. E., Arruda, E. F., ... & Lourenço, M. I. (2020). A review of the multicriteria decision analysis applied to oil and gas decommissioning problems. *Ocean & Coastal Management*, *184*, 105000.

[2] Esteves, A. M., and Barclay, M., Enhancing the benefits of local content: integrating social and economic impact assessment into procurement strategies, in Impact Assessment and Project Appraisal, 29:3, 214 (2011).

[3] Song, S. (2016). The perfect play of salt, bamboo and gas. . AAPG 2016 Annual Convention & Exhibition. Calgary: College of Geoscience.

[4] Purcell, P. (2014). Oil and gas exploration in East Africa: A brief history. AAPG International Conference & Exhibition. Turkey: Geological Consultants Pty Ltd, Scarborough, WA, Australia, 1-21.

of oil companies such as Chevron, Africa Oil and Tullow oil have camped in the region acquiring licenses and conducting seismic oil and gas exploration tests in countries such as Kenya, Uganda and Tanzania.[5]

Oil Exploration in Uganda

Oil exploration in Uganda was first done by Wayland in the 1920s, who documented up to 52 oil and gas seeps in the Albertine Graben.[6] Petroleum exploration activities ceased due to the Second World War in 1945. In 1983 geologists resumed exploration activities in the Albertine Graben, revealing reasonable oil presence.[7] This led to the creation of the Petroleum Unit in 1985, in the Geological Survey and Mines Department to spearhead exploration promotion; In 1985 the Petroleum (Exploration and Production) Act was enacted to make provision for the exploration and production of petroleum and related matters.[8] The Petroleum unit was replaced by the Petroleum Exploration and Production Department which commenced aeromagnetic surveys. The Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations[9] were passed for regulating petroleum activities in the country.[10]

Uganda discovered commercially viable oil deposits in the Albertine Graben region in 2006 and has since embarked on establishing effective management procedures to promote growth and

[5] Yabs, J. (2015). Potential economic effects of oil and gas in East African countries. International Affairs & Global Strategy, 28, 1-4.
[6] Kasimbazi, Emmanuel. "Legal and environmental dimensions of oil exploration in Uganda." (2013).
[7] Kabera, P. (2019). *Inclusive development and the emerging oil sector: a case of Hoima District in the Albertine Region of Mid-Western Uganda* (Master's thesis, Norwegian University of Life Sciences, Ås).
[8] Oloka-Onyango, J. (2020). Courting the Oil Curse or Playing by the Rules? An Analysis of the Legal and Regulatory Framework Governing Oil in Uganda. *An Analysis of the Legal and Regulatory Framework Governing Oil in Uganda (June 6, 2020)*.
[9] Statutory Instrument No. 47 of 2016.
[10] Ibid.

development for the country. [11] By the end of 2013, Uganda's proven oil reserves were estimated by the Ugandan Petroleum Exploration and Production Department to be 3.5 billion barrels, which are expected to yield at least $2 billion per year for 30 years once oil production commences.[12] Uganda is currently described by the World Bank as the hottest inland exploration frontier in the world and the country to watch in the oil and gas space, due to the commercial discovery of an estimated 6.5 billion barrels of oil, 1.4 billion of which are recoverable.[13]

The exploitation of oil continues to remain a top concern for the governments of developing countries like Uganda as a source of foreign direct revenue, a source of taxes, direct and indirect employment, and provides an opportunity for the diffusion of technology from developed countries to developing countries.[14] However, oil and gas production entails and poses a greater threat to the environment.[15]

Before the discovery of oil, the Albertine Graben specifically Lake Albert had 53 different fish species, and approximately 10 of these are unique to the lake and thus are found nowhere else in the world.[16] The region's residents depended on these critical natural resources for their livelihoods in agriculture, fishing and tourism; all of which could be adversely affected by oil exploitation.[17] A key tourist attraction in Buliisa is Murchison Falls National Park renowned all over the world

[11] Kabera, P. (2019). *Inclusive development and the emerging oil sector: a case of Hoima District in the Albertine Region of Mid-Western Uganda* (Master's thesis, Norwegian University of Life Sciences, Ås).
[12] Langer, A., Ukiwo, U., & Mbabazi, P. (2019). *Oil Wealth and Development in Uganda and Beyond: Prospects, Opportunities, and Challenges* (p. 394). Leuven University Press.
[13] Ibid.
[14] Tordo, S., et. al., National oil companies and value creation, 8 (World Bank Working Paper No. 218, 2011).
[15] Arthur Bainomugisha, Hope Kivengyere and Benson Tusasirwe, Escaping the oil curse and making poverty history; A Review of the Oil and Gas Policy and Legal Framework for Uganda. ACODE Policy Research Series, No. 20, 2006 page 3.
[16] Kassim, Wahab. "Land Conservation in the Albertine Graben Region of Uganda: A Critical Analysis of the Legal Regimes." In *Legal Instruments for Sustainable Soil Management in Africa*, pp. 79-99. Springer, Cham, 2020.
[17] Tumusiime, David Mwesigye, Joseph Mawejje, and Patrick Byakagaba. "Discovery of oil: Community perceptions and expectations in Uganda's Albertine Region." (2018).

for its unique biodiversity. [18] The Delta, a wetland area at the confluence of Albert Nile and Victoria Nile, is designated a Ramsar site of international importance as migratory bird sanctuary.[19] Fishing and agriculture throughout the Albertine Graben are also critical economically and socially and are completely reliant on healthy, non-polluted ecosystems.

In the Oil and gas industry, the three main phases which are most detrimental to the environment are the exploratory drilling phase, which confirms the prevalence of hydrocarbon reservoirs and analyzes the reserves;[20] development and production phase that includes the processing of oil from the reservoir through formation pressure, artificial lifting and other advanced recovery processes until economically viable reserves are exhausted;[21] and the decommissioning and rehabilitation stage. In some cases, the effects of environmental degradation are so disastrous that human rights are violated.[22]

Like most of Uganda and sub-Saharan Africa generally, the main land use in the Albertine Graben Region is agriculture (crop farming and livestock grazing) thus the presence of disused installations could also pose hazards to legitimate users of the natural resources.[23] Hence, there is

[18] Report on the Progress of the Implementation of National Oil and Gas Policy for Uganda February 2017 (n6)

[19] Meike Westerkamp and Annabelle Houdret, *Peacebuilding Across Lake Albert Reinforcing Environmental Cooperation between Uganda and the Democratic Republic of Congo* (Initiative for Peace 2010). The Ramsar Convention was held in the city of Ramsar in Iran in February, 1971. The international convention entails conservation of Wetlands of International Importance Especially as Waterfowl Habitat, also known as the Convention on Wetlands, Ken Fritz and Brad Autrey, Governance, Legislation, and Protection of Intermittent Rivers and Ephemeral Streams in Intermittent Rivers and Ephemeral Streams, 2017, > https://www.sciencedirect.com/topics/earth-and-planetary-sciences/ramsar-convention<

[20] Ibid.

[21] Ibid.

[22] Inter-American Commission on Human Rights, Report on the Situation of Human Rights in Ecuador, OAS Doc OEA/Serv.L/V.II.96, doc 10, rev 1, 24 April 1997, Inter-American Commission on Human Rights www.cidh.oas.org/country.htm.

[23] Lake Albert borders Republic of Congo and Uganda, as such is a route within which indigenes of both country travel for trade and other purposes. See Ugandan Civil Society, 'Civil Society Coalition on Oil in Uganda', 20 <http://platformlondon.org/wp-content/uploads/2012/01/Contracts-Curse-Uganda-Platform-CSCO.pdf> accessed 14 July 2017. As a result, such disused offshore installations if not handled can compromise the safety of lake for

the need to ensure that such disused installations are taken care of at the cessation of production which is called decommissioning.[24]

In this line, the Government of Uganda has taken significant strides to ensure that the appropriate policies, institutions and legal framework exist to harness the projected benefits of the Albertine Graben's oil resources and concurrently to ensure that the environment is managed sustainably.[25] The country already has a national oil and gas policy, and a number of laws meant to guide the management of oil resources have already been passed by Parliament, including the Petroleum (Exploration, Development and Production) Act;[26] and the Petroleum (Refining, Conversion, Transmission and Midstream storage) Act[27] and the regulations made thereunder.

In February 2008 Uganda's Ministry of Energy and Mineral Development published the National Oil and Gas Policy (NOGP), which explicitly recognizes many of the challenges associated with natural-resource wealth, including the need to mitigate the potential for negative economic and fiscal impacts that often stem from a sudden influx of revenue in the extractive industry sector. The NOGP[28] outlines internationally recognized mechanisms for managing such impacts, with the aim of turning finite oil wealth into sustainable development outcomes. It also highlights the need for a long-term national strategy to ensure optimal impacts from oil and gas exploitation by maximizing benefits to Ugandans along the industry "value chain".[29]

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transportation purposes. See UK Government, 'Foreign Travel Advice: Uganda' (2017) <https://www.gov.uk/foreign-travel-advice/uganda/safety-and-security> accessed 6 July 2017.

[24] Ole, N. Chinwa, and J. Komugisa. "Ugandan Legal Framework on Decommissioning Fund: Is There an Achilles Heel, and Can Lessons from the UK Help?." *Oil, Gas & Energy Law Journal (OGEL)* 16, no. 2 (2018).

[25] Mawejje, Joseph. "The oil discovery in Uganda's Albertine region: Local expectations, involvement, and impacts." *The Extractive Industries and Society* 6, no. 1 (2019): 129-135.

[26] The Petroleum (Exploration, Development and Production) Act of 2013.

[27] The Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act of 2013.

[28] The National Oil and Gas Policy (NOGP) of 2008.

[29] Ibid.

The enactment of the petroleum laws laid the appropriate framework for the decommissioning stage of the oil and gas projects in Uganda.

Oil and gas management cuts across policy areas of taxation and revenue management, government accountability, corporate regulation, environment, land security, etc., so it is important to recognize that there are other existing laws relevant to the overall framework for managing the new sector.[30] In addition to the Constitution itself, these include: Land Act,[31]; Access to Information Act,[32] National Environment Act,[33] Investment Code Act,[34] Penal Code Act[35] Income Tax Act,[36], Wildlife Act,[37] ; National Forestry and Tree Planting Act,[38] ; Public Health Act[39] Water Act,[40], and Public Procurement and Disposal of Assets Act.[41] (footnote comes aftera comma)

Oil development can bring great benefits, but it also comes with great risks to the environment as has been seen in oil development zones from the Gulf of Mexico to the Niger Delta.[42] The significance of these risks cannot be overstated, and it is critical that Uganda's legislative framework puts laws in place that will ensure that these risks are minimized.[43] Most of the current foreign exchange earnings and livelihoods come from industries that rely directly on the

[30] Tumusiime, F., & Banfield, J. (2011). *Oil and Gas Laws in Uganda: A Legislators' Guide*. International Alert.

[31] The Land Act, 1998 CAP 227 (please ensure that the font type for both text and footnotes is the same. It is only size that differs. 12 for text 10 for footnotes)
[32] Access to Information Act,2005 CAP 4
[33] National Environment Act, No.5 of 2019
[34] Investment Code Act,2019
[35] Penal Code Act, CAP 120
[36] Income Tax Act CAP 340
[37] Uganda Wildlife Act 2019
[38] National Forestry and Tree Planting Act, 2003
[39] Public Health Act CAP 281
[40] Water Act CAP 152
[41] The Public Procurement and Disposal of Public Assets Act, 2003
[42] Ibid.
[43] Ibid.

environment: namely, agriculture and tourism.[44] If oil development is undertaken in a way that compromises the natural endowment of Uganda, the short-term gains will be more than offset by long-term losses.[45] Contamination of the Albert Nile must also be protected against, as it would have far-reaching political ramifications due to the impacts on downstream nations; where interstate relationships are already strained. [46]

Article 39 of the Constitution[47] instructively provides that every Ugandan has a right to a clean and healthy environment. This provision is reiterated under section 3 of the National Environment Act,, [48] (footnote comes after a comma) and section 5(2) of the National Forestry and Tree Planting.[49] (footnote comes after a comma) This right has been defined to include: (a) the right to freedom from pollution, environmental degradation and activities which threaten life, health or livelihood; (b) protection and preservation of air, soil, water, flora and fauna; (c) healthy food and water; and (d) a safe and healthy working environment.

The NOGP[50] asserts the need to protect the environment as part of management of the petroleum sector. Objective 5.3.9 seeks to ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity. To achieve this objective, the state is required to carry out due diligence on oil companies applying for licenses in the country with regard to their technical and financial capabilities together with their environmental standards.[51]

[44] Ibid.
[45] Ibid.
[46] Ole, N. Chinwa, and J. Komugisa. "Ugandan Legal Framework on Decommissioning Fund: Is There an Achilles Heel, and Can Lessons from the UK Help?" *Oil, Gas & Energy Law Journal (OGEL)* 16, no. 2 (2018).
[47] The Constitution of the Republic of Uganda, 1995.
[48] The National Environment Act of 1995 Cap 153
[49] The National Forestry and Tree Planting Act of 2003 No. 8.
[50] The National Oil and Gas Policy (NOGP) of 2008.
[51] Ibid.

The NOGP[52] further tasks the government with doing the following: ensure availability of the necessary institutional and regulatory framework to address environment and biodiversity issues; ensure presence of the necessary capacity and facilities to monitor the impact of oil and gas activities on the environment and biodiversity; require oil companies and their contractors/subcontractors to use best practices in ensuring environmental protection and biodiversity conservation; and require oil companies and any other operators to return all sites on which oil and gas activities are undertaken to their original condition as an environmental obligation. However, this study was intended to analyze the efficiency and effectiveness of such legal and regulatory framework in governing the decommissioning processes of Oil and gas production facilities in Uganda.

1.3 Problem statement

In the extractive industry the decommissioning stage is critical in as far as it is intended to restore the devastated environment to as near as its original state as possible and to rehabilitate the affected communities and prepare them for a decent life after the project. The preparation for this stage needs to be undertaken almost as soon as the project commences. The legal and regulatory framework for the decommissioning stage must therefore, likewise be addressed early enough to ensure that it measure up to the challenge. Dealing with the decommissioning of petroleum installations is a relatively new challenge to most producer countries.[53] As a result, environmental laws in such economies are often ineffective because they are substantively inadequate[54] and or

[52] The National Oil and Gas Policy (NOGP) of 2008.

[53] Tung, A., 2020, May. Design and Analysis of Stakeholder Oriented Critical Paths for Offshore Decommissioning Projects in the United Kingdom and Australian Landscape Using Mixed Methods. In *Offshore Technology Conference*. Offshore Technology Conference.

[54] Parente, V., Ferreira, D., dos Santos, E.M. and Luczynski, E., 2006. Offshore decommissioning issues: Deductibility and transferability. *Energy Policy*, *34*(15), pp.1992-2001.

because they are inadequately enforced.[55] An examination of the current legal and regulatory framework for the decommissioning of the oil and gas projects in the Albertine region reveals that there are gaps that need to be addressed to achieve the desired goal.

1.4 Objectives

1.4.1 General Objective

The general objective of this study was to analyze the efficiency and effectiveness of the legal and regulatory framework governing the decommissioning process of Oil and gas production facilities in Uganda.

1.4.2 Specific Objectives

The study was guided by the following specific objectives:

i. To find out the impact of Oil and Gas exploitation on the environment and the communities in the affected areas in Uganda
ii. To examine the level of compliance to international regulatory framework in the enactment of Uganda`s regulatory framework on decommissioning process of Oil and gas production facilities.
iii. To evaluate the adequacy of the decommissioning regulatory framework in ensuring effective protection of the environment as well as the protection of the fundamental human rights in Uganda

[55] Ahiaga-Dagbui, D.D., Love, P.E., Whyte, A. and Boateng, P., 2017. Costing and technological challenges of offshore oil and gas decommissioning in the UK North Sea. *Journal of Construction Engineering and Management*, *143*(7), p.05017008.

iv. To find out on decommissioning process regulation in the Oil and gas sector in other jurisdictions in order to draw lessons for Uganda

1.5 Research Questions

The study was guided by the following research questions:

i. What is the likely impact of Oil and Gas exploitation on the environment and the communities in the affected areas in Uganda?
ii. What is the level of compliance to international regulatory framework in the decommissioning process of Oil and gas production facilities in Uganda?
iii. How adequate is the decommissioning regulatory framework in ensuring effective protection of the environment and fundamental human rights in Uganda?
v. What lessons can be drawn from other jurisdictions on decommissioning process regulation in the Oil and gas sector?

1.6 Scope of the study

The study was conducted using Uganda as a case study. Specific attention was, however, given to the oil well in the Albertine region in the districts of Hoima and Bulisa there are the largest number of oil wells in the region.

1.7 Justification of the study

Although positive prospects of oil exploration activities are good for a country's economy, the said prospects have a substantial share of negative effects.[56] Oil exploration activities have been ongoing in Uganda resulting in discovery of a huge amount of oil deposits. However, very little research has been conducted to determine the efficiency and effectiveness of the legal and regulatory framework governing Oil and gas production facilities decommissioning process. Naturally, currently the attention is on development and production. Additionally, Energy law as a discipline has been undergoing a rejuvenation[57] and more recently, scholars in the community have advanced a set of core principles.[58] It is important to identify how decommissioning fits in with these principles. Already, decommissioning has been noted as a key activity in the energy system and therefore a key legal area for energy lawyers.[59] Unfortunately the literature on law and decommissioning is sparse especially in the context of Uganda. This made the study extremely relevant and timely.

1.8 Significance of the study

The findings of this study are of great importance to the Ministry of Energy and its affiliated agencies and policy makers alike as it provides reasons for revision, reform and amendment of Oil and gas laws and policies in the country.

The study findings are of benefit to the public and local communities in the oil exploration region as it provides empirical evidence about the need of a safe environment in the long run.

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[56] Nanok, J. K., & Onyango, C. O. (2017). A socio-economic and environmental analysis of the effects of oil exploration on the local community in Lokichar, Turkana County, Kenya. *International Journal of Management, Economics and Social Sciences (IJMESS)*, *6*(3), 144-156.

[57] Heffron, R. J., Roberts, P., Cameron, P. and Johnston, A. 2016. A Review of Energy Law Education in the UK. Journal of World Energy Law and Business, 9 (5), 346-356.

[58] Heffron, R. J., et al. 2018.

[59] Heffron, R. J. and Talus. K. 2016. The Evolution of Energy Law and Energy Jurisprudence: Insights for Energy Analysts and Researchers. Energy Research and Social Science, 19, 1-10.

The study findings are as well of help the academicians and legal scholars since the findings adds on to the body of knowledge especially in the area of decommissioning that seems to have been given less attention by researchers.

1.9 Organization of chapters

The study was presented in Six chapters. Chapter one is the introduction. It highlights the background to the study, the purpose and justification of the study, the objectives, significance and scope of the study.

Chapter two conducted the literature review of other scholarly works on legal and regulatory framework covering the decommissioning process of Oil and gas production facilities generally, the impact of the oil and gas exploitation on the environment and the regulatory frameworks on the protection of the environment. A discussion on the likely impact of the Oil and Gas exploitation in Uganda on the environment and the communities in the affected areas in Uganda is then made.

In the third chapter, deals with the methodology and the study approach including the means of data collection, report dissemination.

The fourth chapter presents an analysis of the legal frameworks on decommissioning of oil and gas projects reviewed for Uganda, the UK and Norway.

The Fifth Chapter presents findings and discussion of fieldwork; and finally the Sixth Chapter, which is the last chapter wrapped up the study by proposing strategies of improving on the adequacy of the decommissioning regulatory framework and make recommendations for the effective and the efficient protection of the environment.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents literature reviewed from the works written by other scholars on decommissioning of oil and gas facilities. It covers actual literature reviewed in line with the objectives of the study and summary of the literature review.

2.1.1 Impact of the Oil and Gas exploitation on the environment

Environmental impacts of oil and gas operations may influence species, populations, assemblages, or ecosystems by modifying a variety of ecological parameters (e.g., biodiversity, biomass, productivity, etc.).[60] Routine oil and gas activities can have detrimental environmental effects during each of the main phases of exploration, development, production, and decommissioning.[61] During the exploration phase, impacts can result from indirect (sound and traffic) and direct physical (anchor chains, drill cuttings, and drilling fluids) disturbance. Additional direct physical impacts occur in the development and production phases as pipelines are laid and the volume of discharged produced water increases.[62]

Lastly, decommissioning can result in a series of direct impacts on the sea floor and can re-introduce contaminants to the environment.[63] It is critical that all of the potential impacts of routine

[60] Ahmadun, F. R., Pendashteh, A., Abdullah, L. C., Biak, D. R. A., Madaeni, S. S., and Abidin, Z. Z. (2009). Review of technologies for oil and gas produced water treatment. *J. Hazard. Mater.* 170, 530–551. doi: 10.1016/j.jhazmat.2009.05.044.

[61] Ardron, J. A., Clark, M. R., Penney, A. J., Hourigan, T. F., Rowden, A. A., Dunstan, P. K., et al. (2014). A systematic approach towards the identification and protection of vulnerable marine ecosystems. *Mar. Policy* 49, 146–154. doi: 10.1016/j.marpol.2013.11.017.

[62] Baguley, J. G., Montagna, P. A., Cooksey, C., Hyland, J. L., Bang, H. W., Morrison, C., et al. (2015). Community response of deep-sea soft-sediment metazoan meiofauna to the Deepwater Horizon blowout and oil spill. *Mar. Ecol. Prog. Ser.* 528, 127–140. doi: 10.3354/meps11290

[63] Cairns, J. Jr., Heath, A. G., and Parker, B. C. (1975). The effects of temperature upon the toxicity of chemicals to aquatic organisms. *Hydrobiologia* 47, 135–171. doi: 10.1007/BF00036747.

operations are accounted for when designing management strategies, whether local or regional, for offshore oil and gas activities.[64]

Once the installation of infrastructure commences, direct impacts on habitats and associated fauna increase. Placement of infrastructure on the seafloor, such as anchors and pipelines, will directly disturb the seabed and cause a transient increase in local sedimentation.[65]

The drilling process involves the disposal of waste, including drill cuttings and excess cement, fluids (drilling mud), produced water, and other chemicals that may cause detrimental ecological effects.[66] Therefore since typical impacts from drilling may persist over long-time scales (years to decades), adequate arrangements for decommissioning are vital.

The Ken Saro Wiwa case[67] is perhaps the most compelling case for taking the preparations for the decommissioning stage of the oil exploitation projects in the Albertine region in Uganda very seriously. The case portrays what happened in Ogoniland, in the Niger Delta of Nigeria where the ruthless and reckless actions and attitudes of the all-powerful oil companies, were at display with a single self-centred focus on maximisation of profits through the exploration and exploitation of the oil and gas resources with little or no regard to the wanton degradation of the environment, or the hapless communities affected by the exploitation in the process.

Ogoniland, covers some 400 square miles in the River State in the Niger Delta area of Southern eastern Nigeria. It is home to some 500,000 Ogoni people. It is a densely populated area and one of the worst polluted parts of the African continent. The Niger Delta covers 27,000 sq. miles on

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[64] Baine, M. (2002). The North Sea rigs-to-reefs debate. *ICES J. Mar. Sci.* 59(Suppl.), S277–S280. doi: 10.1006/jmsc.2002.1216

[65] Davies, J. M., Addy, J. M., Blackman, R. A., Blanchard, J. R., Ferbrache, J. E., Moore, D. C., et al. (1984). Environmental effects of the use of oil-based drilling muds in the North Sea. *Mar. Pollut. Bull.* 15, 363–370. doi: 10.1016/0025-326X(84)90169-3.

[66] Gray, J. S., Clarke, A. J., Warwick, R. M., and Hobbs, G. (1990). Detection of initial effects of pollution on marine benthos: an example from the Ekofisk and Eldfisk oilfields, North Sea. *Mar. Ecol. Prog. Ser.* 66, 285–299. doi: 10.3354/meps066285

[67] Wiwa v. Royal Dutch Petroleum Co., 2002 WL 319887 (S.D.N.Y. 2002).

the Nigerian Southern coast. It was once a tropical rain forest and has one of the highest levels of biodiversity on earth.[68]

The pollution is as a result of the extensive exploitation of oil by the Royal Dutch Company Shell and other Oil companies since the discovery of Oil in 1958. An estimated USD30Bn worth of Oil has been extracted.[69]

The landscape has been devastated by oil spills, waste and acid rain destroying the wildlife and the livelihood of the Ogoni people. The traditional occupation of farming and fishing are no longer possible in Ogoniland. Despite being one of the extensive areas of sources of fresh water the water is full of cancer-causing substances.[70]

Prior to the exploration and exploitation of oil and gas in the Niger delta, the Delta consisted of one of the largest wetlands on the African continent with diverse ecosystems of mangrove swamps, fresh water swamps, rain forest and one of the most important marine ecosystems in the world.[71]

The similarities between the ecosystems of the Niger Delta and that of the Albertine region in Uganda are striking. The Albertine region has been described as a Biodiversity hotspot in Africa.[72] It is described as one the most bio diverse regions of the African continent with more than half of Africa`s birds, 40% of Africa`s mammals and about 20% of its amphibians and plants. It is also densely populated with the communities getting their livelihood from this rich biodiversity through farming and fishing.

Without a comprehensive protective and remedial plan through regulation and monitoring the Albertine region can easily suffer the same fate that the Ogoniland suffered which led to a massive

[68] Ken Henslaw: Ken Saro Wiwa and the Power of Resistance
[69] Ken Henslaw Supra
[70] Writers and Freeexpression: Sace Study: Ken Saro Wiwa
[71] Kadafa,Adati Ayuba,2012 : Environmental Impacts of Oil Exploration and Exploitation in the Niger Delta of Nigeria.
[72] https://albertinerift.wcs.org.

campaign and protests that eventually put a stop to the oil exploitation in the Ogoniland in 1993 but the damage to the environment and to the communities had been done.

Ken Saro Wiwa was a prominent son of Ogoniland, a writer and a TV producer who turned his attention to the degradation of the environment in the Ogoniland and the unfair treatment of his people in as far as the sharing of the oil wealth was concerned.[73] In 1990 Ken Sao Wiwa and other prominent Ogoni leaders organised the Movement for the Survival of Ogoni People (MOSOP) whose objective was to demand a share in the oil wealth to develop the Ogoniland and for a clean and safe environment.[74]

Ken Saro Wiwa became the President of MOSOP in June 1993 and his peaceful and nonviolent campaigns and protests led Shell to halt its Oil exploiting activities in 1993. But the military regime then in Nigeria and the Oil companies had seen Ken Saro Wiwa as a threat to their continued exploitation of the oil resources and his subsequent arrest, detention and trial in the famous Ogoni Nine trial and eventual execution was largely seen as means to silence one of the most vocal voices against environmental degradation and the social and economic injustices meted out to theOgoni people.[75]

Despite the fact that the oil extraction ceased in 1993, oil pollution continues to devastate the communities. This is due to inadequate remediation of historic oil spills and also due to new emerging oil spills from oil infrastructure and pipelines and the failure of Shell to decommission the wells. In 2011 a UNEP report recommended that the environment was unproductive and unsafe for human habitation. It concluded that the rehabilitation could take 30 years and roughly USD 1,000,000,000 in the most challenging environmental remediation exercise ever attempted.

[73] Ken Henslaw; Ken Saro Wiwa and the Power of Resistence
[7474] Writers and Freeexpression;January 12,2021: Case Study: Ken Saro Wiwa
[75] Criminal Justice Administration in Nigeria: Ken Saro Wiwa in Review.

The environment is a composite concept that encompasses natural systems such as rivers and biological species.[76] Although, gas contributes immensely to power generation problem,[77] Oil and gas exploration and production have significant negative impacts on the environment. The main stresses arise from leakages of crude oil, gas flaring and the escape of other chemicals used in production processes.[78]

Ugochukwu et al are of the view, that effects on the flora and fauna of freshwater ecosystems in several countries have been noticed.[79] They note that from exploration to the development and production stages there are accompanying challenges which include sound (noise) from seismic operations, vessels and helicopter activities.

Richardson et al.,[80] observed that structures in human ears and those of most marine mammals are sensitive to changes in sound pressure and that sound in coastal waters can interfere with the ability of marine mammals to detect calls from individuals of the same species, echolocation pulses or other important natural sounds.

A study by Gray et al. found that ecological impact from the oil and gas industry arises from the loss of habitat and biodiversity due to the construction and installation of infrastructure.[81] Such

[76] Gutti, Babagana, Mohammed M. Aji, and Garba Magaji. "Environmental impact of natural resources exploitation in Nigeria and the way forward." *Journal of Applied technology in Environmental sanitation* 2, no. 2 (2012): 95-102.
[77] Cordes, E. E., Jones, D. O., Schlacher, T. A., Amon, D. J., Bernardino, A. F., Brooke, S., ... & Witte, U. (2016). Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Frontiers in Environmental Science*, *4*, 58.
[78] Ugochukwu, C.N. and Ertel, J., 2008. Negative impacts of oil exploration on biodiversity management in the Niger De area of Nigeria. *Impact assessment and project appraisal*, *26*(2), pp.139-147.
[79] Ibid.
[80] Richardson, W.J., C.R. Greene, Jr., J.S. Hanna, W.R. Koski, G.W. Miller, N.J. Patenaude, and M.A. Smultea. 1995. Acoustic effects of oil production activities on bowhead and white whales visible during spring migration near Pt. Barrow, Alaska-1991 and 1994 phases: Sound propagation and whale responses to playbacks of icebreaker noise. OCS Study MMS 95-0051.
[81] Gray, J.S., Clarke, K.R., Warwick, R.M., and Hobbs, G. (1990). Detection of initial effects of pollution on marine benthos: an example from the Ekofisk and Eldfisk oilfields, North Sea. Mar. Ecol. Prog. Ser. 66: 285–299.

installations do not only directly destroy the habitats but also in case offshore drilling give rise to suspended particles which can either smother certain species or may lead to secondary impacts through blockage of respiratory organs of certain fish species.[82] Eventually the destruction of habitats of certain species would potentially reduce prey availability and indirectly affect their predators.

According to Amoasah, there is generation of both hazardous and non-hazardous solid waste.[83] The hazardous waste comprises oily wastes, lubricants; supply vessel tank sludge clean out; chemicals; glue; paint, thinner, paint tins; batteries; rubber; fluorescent tubes; filters; and medical waste. The nonhazardous solid waste may consist of plastic packaging; kitchen waste; paper and cardboard; glass; wood; cabin domestic waste. These wastes are expected to be transported ashore for proper treatment and disposal.[84] However, considering the cost involved in transporting and managing such wastes, the industries often prefer grounding the waste stuff and disposing onsite. The risks include acidification of crop lands, ground and surface water contamination, human exposure to harmful pollutants, flora and fauna contamination and a possible bioaccumulation of obnoxious pollutants in these flora and fauna.[85]

Gutti et al opine that on one hand petroleum exploration has fashioned a remarkable economic development for many countries, however on the negative side petroleum exploration have adverse effects on the environment of the host communities like: oil spills, extensive deforestation, loss of

[82] Terlizzi A., Bevilacqua S., Scuderi D., Fiorentino D., Guarnieri G., Giangrande A, Licciano M, Felline S., Fraschetti S. (2008). Effects of offshore platforms on soft-bottom macro-benthic assemblages: A case study in a Mediterranean gas field. Marine Pollution Bulletin 56, 1303– 1309.
[83] Amoasah, George. "The Potential Impacts of Oil and Gas Exploration and Production on the Coastal Zone of Ghana." *An Ecosystem Services Approach. University Netherlands, Wageningen (Master's Thesis)* (2010).
[84] *Ibid*.
[85] *Ibid*.

farms, loss of soil fertility, erosion, gas flaring, intensive exploitation, contamination of streams and rivers, effluent discharge and disposal, conflict between oil companies and hostcommunities.[86] It is already known world over, abandoned and decommissioned installations pose two main problems: firstly, they can consist of a threat to the safety of navigation, and secondly, they can be harmful to the marine environment.[87]

Basing on the reviewed studies, it is evident that in many areas around the world, scholars have recognized and studied the impacts of exploitation of oil and other natural resources.[88] While many scholars have already conducted several studies to examine the potential impacts of the African oil industry on the environment and society[89], there are a few that have focused on the long-term environmental effects of the Oil and gas production facilities in Uganda especially addressing the issue of decommissioning of Oil and gas production facilities as this particular study did.

2.1.2 Compliance with regulatory framework in the decommissioning process of Oil and gas production facilities

The oil and gas industry is a sensitive and technical in nature involving arrays of infrastructure such as wells, drill plants, rigs, pump, vessels, horse, pipelines, barges, platforms, buildings

[86] Gutti, Babagana, Mohammed M. Aji, and Garba Magaji. "Environmental impact of natural resources exploitation in Nigeria and the way forward." *Journal of Applied technology in Environmental sanitation* 2, no. 2 (2012): 95-102.
[87] Trevisanut, Seline. "Decommissioning of Offshore Installations: a Fragmented and Ineffective International Regulatory Framework." In *The Law of the Seabed*, pp. 431-453. Brill Nijhoff, 2020.
[88] Acheampong, Michael. "Assessing the Impacts of Ghana's Oil and Gas Industry on Ecosystem Services and Smallholder Livelihoods." (2018).
[89] Fuda, Rebecca K., Sadie J. Ryan, Jonathan B. Cohen, Joel Hartter, and Jacqueline L. Frair. "Assessing the impacts of oil exploration and restoration on mammals in Murchison Falls Conservation Area, Uganda." *African Journal of Ecology* 56, no. 4 (2018): 804-817.

campsites, rods pipes, cuttings just to mention but these.[90] Each of these has significant use, application and inherent challenges, after deployment. After decades of exploitation of oil resources, the problem of managing and removing platforms and installations constructed for this purpose urgently presents itself. If not well recycled after use the said installations could unleash danger to both its personnel and the environment.[91] The international law on the decommissioning of petroleum facilities is evolving in various jurisdictions throughout the world.[92] Depending upon the situation, the laws applicable to decommissioning can be quite complex, sometimes vague and even contradictory. [93]

Dike (2017) wrote that decommission of ageing infrastructure seem not to be part of the Nigerian petroleum industry lexicon as what exist in the Petroleum Act is abandonment.[94] Although, petroleum exploration activities started more than six decades ago, Nigeria is still waiting for major catastrophe from various oil and gas aging assets before embarking on making a robust regulatory frame work to address the challenges associated with both abandonment and decommissioning. Decommissioning needs to be planned at the beginning of the life of an asset to prevent complications that may arise at a later stage of the asset. This is because, decommissioning has phases and each phase must receive adequate attention in order to forestall any future problems with associated costs. [95] After the life of an assets, the facilities need to be recycled, relocated or

[90] G Aret Adam, ` Problems and Issues in the Development of Nigeria's Oil and Gas Resources in Chibuzo N |Nwoke and Daniel Omoweh, *The Management of Nigeria's Energy Resources for National Development* (Nigerian Institute of International Affairs 20060 134-137.
[91] G S Akpan, ` Failure of Environmental Governance and Implication for Foreign Investors and Host State: A Study of the Niger Delta Region of Nigeria` (2005)3 (3) OGEL 1, 15-16 on various negative impact of oil and Gas pollution in the Niger Delta Region.
[92] Martin, Tim. "Decommissioning of International Petroleum Facilities evolving Standards and Key Issues." *Oil, Gas & Energy Law Journal (OGEL)* 1, no. 5 (2003).
[93] Ibid.
[94] Dike, Samuel Chisa. "ADEQUATE EDUCATION AND INFORMATION SHARING: KEY TO ATTAINING ACCESS TO SUSTAINABLE ENERGY." *Ajayi Crowther University Law Journal* 1, no. 1 (2017).
[95] Ibid.

safely put away to an environmentally acceptable place through an acceptable means in line with best industry practices.[96] Therefore, the need to provide for a robust legal regime for Decommissioning and Abandonment of oil and gas assets that would become obsolete or disused has become the more imperative.

Chisa Dike (2017) adds that decommissioning in Norway is regulated by law and throughout all phases of petroleum activities, and the industry is required to take environmental concerns into account by contemplating the impact of the oil and gas activities on other users of the seas. However, decommissioning process is equally highly capital intensive, sometimes even surpassing exploration and production cost.[97]

The legal framework for onshore decommissioning is determined by reviewing the national Law and host Government Contract. The legal requirement of the environmental impact assessment ensures that stakeholders can participate in the decision-making the process to protect their interest. These areas include; removal of petroleum facilities, disposal of petroleum facilities, obligation to pay for removal and disposal and residual liability.

According to Fam et al., there are several areas where there are offshore oil and gas activities, and the areas in which decommissioning is more established than other areas, are that in the North Sea and in the Gulf of Mexico. The dominant countries in the North Sea refer to Norway and the United Kingdom, while the United States manages the offshore facilities in the Gulf of Mexico.[98]

[96] Ibid.

[97] John Paterson "Decommissioning of offshore oil and Gas installations" in Greg Gordon , John Paterson and Emere Uusemez. Oil and Gas Law Current Practices and Emerging Trends (2nd edition). (Dundee University Press 2011) Chapter 10 at 287.

[98] Fam, M. L., Konovessis, D., Ong, L. S., & Tan, H. K. (2018). A review of offshore decommissioning regulations in five countries – strengths and weaknesses. Ocean Engineering, 160, 244-263. doi:10.1016/j.oceaneng.2018.04.001.

However, for onshore upstream oil and gas hydrocarbon operations result in a footprint that is comparatively small compared to the scale of an open pit mine. Decommissioning involves plugging and capping of wells, securing and dismantling of facilities, recycling steel material, closure of landfills and land rehabilitation using techniques which are similar to those used in the mining industry or civil infrastructure such as road construction (e.g., re-contouring, re-grading, and re-vegetation).

Fam et al. add that in general, the technical requirements in both areas (North Sea and the Gulf of Mexico) are similar, such as the depth at which structures must be removed, in situ pipeline decommissioning (US and UK), waste management and responsibility tied to the waste shipment, as well as the use of the options analysis methodology to assess the best decommissioning method for a particular area.

Despite the increased awareness of many governments concerning their responsibilities in relation to mine closure, many have yet to develop and implement policy and legislation which comprehensively addresses the key challenges relating to closure, particularly from a sustainable development perspective. This is particularly true of governments in resource rich nations: of 42 developing nations reviewed by Clark and Clark[99], only 11 had comprehensive policy and legislation, with the remainder frequently having only very general policy and legislation in place, if at all. Many countries do not have provisions for mine closure in their mining laws. Few

[99] Clark, A. and J., 2005; "An International Overview of Legal Frameworks for Mine Closure," International Development Research Center (IDRC), June 2005.

governments have actual mine closure legislation. Where mine closure legislation is enacted, it is primarily with respect to reclamation and rehabilitation.[100]

In contrast, a number of developed countries do show a trend towards an increasingly comprehensive approach, with industry also working to take a more active role in the development of guidelines for closure.[101] To date, decommissioning has been comparatively infrequent, but an increase in decommissioning activity is expected over the next few decades as field and facilities which have been producing oil and gas for many years approach the end of their commercial or useful lives.[102] However, from the search of existing literature there was no empirical study found that looked into issues of compliance to decommissioning regulatory frameworks in Uganda. This presents a gap that needs to be filled. It is upon this back drop that this study analyzed the efficiency and effectiveness of the legal and regulatory framework governing Oil and gas production facilities decommissioning process in Uganda.

2.1.3 Role of the decommissioning regulatory framework in ensuring effective protection of the environment

[100] Heffron, R. J., Ronne, A., Bradbrook, A., Tomain, J. P. and Talus, K. 2018. A Treatise for Energy Law. Journal of World Energy Law & Business, 11 (1), 34-48.
[101] Ibid.
[102] Decommissioning, T. S. (2010). Closure of Oil Fields and Mines: A Toolkit to Assist Government Agencies. *WORLD BANK MULTISTAKEHOLDER*.

Energy law for decommissioning legislation is not common in many countries nor is it clear when it should apply.[103] However, law exists that is changing this to a degree. Laws on decommissioning set certain priorities on why and how to decommission oil and gas structures.[104] Enemo et al[105] opine that decommissioning is a tedious and complicated process which needs strict laws and regulations to ensure environmental protection among other issues. They add that when an oil and gas installation reach the end of its productive life, the need to remove such installations from the environment becomes necessary, hence the importance for the existence of national laws and regulations. In their study Enemo et al. (2019) found that the absence of a national legislation on decommissioning in Nigeria has led to failure in provision of regulations in dealing with the complexities associated with decommissioning.[106]

Hillyear in his study found that the cost of decommissioning and remediation is driven by international and national legal frameworks, which define what, when and to what degree the sites need to be reclaimed and rehabilitated.[107] The activities related to the extractive industries in the cessation phase usually include cost estimates and associated provisioning for the facilities mining and oil companies operate.[108] Similarly, Gordon et al. (2018) wrote that the national and state legalization can have an impact on the decommissioning of petroleum facilities in respect of

[103] Heffron, R. J. & McCauley, D. 2017. The concept of energy justice across the disciplines. Energy Policy, 105, 658-667.
[104] Roos, P. (2019). *Policy change in offshore decommissioning governance: dealing with environmental politics and coping with ecological uncertainty. A comparative study of offshore oil and gas in the Dutch North Sea and Australian Commonwealth Waters* (Doctoral dissertation, MSc Thesis. Wageningen University).
[105] Enemo, Ifeoma Pamela, Onyedikachi Josiah Alozie, Comfort Obiageri Ukaoma, and Ifeoma Elizabeth Nwafor. "Proposing a legal framework for decommissioning of oil and gas installation in Nigeria." *Commonwealth Law Bulletin* 45, no. 2 (2019): 211-230.
[106] Enemo, Ifeoma Pamela, Onyedikachi Josiah Alozie, Comfort Obiageri Ukaoma, and Ifeoma Elizabeth Nwafor. "Proposing a legal framework for decommissioning of oil and gas installation in Nigeria." *Commonwealth Law Bulletin* 45, no. 2 (2019): 211-230.
[107] Hillyear, S. 2015. Supply chain opportunities in the UK offshore oil and gas decommissioning. Construction Law Journal, 31 (3), 139-147.
[108] Davar, M. and Dhirazi, G. 2015. Decommissioning in the UK continental shelf: a litigator's perspective. International Energy Law Review, 5, 192-198

environmental, safety, waste management, socio-economic as well as tax and customs considerations.[109] For example, the decommissioning of pipelines of the petroleum industry is not covered in international law and usually this issue is managed in national legalization.[110] Similarly, it is argued that poor decommissioning will lead to injustices, for example, in terms of environmental impact, distribution of wealth, public health and is against the practice of sustainability. [111] From the studies reviewed, as opined by Heffron it is clear that Legal issues around the decommissioning of energy infrastructure have received limited attention by the energy law research community to-date.[112]

Sum up on Literature Review

A number of studies have focused on regulations of oil and gas exploitation and the environment.[113] The majority of these studies focused on regulations of decommissioning of oil and gas facilities within individual countries both developed and developing.[114] Moreover there seems to be very limited study that evaluated the legal regime on decommissioning of oil and gas facilities in the Ugandan context.

[109] Gordon, G., Paterson, J. and Usenmez, E. 2018. UK Oil and Gas Law: Current Practice and Emerging Trends Volume I: Resource Management and Regulatory Law. Edinburgh University Press: Edinburgh, UK
[110] Heffron, R. J., Ronne, A., Bradbrook, A., Tomain, J. P. and Talus, K. 2018. A Treatise for Energy Law. Journal of World Energy Law & Business, 11 (1), 34-48.
[111] Heffron, R 2018, 'Energy law for decommissioning in the energy sector in the 21st century ' Journal of World Energy Law & Business. DOI: 10.1093/jwelb/jwy013
[112] Heffron, R 2018, 'Energy law for decommissioning in the energy sector in the 21st century ' Journal of World Energy Law & Business. DOI: 10.1093/jwelb/jwy013
[113] Roos, P. (2019). *Policy change in offshore decommissioning governance: dealing with environmental politics and coping with ecological uncertainty. A comparative study of offshore oil and gas in the Dutch North Sea and Australian Commonwealth Waters* (Doctoral dissertation, MSc Thesis. Wageningen University).
[114] Ibid.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section contains the details of the methodology that was employed throughout the research process. It included the broad methodological approach, the research design, study population, data collection methods, data analysis and ethical considerations of the study as follows.

3.2 Research Design

The study adopted a cross-sectional descriptive design. This is appropriate because it helped the researcher to visits respondents once without repetitively going back to them.[115] This type of designs allows one to save time and financial constraints as one can cover a big population within a minimum possible time.[116] The qualitative research approach was used for easy analysis and to allow deeper interaction with the respondents.[117]

3.3 Study Population

Study Population comprised a cross section of resource persons including Ministry of Energy staff, Uganda Oil Company officials, Oil firm officials, advocates, political leaders (R.D.Cs, LCs), and civil society organizations' officials. Documentary review employed content analysis technique to synthesize legal documents in Uganda.

3.4 Sample size determination

[115] CRESWELL, J. W., 2003. Research design, qualitative, quantitative and mixed approach (2nd edition). London: Sage publications thousand Oaks.
[116] AMIN, E. M., 2005. Social Science Research, Conception Methodology and Analysis, University of Younde, Cameroon.
[117] GAY, L. R., 1992. Educational research competencies for analysis and application, (5th ed.).
Florida: Macmillan publishing company.

Owing to the fact that the conditions were that a predetermined sample could not be easily attainable, the researcher determined the number of respondents by the saturation levels. According to Charmaz, one stops collecting data when the categories (or themes) are saturated: when gathering fresh data no longer sparks new insights or reveals new properties.[118]

3.5 Sampling Techniques and procedure

The study used non-probability sampling techniques which included convenience and purposive sampling were used to select members for inclusion in the sample. These techniques were selected because they allow the selection of respondents who are knowledgeable about the subject under study as key informants.[119]

3.5.1 Purposive sampling

According to Amin,[120](footnote comes after comma) purposive sampling was preferred in selecting people holding positions that allow them to be more knowledgeable with issues going on in their areas. In that respect therefore the researcher used purposive sampling for selecting key informants; these comprised Ministry of Energy staff, Uganda Oil Company officials and Oil firm officials in Hoima and Bulisa districts.

3.5.2 Convenience sampling

Amin[121] asserts that convenience sampling is where the researcher selects respondents that are close at hand or easy to reach and the results are generalized to the target population. This was used to select advocates, political leaders (RDCs, LCs), and civil society organizations' officials

[118] Charmaz, K. (2006). Constructing grounded theory: a practical guide through qualitative analysis. Los Angeles: Sage Publications.
[119] Amin, M.E., 2005. *Social science research: Conception, methodology and analysis*. Makerere University.
[120] Ibid.
[121] Ibid.

in Hoima and Bulisa districts that were available during the time of data collection.

3.4 Data Collection

Both primary and secondary data were collected, analyzed and integrated in this study. In-depth interviews in form of narratives of one to one was employed to gather primary data while review of documents collected from oil firms and government archives provided the secondary data.

3.6.1 Interview

In-depth interviews in form of narratives of one to one were employed to gather primary data. This is the technique of information gathering that allowed a researcher to collect information using straight oral communication with contributors.[122]

Interviews were conducted with Ministry of Energy staff, Uganda Oil Company officials, Oil firm officials, advocates, political leaders (R.D.Cs, LCs), and civil society organizations' officials using interview guides because Interviews give one an opportunity to have an extensive discussion of the study variables with the study respondents hence getting information of value.[123]

[122] E. M. Amin, Social Science Research, Conception Methodology and Analysis, University of Younde Cameroon, 2005.

[123] CRESWELL, J. W., 2003. Research design, qualitative, quantitative and mixed approach (2nd edition). London: Sage publications thousand Oaks.

The unstructured interview helped solicit for more in depth first-hand information and opinions. The interviews helped to enrich the research findings by providing more information not obtained through other methods.

3.6.2 Documentary Review

This method was used for getting information from secondary data sources from the law statutes, Uganda National Oil Company (UNOC) reports, National Environmental Management Authority (NEMA) reports, Newspapers and government archives to provide supplementary reading materials for the study. This method was acknowledged for availing empirical evidences and facts as well as where the study is interested in trends or history for long a period of time-like the study needed to.[124]

3.5 Data Analysis

Qualitative data from the field was sorted, categorized and arranged according to the main themes and sub-themes of the study. It was finally analyzed using the thematic/ themes developed. The transcripts were re-read looking for similarities and differences in order to find meaning and develop categories. The responses were summarized in a narrative form as a representation of the major findings of the study and integrated into the discussion. The findings were presented according to study objectives.

3.6 Ethical Considerations

[124] E. M. Amin, Social Science Research, Conception Methodology and Analysis, University of Younde Cameroon, 2005.

This research was purely for academic purposes taking into consideration confidentiality, respect to copy rights and ownership of intellectual property rights to avoid plagiarism. All interviews that were undertaken were purely for academic purposes. The researcher sought permission and consent of the respondents before they were interviewed. To avoid bias the names of the respondents were not necessary on the interview guides save for a few respondents/persons who consented to their identities being disclosed.

CHAPTER FOUR

THE LEGAL AND REGULATORY FRAMEWORKS COVERING THE DECOMMISSIONING PROCESS OF OIL AND GAS PRODUCTION FACILITIES IN UGANDA, UK AND NORWAY.

4.1 Introduction

Analysis has been done on the legal framework in regard to the decommissioning process of the oil and gas facilities as derived from the laws at both national and international levels. A legal framework should aim at giving others a clearer understanding of the decommissioning process. It also ensures that the decommissioning activities by following the laws and the established procedural rules and regulations, there is efficient management, operation and maintenance of these activities.[125]

At national level, the general focus at the time of writing this paper, is on upstream and midstream activities and consequently the legal framework that has been developed lays emphasis mainly on these two stages of the oil and gas production processes. Decommissioning is also provided for under the Petroleum (Exploration, Development and Production) Act [126] in general terms and any references to the regulations made under the Act, does not help as there are no regulations covering decommissioning, other than the general aspects on health, safety and the environment.[127] At the International level, Uganda is a signatory and has ratified only UNCLOS that governs decommissioning. Uganda is a non - state party to the London Convention and the OSPAR

[125] Importance of legal and regulatory frameworks :https://www.lexology.com/crvsgateway.info
[126] Part Vi of the Petroleum (Exploration, Development and Production) Act 2013.
[127] The Petroleum (Exploration, Development and Production) (Health, Safety, and Environment) Regulations2016 and the Petroleum (Refining, Conversion, Transmission and Midstream storage) (Health, Safety and Environment) Regulations, 2016

Convention. However, this study looks at these other international instruments for any possible valuable lessons for Uganda.

4.2 International Instruments

The overriding principle of all international regulations and guidance is that decommissioning activities should not result in any harm to other users or to the environment.[128]

4.2.1 United Nations Convention on the Law of the Sea (UNCLOS)

UNCLOS was adopted as a package deal, precisely to encourage that the greatest number of States ratified the convention based on the perceived advantage of having a majority of States bound to all provisions.[129] Indeed by 2016 it had been ratified by 167 States and Signed by 14. Uganda ratified it on 9th November 1990.[130] *Article 193* UNCLOS provides that States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.

Article 208 UNCLOS regulates the prevention, reduction and control of the pollution from seabed activities subject to national jurisdiction. This requires the coastal states to enact national laws that would prevent, reduce and control pollution in the waters under their territorial jurisdiction. Coastal states are required to adopt laws, regulations and measures that 'shall be no less effective than international rules, standards and recommended practices and procedures.

128

129 González, V. (2012). An Alternative Approach for Addressing CO2-Driven Ocean Acidification. Sustainable Development Law & Policy, 12(2), 45–47.

130

Article 210 puts restrictions on dumping to control pollution of the marine environment and dumping can only be carried out with the authorization of the coastal states. The Convention defines dumping as:

> "(5*) (a) (i) any deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea; (ii) any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea; (b) "dumping" does not include: (i) the disposal of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea, operating for the purpose of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft, platforms or structures; (ii) placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention*

The rights and obligations of coastal States in their exclusive economic zone are defined in *Article 56* of UNCLOS. The exclusive economic zone is defined in *Article 55* as: 'an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention'.

The rights of the coastal State with respect to its continental shelf are defined in *Article 77* of UNCLOS. The continental shelf is defined in *Article 76(1)* as: 'the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles

from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance'

Article 80 of UNCLOS provides that *Article 60* of UNCLOS 'applies, mutatis mutandis, to artificial islands, installations and structures on the continental shelf.' The last part of Article 60(3) rather explicitly provides for an obligation to publicize 'the depth, position and dimensions of any installations or structures not entirely removed'. Nonetheless, *Article 60(3)* of UNCLOS only contains an obligation of partial removal, in order to ensure the safety of navigation.[131]

Although UNCLOS regulates the use of the world`s oceans and seas, it embraces principles that cut across and are relevant to decommissioning activities in the extractive industry. These include; the removal and disposal of abandoned or disused installations or structures and to ensure safety of other users. The Convention emphasizes the protection of the marine environment and the control of dumping of industrial waste which is harmful to the environment and the communities where the oil and gas exploitation activities occur.

International conventions have immensely contributed the development of the Environmental law legal regime in Uganda in a way that they support specific development areas by highlighting relevant environmental legal issues and providing the basis for a common view of the issues; they result into enactment of several domestic laws; they influence domestic legislation in that once ratified, National governments must give effect to their treaty obligations through their national law and policy; they help to develop and facilitate the implementation of the domestic laws and policy instruments that regulate environmental protection. These Conventions give birth to internationally accepted practices that benefit countries like Uganda whether they are state parties

[131] Guruswamy, L. (1998). The Promise of the United Nations Convention on the Law of the Sea (UNCLOS): Justice in Trade and Justice in Trade and Environment Disputes. Ecology Law Quarterly, 25(208), 189–225.

or not. As a result of the conventions ratified by Uganda, and the internationally accepted practices espoused by many of these conventions, the country has built an impressive array of policy and legal instruments in the Oil and Gas sector.

4.3 Domestic Instruments

4.3.1 The Constitution of 1995

The Constitution obliges the state to ensure that natural resources are managed in such a way as to meet the development and environmental needs of present and future generations of Ugandans. By *Article 237(2)(b)* of the Constitution, the government or a local government holds in trust for the people and protects natural lakes, rivers, wetlands, forest reserves, game reserves, national parks and any land to be reserved for ecological and touristic purposes for the common good of all citizens.

Under Chapter 15 of the Constitution which deals with land and the environment, particularly *Article 245*, provides for the parliament to make laws for the protection of the environment from pollution, degradation and abuse and to provide for the management of the environment for sustainable development and the promotion of environment awareness.

Article 39 of the Constitution instructively provides that every Ugandan has a right to a clean and healthy environment. This provision is reiterated under section 3 of the 1995 National Environment Act ; and section 5(2) of the National Forestry and Tree Planting Act[132] The law on decommissioning of oil and gas projects in Uganda is aimed at protecting and preserving the environment.

[132] No. 8 of 2003

4.3.2 The Ugandan National Oil and Gas Policy 2008

The Ugandan National Oil and Gas Policy[133] recognizes the need to protect the environment from the negative impact of oil activities. Hence it provides that it is the responsibility of licensed oil companies to protect the environment where they work or any areas in the country impacted by their operations while Government shall legislate, regulate and monitor compliance'.[134] This means that the role of government in this context is to enact adequate laws that will ensure that licensed oil companies in Uganda will have sufficient funding at the time of decommissioning.[135]

4.3.3 The Petroleum (Exploration, Development and Production) Act[136]

The long title to the Act provides, among other things for the cessation of Petroleum activities and decommissioning of infrastructure. Part VI of the Act specifically deals with the cessation of petroleum activities.

Section 112 of the Petroleum (Exploration, Development and Production) Act (Upstream Act) requires a licensee to submit a decommissioning plan to the Petroleum Authority before a petroleum production license or a specific license to install and operate facilities expires or is

[133] The Ugandan National Oil and Gas Policy Of 2008.
[134] The National Oil and Gas Policy for Uganda 2008, 41.
[135] Report on the Progress of the Implementation of National Oil and Gas Policy for Uganda February 2017 (n 6)
[136] Of 2013

surrendered.[137] The plan should be submitted at the earliest 4 years, but at the latest 2 years, before the use of a facility is expected to be terminated permanently.

Decommissioning under the Act consists of; further use of the facility, take it for other uses, part or complete removal or abandonment.[138] The Act also provides for a decommissioning fund to implement the decommissioning plan, and, where the monies in the decommissioning fund are not sufficient to cover implementation, the licensee and, where applicable, the owner of the facilities shall cover the costs and expenses.[139]

Payments into the decommissioning fund must commence from the calendar quarter in which any of the following situations occur: The petroleum production has reached 50% of the aggregate recoverable reserves as determined in an approved development plan and any subsequent reappraisal of such initial recoverable reserves; five years before expiration of the license; or on notice of surrender.[140]

For every subsequent calendar quarter in which petroleum is produced or a facility operated, the Petroleum Authority is required to charge the licensee a proportion of the estimated future cost for decommissioning of facilities to be deposited in the fund.[141]

The amount deposited in the decommissioning fund is charged as operating costs subject to the cost recovery limitations stipulated in the PSA and/or the Regulations. Further, the Petroleum Regulations provide that every exploratory well, whether a dry hole or a discovery, shall be

[137] The Petroleum (Exploration, Development and Production) Act, 2013 (the 'Upstream Act').
[138] Ibid S.112(3)
[139] The Petroleum Act 2013, section 113; see also up to section 143.
[140] Ibid.
[141] Ibid.

abandoned in a safe condition.[142] The wells must be plugged with appropriate cement plugs, the wellhead removed and a steel plate welded on the top of the casing.[143] The location of the abandoned well must be restored to the original site condition to the extent possible and must be marked with the well name and number in a manner approved by the Minister.[144]

The Petroleum Authority is enjoined to issue directions to guide the disposal of decommissioned facilities taking into account the safety, technical, environmental and economic aspects as well as other users.[145]

The Act provides that the licensee and the owner of an offshore facility shall ensure that such a direction from the Petroleum Authority is carried out.[146] The directions relating to the disposal of decommissioned facilities issued by the Petroleum Authority would be based on the approved decommissioning plan but taking into other factors such as technical, safety, environmental and economic aspects as well as considerations for other users.[147] It provides for the establishment of a decommissioning fund which shall be used to implement the decommissioning plan for the offshore oil facilities.[148] The Petroleum Authority will determine the amount of cost that will be charged every subsequent calendar quarter to cover a portion of the estimated future cost for decommissioning of facilities to be deposited in the fund.[149] The licensee shall recover such decommissioning cost subject to the cost recovery limitations stipulated in petroleum agreements

[142] The Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations, S.I. 150-1 (the 'Petroleum Regulations').
[143] Ibid.
[144] Ibid.
[145] Ibid S.115
[146] Ibid,
[147] Ibid, S115(2)
[148] Ibid, s.113(2).
[149] Ibid, s.113(4).

or as may be provided by regulations.[150] The Act vests the management of the fund on a committee made of representatives of the government and the licensee. The ratio of such representation shall be prescribed by subsequent regulations made pursuant to the Act.[151]

4.3.4 The Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act[152]

Part VI of the Act deals with cessation of Midstream operations with Ss 43 – 51 on decommissioning. It provides for a licensee to submit a decommissioning plan before a license to install or operate a midstream facility expires or is surrendered or before the use of a midstream facility is terminated permanently.[153] Such plan to contain information and evaluations which are necessary for purposes of disposal directions to be given by the Minister under S.46. the submitted plan may be updated if there is substantial change to the facilities or change in the cost or techniques due to new technologies or at the request of the Petroleum Authority.[154]

The Act also provides for the establishment of the Decommissioning Fund[155] that would be applied to the decommissioning activities in the approved plan. The fund is to be contributed to by the licensee when the project agreement life is at 50% or 5 years before the expiry of the license or upon serving the notice to surrender.[156]

[150] Ibid, s.113(5).
[151] Ibid, s.113(8).

[152] Of 2013

[153] S.43 of the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013
[154] S.43(5)
[155] S. 44
[156] S.44(3)

The duty to give directions on the disposal of decommissioned facilities falls on the Minister[157] responsible for the oil and gas industry based on the decommissioning plan submitted by the licensee but subject to other factors based on the technical, safety, environmental and economic aspects as well as consideration for other users.[158]. The law makes it clear that in all events the costs are to be borne by the licensee.

4.3.5 The Production Sharing Agreements

Uganda executed Production Sharing Agreements with the major oil companies Total E&P and CNOOC Uganda Ltd for purposes of exploration and development of the oil fields. The PSA enables the State as the owner of the oil resources to contract these international oil companies to provide technical and financial services during the exploration and development stage. In return the IOC acquires a share in the oil produced as a payment for its services.[159] The model PSA which Uganda adopted provides for decommissioning

4.4.0 OTHER JURISDICTIONS

In this section the study examined practices in other jurisdictions with a view of documenting lessons that can influence reform in both the legal and policy framework in regard to decommissioning process of the oil and gas facilities in Uganda with specific focus on the level of compliance to international and national regulatory framework and the adequacy of the decommissioning regulatory framework in ensuring effective protection of the environment as well as the protection of the fundamental human rights from the violations.

[157] S.46
[158] S.46(2)
[159] Kirsten Bindemann: Production Sharing Agreements: An Economic Analysis, Oxford Institute for Energy Studies,WPM 25 October 1999.

4.4.1 United Kingdom

The UK is selected because the World Bank wrote that decommissioning trends in the UK set precedents that provide opportunities for growing oil and gas regions and resource-rich countries to follow and improve.[160]This justifies the study of the UK regime with a view to importing lessons to fill the gaps in the Ugandan decommissioning regime.[161]

4.4.2. The Petroleum Act 1998

The principal enactment that regulates offshore oil activities in the UK is the Petroleum Act .[162] The UK Secretary of State has the power on behalf of the Crown to grant licences for petroleum activities in UK Maritime Zones.[163] As a result, several seaward licences are issued in UK.[164] This includes exploration licences and production licences.[165]

In the past, most of the regulatory functions of the Secretary of State, including in relation to decommissioning, were carried out by the Department of Energy and Climate Change (DECC).[166] As a result, DECC produced a Guidance Note for Decommissioning in 2011.[167]

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[160] World Bank Multistakeholder Initiative (n 29) GG-11.

[161] For detailed commentaries on comparative analysis, See Tina Hunter, 'Comparative Law as an Instrument in Transnational Law: the example of Petroleum Regulation' (2009) 21.3 Bond Law Review 42.

[162] Demetris Hadjiosif and Constantinos Yiallourides, 'The Unsung Hero of North Sea Oil and Gas' (2014)5(2) King Student Law Review 52.

[163] Ibid, s. 3. It is important to note that the licensing regime in Northern Ireland and the Isle of Man is different. The Northern Ireland Licensing Regime is governed by the Northern Ireland Petroleum Production Act of 1964 and administered by the Northern Ireland Executive Department of Enterprise, Trade and Investment. See Micheal Bunter, *The Promotion and Licensing of Petroleum Prospective Acreage* (Kluwer law International 2002) 110-114.

[164] There are also landward licences. See Greg Gordon, 'Petroleum Licenses' in Greg Gordon and Other(eds), *Oil and Gas Law: Current Trend and Emerging Issues* (Dundee University Press 2011) 68.

[165] Petroleum Licensing (Exploration and Production) (Seaward and Landward Areas) Regulations 2008, Sch 1, Model Cl 2.

[166] Micheal Faure (n 153)

[167] DECC Guidance Notes on Decommissioning of Offshore Oil and Gas Installations andPipelines under the Petroleum Act 1998 on Decommissioning 2011<https://www.gov.uk/guidance/oil-and-gas-decommissioning-of-offshore-installations-and-pipelines > accessed 29 July 2017.

The Petroleum Act provides for decommissioning which is detailed in the DECC Guidance Note on Decommissioning.[168] Section 29 provides that 'the Secretary of State may by written notice require the person (or persons jointly) to whom the notice is given … to submit to the Secretary of State a programme setting out the measures proposed to be taken in connection with the abandonment of an offshore installation.[169] In practice, this process is initiated after the approval of a field development plan by the Department for Business , Energy and Industrial Strategy (BEIS) sending a letter of intention to issue the Section 29 Notice to the operator of the offshore facility involved.[170] An opportunity is provided for the person to make representations in relation to such Notice.[171]

The decommissioning option in United Kingdom is reuse, recycle or removal either partly or wholly.[172] The Act and the DECC Guidance Note are silent on the exact timing that the Notice is issued.[173] This gap is essential for some degree of flexibility that will enable such Notice to be treated on a case-by-case basis.[174]

The Secretary of State, after the service of the Notice or after the submission or approval of a decommissioning plan, may demand financial securities to guarantee the availability of sufficient funds at the time of decommissioning. The Energy Act [175] amended the Petroleum Act to include a provision that empowers the Secretary of State to require additional information from any of the parties served with a Section 29 Notice to enable him make an informed decision on whether a

[168] Mohammad Alramahi, *Oil and Gas Law in the UK* (Bloomsbury Professional 2013) 3.27.
[169] The Petroleum Act,UK (n 142) s. 29(1).
[170] John Paterson, 'Decommissioning of Offshore Oil and Gas Installations' in *Oil and Gas Law: Current Trend and Emerging Issues (n 31)* 314.
[171] The DECC Guidance Note 2011(n 156) para 3.4.
[172] Zhiguo Gao, 'Current issues of International Law on Offshore Abandonment, with Special Reference to the United Kingdom' (1997) 28(1) Ocean Development & International Law 59.
[173] Marc Hammerson,*Upstream Oil and Gas: Cases, Materials, Commentaries* (Globe Law and Business) 455.
[174] Paterson (n 162)
[175] Of 2008

financial security would be required.[176] The DECC Guidance provides that 'Where the Secretary of State has concerns about the ability of a group of section 29 notice holders to fund the decommissioning of a project he can initiate section 38(4) of the Petroleum Act to require (financial) security'.[177] A Notice to provide a financial security will 'specify what security is required including the amount, the credit rating of security provider and the timing'.[178]

4.4.3. The Energy Act [179]

This Act among other created the new Oil and Gas Authority (OGA) which meant that a quasi-autonomous national government organization, (a Quango) would henceforth deal with the oil and gas industry other than a government minister.[180]

The long title to this Act provides among others, "An Act to make provision about abandonment of off shore installations, submarine pipelines and upstream petroleum infrastructure."

Under its Schedule 2, the Act provides for amendment of Part 4 of the Petroleum Act. It puts restrictions on any person to whom an abandonment notice is given may not proceed with the abandonment of the decommissioning of the infrastructure or pipeline without the abandonment programme first approved by the Secretary of State.[181] Contravention of this provision constitutes an offence.

[176] The Energy Act 2008(UK), s.73(5).
[177] DECC Guidance Note (n 156)117.
[178] Ibid, 118.

[179] Of 2016

[180] Wikipedia
[181] S.28A of the Energy Act, 2016

The person to whom a notice is given must consult the OGA before submitting the programme to the Secretary of State[182]and must ensure that the cost of carrying out the programme is kept to the minimum.[183] This must be achieved either through the timing of the measures proposed, the inclusion of the provision of collaboration with other persons or otherwise.

The OGA, when consulted must consider and advise on the alternatives to abandonment or decommissioning of the installation or pipeline with other options like re-using or preserving it.[184] The Act lays emphasis throughout the processes of approval of programmes,[185] the revision of programmes[186] and other actions of the Secretary of State, to keep the cost of the abandonment or decommissioning programme to the minimum practicable possible under the circumstances and to consult the OGA which is required to consider and advise on the alternatives such as re-use or preservation of the installation or pipeline. The Act also requires the Secretary of State to receive written representations from any person to whom a notice is given on why such notice should not be given and for the Secretary of State to take action on the abandonment or decommissioning programme if there is failure to comply with the notice at the cost of the person named in the notice.[187]

International Instruments

4.4.4. The United Nations Convention on the Law of the Sea

The United Kingdom ratified the Convention on the 25th July 1997. As observed above in this paper, the Convention which resulted from the third United Nations Conference on the law of the sea that took place between 1973 and 1982 defines the rights and responsibilities of nations on the

[182] Ibid, S.28A(2A) (a)
[183] Ibid, S.28A(2A) (b)
[184] Ibid, S.28A(2B)
[185] Ibid, S. 32
[186] Ibid, S.34
[187] Ibid, S.36

use of the world`s oceans.[188]It provides for the requirement for the owner of an abandoned or disused installation to wholly remove it or parts of it provided that what remains does not interfere with the navigation by other users of the sea.

4.4.5. The London Convention

Remains of or disused structures can also be abandoned in accordance with the 1972 London Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. Signed in London.[189] The Convention was later amended.[190] A Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter was also prepared.[191],It compels the States to; "individually and collectively protect and preserve the marine environment from all sources of pollution and take effective measures according to their scientific,technical and economic capabilities, to prevent, reduce and where practicable eliminate pollutioncaused by dumping or incineration at sea of wastes and other matters." It also provides that 'dumping' means 'any deliberate disposal at sea of vessels, aircraft, platforms or other manmade structures at sea'. The 1972 London Convention does not contain a comprehensive ban on dumping, but the 1996 revised text of the Convention provide for an absolute prohibition of all dumping including, of platforms and installations.

4.4.6. The International Maritime Organization

This is a specialized agency of the United Nations that regulates shipping activities**.** In 1989 it set out guidelines and standards or the removal of off shore installations and structures on the continental shelf or the Exclusive Economic Zone. It requires total removal but makes exception

[188] https://en.wikipedia.org/wiki/United_Nations_Convention_on_the_Law-Of_The_sea
[189] It was done on 29 December 1972, and entered into force on 30 August 1975.
[190] Convention of 1972
[191] It was signed in London on 7 November 1996 and entered into force on 24 March 2006.

where the installation stands in more than 75m of water or weighs more than 4000 tonnes.[192] This is determined on a case-by-case basis.

4.4.7. The OSPAR Convention

The Convention was concluded at Paris on the 22nd September 1992 and was signed and ratified by the United Kingdom. It regulates the European Standards on marine biodiversity, eutrophication, the release of hazardous and radioactive substances into the sea, the oil and gas industry and baseline monitoring of environmental conditions.[193] Under the oil and gas industry, it prohibits the disposal at sea and the leaving wholly or partly in place any disused or abandoned offshore installations. It prefers re-use, or final disposal of the installation on land. It however makes exception for installations based on the depth or weight of the installation in the water.[194]

4.5.0 NORWAY

Norway is chosen because it is a major development partner for Uganda in the Oil and Gas industry. The cooperation that started way back in 2006 has seen the Royal Norwegian government conclude agreements with the government of Uganda in Oil for Development (OfD) programmes to benefit from Norway`s experience in managing its petroleum sector development. Since the inception of the programmes Norway has committed over NOK 167,000,000 which has seen the formulation of the National Oil and Gas Policy and other laws, preparation of the sensitivity Atlas for the Albertine Graben, a study on gas utilization in Uganda and infrastructure requirements, human resource capacity building and designing of institutional development structures.[195] It is

[192] https://www.imo.org/en/knowledgecentre/indexofIMO Resolutions/Assembly/Document/A.672(16) pdf
[193] https:/en.wikipedia.org/wiki/OSPAR_Convention
[194] https://www.ospar.org/documents?y=6875
[195] Programme Document: Strengthening the Managing of oil and Gas Sector in Uganda, Phase II 2015- 2017.

therefore important to examine the legal and regulatory framework for Petroleum Management sector in Norway.

4.5.1. The Petroleum Activities Act.[196]

The Act No.72 deals with petroleum activities from the early stages of development to decommissioning. It makes it clear that the Norwegian State has proprietary rights over the Petroleum resources with an exclusive right to resource management.[197]The Act requires that a decommissioning plan be submitted to the Ministry 5 years or at most 2 years before the license expires or it is surrendered or the facility is terminated permanently.[198] The plan must include proposal for either continued production, or closure of production and disposal of the facility. If it is disposal then the plan must indicate whether the installation would be put up for re-use in a petroleum activity or other uses and specify if the removal will be complete or partial. The plan must also include information and evaluations deemed necessary for the decision-making process by the Minister.[199] The evaluations contained in the plan must be based on safety, technical and environmental aspects as well as considerations for other users of the sea. The Act goes on to detail the liability of the licensee or owner to carry out the decommissioning plan at all times and when in default then the Ministry may implement the plan but at the cost and risk of the licensee or owner.

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[196] Of 1996

[197] S. 1-1 The Petroleum Activities Act 1996
[198] Ibid, S. 5.1
[199] Ibid, S. 5-3

The decommissioning plan must consist of two parts that is a disposal report and an impact assessment in accordance with the Petroleum regulations.[200] In coming to a decision on the appropriate method of disposal, the Minister receives feedback from other governmental bodies such as the Norwegian Petroleum Directorate (NPD) and the Petroleum Safety Authority (PSA) All decisions for the removal of the facility must follow the OSPAR Convention for the protection of the marine environment of the North East Atlantic and any deviation must be assessed and grounds given for this option. Such cases must be presented to the OSPAR Commission before the Norwegian parliament makes a decision.

The decommissioning plan must be supported by an Environment Impact Assessment which assesses the impact of the decommissioning on the environment with potential mitigation measures which may be implemented to reduce such impacts. The EIA is subject to a public hearing where representations are received on the appropriateness of the plan. The Norwegian Environment Agency (NEA) is also consulted in this process.

4.5.2. The Parliament White Paper Report[201] (Pipelines and Cables)[202]

The Norwegian Parliament issued a white paper that deals comprehensively with the decommissioning of pipelines and cables and it is intended to form the basis for any future decisions on disposal of disused pipelines and cables. The overarching law that governs decommissioning activities including the pipelines in Norway is still the Petroleum Activities Act and this white paper is subject to the provisions of the Act.

[200] Ibid, S. 43-45
[201] No. 47
[202] 1999-2000

The general approach is that the decommissioning of pipelines, like it is with all other facilities, is considered on a case by case basis depending on the peculiar circumstances of each case. In most cases pipelines may be left in place so long as there is no safety risks to other users like bottom fishing and also taking into account the overall cost involved if it is burial, covering or removal.

The Ministry of Petroleum and Energy takes the final decision on any given alternative method of disposal of the petroleum activities including the pipelines. This decision always takes into account the cost vis a vis the impact on the environment and other users of the sea. Pipelines left in situ must have a prior approved programme for monitoring by the MPE and other government departments. In all cases, whether it is; to leave in situ, burial/trenching, rock dumping or removal, the licensee remains liable and where the decision is to leave it in situ, the liability covers any future interference or damage that may be caused.

4.5.3. International Instruments

Norway has ratified UNCLOS, the London Convention, it is a party to the Basel Convention, has ratified CITES and CBD.

The Basel Convention on the control of trans boundary movement of hazardous waste and their disposal requires that ant trans boundary movement of waste must only be authorized where there is no danger attached to its movement and disposal. It specifically prohibits developed countries from exporting any hazardous materials to the less developed countries. Uganda is a state party to this Convention.

CITES, the Convention on International trade in endangered species of wild fauna and flora aims at ensuring that the international trade in specimens of wild animals and plants does not threaten

their survival. This Convention provides a framework for countries to enact their own national laws to implement the provisions of CITES.[203]

Convention on Biological Diversity 1993, aims at developing national strategies for the conservation and sustainable use of biological diversity and a fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

4.6 Key Lessons for Uganda from United Kingdom and Norway

The Petroleum laws for Uganda should be amended to provide for domesticating some of the International Instruments that espouse many of the internationally accepted principles on decommissioning. Like it has been mentioned above, Uganda may not be a State Party to some of these Conventions such as the London Convention on pollution, but they provide for internationally accepted practices that can benefit the country.

Regulations should be developed as provided for under the two major Statutes, the Petroleum (Exploration, Development and Production) Act and the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act to provide for the submission of a decommissioning plan early enough after the approval of the field development plan by the PAU like it is under the UK Petroleum Act. This has the advantage of studying the decommissioning plan early enough and to be able to recommend adjustments wherever necessary as the production progresses. Under the current legislation the plan is only submitted at the earliest 4 years before the termination of the facility.

The regulations should also provide for a wider consultation amongst the various relevant agencies of government like NEMA, NFA, Local government, Fisheries department, the Water department and so on before a final decision on the process of decommissioning. This ensures that all

[203] Uganda deposited its instrument of acceptance on 18th July 1991 and it came into force on 16th October 1991.

stakeholders are involved and provides a better protection of the environment. This is how it is provided under the Norwegian petroleum legislation.

The requirement for an impact assessment to accompany the proposed decommissioning plan, followed by a public hearing like it is done in Norway also goes to make the process safer and more acceptable to the affected public.

Likewise, the regulations should provide for the possibility of requiring the licensee to provide financial security for the decommissioning fund other than relying on the periodic deposits which are triggered by the life of the project when it reaches 50% of the projected production that may not be sufficient to cover the decommissioning activities. The regulations should empower the PAU to require where it deems necessary, provision of financial security for the amount, credit rating for the security provider and the timing like it is provided in the UK.

From the comparison among United Kingdom, Norway and Uganda, it was found that the United Kingdom and Norway have ratified and operationalized almost whole the international instruments such as the United Nations Convention on the Law of the Sea, London Convention; and the International Maritime Organization and many more. Therefore, Uganda is advised to do so.

The legislators in Uganda should ensure that such a regulatory framework should integrate economic, social and environmental objectives in a way that improves the wellbeing of the current generation whilst safeguarding the wellbeing of future generations.

4.6.0. Conclusion

Decommissioning has become an all-inclusive, politicized and costly issue.[204] The international framework provides for "removal" or abandonment as opposed to decommissioning.[205] As a result, all of the potential impacts of routine operations are not accounted for when designing management strategies, whether local or regional, for offshore oil and gas activities. The success of decommissioning the facilities in the last of the project timelines depends on the existence of an effective regulatory framework for their sustainability. Such a regulatory framework should integrate economic, social and environmental objectives in a way that improves the wellbeing of the current generation whilst safeguarding the wellbeing of future generations. Regulation through law and policy has the potential to address many of the impediments decisions into decommissioning. While Uganda has developed energy and environmental law and policy to regulate the decommissioning the facilities of oil and gas facilities, there are impediments that need to be addressed through different options. The main purpose of this paper was to analyze the efficiency and effectiveness of the legal and regulatory framework governing Oil and gas production facilities decommissioning process in Uganda.

[204] Ferreira, D. F. (2003). Fiscal treatment: decommissioning and bonds. Chapter 5. Anticipating Impacts of Financial Assurance Requirements for Offshore Decommissioning: a Decision Model for the Oil Industry. Fiscal treatment: decommissioning and bonds. State University, Campinas, Brazil, Campinas.
[205] Ibid.

CHAPTER FIVE

PRESENTATION AND DISCUSSION OF FINDINGS

5.1 Introduction

The previous chapter presented an analysis of the legal framework in regard to decommissioning process of the oil and gas facilities as derived from the laws at both national and international levels as well as looking at other frameworks from other jurisdictions, the United Kingdom and Norway. This chapter presents field findings from in-depth interviews conducted with the various stakeholders in the legal and the oil and gas sector in Uganda on the adequacy of the legal framework on decommissioning process of the oil and gas facilities. It must be pointed out from the onset that most interviewees had more to say on the potential impact of the oil and gas activities on the environment. Many admitted that the focus presently lies with getting the oil out of the ground and little attention has been given to the decommissioning framework apart from the provisions of the Petroleum law. The chapter is structured along with a discussion of the findings on the adequacy of the laws regulating the decommissioning process of the oil and gas facilities in Uganda, drawing on relevant lessons from the other jurisdictions considered in the previous chapter.

5.2 Impact of Oil and Gas exploitation on the environment and the communities in the affected areas in Uganda

This study findings indicate that all respondents mentioned that upstream oil and gas activities had contributed to certain physical environmental losses just as Cordes et al noted that although, gas contributes immensely to power generation problem, oil and gas exploration and production have significant negative impacts on the environment.[206] In confirmation, the Uganda Wildlife Education Centre Chief Executive Officer interviewed said

> "*The oil industry holds a major potential of hazards for the environment, and may impact it at different levels: air, water, soil, and consequently all living beings on our planet. The most widespread and dangerous consequence of oil and gas industry activities is pollution*".[207]

In addition, another respondent from the National Environment Management Authority said

> "*Pollution is associated with virtually all activities throughout all stages of oil and gas production, from exploratory activities to refining. Wastewaters, gas emissions, solid waste and aerosols generated during drilling, production, refining (responsible for the most pollution) and transportation amount to over 800 different chemicals, among which, of course, prevail oil and petroleum products*".[208]

In confirmation of the negative effects on the environment caused by oil and gas activities in line with the above study findings, scholars have noted that the main stresses arise from leakages of crude oil, gas flaring and the escape of other chemicals used in production processes.[209]

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[206] Cordes, E. E., Jones, D. O., Schlacher, T. A., Amon, D. J., Bernardino, A. F., Brooke, S., ... & Witte, U. (2016). Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Frontiers in Environmental Science*, *4*, 58.

[207] UWEC Chief Executive Officer,James Musinguzi interviewed on 22/05/2021

[208] NEMA officer interviewed on 26/05/2021

[209] Ugochukwu, C.N. and Ertel, J., 2008. Negative impacts of oil exploration on biodiversity management in the Niger De area of Nigeria. *Impact assessment and project appraisal*, *26*(2), pp.139-147.

This study also found that as an impact of oil exploration, the oil and gas industry may also contribute to biodiversity loss as well as to the destruction of ecosystems that, in some cases, may be unique. An official from NEMA interviewed said

> "*In combination with other anthropogenic activities, environmental change associated with oil and gas operations may cumulatively affect living organisms, and potentially calamitous ways. The process has the potential to cause serious and irreparable damage to the environment and the potential to harm human and animal health*".[210]

Another officer from the Uganda Wildlife Authority[211] said

> "*During surveys, some endangered species of animals were wiped off e.g. the rid buck. However, the number of animals has not changed much apart from a few that are being knocked down by vehicles on the road*".

In agreement with the above study findings, Ugochukwu et al wrote that effects on the flora and fauna of freshwater ecosystems in several countries have been noticed.[212]

It was also found that potential effects on terrestrial and aquatic ecosystems can result from many oil and gas activities associated with the extraction process and the rate of development, such as road and pipeline construction, well pad development, well drilling and fracturing, water removal from surface and ground waters, establishment of compressor stations, and by unintended accidents such as spills or well casing failures. An officer from the UWA said

> "*In Uganda, the Albertine Graben is the most bio-diverse region and one of the most species-rich areas in the world and is Uganda's largest draw for tourism. It harbors more species of vertebrates than any other region on the African continent, shelters more than half of continental Africa's bird species and nearly 40% of its mammal species*".[213]

[210] Ibid.
[211] UWA officer interviewed on 22/05/2021
[212] Ibid.
[213] UWA officer interviewed on 22/05/2021

The respondent added that other environmental impacts include intensification of the greenhouse effect, acid rain, poorer water quality, groundwater contamination, among others. Similarly, in confirmation of the findings, Gray et al. found that ecological impact from the oil and gas industry arises from the loss of habitat and biodiversity due to the construction and installation of infrastructure.[214]

This study found that there is increased disturbance to wild animals during exploration, drilling and road construction whereby majority of the animals move further away from operational areas. A respondent for the Uganda National Oil Company (UNOC) said that,

> "*During surveys, some endangered species of animals were wiped off e.g., "the rid buck." However, the number of animals has not changed much apart from a few that are being knocked down by vehicles on the road*".[215]

In agreement, Richardson et al. [216] observed that structures in human ears and those of most marine mammals are sensitive to changes in sound pressure and that sound in coastal waters can interfere with the ability of marine mammals to detect calls from individuals of the same species, echolocation pulses or other important natural sounds.

It was further highlighted by the UNOC official interviewed that the mismanagement of oil waste could lead to severe environmental degradation from effluent from sewage treatment, drill fluids, drill and mud cuttings from well construction, and other solid and hazardous waste materials. The official said "*even when a platform is actually decommissioned and removed, there will be a waste*

[214] Gray, J.S., Clarke, K.R., Warwick, R.M., and Hobbs, G. (1990). Detection of initial effects of pollution on marine benthos: an example from the Ekofisk and Eldfisk oilfields, North Sea. Mar. Ecol. Prog. Ser. 66: 285–299.
[215] Uganda National Oil Company (UNOC) official interviewed on 20/05/2021
[216] Richardson, W.J., C.R. Greene, Jr., J.S. Hanna, W.R. Koski, G.W. Miller, N.J. Patenaude, and M.A. Smultea. 1995. Acoustic effects of oil production activities on bowhead and white whales visible during spring migration near Pt. Barrow, Alaska-1991 and 1994 phases: Sound propagation and whale responses to playbacks of icebreaker noise. OCS Study MMS 95-0051.

management problem concerning the way in which the structure is treated". This may require that all wells and well conductors are severed and plugged-in line with applicable regulations; tanks, pipelines and other process systems must be drained and cleaned; operational consumables are removed to leave the bare steel or concrete structure. This process is important to ensure that decommissioned waste is not dumped indiscriminately into the marine ecosystem.

5.3 The level of compliance to international and national regulatory framework in the decommissioning process of Oil and gas production facilities in Uganda

Regarding aspects on compliance to international and national regulatory frameworks in the decommissioning process of oil and gas production facilities, this study found that Uganda's oil waste management systems are so far well monitored and properly structured. In emphasis, one Oil company official said

> "*Waste management occurs at waste treatment facilities, such as the Kisinga facility in Buliisa district. Here, all operating systems are monitored daily so as to ensure ultimate precaution. Wastewater storage occurs in large pits in the ground that are lined with heavy protection liners so as to prevent wastewater from entering into the soil*".

Another Oil company official interviewed said

> "*All waste storage areas are covered with lining mechanisms so as to prevent evaporation of toxic chemicals into the atmosphere. Chemical levels and quantities are measured in both water and solid waste treatment procedures, and samples are regularly sent to Kampala for further PH testing procedures*".

Such findings indicate that although, the oil processes are still far from the decommissioning phase, environment conservation regulations are being observed by operators.

Another Oil company official[217] reported that

[217] Interviewed on 21/05/2021

> "*at the exploration stage an Environmental Audit Report and Abandonment Plan was developed which contained numerous actions on how the site was to be decommissioned and restored. This plan was submitted to NEMA and was authorized*".

Such findings concur with scholars who noted that decommissioning needs to be planned at the beginning of the life of an asset to prevent complications that may arise at a later stage of the asset. This is because, decommissioning has phases and each phase must receive adequate attention in order to forestall any future problems with associated costs. [218]

However, on the contrary at the site of exploration past drilling operations were still very much apparent; concrete hard-standing cover the majority of the area, waste pits and flaring pits were still present and uncovered. Some pits remained filled with liquid waste, others which appeared empty of waste now had contaminant-tolerant plants growing within them, the camp still contains discarded equipment (including pipes, cookers and air conditioning/fuel pump unit) and lots of litter (plastics, paperwork with workers names, bottles, laundry baskets, etc), and large sections of the perimeter fence have fallen or disappeared i.e., not adequately restraining entry to the site, either by people or animals. This is an indication of poor compliance to the environmental laws and regulations governing decommissioning of oil and gas facilities.

5.4 Adequacy of the decommissioning regulatory framework in ensuring effective protection of the environment in Uganda

This study did find that Uganda has in place a legal framework for the decommissioning process of the oil and gas facilities. The Petroleum (Exploration, Development and Production) Act,[219] and the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act,[220] being the

[218] Ibid.
[219] Of 2013
[220] Of 2013

main statutes that governs the Petroleum activities in Uganda including decommissioning, provides the basic requirements for decommissioning. It also addresses the institutional framework for the implementation of these requirements through the creation of the Petroleum Authority.[221] The study also found that the decommissioning process requires sophisticated resources and adequate planning.[222]

In two separate interviews with officials of UNOC[223] and UWA[224] they both admitted that at the time of this study the major focus is to ensure the ringing of the oil out of the ground with appropriate safeguards to the environment. There has not been much focus on the decommissioning process apart from the provisions in the statutes. There are no specific regulations made under the statutes on the decommissioning process so far apart from the petroleum waste disposal regulations.[225]

So in analyzing the adequacy of the legal framework on the decommissioning process the study had to consider the key aspects or stages of the decommissioning process in light of the current laws and in comparison to the frameworks in the other considered jurisdiction as well as the internationally accepted practices.

5.4.1 A Decommissioning Plan

The study has observed above that adequate planning is a major key for an efficient decommissioning process. Uganda`s Petroleum laws require the submission of a decommissioning plan by the licensee within a reasonable timeframe before the end of the project to the Petroleum

[221] S.9 The Petroleum(Exploration, Development and Production) Act, 2013
[222] An overview on the decommissioning process in the oil and gas sector,https://www,lexology.com/library/detail.aspx?
[223] Ms Susan Batuuka Board and Corporate Affairs
[224]Ibid.
[225] Ibid.

Authority.[226] The content of the plan should be in accordance with the regulations.[227] However the regulations are yet to be issued which leaves a gap in the planning process. In the UK a licensee may not abandon or proceed with the decommissioning of a facility without an approved programme by the Secretary of state after consultations with the Oil and Gas Authority.[228] The programme must be made in such a way as to keep the costs of carrying it out as low as possible. In Norway, a decommissioning plan is also a requirement and the laws spells out the expected content of the plan as this study has observed above.

The Ugandan laws can be improved by way of amendments or through the making of the regulations on decommissioning to provide for the expected content of a decommissioning plan.

5.4.2 Decommissioning Fund

The process of decommissioning is a very costly venture. It involves securing the wells, the removal of structures and pipes, identification of adequate sites for the storage of the non- re-usable materials, the processing of the potentially polluting materials like plastics, metals and combustible oils as well as restoration of the site to as close as to the surrounding environment.[229] There is therefore need to put aside funds regularly during the productive stage of the facility to take care of the decommissioning expenses.

The Uganda petroleum laws provides for the establishment of the decommissioning fund to cater for the activities approved in the decommissioning plan[230]. It is estimated that this cost reduces the economic value of the project by almost 10%,[231]and would rather be avoided by the International

[226] Ibid S. 112 PEDP Act
[227] Ibid S.12(2)
[228] Ibid S.28A of the Energy Act 2016 as amended
[229] Ibid
[230] Ibid S.113
[231] https://oilandgasuk.co.uk/wp-content/uploads/2019/03/OGUK-Decommissioning-Insight-Report-2018.pdf

Oil Companies as much as possible. Hence the need to have laws that provide for a reservation of this fund well in time.

In UK, Decommissioning Security Agreements are used to create a trust fund where a company agrees to take on all decommissioning liabilities in a sale and purchase agreement and provides a security commonly in an irrevocable letter of credit from a bank or a parent company that provide the necessary funds for decommissioning. This guarantees the availability of funds for the decommissioning stage whether the licensee is still in business or not. This situation has been improved by the Finance Act of 2013 which introduced Decommissioning Relief Deeds which provide tax reliefs to Oil Companies during the decommissioning stage.[232]

In Norway there is no specific provision for the establishment of a decommissioning fund but the Petroleum Act puts the liability to meet the decommissioning costs on the licensee.

Uganda could benefit through the introduction of similar tax incentives like in the UK for the international oil companies to be offered tax reliefs during the decommissioning stage. This is more so because it is extremely difficult to estimate the cost of decommissioning before production has even commenced. These costs will eventually be determined by the material condition of the facility at the time, the market volatility, industry, experience, expertise and knowledge and technology development. It has been argued[233] that the problem here is the trigger point at which the licensee begins to deposit money in the fund because of the fore mentioned reasons, it might be difficult to determine. This paper agrees with that view which further supports the idea of a tax relief policy.

5.4.3. Complete or Partial removal

[232]

[233] Research paper by LLM Student Id No, 140012519 University of Dundee:" Has Uganda Prepared adequately for decommissioning in its oil and gas sector ? A comparative analysis with UK`s oil and gas sector decommissioning framework."

Another aspect of the decommissioning process is the decision whether to allow a complete or partial removal**.** This has been the subject of much debate with the desired goal being a complete removal and expressed in the Barcelona Convention but a more cautious approach that called for the evaluation of each case by its peculiarities called for the allowance of partial removal under UNCLOS 1982.

Uganda Petroleum laws allow for partial removal depending on factors such as safety, technical, environmental and economic aspects as well as consideration for other users[234] Uganda also ratified UNCLOS which allows for partial removal given the peculiarities of each project.

Both the UK and Norway are party to UNCLOS but also their respective petroleum laws allow for alternatives which include, re-use in other petroleum activities, other uses, complete or partial removal.[235]

In that aspect Uganda`s legal framework seems to be in tandem with the international convention and the generally acceptable practices in the more mature jurisdictions. This study agrees that this is a more pragmatic approach to evaluate each case by its peculiarities which includes the cost involved, the depth and weight of the facility but taking into account the environment and other users.

5.4.4. Authority

Another key aspect in the decommissioning process is the authority responsible for the decommissioning decisions. These decisions which are key to the whole process include the approval process of the decommissioning plan, the supervision of the decommissioning fund and the decision on the actual disposal. This authority is important to be defined, to be fully empowered under the law to be able to control and give guidance to the sector including supervising the

[234] Ibid S.115(2)
[235] Ibid

activities of the international oil companies and to fully enforce the approved decommissioning plan, among others.

The Uganda petroleum laws established the Petroleum Authority of Uganda (PAU)[236]with a wide mandate to superintend the petroleum activities in the country including the decommissioning.[237] The Authority is a body corporate with perpetual succession[238] and subject to the directions that may be given by the Minister responsible for petroleum activities on the policy issues, it is independent in the exercise of its functions.[239] This gives clarity as to the responsible center which is the hall mark of a regulatory framework.

In the UK, the Energy Act, 2016 established the Oil and Gas Authority (OGA) which performs a similar function like that of the PAU in the decommissioning or abandonment process of the oil and gas sector.

Norway Ministry of Petroleum and Energy(MPE) is defined as the authority responsible for taking the final decision on decommissioning of oil and gas facilities including the pipelines.[240] The final disposal method decision is taken by the MPE but after wide consultations. Consultations include the Norwegian Petroleum Directorate(NPD), the Norwegian Environment Agency(NEA) and the Petroleum Safety Authority(PSA). The Ministries of Local government and Regional Development are also consulted. The decommissioning plan is subject to an impact assessment which is subject to a public hearing. The Norwegian Parliament also comes in if there is derogation, meaning if the decision will lead to partial disposal. This wide consultation does not only make the process transparent but it enables the various stakeholders to buy in the process.

[236] Ibid S.9
[237] Ibid S.10(2)(f)
[238] Ibid
[239] Ibid S. 14
[240] Ibid The Petroleum Activities Act, 1996

5.4.5 Protection of the environment

The study found that Uganda has a comprehensive regulatory framework for the protection and management of the environment. The Constitution of the Republic of Uganda, 1995 lays the foundation for all the laws that have a bearing on the environment in Uganda. Every Ugandan has a right to a clean and healthy environment as stipulated in article 39 of the 1995 Constitution[241] and section 3 of the National Environment Act, 2019. It is the duty of every person to create, maintain and enhance the environment including the duty to prevent pollution. An official interviewed from NEMA said

> "*National Environmental Management Authority requires oil companies to submit a preliminary decommissioning plan as part of a project brief or environmental impact and social impact statement. The Authority may also require a developer or operator of a project to undertake decommissioning in accordance with the approved decommissioning plan and international best practices, at his or her own cost, before final closure of the project*".

Another officer from the Uganda National Oil Company (UNOC) said

> "*In the oil & gas sector, the decommissioning process is legally governed by a wide array of international, national and regional legal sources, which are sometimes in contrast with each other and are under a continuous forging and development process*".

An environmental restoration plan is a requirement before any exploration or mining lease can be granted for areas that are likely to be damaged or adversely affected by operations under section 110 of the Mining Act. Also, the Ugandan National Oil and Gas Policy recognizes the need to

[241] The Constitution of the Republic of Uganda, 1995

protect the environment from the negative impact of oil activities. Hence it provides that it is the responsibility of licensed oil companies to protect the environment where they work or any areas in the country impacted by their operations while Government shall legislate, regulate and monitor compliance'.[242]

The Petroleum(Exploration, Development and Production)Act , makes a cross reference with the NEMA Act and provides that the petroleum activities shall comply with the environmental principles and safeguards under the NEMA Act.[243] The law further stresses that any disposal method must take into account factors such as safety, technical, environment and economic.[244]

In UK and Norway who are both party to UNCLOS and the London Convention, the emphasis on any method of disposal is aimed at the protection of the environment.

In regard with the aspect of completion of decommissioning actions and termination of the authorization for decommissioning, this study found that over the past decade Ugandan parliament has produced and approved numerous laws and regulations relating to the protection of the environment. Of these, the overarching laws and acts pertaining to petroleum development are the National Environment Act (NEA), the National Environment Management Policy (NEMP), the National Development Policy (NDP) and the Petroleum (Exploration, Development and Production) Act.

It was still found that the PEDP act calls for the enforcement of environmental conservation practices to be upheld by the license holders and for the Petroleum Authority to provide ample governance.

[242] The National Oil and Gas Policy for Uganda 2008, 41.
[243] Ibid S.3
[244] Ibid

The study found that the National Development Policy (NDP) provides environmental suggestions at the very end of the document, which include restoring damaged ecosystems, strengthening environmental frameworks and legal documents, upholding sustainable development practices in oil exploration, and protecting water sources, soil erosion, and climate changes.

Further, the National Oil and Gas policy that sets out all operations of the petroleum activities in Uganda does not explicitly talk about decommissioning but it gives an over view of the need to protect the environment and conserve biodiversity under principle 5.1-5.

In Section 2.5 of Uganda Wildlife Policy[245], , the policy provides standards, guidelines and mitigation measures to be followed for any development activities that may have a significant impact on wildlife; c) Monitor impacts of exploration and development of oil, gas and other minerals, tourism and energy infrastructure development in wildlife conservation areas. Assuming that the "mitigation" referred to in section 2.5 (b) encompasses the first three steps (i.e. avoidance, minimization and restoration) in the mitigation hierarchy, then it can be concluded that this particular section addresses the decommissioning aspect.

However, Uganda has not experienced decommissioning because it yet to commence oil production; Overall, Uganda's regulatory framework on decommissioning is a step in the right direction. Generally, there are gaps, which should be filled in order to have terms of reference provided for a decommissioning plan, provide for a wider consultation with the various stakeholders on the final decision on the method of disposal, introduce incentives such as tax reliefs on the decommissioning stage to encourage more investment at this stage. All in all, there is room to make Uganda`s regulatory framework more dynamic and in tandem with international practices in the decommissioning process of the oil and gas sector.

[245] Of 2014

5.5 Conclusion

It is observed that Uganda`s regulatory framework on decommissioning of oil and gas projects can benefit greatly from lessons to be derived from other jurisdictions with mature fields like the United Kingdom and Norway. This study has observed that in those jurisdictions decommissioning of oil and gas has become a normal part of doing business in the UK North East Atlantic Sea, alongside exploration, new field development and in-field development. The principle of UK and Norway legislation in this area, as in most jurisdictions, is that all oil and gas infrastructure installed on the continental shelf must be removed at the end of its life – subject to some limited derogations.[246] The Oil and Gas Authority (OGA), an independent regulator established in 2016, in the UK and the Ministry of Petroleum and Energy in Norway also oversee decommissioning through their role of assessing decommissioning programmes on the basis of costs, future alternative use of facilities and collaboration across the industry.

[246] Paul Stockley, 2020. Decommissioning oil and gas installations: A UK perspective. Fieldfishers. United Kingdom

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The previous chapter contained the presentation and discussion of findings while this chapter presents the conclusions and recommendations.

6.1 Conclusions

Basing on the findings, it can be concluded that although Uganda has in place the basic requirements for a regulatory framework for the decommissioning stage in the oil and gas sector, the same has major gaps that need to be filled and improved. The absence of regulations under the Petroleum law on decommissioning is still a major gap in the framework that does not help investor planning and should be filled. The provision for safety standards in the aspect of decommissioning needs to be highlighted. The decommissioning plans need to be guided by comprehensive terms of reference fortified with an impact assessment.

The decommissioning framework in Uganda does not adequately canvass the need to have the liability for non- compliance to be joint and several taking into account the joint operating model. It also needs to secure the perpetual liability for non-compliance to the extent that will guarantee that taxpayers do not bear the cost of decommissioning and the consequences of insolvency on residual liabilities. Residual liability is essentially about who is responsible for bearing any or all associated obligations for infrastructure left in place post-decommissioning.

It is also concluded that it cannot be guaranteed that sufficient funds will be raised for the decommissioning of oil facilities in Lake Albert, in the event of such payment to the fund commencing after recovery has reached fifty percent in the field.

The UK legal regime on decommissioning was examined and lessons were recommended for importation to remedy the identified gaps in the Ugandan framework. It is also concluded that challenges faced by state agencies like the National Environmental Management Authorities (NEMA), the Uganda Wildlife Authority (UWA), the National Forestry Authority (NFA) and Fisheries in implementing environmental regulations are a pointer to inadequacies in existing regulatory systems to regulate potential environmental problems associated with the petroleum industry. Hence the need for the framework to take stronger cognizant for the need for wide consultation amongst various concerned government agencies and departments as well as the public.

6.3 Recommendations

The study recommended that the Parliament of Uganda reviews the petroleum laws to improve on the law to regulate the decommissioning process of oil and gas facilities early in time; operationalize the promulgation of specific regulations under the law to guide the decommissioning process.

It will be critical for the law to require and institutionalize the practice of preparing and publicizing environment monitoring and auditing reports by the responsible bodies such as NEMA, NFA, UWA etc. and district local governments in the Albertine region to hold companies involved in oil and gas activities with a potential to impact the environment accountable and develop strategies to minimize or mitigate negative environmental impacts.

The government must ensure enforcement of existing environmental laws within degraded development areas that require restoration due to development activities e.g. the restoration order in the environment act. This will address issues of gullies due to road construction and any other environmental issues during subsequent activities

In order to achieve sustainable development, the oil companies need to adopt environmentally friendly and technologically advanced operations that minimize the associated environmental pollution and wildlife disturbances. Adoption of effective sustainable reforms will encourage responsible petroleum exploration activities in ways that will positively influence economic development of host communities, tourism industry and also protect human, animal and environmental health in the near and long term.

Decommissioning is a challenging period as there is no more oil and gas to be produced. However, the relevant stakeholders face a significant amount of work, costs and risks to complete the required decommissioning project. This is why it is essential to put in place enough collaterals and guarantees in order to secure enough funds to cover the relevant costs to implement the said decommissioning.

This study recommends that international laws be domesticated in order to get a more effective legal regime on decommissioning and abandonment.

Ugandan laws are too clandestine, the host communities and the public are entirely shaded from the process, whereas, the effects are more on them. The process of decommissioning and abandonment should be open to the public as was in the case of Brent spar in Britain where public opinion helped in arriving at a more generally acceptable decommissioning process.

The Norway examples is classic example as, several Government Departments or Agencies whose functions are related to the activity of Decommissioning and Abandonment came together to form a specialized committee on the development of processes and standards for handling such issues.

There must be imposition of heavy fines and sanctions on companies that fail to adhere strictly to legal provisions on the decommission and abandonment process and such fines and sanctions should be provided for in Uganda's legal regime and ultimately implemented when the need arises.

The law should also include a requirement for provision of a security in terms of an irrevocable letter of credit from a reputable international bank for the cost of decommissioning from the contracting oil company.

Since most of these facilities affect the economic life of the host communities, any decommissioning or abandonment processes should involve the host communities as stake holders. It is in this way that various acts of sabotage and obstruction of decommissioning plans, would be obviated.

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Appendix A: INTERVIEW GUIDE

a) What is the likely impact of the Oil and Gas exploitation in Uganda on the environment?
b) What is the likely impact of the Oil and Gas exploitation in Uganda on the communities in the oil rich areas?
c) How is the issue of decommissioning of Oil and gas production facilities in Uganda being handled by stakeholder? Government and Oil companies?
d) Are there international legal and regulatory frameworks that offer guidance on the decommissioning process of Oil and gas production facilities that Uganda is signatory to? If yes, what are they?
e) Describe the level of compliance to those international regulatory frameworks in the decommissioning process of Oil and gas production facilities in Uganda?
f) What are the national legal and regulatory frameworks in place that offer guidance on the decommissioning process of Oil and gas production facilities in Uganda?
g) How adequate is the decommissioning regulatory framework in ensuring effective protection of the environment and fundamental human rights in Uganda?
h) What lessons can be drawn from other jurisdictions on decommissioning process regulation in the Oil and gas sector?

End