ENVIRONMENTAL IMPLICATIONS OF LAND ACQUISITION FOR OIL AND GAS PROJECTS IN UGANDA: A LEGAL ANALYSIS OF THE ENVIRONMENTAL SAFEGUARDS IN ALBERTINE GRABEN

BY

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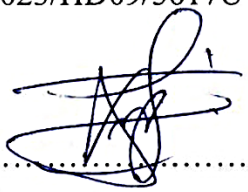
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DECLARATION

I **Twinomugisha Tevin Calvin**, do hereby declare that this research work is original in nature and it has never been submitted to any other university or academic institution whatsoever. That were someone is work has been used, due acknowledgment and reference have been made.

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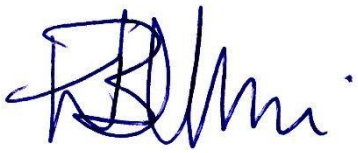
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SUPERVISOR'S APPROVAL

This dissertation titled "Environmental Implications of Land Acquisition for Oil and Gas Projects in Uganda: A Legal Analysis of the Environmental Safeguards in the Albertine Gaben, has been submitted with my approval in partial fulfilment of the requirement for the award of the Degree of Masters of Laws of Makerere university.

Supervisor's name: Professor Emmanuel Kasimbazi

Signature: 

Date: 20/10/2026

DEDICATION

This dissertation is dedicated to my parents whose sacrifices, unconditional love and steadfast encouragement have made my education possible.

I also dedicate this work to everyone striving to use the law to promote environmental justice and sustainable development in Uganda. It is my hope that the research contributes, however modesty, to the protection of communities, land and the environment to present and future generations.

Above all, I dedicate this work to the almighty God whose guidance, mercy and abundant blessing have sustained me through this journey.

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LIST OF ABBREVIATIONS AND ACRONYMS

EACOP	East African Crude Oil Pipe Line
IFC	International Finance Corporation
NEMA	National Environment Management Authority
PAU	Petroleum Authority of Uganda
NGHC	Nigerian High Court
ACODE	Advocates Coalition for Development and Environment

LIST OF STATUTES

1. The 1995 Constitution of the Republic of Uganda.
2. National climate change Act chapter 182
3. National Environment (Environment and Assessment) regulations SI No 143 of 2020
4. National Environment Act Chapter 181
5. Physical Planning Act cap 142
6. Public lands Act Cap 201(repealed)
7. The Land Acquisition act (cap 235)
8. The land Act Chapter 236
9. The Petroleum (Exploration development and production) Cap 161
10. The Petroleum (Refining, Conversion transmission and mid-stream storage) Cap 162.
11. The Tax procedures code cap 343.
12. The Uganda national bureau of statics act cap 333.

NATIONAL LAWS

1. National climate change Act chapter 182
2. National Environment (Environment and Assessment) regulations SI No 143 of 2020
3. National Environment Act Chapter 181
4. Physical Planning Act cap 142
5. Public lands Act Cap 201(repealed)
6. The 1995 Constitution of the republic of Uganda (as amended).
7. The Land Acquisition act (cap 235)
8. The land Act Chapter 236
9. The Petroleum (Exploration development and production) Cap 161
10. The Petroleum (Refining, Conversion transmission and mid-stream storage) Cap 162
11. The Tax procedures code cap 343
12. The Uganda national bureau of statics act cap 333

FOREIGHN LAWS

1. The 2010 Constitution of the republic of Kenya
2. Environment Management Act 2025 (Act 1124)(Ghana)
3. Environment Management Act 2004 (Tanzania)
4. Petroleum Industry Act 2021 (Nigeria)

REGULATIONS

1. National Environment (Environment and Assessment) Regulations SI No 143 of 2020

INTERNATIONAL INSTRUMENTS

1. Convention on Access to information, Public Participation in Decision making and Access to justice in Environmental matters (adopted 25th June 1998)
2. Convention on Biological diversity (adopted on 5th June 1992)
3. Declaration of the United Nations Conference on Human Environment (adopted on 16 June)
4. International Association for Impact assessment, Strategic Environment Assessment Performance Criteria.
5. Paris Agreement (adopted on 12th December 2015)
6. Rio Declaration on environment and Development 1992 (adopted on June 1992)
7. United Nations Economic Commissions for Europe, Protocol on Strategic, Environmental assessment to the convention on environmental impact assessment in a transboundary context (2003).
8. Kumming Montreal Global Diversity Framework.

REGIONAL INSTRUMENTS

1. African charter on human and people's rights.(adopted 27th June 1981, entered into force 21st October 1986)

LIST OF CASES

1. Advocates Coalition for Development and Environment v Attorney General Constitutional Petition No 0100 of 2004.

2. African Commission on Human and Peoples' Rights v Republic of Kenya (Ogiek case) Application 006/2012 (Judgment, 26 May 2017) (African Court on Human and Peoples' Rights).

3. Centre for Minority Rights Development (Kenya) and Minority Rights Group International v Kenya Communication 276/2003 (2009) AHRLR 11 (ACHPR 2009).

4. Environmental Action Network Ltd Vs Attorney General (Misc Cause No 39 of 2001)

5. Gembre Vs Shell Petroleum Development Company (2005) AHRLR 151 (NGHC)

6. Greenwatch v Attorney General and NEMA Misc Cause No 140 of 2002 (HC).

7. National Association of Professional Environmentalists (NAPE) v Total Energies E&P Uganda and Others, High Court of Uganda, Miscellaneous Cause No 81 of 2020.

8. National Association of Professional Environmentalists (NAPE) v Total-Energies E&P Uganda and Others, High Court of Uganda, Miscellaneous Cause No 81 of 2020.

9. National Association of Professional Environmentalists v AES Nile Power Ltd Misc Cause No 268 of 1999 (HC).

10. Shell Petroleum Development Company Vs Farah [1995] 3 MWLR 148 Article 237 (2)(b).

11. Social and Economic Rights Action Centre (SERAC) and Center for Economic and Social Rights (CESR) v Nigeria Communication 155/96 (2001) AHRLR 60 (ACHPR 2001).

12. Uganda National Roads Authority v Irumba Asumani Supreme Court Civil Appeal No 2 of 2014.

TABLE OF CONTENTS

DECLARATION i
SUPERVISOR'S APPROVAL ..... **Error! Bookmark not defined.**
DEDICATION iii
ACKNOWLEDGEMENTS iv
LIST OF ABBREVIATIONS AND ACRONYMS v
LIST OF STATUTES vi
NATIONAL LAWS vii
REGULATIONS ix
INTERNATIONAL INSTRUMENTS x
REGIONAL INSTRUMENTS xi
LIST OF CASES xii
ABSTRACT xix
CHAPTER ONE: GENERAL INTRODUCTION 1
1.1 Introduction 1
1.1 Background of the study. 1
1.2 STATEMENT OF THE PROBLEM 4
1.3 Objectives of the Study 6
1.3.1 General Objective 6
1.3.2 Specific Objectives 6
1.4 RESEARCH QUESTIONS 6
1.5 SCOPE OF THE STUDY 7
1.5.1 Content Scope 7
1.5 Scope of the Study 8
1.5.1 Geographical Scope 8
1.5.2 Content Scope 8
1.5.3 Time Scope 8
1.7 SIGNIFICANCE OF THE STUDY 10
1.8 JUSTIFICATION OF THE STUDY 11

2.2 Petroleum-related Land Acquisition, Land-use Change and the Albertine Graben 12
2.3 Environmental and Social Implications of Petroleum-related Land Acquisition. 15
2.4 Adequacy of Uganda's Policy, Legal and Institutional Framework 17
2.5 Environmental Assessment, Strategic Environmental Assessment and Cumulative Impacts. 19
2.6 International Environmental Standards and Comparative Approaches. 20
2.7 Compensation, Customary Tenure and Environmental Justice. 22
2.8 Institutional Coordination, Participation and Enforcement. 23
2.9 Synthesis of the Literature and Research Gap. 24
1.10. METHODOLOGY 27
10.1.1 Research Design 27
10.1.2 Study Area 27
10.1.3 Target Population 28
10.1.5 Data Collection Methods 28
10.1.6 Data Analysis 28
10.1.7 Ethical Considerations 28
11.1 Limitations of the Study 29
Chapter Synopsis 30
Dissertation Structure and Chapter Overview 30
CHAPTER TWO 32
THE ENVIRONMENTAL IMPLICATIONS OF LAND ACQUISITION IN THE ALBERTINE GRABEN 32
2.1 Introduction 32
2.2 Overview of the Albertine Graben 32
2.2 Land Acquisition for Oil Projects 34
2.4 Environmental Impacts of Land Acquisition 36
2.4.1 Land Use Change and Habitat Destruction 36
2.4.2 Deforestation and Forest Degradation 38
2.4.3 Wetland Degradation and Water Resource Pressure 38
2.4.4 Soil Degradation and Erosion 39
2.4.5 Biodiversity Loss 39

2.4.6 Climate Change and Greenhouse Gas Emissions 40
2.4.7 Flooding and Ecological Disruption 40
2.5 Social and Ecological Impacts 41
2.5.1 Displacement and Resettlement 41
2.5.2 Livelihood Disruption 41
2.5.3 Human-Wildlife Conflict 41
2.5.5 Gender and Social Implications 42
2.5.6 Conflict and Human Rights Concerns 42
2.6 Case Studies of Oil Projects in the Albertine Graben 42
2.6.1 The Tilenga Project 43
2.6.2 The Kingfisher Project 44
2.6.3 The East African Crude Oil Pipeline (EACOP) 45
2.7 A Critical Analysis: Environmental Degradation as a driver of Social vulnerability in the Albertine Graben 46
2.7 Conclusion 47
CHAPTER THREE: 49
AN ANALYSIS OF THE ADEQUACY OF THE REGULATORY FRAMEWORK FOR THE ENVIRONMENTAL IMPLICATIONS OF LAND ACQUISITION IN THE ALBERTINE GRABEN 49
3.1 Introduction 49
3.2 Analysis of the Policy Framework 50
3.2.1 The National Oil and Gas Policy for Uganda, 2025 50
3.2.1 The National Land Policy, 2013 52
3.3 Legal Framework 55
3.3.1 Constitutional Implications 55
3.4 The Land Act, Cap. 236 and the Environmental Implications. 60
3.5 Land Acquisition Act chapter 235 and Environmental Implications for Oil Exploration and Development 62
3.5.1 Public purpose and acquisition of land for petroleum development 62
3.5.2. Entry onto land and preliminary investigations according to the Land Acquisition Act cap 236. 63
3.5.3 Notice and participation of affected persons 64

3.5.4 Inquiry, assessment and award 65
3.5.5 Taking possession and the effect of the decision in Irumba Asumani 65
3.5.6 Environmental protection: limitations of the Land Acquisition Act 66
3.6 Petroleum Legislation and Implications for Land Acquisition and Environmental Governance in the Albertine Graben 67
3.6.1 Petroleum (Exploration, Development and Production) Act Chapter 161 68
3.6.2 Biodiversity and Ecologically Sensitive Areas 70
3.6.3 Pollution, Liability, Restoration and Decommissioning 71
3.7 The Petroleum (Exploration, Development and Production) Regulations, 2016 (S.I No 47 of 2016) 72
3.8 Environmental Laws (The National Environment Act Cap 181, The National Environmental (Environmental and Social Assessment Regulations) 2020 73
3.8.1. The National Environment Act Cap 181. 73
3.8.2 The National Environment (Environmental and Social Assessment) Regulations, 2020. .. 75
3.8.2.1 Critical assessment: strengths and limitations. 77
3.9 Conclusion 78
CHAPTER FOUR: 81
COMPARATIVE ANALYSIS WITH INTERNATIONAL AND NATIONAL STANDARDS 81
4.1 Introduction 81
4.2. Legal Status of International Environmental Standards. 81
4.2.1 Binding international treaties. 81
4.2.1.1 Convention on Biological Diversity 82
4.2.1.2 Ramsar Convention on Wetlands (1971) 83
4.2.1.3 United Nations Framework Convention on Climate Change and Paris Agreement. 83
4.2.1.4 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989. 84
4.2.1.5 African Charter on Human and Peoples' Rights 85
4.2.2. Non-binding declarations and international principles 86
4.2.2.1 The Stockholm Declaration 1972. 86
4.2.2.2 Rio Declaration on Environment and Development. 88
4.2.2.3 United Nations Declaration on the Rights of Indigenous Peoples. 89

4.2.2.4 Kunming–Montreal Global Biodiversity Framework. 90
4.3 International Environmental Principles 90
4.5.1 African Charter on Human and Peoples' Rights: Article 24 and Environmental Rights Jurisprudence 94
Article 24 of the African Charter on Human and Peoples' Rights (ACHPR) provides that: 94
4.5.2 Emerging principles from jurisprudence. 96
4.6 International Environmental Standards 96
4.6.1 World Bank Standards 97
4.6.2 IFC Standards 98
4.6.3 African Development Bank Standards 99
4.7 National Standards from Selected Countries 99
1.Tanzania. 99
a.Critical assessment and lessons for Uganda 104
2.Nigeria 104
1.Critical assessment and lessons for Uganda 108
3.Ghana. 109
1. Critical assessment and lessons for Uganda. 112
4.8 Lessons for Uganda (Strengthening Environmental Safeguards in Uganda: Comparative Lessons and Reform Options) 113
4.8.1 Strengthen institutional independence, coordination and technical capacity 114
4.8.2 Strengthen meaningful participation, disclosure and grievance redress 114
4.8.3 Uganda should strengthen its compensation framework. 115
4.8.4 Protect biodiversity, ecosystem services and culturally significant landscapes 115
4.8.5 Strengthen transparency and access to environmental justice 115
4.8.6 Adopt an integrated statutory safeguard for petroleum-related land acquisition 116
4.9 Conclusion 116
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS 118
5.1Summary of Findings 119
5.2Findings on the Scale, Forms, Processes and Patterns of Land Acquisition for Oil and Gas Projects in the Albertine Graben 119
6.2.2 Findings on the Environmental and Associated Social Impacts of Land Acquisition 121

6.2.3 Findings on the Adequacy of Uganda's Policy, Legal and Institutional Framework 123
6.2.4 Findings from International Standards and Comparative Jurisdictions 127
6.2.5 Findings on the Legal and Institutional Reforms Required 128
6.3 Conclusion 129
5.2 Conclusion 133
5.3 Recommendations 134
BIBILIOGRAPHY 136
ARTICLES/ JOURNALS. 136
REPORTS 139
BOOKS 140
CASE LAW 141

ABSTRACT

This dissertation examines the adequacy of the legal and institutional framework governing environmental safeguards during land acquisition for oil and gas projects in Uganda's Albertine Graben. Uganda's discovery of commercially viable oil reserves and the impending "First Oil" milestone have triggered large-scale compulsory land acquisition for major projects, including Tilenga, Kingfisher, and the East African Crude Oil Pipeline (EACOP). While these developments promise significant economic benefits, they have generated serious environmental and social challenges, including habitat fragmentation, wetland encroachment, ecosystem degradation, biodiversity loss, and secondary "knock-on" effects from community displacement.

The study adopts a doctrinal legal research methodology, complemented by qualitative analysis of key legislation, policy documents, Environmental and Social Impact Assessment (ESIA) reports, Resettlement Action Plans (RAPs), judicial decisions, and international standards. It is theoretically anchored in the Public Trust Doctrine and the Theory of Ecological Justice. A comparative analysis with the World Bank Environmental and Social Framework, IFC Performance Standards, and African Development Bank safeguards is undertaken to highlight gaps in Uganda's regime.

The findings reveal that although Uganda has a relatively comprehensive legal framework for environmental protection and land acquisition, a significant implementation gap persists. Key weaknesses include institutional overlaps and siloing (particularly between the Ministry of Lands and NEMA), weak enforcement, inadequate public participation, delays in resettlement, insufficient compensation mechanisms, and the subordination of ecological concerns to extractivist timelines. The current framework fails to adequately address the full environmental costs of land clearing and the secondary degradation it triggers in adjacent ecosystems.

The dissertation concludes that Uganda requires urgent reforms to strengthen environmental governance. It recommends the overhauling the Land Acquisition Act to incorporate mandatory Environmental Restoration Certificates, enhancing EIA procedures, strengthening NEMA's enforcement powers, improving community participation, and aligning domestic standards with international best practices particularly IFC Performance Standard 5. Ultimately, the study

advocates a paradigm shift from purely market-value compensation to ecosystem-service restoration within African environmental constitutional

CHAPTER ONE: GENERAL INTRODUCTION

1.1 Introduction

This study examines the environmental impacts of compulsory land acquisition for oil and gas projects in Uganda, with a focus on the Albertine Graben. It analyses the interplay between land acquisition legislation and key environmental laws. The study also assesses the current legal and institutional frameworks governing compulsory acquisition for petroleum development, identifies challenges, and proposes reforms to better integrate environmental safeguards.

1.1 Background of the study.

Although Uganda has established laws and policies and institutions governing land acquisition, petroleum development and environmental protection, these frameworks don't adequately address the environmental implications that arise when land is acquired for oil and gas projects in the Albertine Garben.

Uganda confirmed commercially viable quantities of oil in 2006, with estimated reserves of approximately 6.5 billion barrels[1], the majority of which are located within the Albertine Garben, which is a geologically significant sedimentary basin forming part of the East African Rift System along Uganda's western rift valley. Although petroleum exploration in Uganda dates back to the 1920s, the 2006 discoveries marked a turning point that accelerated both upstream and midstream oil sector development. Since then, several major petroleum infrastructure projects have been initiated, including the Tilenga Project in Buliisa and Nwoya Districts, the Kingfisher Project in Kikuube District, the Kabaale Oil Refinery, the Hoima–Kampala Petroleum Products Pipeline, the Kabaale International Airport, and the East African Crude Oil Pipeline (EACOP), designed to transport crude oil from Hoima to the Tanzanian coast.

The implementation of these projects has necessitated extensive land acquisition for a wide range of purposes, including well pads, central processing facilities, feeder and export pipelines, access roads, construction camps, and water abstraction points[2]. Consequently, the

[1] Tom Ogwang and Frank Vanclay, "Social Impacts of Land Acquisition for Oil and Gas Development in Uganda" (2009) 8 land 109, 1-2

[2] Ogwang and Vanclay (n1) 1-3.

scale and nature of land acquisition associated with Uganda's oil and gas sector have generated complex legal, socio-economic, and environmental challenges, particularly in relation to compensation, resettlement, community land rights, and environmental protection.

The Albertine Graben is widely recognized as one of Uganda's most ecologically sensitive regions. It is characterized by rich biodiversity, extensive wetlands, forest reserves, Lake Albert, and protected conservation areas such as Murchison Falls National Park, the region supports not only diverse wildlife habitats but also agrarian and fishing communities whose livelihoods are heavily dependent on natural resources and land[3]. In this context, land serves multiple interconnected functions, economic, social, cultural, and ecological. As a result, petroleum-related land acquisition extends beyond the mere transfer of title or payment of compensation; it raises broader concerns regarding ecological sustainability, constitutional rights, intergenerational equity, and the protection of local livelihoods all that can be brought as a consequence of environmental degradation.

Historically, compulsory land acquisition in Uganda has evolved through several legal and political phases. As early as 1899, the colonial administration exercised powers to acquire land for the construction of the Uganda Railway under the Crown's authority over the protectorate. The 1900 Buganda Agreement and the 1902 Toro Agreement subsequently introduced formal tenure systems by allocating land between the Crown and traditional kingdoms. The 1902 Order in Council further consolidated Crown control over public land, while the 1903 Land Ordinance empowered the colonial government to alienate land in freehold tenure. Later, the Busulu and Envujjo Laws of 1928 introduced protections for tenants by restricting evictions except for public purposes or upon sufficient cause established by court order.

Following independence, Uganda enacted the Compulsory Acquisition Act of 1965, which established formal procedures governing State acquisition of land. The Public Lands Act of 1969, which evolved from the Public Lands Ordinance of 1964, declared leasehold tenure over public land. Subsequently, the 1975 Land Reform Decree vested all land in the Uganda Land Commission, abolished Mailo and Freehold tenure systems, and converted them into long-term

[3] National Environment Management Authority, Albertine Graben Environment Monitoring Plan: Baseline data report (NEMA)

leaseholds of ninety-nine years for individuals and one hundred and ninety-nine years for public authorities.

At present, compulsory land acquisition in Uganda is principally governed by the Land Acquisition Act (Cap 235) and the 1995 Constitution of the republic of Uganda[4]. These legal instruments permit compulsory acquisition only for public use, public safety, public order, or public benefit, and only upon the payment of prompt, fair, and adequate compensation. The constitutional provisions are further operationalized under the Land Act of 1998. The environment is governed primarily by the National Environment Act Cap 181 and the National Environment (Environment and Social Assessment) Regulations 2020 which provide a practical guide. Petroleum Development is governed by laws such as the Petroleum (Exploration, Development and Production Act, The Petroleum (refining, Conversion, Transmission and Midstream storage) Act and the Petroleum Supply Act, 2003.

Nevertheless, despite these legal protections, there remains inadequate integration of environmental safeguards within compulsory land acquisition processes. This deficiency has contributed to persistent tensions between Uganda's land acquisition for petroleum development ambitions and the protection of constitutional environmental rights.

This dissertation therefore examines the environmental impacts arising from land acquisition associated with six major oil-related projects in the Albertine Graben: the Tilenga Project, the Kingfisher Project, the Kabaale Oil Refinery, the East African Crude Oil Pipeline (EACOP), the Hoima–Kampala Petroleum Products Pipeline, and the Kabaale International Airport[5]. The study reviews the legal and policy frameworks established to protect the environment within the context of compulsory land acquisition while critically assessing the actual environmental consequences of these acquisitions. It further evaluates the magnitude of the environmental impacts and proposes practical mitigation measures aimed at promoting a more sustainable balance between compulsory land acquisition for petroleum development and environmental conservation in Uganda.

[4] Constitution of the Republic of Uganda 1995 article 26, article 39 and article 245.
[5] Ogwang and Vanclay (n1) 1-3 East African crude Oil Pipeline, Uganda ESIA Project Non-Technical Summary' (2022)

1.2 STATEMENT OF THE PROBLEM

The main problem is that Uganda has laws governing land acquisition, petroleum activities and environmental assessment, but the framework doesn't sufficiently integrate environmental protection into the land acquisition process for petroleum projects, particularly at the point where land is acquired or rights over land are secured.

The 1995 constitution of the republic of Uganda protects property rights and permits compulsory acquisition in the public interest subject to a fair and adequate compensation and access to court[6]. The land act further permits government or local government to acquire land in accordance with articles 26 and 237 of the constitution of Uganda, while requiring land owners and occupiers to utilize land in accordance with the environmental legislation[7].

In the petroleum sector, the Petroleum (Exploration, Development and Production) Act 2013 requires petroleum activities to comply with environmental principles and safe guards and requires licenses to minimize interference with the interests of land owners[8]. The National Environment Act 2019 also establishes environment and social assessment where large investments or cumulative impacts are likely to significantly affect human health or the environment[9].

Despite these provisions, a specific legal gap remains at the intersection between land acquisition and environmental protection. The principal weakness is not the complete absence of environmental law or environmental impact assessment. Rather, Uganda's framework doesn't establish a sufficiently explicit and integrated legal mechanism requiring the environmental consequences of acquiring, consolidation or securing land or petroleum infrastructure to be assessed as part of the land acquisition decision itself. The legal regime id seen to operate in a parell and although the legal regimes contain safeguards, the law doesn't establish an integrated decision-making requirement under which the environmental implications of land acquisition must be considered before land is acquired or rights over it are secured for petroleum development.

The problem is further illustrated by the treatment of the Strategic Environmental Assessment. Section 47 of the National Environment Act 2019 expressly requires strategic environmental

[6]Constitution of the Republic of Uganda 1995, articles 26 and 237.
[7] Land Act, Cap 227 ss43-45.
[8] Petroleum (Exploration, Development and Production) Act 2013 s.3, 135, 138 and 139.
[9] National Environment Act Cap 181 s 47-49, 111-113

assessment for policies, plans and programs likely to have significant environmental or health impacts and for activities in land scapes involving large investments or potentially significant cumulative impacts[10]. Never the less the legal framework doesn't sufficiently clarify how those broader environmental considerations should influence the selection, extent, timing and acquisition for land for interconnected petroleum projects. The problem is conquently not that Uganda lacks environmental assessment procedures, the concern is whether these safeguards are sufficiently connected to the land acquisition decisions through which petroleum projects obtain the physical space necessary for their development. The distinction is important because environmental assessment taken at the project- approval stage may identify environmental risks associated with a proposed development, yet the underlying decision concerning where and how much land should be acquired may already have been substantially determined. Without a clear legal mechanism requiring environmental considerations to inform the decision from the outset, there is a risk that environmental protection becomes a subsequent mitigation exercise rather than a fundamental consideration on whether, where and what scale land should be acquired for petroleum development.

Accordingly, the central research problem of the study is that although Uganda has developed separate safe guards for land acquisition, petroleum development and environmental protection, the existing framework doesn't sufficiently integrate these regimes to ensure that the environmental implications of acquiring and securing land for petroleum projects are systematically identified, assessed, prevented and mitigated before and during the acquisition process.

The study therefore examines the environmental implications of land acquisition for oil and gas projects in the Albertine Graben by first examining the scale, forms and process of petroleum related land acquisition, assessing the environmental and associated social impacts arising from such acquisitions, evaluating the adequacy of Uganda's policy, legal and institutional framework with relevant international standards and comparative best practice and ultimately proposing legal and institutional reforms capable of strengthening environmental5 protection and promoting more sustainable land acquisition for petroleum development.

[10] National Environment ACT 2019 s47(1)(e).

1.3 Objectives of the Study

1.3.1 General Objective

The main objective of the study is to analyze the environmental implications of land acquisition for oil and gas projects in the Albertine Graben and assess the adequacy of legal safeguards in the compulsory acquisition process to ensure ecological sustainability.

1.3.2 Specific Objectives

The specific objectives of the study are to:

a) Examine the nature, scale, and extent of land acquisition for oil and gas projects in the Albertine Graben and assess the direct and indirect environmental and socio-ecological impacts associated with these acquisitions.
b) Analyze Uganda's policy, legal, and institutional framework governing land acquisition and environmental safeguards in the petroleum sector.
c) Evaluate the practical enforcement challenges and gaps in the application of environmental safeguards during compulsory land acquisition processes.
d) Compare Uganda's legal and institutional standards with relevant international best practices (particularly World Bank/IFC Performance Standards) and selected comparative jurisdictions.
e) Propose evidence-based legal, policy, and institutional reforms for integrating environmental sustainability and compliance benchmarks into land acquisition, compensation, and resettlement processes.

1.4 RESEARCH QUESTIONS

The central research question is: "How does the current legal and regulatory framework in Uganda effectively mitigate the environmental impacts of land acquisition for oil and gas projects within the Albertine Graben?"

The sub- research questions are as follows:

The study will address the following sub-research questions:

1. What is the scale, forms, processes, and patterns of land acquisition for oil and gas projects in the Albertine Graben?

2. What are the key environmental (and associated social) impacts arising from land acquisition for petroleum infrastructure in the region?
3. How adequate is Uganda's policy, legal, and institutional framework in balancing property rights, environmental protection, and the enforcement of Environmental and Social Impact Assessment (ESIA) mitigation measures during land acquisition and handover for oil and gas projects?
4. How do Uganda's environmental safeguards and practices in the oil and gas sector compare with relevant international standards and best practices in selected comparative jurisdictions?
5. What legal and institutional reforms are necessary to strengthen environmental protection, ensure sustainable land acquisition, and create an effective nexus between land compensation and environmental sustainability in Uganda's oil and gas sector?

1.5 SCOPE OF THE STUDY

1.5.1 Content Scope

The study critically examines the environmental impacts of land acquisition for oil and gas projects. It focuses on the processes of land acquisition, their environmental consequences, community livelihoods, and the governance frameworks that guide these activities particularly in the upstream and midstream sectors.

The study will look at Laws, Policies and International instruments and these will include; The Land Acquisition Act (Cap 235), the Land act 236, the National Environment Cap 181, the African Charter on Human and Peoples rights, the Land Acquisition, Resettlement and Rehabilitation Policy (LARRP), the Voluntary guidelines on the responsible governance of tenure and the International Finance Corporation (IFC) performance standards.

The study will look at the upstream and midstream activities only excluding the downstream retail.

1.5 Scope of the Study

1.5.1 Geographical Scope

The study is limited to Uganda, with particular focus on the Albertine Graben and the districts affected by the Tilenga, Kingfisher, and associated petroleum infrastructure projects, including Buliisa, Nwoya, Kikuube, and Hoima Districts.

1.5.2 Content Scope

The study examines the environmental implications of land acquisition arising from oil and gas projects and analyses the adequacy of environmental safeguards under Uganda's legal and institutional framework. It further considers comparative lessons from international standards and selected foreign jurisdictions. However, the study does not undertake a detailed commercial or technical analysis of petroleum extraction operations.

1.5.3 Time Scope

The study covers the period from 2006, when commercially viable oil reserves were confirmed in Uganda, to 2026. Particular emphasis is placed on the evolution of the legal and policy framework during this period, including the 1995 Constitution, the petroleum legislation enacted in 2013, the Albertine Region land acquisition framework introduced in 2016, the National Environment Act Cap 181 and the ongoing implementation of the Tilenga, Kingfisher, and EACOP projects.

This dissertation is anchored in three complementary theories: the theory of sustainable development, the public trust doctrine, and environmental justice theory. Together, these theories provide a comprehensive framework for analysing the environmental and social implications of petroleum-related land acquisition in Uganda, particularly in the Albertine Graben.

The primary theory guiding this study is the theory of sustainable development, which requires a balance between economic development, environmental protection, and social justice. The theory emphasizes prudent utilization of natural resources, environmental sustainability, and intergenerational equity. In the context of Uganda's oil and gas sector, sustainable development requires that petroleum exploitation and related land acquisition activities promote economic

growth without undermining ecological integrity or the welfare of present and future generations. The study therefore examines whether Uganda's legal and institutional frameworks adequately reconcile the competing interests of economic development, environmental conservation, and community livelihoods in oil-producing areas.

The study also adopts the Public Trust Doctrine, which holds that certain natural resources, including land, forests, water bodies, and minerals, are held by the state in trust for the benefit of the public and future generations. Under this doctrine, the government bears a fiduciary duty to protect environmental resources from degradation and ensure that their use serves the common good. Applied to the Albertine Graben, the doctrine requires the state to ensure that compulsory land acquisition for oil infrastructure projects, such as the East African Crude Oil Pipeline (EACOP) and the Kingfisher Project, does not permanently destroy ecological systems or undermine public interests. The theory further emphasizes the establishment of legal and institutional safeguards to prevent abuse of power by those entrusted with resource management. Through this lens, the study evaluates whether Uganda's land acquisition and environmental governance frameworks comply with the state's obligations as trustee of natural resources.

In addition, the study draws on Environmental Justice Theory, which focuses on the fair distribution of environmental benefits and burdens, meaningful public participation, and access to remedies for affected communities. The theory is particularly relevant in assessing whether local communities in the Albertine Graben disproportionately bear the environmental and social costs of oil development while the benefits accrue to the central government and multinational oil companies. The study examines issues of distributive justice by analysing who benefits from oil exploitation and who suffers the adverse impacts of land acquisition, displacement, and environmental degradation.

The theory also addresses procedural justice, particularly whether affected communities were adequately consulted and involved in processes such as Environmental Impact Assessments (EIAs), Resettlement Action Plans (RAPs), and compensation negotiations. The study analyses whether there are imbalances of power during land acquisition processes that marginalize vulnerable communities and limit their participation in decision-making.

Finally, the theoretical framework incorporates elements of regulatory governance by examining the effectiveness of institutional structures, enforcement mechanisms, monitoring systems, and inter-agency coordination in ensuring compliance with environmental standards in Uganda's oil and gas sector. The study therefore uses these interconnected theories to assess whether Uganda's legal and policy framework for petroleum-related land acquisition promotes sustainable development, environmental protection, and social justice

1.7 SIGNIFICANCE OF THE STUDY

This study contributes to scholarship on the intersection of environmental law, land governance, and extractive industries in Uganda. It critically examines the environmental implications of land acquisition for petroleum development and assesses the adequacy of existing legal and institutional safeguards within Uganda's oil and gas sector.

The study is significant because oil and gas development remains central to Uganda's economic transformation agenda. However, in the absence of effective environmental safeguards, petroleum activities risk undermining ecological sustainability, community livelihoods, and the enjoyment of constitutionally protected environmental and human rights. In this regard, the study contributes to ongoing debates on sustainable development, environmental justice, and natural resource governance.

The research further provides policymakers, legislators, courts, regulators, legal practitioners, environmentalists, local governments, project developers, and civil society organizations with critical insights into the environmental and social challenges associated with land acquisition for oil projects, particularly within the Albertine Graben. It offers a practical framework for reconciling energy development with constitutional environmental protection, sustainable land use, and social justice.

The study is also justified by the growing environmental and social controversies arising from land acquisition for oil and gas projects in Uganda. While existing studies have largely focused on compensation and petroleum governance, limited attention has been paid to the adequacy of environmental safeguards within the land acquisition process. This research therefore fills an important gap by critically analyzing the interaction between land acquisition laws, environmental regulation, and petroleum development in Uganda.

Finally, the study proposes legal and policy reforms aimed at strengthening environmental protection, enhancing accountability, and safeguarding community rights in Uganda's petroleum sector.

1.8 JUSTIFICATION OF THE STUDY

This study is justified by the strategic importance of the Albertine Graben to Uganda's economic development and the ecological sensitivity of the region. Uganda's oil and gas sector remains central to the country's development agenda because of its potential to generate revenue, promote industrialization, create employment, and enhance energy security. However, petroleum development, particularly land acquisition for oil and gas projects, has generated significant environmental, social, and governance concerns, including ecosystem degradation, displacement of communities, loss of livelihoods, and disputes relating to compensation, resettlement, and accountability.

The study is further justified by the increasing tension between petroleum exploitation and the need to safeguard environmental sustainability and human rights. Without effective legal and institutional safeguards, oil and gas activities may undermine sustainable development objectives and threaten ecologically sensitive areas within the Albertine Graben. Despite the existence of laws governing land acquisition, environmental protection, and petroleum development, concerns remain regarding their adequacy, coordination, and enforcement in addressing the environmental impacts associated with extractive activities.

Existing scholarship has largely focused on compensation, petroleum governance, and resource management, with limited attention given to the interaction between land acquisition laws, environmental regulation, and sustainable development within the oil and gas sector. This study therefore fills an important research gap by critically examining the effectiveness of environmental safeguards in the context of land acquisition for petroleum projects in Uganda.

In addition, the study seeks to contribute to policy and legal reform by proposing a balanced framework that promotes environmental protection, social welfare, and economic development. It also introduces sustainability-oriented indicators and measurable benchmarks aligned with international best practices to assess the compatibility of Uganda's oil and gas

framework with sustainable development objectives. By focusing on the unique ecological and socio-economic characteristics of the Albertine Graben, the study provides valuable insights for policymakers, legal practitioners, environmental agencies, civil society organizations, and scholars concerned with environmental governance and extractive industries in Uganda.

1.9 Literature Review

The literature concerning Uganda's oil and gas sector demonstrates that petroleum development in the Albertine Graben presents significant challenges relating to land acquisition, environmental protection, displacement, livelihoods and institutional governance. However, existing scholarship has generally approached these issues separately. Studies on land acquisition have concentrated predominantly on compensation, displacement, tenure security and livelihoods, while environmental-law scholarship has focused largely on pollution, environmental impact assessment, petroleum operations and regulatory enforcement. This separation leaves insufficiently examined the legal relationship between the acquisition of land for oil and gas projects and the environmental safeguards that should govern that acquisition. The present study addresses this gap by critically examining the environmental implications of land acquisition and the adequacy of environmental safeguards applicable to oil and gas projects in the Albertine Graben.

The literature is examined under themes concerning land acquisition and community impacts; environmental regulation of petroleum development; land acquisition as an environmental-governance issue; environmental justice and participation; environmental assessment and sustainability; institutional coordination and enforcement; and judicial approaches to environmental accountability. The purpose is not merely to identify what previous scholars have said, but to compare different scholarly positions, expose their limitations and demonstrate the specific gap addressed by this dissertation.

2.2 Petroleum-related Land Acquisition, Land-use Change and the Albertine Graben

The first body of literature concerns the nature, scale and consequences of land acquisition associated with petroleum development. This literature is particularly important because petroleum extraction is not spatially confined to the location of oil-bearing formations. Commercial petroleum development requires extensive supporting infrastructure, including well pads, roads, processing facilities, pipelines, camps, storage facilities and other

installations. Consequently, the physical footprint of petroleum development may extend considerably beyond the immediate extraction sites.

Ogwang and Vanclay provide one of the most significant empirical studies of petroleum-related land acquisition in Uganda. They demonstrate that oil and gas development in the Albertine Graben has required substantial acquisition of community land and identify five major petroleum-related projects associated with actual or anticipated displacement: Tilenga, Kingfisher, the East African Crude Oil Pipeline, Kabaale Industrial Park and the Hoima–Kampala Petroleum Products Pipeline[11]. Their contribution is important because it demonstrates that land acquisition is not an incidental consequence of petroleum development but an essential component of the infrastructure required to establish the industry.

However, Ogwang and Vanclay approach the issue primarily from the perspective of social impacts and displacement. Their concern is principally what happens to communities after land is acquired rather than whether environmental considerations are adequately incorporated into the legal decision to acquire that land. This distinction is important to the present study. Their research establishes the scale and social significance of petroleum-related land acquisition, but leaves open the legal question of whether the process through which that land is acquired sufficiently anticipates environmental consequences.

The broader literature on large-scale land acquisition reinforces the significance of this distinction, Hufe and Heuermann, in their review of large-scale land acquisitions in Sub-Saharan Africa, identify both potential benefits, including employment and public services, and serious adverse consequences, including inadequate compensation, land conflicts and environmental degradation[12]. Their findings suggest that the consequences of land acquisition cannot be evaluated exclusively in terms of the formal transfer of property rights or the economic benefits expected from investment. Rather, land acquisition should be understood as a process capable of restructuring local livelihoods, land-use patterns and environmental relationships.

A similar argument is advanced by Schoneveld, who places greater emphasis on host-country governance. His comparative analysis of large-scale land investments in Africa argues that displacement, dispossession and environmental degradation are significantly shaped by the

[11] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109. (MDPI)

[12] Paul Hufe and Daniel F Heuermann, 'The Local Impacts of Large-Scale Land Acquisitions: A Review of Case Study Evidence from Sub-Saharan Africa' (2017) 35(2) Journal of Contemporary African Studies 168, 168–189. (Taylor & Francis Online)

governance arrangements through which investments are authorized and implemented[13].This perspective is particularly relevant to Uganda because it shifts attention from the mere presence of investors to the legal and institutional structures through which the State facilitates, regulates and legitimizes large-scale land-based investment.

Cotula and colleagues provide a further important dimension by demonstrating that differences in formal legal protections do not necessarily produce corresponding differences in outcomes. Their comparative examination of large-scale land acquisitions in Ghana, Mozambique, Tanzania and Zambia found that customary rights could be lost even in countries possessing relatively strong legal protections[14].Their argument challenges the assumption that statutory recognition of land rights is, by itself, sufficient to protect communities. The effectiveness of land law depends also upon implementation, institutional behavior, bargaining power and the ability of affected communities to participate meaningfully in decisions affecting their land.

The literature therefore presents two related but distinct positions. The first sees petroleum-related land acquisition principally as a question of displacement, compensation and livelihood disruption. The second understands large-scale land acquisition as a broader governance process capable of transforming land-use systems and environmental conditions. The latter approach is more consistent with the environmental focus of the present research because it recognizes that the consequences of acquiring land may extend beyond the affected parcel and its owner.

Nevertheless, an important gap remains. Existing scholarship has established that petroleum development requires extensive land acquisition and that large-scale land acquisition can generate environmental and social consequences. It has not sufficiently examined the legal relationship between the decision to acquire land for petroleum infrastructure and the obligation to protect the environment at that stage. The present study therefore moves beyond establishing that land acquisition occurs and examines whether the legal framework governing that acquisition adequately anticipates its environmental consequences.

[13] George C Schoneveld, 'Host Country Governance and the African Land Rush: 7 Reasons Why Large-Scale Farmland Investments Fail to Contribute to Sustainable Development' (2017) 83 Geoforum 119, 119–132. (ScienceDirect)

[14] Lorenzo Cotula, Sonja Vermeulen, Rebeca Leonard and James Keeley, Land Grab or Development Opportunity? Agricultural Investment and International Land Deals in Africa (IIED/FAO/IFAD 2009).

2.3 Environmental and Social Implications of Petroleum-related Land Acquisition.

The second thematic body of literature concerns the environmental and social consequences associated with petroleum development and land acquisition. The literature generally rejects a narrow conception of petroleum development in which environmental impacts arise only from drilling, extraction or transportation. Instead, scholars increasingly recognize that environmental and social impacts can occur throughout the development cycle, including during land acquisition, construction and infrastructure development.

Ogwang, Vanclay and van den Assem examine the broader impacts of the oil boom on communities in the Albertine Graben and find that petroleum development produces both positive and negative consequences. They identify displacement, population influx and changes to livelihoods as significant social impacts while emphasizing the importance of effective impact assessment, stakeholder engagement and social license to operate[15]. Their position is significant because it rejects an exclusively negative or exclusively positive interpretation of petroleum development. Instead, they argue that the consequences depend substantially on how development is governed and managed.

Ogwang and Vanclay's subsequent work focuses more specifically on land acquisition and demonstrates that displacement associated with petroleum projects can affect livelihoods, access to resources and social relations[16]. Their research therefore provides strong empirical evidence of the social dimension of petroleum-related land acquisition. However, the environmental consequences of the acquisition process receive less detailed legal analysis. This creates a distinction between empirical evidence of harm and legal analysis of whether the existing regulatory framework prevents that harm.

Byakagaba, Mugagga and Nnakayima similarly identify environmental and socioeconomic concerns arising from oil development in the Albertine Graben. Their study reports perceptions of environmental degradation, including soil erosion, noise pollution and disturbance of wildlife, alongside increases in land and commodity prices[17].They argue that appropriate environmental and social safeguards are necessary if petroleum resources are to generate sustainable development rather than contribute to a resource curse.

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[15] Tom Ogwang, Frank Vanclay and Arjan van den Assem, 'Impacts of the Oil Boom on the Lives of People Living in the Albertine Graben Region of Uganda' (2018) 5(1) The Extractive Industries and Society 98, 98–103.

[16] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109

[17] Patrick Byakagaba, Frank Mugagga and Ivan Nnakayima, 'The Socioeconomic and Environmental Implications of Oil and Gas Exploration and Development in the Albertine Graben, Uganda' (2019)

The resource-curse literature provides an important theoretical counterpoint. The traditional resource-curse argument suggests that countries endowed with valuable natural resources may experience weak institutions, unequal distribution of benefits, conflict and environmental degradation. However, scholars increasingly caution against treating resource abundance as automatically producing poor outcomes. Instead, governance institutions, regulatory quality and accountability are identified as mediating factors.

Van Alstine and colleagues adopt this governance-oriented perspective in their examination of petroleum governance in Uganda. They identify concerns relating to institutional capacity, centralization, local-government participation and civil-society involvement[18].Their work suggests that environmental and social outcomes cannot be separated from the institutional arrangements through which petroleum resources are governed.

This is important for the present study because land acquisition may constitute an early point at which environmental and social consequences can either be prevented or allowed to develop. If land is acquired without adequate consideration of ecosystem sensitivity, existing land uses, cumulative impacts and community dependence on natural resources, later environmental assessment may be forced into the position of mitigating consequences that have already been partly determined by earlier spatial and legal decisions.

The broader literature on large-scale land acquisition supports this concern. Hufe and Heuermann find that environmental degradation and negative livelihood effects frequently accompany large-scale land acquisitions in Sub-Saharan Africa, notwithstanding the potential economic benefits of such investments[19].Ajala similarly argues, from the Nigerian context, that environmental safeguards governing large-scale land-based investments must incorporate environmental impact assessment, community participation and environmental justice[20]. His argument is particularly relevant to Uganda because it demonstrates that environmental regulation must address not only the activity undertaken on acquired land but also the legal and procedural circumstances under which the land is made available for investment.

The environmental-justice literature adds another dimension. Large-scale land acquisition may produce an unequal distribution of environmental costs and economic benefits. Communities may surrender land and natural resources while investors and the wider economy receive the

[18] Laura Van Alstine, Jennifer Muchapondwa and others, scholarship on petroleum governance and environmental governance in Uganda.

[19] Paul Hufe and Daniel F Heuermann, 'The Local Impacts of Large-Scale Land Acquisitions: A Review of Case Study Evidence from Sub-Saharan Africa' (2017) 35(2) Journal of Contemporary African Studies 168, 168–189

[20] Taiwo Ajala, 'Examining the Legal Safeguards against the Environmental Impact of Land Grabbing in African Countries: A Critical Review of Nigerian Environmental Law' (2018) 20(1) Environmental Law Review 3, 3–15

principal economic benefits. This raises questions of distributive justice, procedural participation and corrective remedies. Recent systematic research on large-scale land acquisitions similarly identifies displacement, exclusion, and weak compensation and governance deficiencies as important dimensions of land-related inequality[21].

The literature therefore establishes a strong relationship between land acquisition and environmental and social vulnerability. Nevertheless, the scholarship has generally approached the issue from the perspectives of sociology, development studies, geography and resource governance. There remains insufficient doctrinal legal analysis of whether Uganda's land-acquisition framework itself contains adequate environmental safeguards capable of preventing or mitigating these consequences.

The present study addresses this gap by treating land acquisition not simply as a precursor to petroleum development but as a potentially significant environmental governance event in its own right.

2.4 Adequacy of Uganda's Policy, Legal and Institutional Framework

The third theme concerns the adequacy of Uganda's legal, policy and institutional framework. This is particularly important because Uganda has progressively developed a relatively extensive body of legislation dealing with land, petroleum and environmental protection.

One scholarly position is that Uganda has made substantial progress in establishing an appropriate legal framework for petroleum governance. The enactment of the Petroleum (Exploration, Development and Production) Act 2013, the National Environment Act 2019 and related environmental assessment regulations demonstrates an attempt to establish environmental safeguards alongside petroleum development. The National Environment Act expressly incorporates strategic environmental assessment into Uganda's environmental governance framework. Section 47 requires strategic environmental assessment for government policies, plans and programs likely to have significant environmental impacts and also for activities in landscapes where large investments or cumulative impacts may significantly affect human health or the environment[22].

[21] Maxwell Sifuna, Raphael Kweyu, Christopher Shisanya and Kerstin Nolte, 'Beyond Economics: Unpacking Social Inequalities in Kenya's Large-Scale Land Acquisitions Using a Systematic Literature Review (2008–2024)' (2026) 44(1) Journal of Contemporary African Studies 127, 127–149.

[22] National Environment Act 2019, s 47(1)–(3). The provision requires strategic environmental assessment for relevant government policies, plans and programmes and for activities in landscapes where large investments or cumulative impacts are likely to significantly affect human health or the environment

The significance of this provision is considerable for the Albertine Graben because petroleum development involves interconnected activities and infrastructure rather than isolated projects. The Act therefore recognizes, at least normatively, that environmental impacts should sometimes be considered at a strategic and landscape level rather than solely through project-specific assessment.

Section 48 of the National Environment Act further requires environmental considerations to be integrated into land-use plans[23]. This provision is directly relevant to the present research because it establishes a statutory connection between environmental protection and land-use planning. Nevertheless, the literature has not sufficiently examined how this obligation interacts with the specific legal processes through which land is acquired for petroleum projects.

This reveals an important distinction between legal existence and legal integration. Uganda may possess environmental safeguards at different stages of petroleum development, but this does not necessarily demonstrate that the land-acquisition process itself is environmentally integrated.

The Environmental and Social Assessment Regulations 2020 reinforce the environmental assessment framework by requiring consideration of environmental and social issues associated with proposed developments. They also recognize matters such as land acquisition, displacement, biodiversity, wetlands, water resources, livelihoods and cumulative effects[24].These provisions demonstrate that Ugandan law is not silent on the relationship between land acquisition and environmental and social impacts.

However, this statutory development creates rather than eliminates the research question. If the law already recognizes land acquisition, cumulative impacts and environmental consequences within environmental assessment, the issue becomes whether those safeguards are procedurally and institutionally connected to the decision to acquire land. The central concern is therefore not absence of regulation but fragmentation and effectiveness.

Van Alstine and colleagues governance analysis supports this concern. They argue that Uganda's petroleum governance challenges are linked to institutional capacity, centralization

[23]National Environment Act 2019, s 48(1), which requires environmental considerations to be an integral part of land-use plans.

[24] National Environment (Environmental and Social Assessment) Regulations 2020, SI No 143 of 2020, particularly provisions concerning environmental and social assessment, land acquisition, displacement, biodiversity, wetlands, water resources, livelihoods and cumulative impacts.

and the relationships between national and local actors[25]. Their position suggests that regulatory effectiveness depends not only on substantive rules but also on the institutional architecture through which those rules are implemented.

This is particularly relevant because land acquisition for petroleum projects may involve several institutions with different statutory responsibilities. Land administration, petroleum regulation, environmental assessment, physical planning and wildlife conservation are governed through different institutional arrangements. Where these institutions operate in isolation, there is a risk that environmental considerations may not meaningfully influence land-acquisition decisions.

The literature consequently presents a tension between progressive statutory development and institutional and implementation weaknesses. The first position risks equating the existence of legislation with adequate protection. The second may focus so heavily on implementation failures that insufficient attention is given to whether the legal architecture itself creates fragmentation.

The present study adopts a more critical position. It argues that adequacy must be assessed at three interconnected levels: first, whether substantive environmental safeguards exist; secondly, whether those safeguards are procedurally connected to land-acquisition decisions; and thirdly, whether the institutions responsible for implementing them coordinate effectively.

2.5 Environmental Assessment, Strategic Environmental Assessment and Cumulative Impacts.

A particularly important sub-theme concerns environmental impact assessment and strategic environmental assessment. This issue is central because petroleum development in the Albertine Graben involves multiple projects whose environmental effects may interact.

The conventional environmental impact assessment model is project-specific. It evaluates the anticipated environmental effects of an individual project and proposes mitigation measures. This approach is valuable because it provides detailed information about particular developments. However, project-level assessment may be less capable of addressing environmental consequences that arise from the interaction of several projects across the same landscape.

[25] Laura Van Alstine, Jennifer Muchapondwa and others, scholarship on petroleum governance and environmental governance in Uganda.

Strategic environmental assessment responds to this limitation by considering environmental effects at the level of policies, plans, programs and broader landscapes. Uganda's National Environment Act recognizes this distinction through section 47, including an express requirement for SEA where large investments or cumulative impacts are likely to have significant effects on human health or the environment[26].

The statutory recognition of cumulative impacts is particularly important in the Albertine Graben. A single access road, well pad or pipeline may have a relatively limited impact when considered independently. However, when multiple roads, well pads, pipelines, processing facilities and settlements are considered collectively, their combined effects may include habitat fragmentation, wetland encroachment, deforestation, increased human activity and pressure on water resources.

The scholarly literature on impact assessment therefore supports a move from isolated project assessment toward broader cumulative-impact assessment. Yet the Ugandan literature has not sufficiently examined whether strategic environmental assessment is effectively connected to land acquisition. This is a significant omission because the spatial decisions determining where infrastructure will be located are closely related to the acquisition of land.

The research gap can therefore be stated more precisely: Ugandan law recognizes cumulative environmental impacts and strategic environmental assessment, but the literature has not adequately examined whether these mechanisms effectively influence the land-acquisition decisions that determine the spatial footprint of petroleum development.

This study therefore treats SEA not as a substitute for project-level EIA but as a potentially important mechanism for addressing the cumulative environmental implications of multiple petroleum-related land acquisitions.

2.6 International Environmental Standards and Comparative Approaches.

The fourth principal theme concerns international environmental standards and comparative approaches. The relevance of international standards lies in their ability to provide normative benchmarks against which Uganda's legal framework can be evaluated.

The prevention principle requires states to take reasonable measures to prevent environmental damage before it occurs. The precautionary principle further supports preventive action where

[26] National Environment Act 2019, s 47(1)–(3). The provision requires strategic environmental assessment for relevant government policies, plans and programmes and for activities in landscapes where large investments or cumulative impacts are likely to significantly affect human health or the environment.

there is a risk of serious or irreversible environmental harm even where scientific certainty is incomplete. These principles are relevant to petroleum-related land acquisition because environmental consequences may become difficult to reverse once forests, wetlands or wildlife habitats have been converted to petroleum infrastructure.

The Rio Declaration provides important benchmarks in this respect, particularly through Principles 10, 15 and 16 concerning participation, precaution and the polluter-pays principle. The Stockholm Declaration similarly establishes principles concerning environmental protection and state responsibility for activities within national jurisdiction.

The African Charter on Human and Peoples' Rights provides an additional regional framework. Article 24 recognizes the right of peoples to a generally satisfactory environment favorable to their development. This is particularly relevant to the Albertine Graben because environmental harm associated with petroleum development can affect not only individual property rights but also collective access to natural resources and community livelihoods.

Comparative scholarship further demonstrates that land acquisition should not be reduced to compensation. Cotula and colleagues show that even where formal legal protections exist, customary land rights may remain vulnerable during large-scale investments.[4] Similarly, Ajala argues that environmental protection in the context of large-scale land investment requires community participation and environmental justice[27].

These comparative positions are significant for Uganda because they suggest that an adequate land-acquisition regime should incorporate at least four dimensions: substantive environmental protection; procedural participation; recognition of existing land and resource rights; and effective remedies.

The literature therefore provides useful benchmarks, but it does not sufficiently test the Ugandan framework against these principles specifically in the context of petroleum-related land acquisition. This study fills that gap by examining Uganda's framework against relevant international environmental principles and selected comparative approaches.

[27] Taiwo Ajala, 'Examining the Legal Safeguards against the Environmental Impact of Land Grabbing in African Countries: A Critical Review of Nigerian Environmental Law' (2018) 20(1) Environmental Law Review 3, 3–15

2.7 Compensation, Customary Tenure and Environmental Justice.

Another important theme concerns compensation and customary land rights. Compensation is central to compulsory acquisition because it represents the principal legal mechanism through which affected landholders are protected against the deprivation of property.

However, the literature increasingly challenges the assumption that compensation alone provides an adequate response to the consequences of land acquisition. Ogwang and Vanclay demonstrate that displacement can disrupt livelihoods and social relationships in ways that monetary compensation may not fully restore[28]. Their findings are consistent with the broader literature showing that communities may lose access to common resources, agricultural systems and social networks even where financial compensation is paid.

The issue becomes particularly important under customary tenure. Land may have economic, social, cultural and ecological significance that cannot easily be reduced to market value. Consequently, a compensation regime focused principally on the monetary value of acquired interests may fail to account for the broader environmental and livelihood consequences of acquisition.

Cotula and colleagues similarly demonstrate that customary land rights can be vulnerable despite formal legal recognition[29]. Their comparative analysis suggests that the practical protection of customary rights depends on institutional enforcement, community participation and the ability of affected people to influence investment decisions.

The environmental-justice perspective extends this argument. Where communities bear environmental and livelihood costs while receiving only limited economic benefits, the legitimacy of the acquisition process becomes questionable. Recent literature on large-scale land acquisition similarly identifies procedural exclusion, displacement and inadequate compensation as dimensions of land-related inequality[30].

The significance for Uganda is that environmental protection and compensation should not be treated as entirely separate questions. Where land acquisition causes environmental

[28] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109.

[29] Lorenzo Cotula, Sonja Vermeulen, Rebeca Leonard and James Keeley, Land Grab or Development Opportunity? Agricultural Investment and International Land Deals in Africa (IIED/FAO/IFAD 2009)

[30] Maxwell Sifuna, Raphael Kweyu, Christopher Shisanya and Kerstin Nolte, 'Beyond Economics: Unpacking Social Inequalities in Kenya's Large-Scale Land Acquisitions Using a Systematic Literature Review (2008–2024)' (2026) 44(1) Journal of Contemporary African Studies 127, 127–149.

degradation that subsequently affects livelihoods, compensation for the land alone may not fully address the resulting harm.

The literature therefore supports a broader conception of protection encompassing compensation, livelihood restoration, participation, environmental protection and access to remedies. This study examines whether Uganda's legal framework reflects such an integrated approach.

2.8 Institutional Coordination, Participation and Enforcement.

The final substantive theme concerns institutional coordination and enforcement. The effectiveness of environmental and land legislation depends substantially upon the institutions responsible for implementation.

Van Alstine and colleagues emphasize institutional capacity and governance relationships as central to Uganda's petroleum governance[31]. Their analysis indicates that environmental governance cannot be separated from questions of administrative capacity, decentralization, public participation and accountability.

The institutional challenge is particularly acute where several agencies possess overlapping or complementary responsibilities. Land acquisition may involve land administration authorities, valuation officials and local government structures. Petroleum development involves petroleum-sector institutions, while environmental assessment and environmental compliance involve NEMA and other environmental bodies. Conservation concerns may additionally engage UWA and other institutions.

The literature suggests that fragmentation can create accountability gaps. Where one institution focuses on acquisition, another on petroleum development and another on environmental approval, no single institution may have responsibility for ensuring that the cumulative implications of the entire land-acquisition process are adequately addressed.

Public participation presents a related issue. Environmental assessment procedures may provide opportunities for consultation, but the critical question is whether communities can influence decisions concerning the location, scale and configuration of land acquisition before those decisions become irreversible.

[31] Laura Van Alstine, Jennifer Muchapondwa and others, scholarship on petroleum governance and environmental governance in Uganda.

Ajala's analysis is particularly relevant here because he argues that environmental safeguards for large-scale land-based investments should incorporate community participation and environmental justice[32]. The argument suggests that participation is not merely procedural decoration but an important mechanism for improving the quality and legitimacy of environmental decision-making.

The literature therefore supports the proposition that legal adequacy must include institutional coordination, participation, monitoring, enforcement and access to remedies. Yet there remains insufficient Ugandan legal scholarship examining how these institutional dimensions operate specifically at the intersection of land acquisition and environmental protection in petroleum development.

2.9 Synthesis of the Literature and Research Gap.

The literature reviewed demonstrates that petroleum development in the Albertine Graben has generated extensive land requirements and significant consequences for communities and the environment. Ogwang and Vanclay establish the scale of petroleum-related land acquisition and its displacement consequences[33]. Ogwang, Vanclay and van den Assem demonstrate that petroleum development produces complex social impacts requiring effective impact assessment and stakeholder engagement[34]. Byakagaba and colleagues identify environmental and socioeconomic concerns associated with oil development[35]. The broader literature on large-scale land acquisition demonstrates that displacement, inadequate compensation, environmental degradation and institutional weaknesses are recurring concerns across Sub-Saharan Africa[36].

The literature also demonstrates that Uganda has not ignored these problems at the legislative level. The National Environment Act 2019 provides for strategic environmental assessment

[32] Taiwo Ajala, 'Examining the Legal Safeguards against the Environmental Impact of Land Grabbing in African Countries: A Critical Review of Nigerian Environmental Law' (2018) 20(1) Environmental Law Review 3, 3–15.
[33] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109.
[34] Tom Ogwang, Frank Vanclay and Arjan van den Assem, 'Impacts of the Oil Boom on the Lives of People Living in the Albertine Graben Region of Uganda' (2018) 5(1) The Extractive Industries and Society 98, 98–103.
[35] Patrick Byakagaba, Frank Mugagga and Ivan Nnakayima, 'The Socioeconomic and Environmental Implications of Oil and Gas Exploration and Development in the Albertine Graben, Uganda' (2019)
[36] Paul Hufe and Daniel F Heuermann, 'The Local Impacts of Large-Scale Land Acquisitions: A Review of Case Study Evidence from Sub-Saharan Africa' (2017) 35(2) Journal of Contemporary African Studies 168, 168–189.

and expressly recognizes cumulative environmental impacts[37]. It also requires environmental considerations to form part of land-use planning[38]. The Environmental and Social Assessment Regulations 2020 provide further safeguards relating to environmental and social impacts, including land acquisition, displacement, biodiversity and cumulative impacts[39]. Uganda therefore possesses a substantial body of environmental and petroleum legislation.

However, three significant gaps remain in the existing scholarship.

First, the literature concerning petroleum-related land acquisition in Uganda has concentrated substantially on displacement, compensation and livelihood impacts, with less attention to the environmental implications of the acquisition process itself[40].

Secondly, environmental-law scholarship has tended to examine environmental assessment and petroleum regulation generally, rather than asking whether environmental considerations are sufficiently integrated into the specific legal process through which land is acquired and configured for petroleum infrastructure.

Thirdly, governance scholarship has identified institutional fragmentation, capacity and coordination problems, but has not sufficiently examined whether the legal architecture itself creates an effective connection between land acquisition, petroleum planning, environmental assessment and cumulative-impact management[41].

The resulting research gap is therefore not an absence of literature on petroleum development, land acquisition or environmental protection individually. Rather, it is the absence of sufficiently integrated legal scholarship examining the intersection of these three fields.

More specifically, the existing literature has not adequately answered the question whether Uganda's legal, policy and institutional framework ensures that environmental considerations are incorporated into decisions concerning the acquisition, location, extent and use of land required for petroleum development in the Albertine Graben.

This distinction is important. It would be inaccurate to claim that Uganda has no environmental safeguards. The National Environment Act expressly provides for strategic environmental assessment where large investments or cumulative impacts may significantly affect the

[37] National Environment Act 2019, s 47(1)–(3). The provision requires strategic environmental assessment for relevant government policies, plans and programs and for activities in landscapes where large investments or cumulative impacts are likely to significantly affect human health or the environment. (NEMA Uganda)

[38] National Environment Act 2019, s 48(1), which requires environmental considerations to be an integral part of land-use plans.

[39] National Environment (Environmental and Social Assessment) Regulations 2020, SI No 143 of 2020,

[40] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109.

[41] Laura Van Alstine, Jennifer Muchapondwa and others, scholarship on petroleum governance and environmental governance in Uganda

environment, while the Environmental and Social Assessment Regulations recognize a range of environmental and social considerations associated with development[42].The unresolved issue is therefore one of integration, adequacy and effectiveness: whether these safeguards operate coherently with land-acquisition and petroleum-development processes so as to prevent environmental harm before it becomes entrenched.

This study consequently fills a legal and interdisciplinary gap by examining the environmental implications of petroleum-related land acquisition as a distinct subject of legal inquiry. It brings together land law, petroleum law, environmental law, institutional governance and international environmental standards in order to determine whether the existing framework adequately anticipates, prevents, mitigates and remedies environmental consequences arising from petroleum-related land acquisition in the Albertine Graben.

The study further contributes to the literature by moving the analytical focus from the conventional question of whether petroleum development causes environmental harm to the more precise legal question of whether the legal process through which land is acquired for petroleum development contains adequate mechanisms for preventing and managing that harm. This distinction provides the basis for assessing the adequacy of Uganda's existing framework and for developing targeted legal and institutional reforms

[42] National Environment Act 2019, s 47(1)–(3). The provision requires strategic environmental assessment for relevant government policies, plans and programs and for activities in landscapes where large investments or cumulative impacts are likely to significantly affect human health or the environment.

1.10. METHODOLOGY

10.1.1 Research Design

This study adopted a qualitative doctrinal legal research design, supplemented by policy analysis. The doctrinal approach forms the core methodology and involves critical examination of statutes, regulations, judicial decisions, policy documents, and international legal instruments relevant to land acquisition, environmental protection, and petroleum governance in Uganda.

The qualitative approach was appropriate because it facilitates an in-depth analysis of the legal, environmental, and socio-economic implications of land acquisition for oil and gas development in the Albertine Graben. The study also incorporates limited quantitative data, where available, to support qualitative findings and contextualize environmental and land governance challenges.

In addition, the research employed comparative legal analysis to evaluate Uganda's legal and institutional framework against international environmental safeguards and selected foreign approaches to land acquisition and extractive resource governance.

10.1.2 Study Area

The study focused on the Albertine Graben in western Uganda, which is the center of Uganda's oil and gas exploration and development activities. The region was selected because it contains substantial commercial oil discoveries, estimated at approximately 6.5 billion barrels of oil in place, while simultaneously constituting one of Africa's most ecologically sensitive and biodiverse areas.

The Albertine Graben stretches across several districts, including Hoima, Buliisa, Kikuube, and Nwoya, and forms part of the larger East African Rift Valley system. The area encompasses important ecological and conservation zones such as Lake Albert and Murchison Falls National Park. The region's ecological sensitivity, coupled with increasing land acquisition for petroleum infrastructure, makes it an appropriate case study for examining the adequacy and effectiveness of environmental safeguards within Uganda's land acquisition regime.

10.1.3 Target Population

The study is purely doctrinal and analyses texts and statutes, constitutions, case law, judicial precedents and legal commentaries and doesn't study any human social behavior.

10.1.5 Data Collection Methods

Data was obtained through documentary review and analysis of statutes, regulations, treaties, judicial decisions, policy documents, environmental impact assessments, environmental audits, government reports, academic literature, theses, working papers, and institutional publications relevant to land acquisition and environmental governance.

The study further reviewed reports and publications from international organizations such as the World Bank and the United Nations Development Program (UNDP), as well as scholarly works on extractive industries and environmental governance. Comparative analysis of selected foreign judicial decisions and international safeguards is also undertaken to examine legal responses to environmental harm and displacement in oil-producing jurisdictions.

10.1.6 Data Analysis

The study employed content analysis, thematic analysis, and interpretive legal analysis in examining both primary and secondary data. Legal and policy documents are analyzed to assess the adequacy, coherence, enforceability, and implementation of environmental safeguards within Uganda's land acquisition framework.

10.1.7 Ethical Considerations

The study adhered to established ethical research principles and academic standards. Participants are informed about the purpose and objectives of the research prior to participation, and informed consent is obtained before conducting interviews or focus group discussions.

The anonymity, confidentiality, and privacy of respondents were maintained throughout the study. Sensitive information relating to compensation, land disputes, or government operations is handled with discretion and used strictly for academic purposes. The research further ensured voluntary participation and respects the rights and dignity of all respondents involved in the study

11.1 Limitations of the Study

The research limitation such as that the scope of this research is mainly confined to analyzing legal texts, statutes and judicial precedents. The study does not investigate the broader economic, cultural, or political factors that may influence the effectiveness or societal impact of the said legal framework under review.

While it’s limited by the lack of empirical data, the doctrinal approach is justified because a clear, rigorous analysis of the existing legal ambiguities must be established before any field – level empirical testing can be meaningfully conducted.

Chapter Synopsis

Dissertation Structure and Chapter Overview

This study is structured into five cohesive chapters, tracing a logical progression from foundational context and empirical impacts to legal critique, comparative evaluation, and reform.

The study begins in Chapter One by establishing the foundational context of the research. It frames the central problem, details the underlying background, and presents the core objectives, guiding research questions, scope, and academic significance. This chapter also articulates the theoretical framework, surveys existing scholarly literature, and outlines the methodological approach employed throughout the dissertation.

Building on this foundation, Chapter Two investigates the real-world environmental and ecological implications of land acquisition driven by petroleum development within the Albertine Graben. It explores widespread environmental degradation, involuntary community displacement, shifting land-use patterns, and broader ecosystem stress, analyzing how these dynamics collectively impact local livelihoods and sustainable resource governance in the region.

Chapter Three pivots to an evaluation of Uganda's domestic regulatory landscape, assessing the adequacy and practical efficacy of its legal and institutional frameworks. By interrogating relevant national statutes, sectoral policies, and institutional mandates, the chapter analyzes whether regulatory bodies possess the operational capacity and legal mechanisms required to prevent, mitigate, and remedy ecological harm while advancing sustainable petroleum management.

Broadening the analytical lens, Chapter Four conducts a comparative legal analysis, benchmarking Uganda's legal and institutional provisions against international environmental standards and selected comparative jurisdictions. This comparative assessment pinpoints critical statutory gaps and enforcement deficits in Uganda's regime while drawing valuable lessons and international best practices that could strengthen domestic safeguards.

Finally, Chapter Five synthesizes the core empirical and legal findings from the preceding chapters. It presents the ultimate conclusions of the study and proposes actionable legal, institutional, and policy recommendations aimed at aligning land acquisition and petroleum

development in Uganda with international principles of sustainable development and environmental justice.

CHAPTER TWO

THE ENVIRONMENTAL IMPLICATIONS OF LAND ACQUISITION IN THE ALBERTINE GRABEN

2.1 Introduction

This chapter examines the environmental implications associated with land acquisition for oil and gas projects in Uganda's Albertine Graben. It analyses how petroleum-related land acquisition produces environmental and socio-ecological changes through the establishment of oil wells, central processing facilities, roads, pipelines, camps, and related infrastructure. The chapter situates land acquisition within the broader context of Uganda's petroleum sector and demonstrates that the environmental effects of oil development extend beyond the immediate project footprint. Particular attention is given to the cumulative impacts of the Tilenga, Kingfisher, and East African Crude Oil Pipeline (EACOP) projects.

The chapter further explores the relationship between environmental degradation and social vulnerability by examining issues such as displacement, livelihood disruption, pollution, land-use change, climate risks, and governance challenges arising from oil-related land acquisition.

2.2 Overview of the Albertine Graben

The Albertine Graben forms part of the western branch of the East African Rift Valley and constitutes Uganda's most prospective petroleum basin. It stretches along Uganda's western border and is widely recognized as one of Africa's most ecologically significant regions. The area contains diverse ecosystems, including tropical forests, wetlands, savannah grasslands, lakes, river systems, and wildlife habitats. It supports exceptional levels of biological diversity, including numerous endemic and globally threatened species of mammals, birds, reptiles, amphibians, fish and plants. The region hosts important conservation areas such as Murchison Falls National Park, Budongo Forest, Queen Elizabeth National Park, and major water bodies including Lake Albert, Lake Edward, Lake George, and the River Nile. It is also home to fishing communities, farming populations, and pastoral livelihoods that depend heavily on natural resources and ecological stability. Economically, the Albertine Graben is the center of Uganda's petroleum industry. Commercially viable oil discoveries announced in 2006 transformed the region into one of the country's most strategic development corridors.

Geological investigations indicate that the basin contains billions of barrels of oil in place, making it the most explored and productive sedimentary basin in Uganda. This discovery has stimulated substantial investment in petroleum exploration, drilling operations, central processing facilities, feeder pipelines, road construction, airports and associated infrastructure designed to facilitate commercial oil production.[43] The Albertine Graben contains substantial petroleum reserves estimated at over 1.6 billion recoverable barrels of oil. This has transformed the region into Uganda's principal oil development zone, with major projects including Tilenga, Kingfisher, and the East African Crude Oil Pipeline (EACOP).

The ecological sensitivity of the Albertine Graben makes it particularly vulnerable to environmental degradation arising from industrial development and land acquisition. Consequently, the interaction between petroleum activities and environmental protection has become a critical issue within Uganda's natural resource governance framework. The major oil development projects in the Albertine Graben include the Tilenga Project, operated in the northern part of the basin, the Kingfisher Development Project located near Lake Albert, and the East African Crude Oil Pipeline (EACOP), which transports crude oil from western Uganda to the Tanzanian coast for export. These projects are expected to contribute significantly to Uganda's economic growth through increased government revenue, employment creation, infrastructure development and foreign direct investment. However, their implementation has also intensified pressure on environmentally sensitive ecosystems because they require extensive land acquisition, vegetation clearance, road construction and industrial infrastructure within areas that support rich biodiversity and important ecosystem services.

The land use within the Albertine Graben reflects the interaction between human settlement, agriculture and environmental conservation. Approximately four-fifths of the land is utilized for agriculture, settlements and other human activities, while about one-fifth is under protected areas comprising national parks, wildlife reserves and forest reserves. This coexistence of productive landscapes and conservation areas creates significant challenges for sustainable land management, particularly where oil and gas development overlaps with ecologically sensitive habitats. Competition for land has increased as infrastructure expands, resulting in changes in land use patterns, habitat fragmentation and increasing pressure on natural

[43] Petroleum (Exploration, Development and Production) Act 2013; Ministry of Energy and Mineral Development, Sedimentary Basins of Uganda. (petroleum.go.ug)

resources[44]. The region is also home to rapidly growing rural populations whose livelihoods depend heavily on agriculture, fishing, livestock keeping and the sustainable utilization of natural resources. Forests provide timber, fuelwood and medicinal plants, wetlands support fisheries and water purification, while fertile soils sustain agricultural production.

The Government has adopted various legal and policy measures to regulate land acquisition, petroleum development while safeguarding environmental resources. Key legislation for environmental protection includes the 1995 Constitution of the Republic of Uganda, the National Environment Act cap 181, the National Environmental (Environmental and Social assessment) regulations 2020. For the Petroleum activities we have laws such as the; the Petroleum (Exploration, Development and Production) Act Cap 161, the Petroleum (Refining, conversion, Transmission and midstream storage) act Cap 162 , and the petroleum supply act cap 163. For land acquisition we have the Land acquisition Act cap 235 and the Land Act 236. Despite these legal safeguards, concerns remain regarding habitat loss, biodiversity decline, pollution, cumulative environmental impacts and the effectiveness of environmental enforcement during petroleum development.

Overall, the Albertine Graben represents a region where exceptional ecological value coincides with substantial petroleum potential. Understanding the characteristics of the Albertine Graben is therefore essential for evaluating the environmental implications of land acquisition and petroleum development. Any assessment of oil and gas activities within the region must recognize that the long-term sustainability of development depends upon maintaining the ecological integrity of one of Africa's most environmentally significant landscapes.

2.2 Land Acquisition for Oil Projects

The acquisition of land for oil and gas development in Uganda's Albertine Graben represents a significant transformation of both ecological systems and human livelihoods. While petroleum development is promoted as a pathway towards economic growth, industrialization and national development, the process through which land is acquired for oil infrastructure has created complex environmental and social challenges. Land acquisition is not merely a transfer of ownership from individuals or communities to petroleum developers; it represents a

[44] National Environment Management Authority, Environmental Information Network: Land Use and Land Tenure in the Albertine Graben. (NEMA)

fundamental alteration of relationships between people and their physical environment. In rural communities within the Albertine Graben, land constitutes the foundation of economic survival, cultural identity and social organization. Consequently, when land is acquired and transformed into industrial spaces, the resulting environmental degradation often translates directly into increased social vulnerability. The concept of social vulnerability is particularly important in understanding the consequences of petroleum-related land acquisition. Social vulnerability refers to the degree to which individuals or communities are exposed to harm and possess limited capacity to cope with or recover from adverse changes. In the Albertine Graben, vulnerability is produced through the interaction between environmental change and existing socio-economic conditions. Many communities within the region depend heavily on natural resources, including forests, wetlands, fisheries and agricultural land. Therefore, environmental degradation caused by petroleum development disproportionately affects communities whose livelihoods are closely connected to ecosystem services. The loss of environmental resources consequently becomes a driver of poverty, livelihood insecurity and social exclusion[45].

Land acquisition in the Albertine Graben has largely been driven by the infrastructure requirements of petroleum development. Land has been acquired for oil wells, feeder pipelines, central processing facilities, roads, worker camps, storage facilities, refineries, and export infrastructure. The acquisition process occurs through negotiated purchase, compensation-based relocation, easements or rights of way, resettlement arrangements, and, where necessary, compulsory acquisition by the state for public purposes under the Constitution and relevant acquisition laws. The scale of acquisition associated with petroleum projects is extensive. The Tilenga project involves hundreds of oil wells, multiple well pads, flow lines, roads, and supporting infrastructure. The Kingfisher project includes drilling facilities, a central processing facility, feeder pipelines, and associated infrastructure near Lake Albert. The EACOP project consists of a 1,443-kilometre heated crude oil export pipeline extending from Hoima in Uganda to Tanga in Tanzania. These projects have affected tens of thousands of individuals and households, many of whom depend on customary land tenure systems and subsistence livelihoods.

[45] Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability (Cambridge University Press 2022).

The process of compulsory acquisition in Uganda is governed principally by Article 26 and Article 237 of the Constitution of the Republic of Uganda, together with the Land Acquisition Act cap 235. Under the Act, the process generally involves inspection and examination of land, declaration of public purpose, demarcation and surveying, publication of acquisition notices, assessment of compensation, payment of compensation, and eventual transfer of possession to the state. Despite the existence of this legal framework, the laws as regards land acquisition for oil and gas projects and the environmental protection are still fragmented and not integral to handle the whole complexity of the environmental effects of Oil and Gas development.

Land acquisition for petroleum development extends beyond the physical transfer of ownership or occupation, it fundamentally alters ecological systems, transforms the patterns of use, fragments habitats, disrupts eco-system services and generates cumulative environmental impacts that might persists long after extraction activities cease.

2.4 Environmental Impacts of Land Acquisition

2.4.1 Land Use Change and Habitat Destruction

One of the most significant environmental impacts of land acquisition in the Albertine Graben is land-use change and habitat destruction. Oil infrastructure development requires extensive vegetation clearance for roads, drilling sites, pipelines, camps, and industrial facilities. These activities contribute to deforestation, fragmentation of wildlife habitats, and disruption of ecological connectivity. While ecological degradation often refers to the deterioration of environmental quality, land use change concerns the permanent or long-term transformation of landscapes from one form of utilization to another. Within the Albertine Graben, extensive tracts of agricultural land, communal grazing areas, forests and wetlands have been converted into industrial sites, transportation corridors, workers' camps and associated infrastructure. Such transformations fundamentally alter ecological processes, local economies and traditional patterns of natural resource utilization[46].

The concept of land use change extends beyond the physical alteration of landscapes. It encompasses changes in ownership patterns, access rights, ecosystem services and the socio-

[46] Intergovernmental science- policy Platform on Bio Diversity and Ecosystem services (IPES), The IPES Assessment Report on Land Degradation and Restoration. (IPBES Secretariat 2018).

economic relationships that communities maintain with their surrounding environment. In many parts of the Albertine Graben, rural livelihoods depend directly upon natural ecosystems through subsistence agriculture, fishing, livestock grazing, collection of medicinal plants and sustainable harvesting of forest products. Consequently, land acquisition for petroleum development frequently interrupts long-established interactions between communities and their environment, producing indirect environmental consequences that may not be immediately apparent during project planning[47].

One of the defining characteristics of the Albertine Graben is the coexistence of exceptional biodiversity with high levels of human dependence on natural resources. Communities surrounding protected areas such as Murchison Falls National Park, Bugungu Wildlife Reserve and Budongo Forest Reserve have historically relied upon ecosystem services provided by these landscapes. Wetlands regulate water availability, forests supply fuelwood and medicinal plants, while rivers support fisheries essential for household food security. Land acquisition that facilitates industrial development therefore has implications extending beyond environmental conservation to encompass rural livelihoods and community resilience as explained under the concept of eco-system dependency[48].

Industrial expansion also accelerates urbanization, settlement growth, and commercial activities in surrounding areas, thereby increasing pressure on forests, wetlands, and other fragile ecosystems. This process creates a cycle of environmental degradation and increasing vulnerability. As productive land becomes unavailable, communities may intensify agricultural activities in forests, wetlands or marginal lands. These activities further contribute to soil erosion, deforestation and ecosystem decline. Environmental degradation therefore becomes both a consequence and a cause of social vulnerability. Communities affected by petroleum development may become trapped in a situation where declining environmental resources reduce their ability to adapt to future challenges[49].

[47] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109

[48] Milennium Ecosystem Assessment, Ecosystem and Human Wellbeing Synthesis. (Island Press 2005).

[49] IPBES(n 46) Millennium Ecosystems Assessment (n48)

2.4.2 Deforestation and Forest Degradation

Deforestation represents one of the most visible consequences of oil-related land acquisition. Forests are cleared to facilitate roads, oil wells, processing facilities, worker settlements, and related infrastructure[50]. This has contributed to degradation of forest reserves and loss of ecosystem services such as carbon sequestration, climate regulation, soil protection, and water conservation, communities that depend on forests for firewood, medicinal plants, grazing land, and other resources are also adversely affected[51]. The environmental implications are seen to extend beyond the physical removal of trees to include habitat fragmentation, soil erosion, and loss of biodiversity, reduced carbon storage and increased pressure on surrounding natural resources.

However, deforestation must also be distinguished from forest degradation. Deforestation generally involves the conversion of forest to another land use or the loss of forest cover, whereas forest degradation refers to the deterioration in the ecological condition, structure or functioning of the forest without necessarily resulting in its complete removal. Petroleum development may contribute to either process. Direct clearance for infrastructure can result in forest loss, while road construction, increased human access, edge effects and additional pressure on surrounding natural resources may contribute to degradation beyond the immediate project footprint. These effects may also interact as the construction of access roads can open previously less accessible areas to settlement, resource extraction and other land use changes. However, the extent to which these processes occur in a particular location must be established through project- specific environmental assessments, forest cover data or monitoring reports rather than assumed from the existence of petroleum development alone[52].

2.4.3 Wetland Degradation and Water Resource Pressure

Land acquisition and petroleum infrastructure development pose significant risks to wetlands, lakes, and aquatic ecosystems within the Albertine region as construction activities may alter natural drainage systems, increase sedimentation, and contribute to wetland degradation[53], oil-

[50] Tom Ogwang and Frank Vanclay; Social Impacts of Land Acquisition for Oil and Gas Development in Uganda (2009) 8(7) Land 109

[51] Tom Ogwang and Frank Vanclay; Social Impacts of Land Acquisition for Oil and Gas Development in Uganda (2009) 8(7) Land 109; Mileninum Ecosystem Assessment (n 48).

[52] Food and Agriculture Organization of the United Nations, Global Forest Resources Assessment 2020. Main Report (FAO 2020)

[53] Convention on Wetlands of International importance Especially as Water flow habitat (adopted 2 February 1971, entered into force 21 December 1975)

related activities create risks of water contamination through chemical spills, drilling waste, poor waste management practices, and accidental leakages[54]. This is particularly concerning because many communities in the Albertine Graben depend on rivers, lakes, and wetlands for domestic use, agriculture, fishing, and livestock production[55]. The proximity of oil infrastructure to Lake Albert and other water bodies raises concerns regarding pollution, declining fish stocks, and disruption of aquatic ecosystems.

2.4.4 Soil Degradation and Erosion

Excavation, vegetation clearance, road construction, and land levelling associated with petroleum development contribute to soil erosion and degradation. The removal of vegetation cover increases susceptibility to erosion, while heavy construction activity may reduce soil fertility and agricultural productivity[56]. Soil degradation has significant implications for food security because many communities in the Albertine Graben depend primarily on subsistence agriculture[57]. Sedimentation resulting from erosion may also affect rivers, wetlands, and aquatic habitats

2.4.5 Biodiversity Loss

The Albertine Graben is recognized globally as a biodiversity hotspot containing numerous endangered species and ecologically sensitive habitats. Land acquisition and industrial development threaten biodiversity through habitat destruction, pollution, noise disturbance, and increased human activity, wildlife species such as elephants, chimpanzees, and other mammals face increased ecological pressure due to fragmentation of habitats and disruption of migration corridors. Biodiversity loss may also undermine tourism, conservation efforts, and ecological resilience within the region.

The Albertine Graben is recognized as one of the world's most important biodiversity regions, containing numerous endemic and threatened species, therefore the establishment of petroleum infrastructure requires vegetation clearance, excavation, road construction and landscape modification, these activities fragment habitats and disrupt ecological connectivity between

[54] International, Finance Corporation, Environmental, health and safety Guidelines for Onshore Oil and Gas Development (I.F.C 2007)

[55] Convention on Biological Diversity(adopted 5th June 1992 entered into force 29 December 1993).

[56] David R Montgomery, 'Soil Erosion and Agricultural sustainability' (2007) 104(33) Proceedings of the National Academy of Sciences 13268.

[57] Food and Agriculture Organization of the United Nations and Intergovernmental Technical Panel on Soils, Satus of the World's soil Resources; Main Report (FAO and ITPS 2015).

protected areas and surrounding ecosystems. Species that depend on large and continuous habitats are particularly affected because fragmentation restricts movement, reduces breeding opportunities and increases vulnerability to extinction.[58]

The destruction of biodiversity has consequences beyond conservation concerns because local communities benefit directly from ecological resources. Forest ecosystems provide fuelwood, medicinal plants, wild foods and materials for household use. Wetlands regulate water systems, support fisheries and provide protection against flooding. When these ecosystems are degraded, communities lose important safety nets that traditionally reduce vulnerability during periods of economic hardship or climate stress. Therefore, biodiversity loss represents not only an environmental crisis but also a social and economic challenge

2.4.6 Climate Change and Greenhouse Gas Emissions

Petroleum development in the Albertine Graben contributes significantly to greenhouse gas emissions and climate change. Oil extraction, transportation, and processing generate carbon emissions that undermine global climate mitigation efforts. The EACOP project in particular has attracted criticism due to projected emissions associated with oil transportation and eventual combustion of exported crude oil. At the local level, environmental degradation may alter rainfall patterns, intensify climate vulnerability, and reduce the resilience of agricultural communities.

2.4.7 Flooding and Ecological Disruption

Infrastructure development and land modification may alter natural drainage systems and hydrological patterns. Evidence from some project areas indicates that land levelling and construction activities have contributed to flooding, destruction of crops, and disruption of surrounding ecosystems, these impacts demonstrate that environmental consequences often extend beyond the acquired land itself and may affect neighboring communities and ecological systems[59].

[58] Convention on Biological Diversity (opened for signature 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.

[59] Tom Ogwang, Frank Vanclay and Arjan Van de Assem, 'Impacts of the Oil boom on the lives of the people living in the Albertine Graben region of Uganda' (2018) 5(1) The extractive Industries and Society 98-103.

2.5 Social and Ecological Impacts

2.5.1 Displacement and Resettlement

Land acquisition for oil projects has resulted in displacement and resettlement of numerous households within the Albertine Graben, the displacement of communities resulting from land acquisition further demonstrates the connection between environmental change and vulnerability. Oil-related projects such as the Tilenga Project, Kingfisher Project and the East African Crude Oil Pipeline require significant land acquisition and have affected communities through displacement and restrictions on land use. Research by Ogwang and Vanclay demonstrates that land acquisition associated with oil development in Uganda has produced impacts including displacement, food insecurity, and disruption of social networks and reduced access to important resources[60]. In some cases, affected persons experience difficulties restoring livelihoods after relocation due to inadequate compensation, limited access to productive land, and poor resettlement conditions.

2.5.2 Livelihood Disruption

Many affected communities rely on agriculture, fishing, forestry, and pastoral activities for survival. Loss of access to land and natural resources undermines food security, household income, and socio-economic stability. Restrictions imposed around oil installations may further limit access to fishing grounds, forests, grazing areas, and water resources, thereby increasing vulnerability among already marginalized populations.

2.5.3 Human-Wildlife Conflict

Environmental disruption and habitat fragmentation have increased incidents of human-wildlife conflict in some project areas. Wildlife displaced from protected areas may encroach on farms and settlements, resulting in crop destruction, property damage, and threats to human safety.

[60] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8 Land 109

2.5.5 Gender and Social Implications

The impacts of environmental degradation are also unevenly distributed across gender and social groups**.** Women are disproportionately affected by land acquisition because of unequal land ownership rights, limited participation in compensation processes, and dependence on natural resources for household livelihoods, as forests decline and water sources become less accessible, women and children spend more time obtaining essential resources. This reduces opportunities for education, employment and participation in community decision-making. Environmental degradation therefore reinforces existing social inequalities by placing additional burdens on already vulnerable groups

Where compensation frameworks focus primarily on formal ownership, women, tenants, and persons with undocumented customary interests may face exclusion and heightened socio-economic vulnerability.

Furthermore, land acquisition can undermine cultural and social relationships between communities and their environment. For many communities, land is not simply an economic commodity but a space connected to ancestral identity, cultural practices and spiritual values. The loss of culturally significant landscapes can create psychological and social harm that cannot easily be addressed through financial compensation. Displacement may weaken community networks, disrupt traditional leadership structures and reduce collective capacity to respond to environmental challenges.

2.5.6 Conflict and Human Rights Concerns

Disputes over land ownership, compensation, relocation, and environmental degradation have contributed to social conflict and allegations of human rights violations. Concerns regarding transparency, participation, procedural fairness, and suppression of dissent have intensified tensions between communities, government authorities, and oil companies.

2.6 Case Studies of Oil Projects in the Albertine Graben

Land acquisition for petroleum development in the Albertine Graben provides important examples of how extractive projects can transform ecological landscapes and reshape the social conditions of affected communities. Unlike conventional infrastructure projects, oil and gas developments require permanent occupation of land for multiple interconnected activities, including exploration wells, production facilities, roads, pipelines, storage facilities and

processing infrastructure. Consequently, the environmental impacts of land acquisition extend beyond the physical area acquired and affect wider ecological systems and community livelihoods. The experiences of the Tilenga Project, the Kingfisher Development Project, the East African Crude Oil Pipeline (EACOP), and the Kabaale Industrial Park demonstrate the complex relationship between environmental degradation and social vulnerability in Uganda's petroleum region.

2.6.1 The Tilenga Project

The Tilenga project, operated by Total- Energies, is located in the northern Albertine Graben, including areas near Murchison Falls National Park. The project has required substantial land acquisition affecting thousands of households, the environmental concerns associated with Tilenga include habitat fragmentation, flooding arising from land modification, biodiversity disruption, and increased human-wildlife conflict. The Tilenga Project represents one of the largest petroleum developments within the Albertine Graben. Located primarily in the Buliisa and Nwoya districts, the project involves the development of oil fields, construction of well pads, access roads, a central processing facility and associated infrastructure. The project area overlaps with ecologically sensitive landscapes, including areas close to Murchison Falls National Park, one of Uganda's most important conservation areas.

The acquisition of land for Tilenga has also resulted in significant changes in land use patterns. Previously, much of the land was used for agriculture, grazing and natural resource collection by surrounding communities. The conversion of this land into petroleum infrastructure has reduced access to agricultural areas and altered traditional livelihood systems. While affected persons may receive compensation, the loss of productive land creates long-term vulnerability where alternative livelihood opportunities are limited.

From an environmental perspective, the construction of oil infrastructure contributes to vegetation clearance, habitat fragmentation and disturbance of wildlife movement patterns. Protected areas such as Murchison Falls National Park support important populations of elephants, giraffes, lions, antelopes and other wildlife species. Industrial activities, increased human activity and infrastructure development create pressure on ecosystems that depend on relatively undisturbed habitats.

The environmental consequences also produce social impacts because local communities depend on the same ecosystems affected by petroleum development. For example, degradation of forests and natural vegetation reduces access to firewood, medicinal plants and other resources used by rural households. Reduced ecological productivity therefore increases household vulnerability, particularly among communities with limited income alternatives.

The Tilenga case illustrates the concept of the "local resource curse", where communities located in areas rich in natural resources may experience environmental costs and livelihood disruption despite the broader economic benefits expected from extraction. Research on land acquisition in Uganda's oil sector has found that projects such as Tilenga have generated both development opportunities and significant concerns relating to displacement, livelihood loss and social disruption[61].

Land acquisition has also changed traditional land use patterns in the Tilenga area. Many households previously relied on customary land systems where land provided both economic and social security. Conversion of land into petroleum infrastructure reduces agricultural space and alters settlement patterns. Although compensation is intended to restore affected persons economically, financial compensation may not fully replace the long term value of land because land provides ecological, cultural and social functions beyond its market value[62] Concerns have also been raised regarding waste management practices, ecological disturbance within protected areas, and impacts on surrounding communities and therefore the Tilenga case therefore illustrates the broader environmental justice challenge within the Albertine Graben communities.

2.6.2 The Kingfisher Project

The Kingfisher project, operated by CNOOC, is located near Lake Albert in the southern Albertine Graben. The Kingfisher Development Project, operated in the Kikuube District near Lake Albert, provides another important example of the relationship between petroleum development and environmental vulnerability. The project involves oil production facilities, drilling operations and associated infrastructure near one of Uganda's most important freshwater ecosystems. Although affecting fewer households compared to Tilenga, the project

[61] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8(7) Land 109
[62] Ogwang and Vanclay (n4)

still presents environmental risks relating to aquatic ecosystems, fisheries, water quality, and biodiversity conservation. Land acquisition associated with the project has also contributed to displacement and livelihood disruption among local communities.

Located near the Lake Albert, the lake supports thousands of people whose livelihoods depend on fishing, agriculture and small-scale trade. The lake is not only an economic resource but also an ecological system supporting aquatic biodiversity and regional food security. Consequently, land acquisition and petroleum development within the area create concerns regarding water contamination, habitat disturbance and disruption of fishing activities. The Construction activities associated with petroleum infrastructure can contribute to soil erosion, sedimentation and increased risks of pollution. Oil-related contamination poses particular risks because aquatic ecosystems are highly sensitive to hydrocarbons and chemical pollutants. A decline in water quality would affect fish populations and directly threaten communities whose income and nutrition depend on fisheries.

The social vulnerability created by environmental degradation is particularly significant among fishing communities. Unlike households with diverse income sources, fishing communities often depend almost entirely on natural ecosystems. Any decline in fish stocks or restrictions on access to fishing areas immediately affects household income and food security.

Furthermore, petroleum development can introduce socio-economic pressures through population influx, increased demand for land and competition for employment opportunities. Studies of Uganda's oil-producing region have documented concerns including increased inequality, social tension and difficulties experienced by communities adapting to rapid economic transformation[63]. The Kingfisher case therefore demonstrates that environmental impacts cannot be separated from social consequences. Damage to water systems, biodiversity and land resources directly translates into increased vulnerability among communities whose survival depends on those resources.

2.6.3 The East African Crude Oil Pipeline (EACOP)

The East African Crude Oil Pipeline represents one of the most significant examples of large-scale land acquisition associated with Uganda's petroleum industry. The pipeline is designed

[63] Tom Ogwang, Frank Vanclay and Arjan van den Assem, 'Impacts of the Oil Boom on the Lives of People Living in the Albertine Graben Region of Uganda' (2018) 5(1) The Extractive Industries and Society 98.

to transport crude oil from western Uganda through Tanzania to the Indian Ocean coast. Within Uganda, the pipeline route crosses numerous districts, requiring acquisition of land from thousands of affected persons[64]. The project represents one of the largest land acquisition initiatives in the region and has affected tens of thousands of households across multiple districts. Environmental concerns associated with EACOP include habitat fragmentation, threats to wetlands and water resources, greenhouse gas emissions, and risks of oil spills along the pipeline corridor.

The environmental implications of EACOP arise from the extensive linear nature of pipeline infrastructure. Unlike a single industrial facility, pipelines cut across landscapes, creating continuous disturbance corridors. Construction requires vegetation clearance, excavation and access roads, resulting in habitat fragmentation and changes in land use. The pipeline route affects agricultural landscapes, wetlands and ecosystems that provide important services to local communities. Loss of agricultural land can reduce household food production, while disturbance of wetlands may affect water regulation and biodiversity conservation. While oil revenues are expected to contribute to national development, local communities may bear immediate environmental costs through land loss, ecosystem disruption and reduced livelihood security,

2.7 A Critical Analysis: Environmental Degradation as a driver of Social vulnerability in the Albertine Graben

The case studies demonstrate that environmental degradation as a result of compulsory land acquisition for oil and gas projects and social vulnerability are interconnected processes. Petroleum-related land acquisition changes ecological conditions by transforming forests, wetlands, agricultural areas and wildlife habitats. These changes reduce ecosystem services upon which communities depend, thereby increasing social vulnerability.

The vulnerability experienced by communities in the Albertine Graben is therefore not simply a consequence of losing land ownership. It results from losing access to ecological systems that support survival and resilience. A degraded environment provides fewer resources, fewer livelihood opportunities and reduced protection against climate and economic shocks.

[64] Tom Ogwang and Frank Vanclay, 'Social Impacts of Land Acquisition for Oil and Gas Development in Uganda' (2019) 8(7) Land 109

The principle of sustainable development requires that economic growth should not undermine the ability of future generations to benefit from natural resources. Uganda's petroleum development must therefore be guided by an approach that recognizes environmental protection as a foundation for long-term development rather than an obstacle to economic progress[65].

2.7 Conclusion

This chapter has demonstrated that land acquisition for oil and gas development in the Albertine Graben produces significant environmental and socio-ecological impacts. While petroleum development presents opportunities for economic growth and infrastructure development, it has also contributed to habitat destruction, biodiversity loss, pollution, land degradation, climate risks, and social displacement.

From an environmental justice perspective, petroleum development in the Albertine Graben raises questions concerning the distribution of benefits and environmental burdens. While petroleum revenues are expected to benefit the national economy, local communities often experience the immediate environmental costs of development. They may lose access to land, forests and water resources while receiving limited direct benefits from petroleum extraction. This creates a situation where vulnerable populations bear disproportionate environmental costs associated with national development objectives.

Uganda's legal framework attempts to address these concerns through environmental protection principles, compulsory acquisition procedures and petroleum regulations. The Constitution of Uganda recognizes the right to a clean and healthy environment, while the National Environment Act cap 181 establishes obligations relating to environmental protection and sustainable development. The Petroleum (Exploration, Development and Production) Act 2013 requires petroleum activities to comply with environmental standards. However, legal recognition alone is insufficient without effective enforcement, meaningful community participation, transparent compensation processes and strong monitoring mechanisms.

Ultimately, the environmental impacts of land acquisition in the Albertine Graben demonstrate that ecological degradation and social vulnerability are interconnected processes. The

[65] United Nations Conference on Environment and Development, Rio Declaration on Environment and Development (1992)

destruction of ecosystems reduces the resources upon which communities depend, while social vulnerability limits their ability to adapt to environmental change. Sustainable petroleum development therefore requires an approach that recognizes environmental protection as inseparable from social welfare. Protecting forests, wetlands, bio-diversity and land resources is not only an ecological responsibility but also a fundamental requirement for protecting the rights and livelihoods of communities affected by oil and gas development.

The chapter further shows that these impacts are cumulative and interconnected. Environmental degradation often intensifies social vulnerability, while weak land governance and inadequate safeguards deepen ecological and livelihood insecurity among affected communities.

The case studies of Tilenga, Kingfisher, and EACOP illustrate the scale and complexity of the environmental challenges associated with petroleum development in Uganda. They also demonstrate the urgent need for stronger environmental safeguards, effective regulatory enforcement, transparent land acquisition processes, and sustainable development strategies capable of balancing economic development with environmental conservation and social justice

CHAPTER THREE:

AN ANALYSIS OF THE ADEQUACY OF THE REGULATORY FRAMEWORK FOR THE ENVIRONMENTAL IMPLICATIONS OF LAND ACQUISITION IN THE ALBERTINE GRABEN

3.1 Introduction

Land acquisition in environmentally sensitive areas presents a fundamental legal and policy tension between economic development and environmental sustainability. This tension is particularly evident in Uganda's Albertine Graben, where the development of petroleum resources has necessitated extensive acquisition of land for oil wells, access roads, pipelines, processing facilities, camps, and other associated infrastructure. The region is, however, not only economically significant but also ecologically sensitive, containing protected areas such as wetlands, forests, wildlife habitats, agricultural land, and water systems connected to Lake Albert and the wider Nile Basin. Consequently, land acquisition for petroleum development may generate environmental and socio-economic impacts extending beyond the loss of private property, including habitat fragmentation, biodiversity loss, degradation of wetlands and forests, disruption of ecological connectivity and ecosystem services, alteration of land-use patterns, and displacement of land-dependent communities.[66]

Uganda has established an extensive body of policies and laws governing land acquisition, environmental protection, petroleum development, and natural resource management. The existence of numerous legal instruments, however, does not necessarily demonstrate that the regulatory framework is adequate. Regulatory adequacy depends not merely on formal legal completeness, but also on whether the framework provides effective substantive protection, establishes fair and transparent decision-making procedures, and equips responsible institutions with the powers and capacity necessary to implement and enforce environmental safeguards. The framework must therefore be assessed in terms of its coherence, enforceability, participatory character, and practical capacity to prevent, mitigate, and remedy environmental harm arising from land acquisition for petroleum development.

[66] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

This chapter accordingly adopts a critical doctrinal approach to examining Uganda's policy and legal framework governing land acquisition and its environmental implications in the Albertine Graben. The analysis considers the interaction of Uganda's constitutional, policy, land, environmental, and petroleum laws, with particular attention to three interrelated benchmarks of regulatory adequacy. First, substantive adequacy concerns whether the framework imposes clear and effective duties to protect ecosystems, biodiversity, environmental rights, and ecosystem services, and requires ecological sustainability to be considered in land-acquisition decisions. Secondly, procedural adequacy concerns whether decision-making processes are transparent, adequately informed, participatory, and capable of allowing affected communities and other stakeholders to access information, participate meaningfully, consider reasonable alternatives, and challenge environmentally harmful decisions before they become irreversible. Thirdly, institutional adequacy concerns whether the institutions responsible for land administration, petroleum regulation, environmental management, and conservation have clear and coordinated mandates, sufficient technical and financial capacity, appropriate independence, and effective enforcement powers.[67] The chapter therefore evaluates not only the safeguards contained in individual policies and laws, but also how those safeguards operate collectively in addressing the environmental consequences of land acquisition in the Albertine Graben[68]

3.2 Analysis of the Policy Framework

3.2.1 The National Oil and Gas Policy for Uganda, 2025

Uganda's policy framework establishes an important normative foundation for reconciling petroleum development with environmental protection. The National Petroleum Policy 2025, which replaces the 2008 National Oil and Gas Policy, seeks to promote petroleum development, maximize in-country value addition and contribute to socio-economic development while safeguarding the environment, its stated goal is "to sustainably exploit and utilize Uganda's petroleum resources in a manner that maximizes in-country value addition, fosters equitable socio-economic development, and safeguards the environment." The policy is intended to consolidate the achievements of the earlier framework and address emerging challenges in

[67] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

[68] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.;National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

petroleum development in line with Uganda Vision 2040. Its environmental orientation includes the protection of natural assets, promotion of environmentally responsible petroleum operations and sound environmental and social management in the petroleum industry. [69]
Nevertheless, the existence of progressive policy commitments does not, by itself, establish effective environmental governance. The principal weakness is the limited legal enforceability of policy commitments, policies generally provide strategic direction rather than directly enforceable obligations. In a context characterized by rapid and large-scale land acquisition, significant investment in petroleum revenues and potentially irreversible ecological impacts, this distinction is consequential. Environmental objectives may therefore operate as guiding standards without necessarily constituting legally enforceable constraints on development decisions. This constitutes a gap between the appearance of regulation and its effective legal force.

A further weakness is the fragmentation of policy across the land, petroleum and environmental sectors. Environmental policy requires environmental assessment and protection, the petroleum policy is substantially concerned with resource development and investment, while land policy and administration continue to emphasize tenure, ownership and compensation and where these objectives are not integrated, compliance with one policy may occur at the expense of another. This produces a regulatory environment in which environmental safeguards can be treated as an additional project requirement rather than as an integral component of land-use and petroleum planning, land acquisition is not an isolated legal event, it's part of a wider chain of decisions concerning the location of petroleum facilities, infrastructure corridors, protected areas, settlements and agricultural land. If land acquisition decisions are made without integrating ecological information generated through environmental planning, environmental protection becomes reactive rather than preventive. The policy framework therefore requires stronger horizontal integration so that petroleum development objectives, land-use planning and environmental thresholds are considered together before acquisition decisions are finalized.[70]

[69] Ministry of Energy and Mineral Development, *National Petroleum Policy 2025* (2025).
[70] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

3.2.1 The National Land Policy, 2013

The Policy provides an important policy foundation for analyzing land acquisition for petroleum exploration and development. It seeks to ensure the efficient, equitable and sustainable utilization and management of Uganda's land resources for poverty reduction, wealth creation and socio-economic development. The Policy expressly recognizes the centrality of land to sectors such as energy, minerals, water, wildlife, forestry and agriculture and therefore envisages an integrated approach to land management and development.

The Policy is particularly relevant to petroleum-related land acquisition because it addresses three interconnected issues: the State's power of compulsory acquisition, the protection of land rights in areas containing petroleum and mineral resources, and the sustainable management of land and natural resources. These provisions provide an important policy benchmark against which the responsibility and fairness of land acquisition for petroleum exploration and development can be assessed.

The Policy takes a rights-based approach to compulsory acquisition. Under Policy Statement 11, it provides that: "The State, as a trustee for the Citizens of Uganda, shall exercise the power of compulsory acquisition responsibly and in the public interest."[71]

This policy commitment is significant because petroleum development may require substantial acquisition of land for production facilities, access roads, pipelines, processing infrastructure and other associated facilities. The Policy recognizes that compulsory acquisition is a significant exercise of State power and should not be treated merely as an administrative mechanism for making land available for investment. It links the power to the State's trustee relationship with citizens, public interest and responsible governance.

The Policy further proposes reforms to clarify the exercise of compulsory acquisition, including a uniform approach to prompt, adequate and fair compensation irrespective of tenure category, clear institutional responsibilities, and restitution of original owners where the public purpose justifying acquisition fails or expires.

These provisions are particularly relevant to petroleum development because they suggest that responsible acquisition should encompass more than the payment of compensation for

[71] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy* (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

identified physical assets. It should also involve lawful decision-making, accountability, clarity of institutional responsibility and protection of land rights throughout the acquisition process.
The most directly relevant provisions are contained in section 3.8 of the Policy, "Minerals and Petroleum." Policy Statement 29 provides that minerals and petroleum, as strategic natural resources, shall vest in the State "for the beneficial interest of all the Citizens of Uganda." [72]
However, the Policy expressly balances State interests in petroleum resources with the rights of persons and communities holding the surface land on which petroleum development occurs. In particular, Strategy 30(i) requires Government to: "Protect the land rights and land resources of customary owners, individuals and communities owning land in areas where mineral and petroleum deposits exist or are discovered."[73]

This is complemented by Strategy 30(ii), which requires Government to allow, "to the extent possible," the co-existence of customary owners, individuals and communities with petroleum and mineral activities. The Policy further calls for restitution of land rights where minerals or oil are exhausted or the relevant rights expire, depending on the mode of acquisition.[74]
These provisions are highly significant for responsible petroleum land acquisition. They indicate that the discovery of petroleum does not, as a matter of policy, automatically extinguish existing surface land rights. Rather, the preferred approach is to minimize displacement and promote coexistence where petroleum operations permit it. Permanent acquisition should therefore be justified by the actual requirements of the petroleum project rather than treated as the automatic consequence of the existence of petroleum resources.
The Policy adopts an important transparency and participation requirement in Strategy 30(v). It calls for an open policy on information to the public and for Government to seek the consent of communities and local governments concerning prospecting and mining of minerals and petroleum.[75]
Although the precise legal status of this policy commitment must be distinguished from binding statutory consent requirements, its significance is considerable. It establishes a policy expectation that petroleum decisions affecting land should not be undertaken exclusively

[72] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy* (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.; Land Acquisition Act, Cap 226, ss 2–7.
[73] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy* (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.
[74] Ministry of Lands, Housing and Urban Development, *The Uganda National Land Policy* (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.
[75] Ministry of Lands, Housing and Urban Development, *The Uganda National Land Policy* (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

through central Government institutions and petroleum companies. Communities and local governments are intended to have access to information and an opportunity to participate in decisions concerning resource development.

For land acquisition, this principle is relevant at an early stage, before the location and extent of petroleum infrastructure become fixed. Meaningful participation can allow communities to raise concerns concerning alternative sites, access routes, customary land rights, agricultural land, culturally significant areas and environmentally sensitive locations. In this sense, participation is not merely a procedural requirement but a mechanism for improving the substantive quality of land-acquisition decision. The Policy recognizes that Uganda faces degradation of forests, wildlife habitats, wetlands, fragile ecosystems, water catchments, riverbanks and water bodies, and attributes some of these problems to inappropriate land-use practices and investment activities. This is particularly important in the context of the Albertine Graben, where petroleum infrastructure may require acquisition and conversion of agricultural, forest, wetland and wildlife-adjacent land. Land acquisition should therefore be evaluated not simply according to the amount of land acquired and the compensation paid, but also according to the environmental function of that land and the consequences of its conversion.[76]

The Policy's Strategy 142 is particularly relevant. It calls for special protection of fragile ecosystems, including wetlands, water catchment areas, lake shores, riverbanks and sensitive biodiversity areas, and for discontinuation of the alienation of designated sensitive ecosystems through enforcement of applicable laws, regulations, guidelines and standards.[77]

This provision provides an important policy basis for requiring petroleum land-acquisition decisions to take environmental sensitivity into account before land is acquired. It supports the proposition that compensation alone should not legitimize acquisition where the proposed land use would be inconsistent with environmental protection requirements.

The Policy also links land acquisition and petroleum development to the public trust doctrine. Policy Statement 20 provides that; *the State shall manage and protect natural resources held under public trust for the common good of all Ugandans*. Strategy 21(v) further requires that: *large-scale investment decisions and activities should not compromise the sustainable management and conservation of natural resources*. The Policy also calls for participatory

[76] Ministry of Lands, Housing and Urban Development, The Uganda National Land Policy* (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

[77] Ministry of Lands, Housing and Urban Development, the Uganda National Land Policy (2013), Policy Statements 11, 29, 39, 57, 74 and 140; Strategies 30 and 142.

management with communities and mechanisms for benefit-sharing and compensation for foregone opportunities. This provides an important conceptual basis for evaluating petroleum land acquisition, Government's role is not simply to facilitate investment in petroleum resources; it must also act as a trustee of natural resources for present and future generations. Accordingly, petroleum development should be pursued in a manner that balances resource development, land rights, environmental protection and community interests.

There is significant limitation is the gap between policy commitment and legal enforceability. The NLP is a policy instrument rather than a comprehensive statute governing petroleum land acquisition. Several of its provisions are framed as strategies for future legislative, institutional or administrative reform. For example, the Policy proposed amendments to the Constitution, Land Act and Land Acquisition Act to clarify compulsory acquisition and compensation procedures. Consequently, the extent to which the policy safeguards can be directly invoked by affected persons depends on their incorporation into binding legislation, regulations, licensing conditions and administrative practice.[78]

There is also a potential mismatch between the Policy's recognition of layered and collective land interests and conventional compensation mechanisms. Valuation systems are generally better equipped to identify and compensate tangible assets such as land, houses, crops and structures than to quantify collective interests in communal land, cultural landscapes, ecosystem services, social networks and customary resources. This creates a risk that formal compensation may satisfy a narrow property-based assessment while failing to address the broader social and economic consequences of petroleum-related land acquisition.

3.3 Legal Framework

3.3.1 Constitutional Implications

The1995 Constitution of the Republic of Uganda, provides the primary foundation for the protection of property rights, compulsory acquisition of land, environmental protection and the stewardship of natural resources. Several constitutional provisions are particularly relevant to the acquisition and use of land for petroleum development and associated infrastructure in environmentally sensitive areas such as the Albertine Graben and these include; **Article 26** that establishes a fundamental protection against arbitrary deprivation of property, it provides that

[78] Land Acquisition Act, Cap 226, ss 2–7.

every person has the right to own property, either individually or in association with others, and that no person may be compulsorily deprived of their property except for public purpose, including public use, defense, public safety, public order, public morality or public health, and must be authorized by law providing for prompt payment of fair and adequate compensation before possession or acquisition[79]. The provision also guarantees affected persons access to a court of law where they have an interest or right in the property. Article 26 therefore constitutes an important safeguard against arbitrary state interference with land rights. In the context of environmental protection, however, its principal emphasis is on the legality of acquisition, the existence of a public purpose and the payment of compensation. It does not expressly require an acquiring authority to demonstrate that the selected site represents the least environmentally harmful alternative, nor does it expressly make ecological sustainability a constitutional prerequisite for compulsory acquisition. Consequently, land containing wetlands, forests, wildlife habitats, water systems or other ecologically important resources may, in principle, be acquired where the constitutional requirements relating to public purpose, legality and compensation have been satisfied.[80]

The relationship between property protection and environmental governance is further complicated by the fact that the Constitution does not expressly require environmental assessment as a condition precedent to compulsory acquisition. Environmental and social impact assessment is principally undertaken through environmental legislation and regulatory processes, which may occur after fundamental decisions concerning project location, land requirements or petroleum development have already been made. This creates the possibility of a reactive approach in which environmental assessment is used primarily to mitigate the effects of a development decision that has already been taken, rather than to determine whether the proposed acquisition is environmentally appropriate in the first place.[81]

Article 39 of the Constitution provides that every Ugandan has a right to a clean and healthy environment. This provision is particularly significant in the context of land acquisition for petroleum development because environmental degradation may affect public health, livelihoods, access to water, cultural interests and the quality of life of both present and future

[79] Article 26(2)(a) and (b) of the Constitution of the Republic of Uganda1995.
[80] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.
[81] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

generations. Nevertheless, the constitutional environmental right has not always been developed into a sufficiently robust standard for requiring the State to prevent, justify or reconsider land-acquisition decisions that may result in significant environmental harm.[82]

Ugandan environmental jurisprudence on the provisions of Article 26 and 29 of the 1995 Constitution of the Republic of Uganda demonstrates that courts can recognize environmental concerns and the role of public-interest litigation in protecting environmental resources. Decisions such as **Green-watch v Attorney General and National Environment Management Authority** and **National Association of Professional Environmentalists (NAPE) v AES Nile Power Ltd**[83] illustrates the significance of environmental considerations within Uganda's legal system, one of the challenges encountered by environmental litigation is that it may encounter procedural requirements, evidentiary difficulties and institutional deference to decisions made by public authorities. In large-scale infrastructure and petroleum projects, these challenges may make it difficult for affected communities or environmental organizations to obtain substantive judicial review of the environmental consequences of acquisition. Environmental protection may consequently become dependent on compliance with administrative and regulatory procedures rather than on a direct judicial assessment of whether the ultimate environmental outcome is constitutionally acceptable.

Additionally, the 1995 constitution of the republic of Uganda under the National Objectives and Directive Principles of State Policy reinforce the constitutional commitment to environmental protection. Objective XIII requires the State to protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora, on behalf of the people of Uganda, Objective XXVII similarly requires the State to promote sustainable development and public awareness concerning the balanced and sustainable management of land, air and water resources for present and future generations. It further requires natural resources to be utilized in a manner that responds to both development and environmental needs and directs the State to take measures to prevent or minimize damage to land, air and water resources. The Objective also requires the State and local governments to promote conservation, create and develop parks and reserves, and safeguard biodiversity.[84]

[82] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2) (b), 244(1) and National Objectives XIII and XXVII.
[83] Green watch v Attorney General and NEMA (Misc. Cause No 140 of 2002) [2012] UGHC 205
[84] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.

Although these provisions establish important constitutional environmental values, their practical effect may be constrained by questions concerning their direct enforceability. They are nevertheless significant interpretive principles that should guide the exercise of public power and the development and application of legislation. They provide a constitutional basis for understanding public interest more broadly than economic development or financial compensation alone. A purposive interpretation of the Constitution should therefore read Article 26 together with Article 39, Article 237(2) (b) and the National Objectives and Directive Principles of State Policy, such an approach would recognize environmental protection as a constitutional component of the public-interest inquiry rather than treating it solely as a matter to be addressed after land has been selected for acquisition. Before acquiring environmentally sensitive land, public authorities should be expected to establish the necessity of the acquisition, consider reasonably available alternatives, evaluate potential environmental and cumulative impacts, avoid irreversible harm where reasonably possible and provide appropriate measures for restoration and mitigation where harm cannot be avoided.[85]

The constitution also provides for the Public Trust Doctrine and under Article 237(2) (b)[86] it requires the Government or local government, as determined by Parliament, to hold in trust for the people and protect natural lakes, rivers, wetlands, forest reserves, game reserves, national parks and land reserved for ecological and touristic purposes for the common good of all citizens. The provision is particularly relevant to petroleum-related land acquisition where development activities affect wetlands, forests, wildlife habitats, water systems and other resources held for the benefit of the public. The public trust doctrine implies that the State should not exercise control over protected natural resources as though it were an unrestricted private owner, rather public authorities have a stewardship responsibility to manage such resources in a manner consistent with the interests of present and future generations. In the context of compulsory acquisition, this principle should require authorities to demonstrate that an acquisition affecting trust resources is necessary, proportionate and compatible with long-term environmental protection.

[85] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.
[86] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.

Properly applied, the doctrine could also strengthen the requirements for environmental assessment and decision-making. Public authorities should consider less environmentally harmful alternatives, cumulative environmental impacts, ecological integrity and the consequences of development for future generations. Where environmental degradation is unavoidable, appropriate mitigation, restoration and rehabilitation measures should form part of the decision-making process. The doctrine therefore has the potential to move constitutional analysis beyond a narrow focus on ownership and compensation towards a broader conception of the public interest that incorporates ecological sustainability.

Despite this potential, the public trust doctrine remains comparatively underdeveloped as a practical standard for reviewing government decisions concerning petroleum development, land acquisition and environmental approvals. This is particularly significant in the Albertine Graben, where the State may simultaneously act as a promoter of petroleum development, a recipient of petroleum revenues and a trustee of environmentally important resources. The combination of these functions creates a need for strong institutional safeguards to ensure that short-term development interests do not undermine the State's constitutional obligation to protect resources held for the common good.[87]

Uganda's Constitution[88] provides significant foundations for the protection of property rights, environmental rights and the public stewardship of natural resources. Nevertheless, it remains comparatively inadequate as a direct constitutional constraint on environmentally harmful land acquisition. The principal limitations arise from the compensation centered character of Article 26, the underdevelopment of the public trust doctrine, the limited practical enforceability of some constitutional environmental principles and the absence of an express requirement that environmental assessment precede compulsory acquisition. The constitutional framework is therefore normatively progressive but structurally incomplete in addressing the environmental implications of compulsory land acquisition, it protects private property and recognizes the importance of environmental protection, yet it does not expressly require ecological sustainability, cumulative-impact assessment or consideration of less environmentally harmful

[87] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139 of the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

[88] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.

alternatives as independent constitutional conditions for acquisition. This creates a situation in which the State may satisfy the formal requirements of Article 26 while environmental consequences remain insufficiently integrated into the constitutional assessment of whether acquisition is genuinely in the public interest.[89]

The constitutional framework would be strengthened through a purposive interpretation of the concept of public interest that incorporates ecological sustainability, the precautionary principle, intergenerational equity and the public trust doctrine. Such an interpretation would not eliminate the State's power to acquire land for legitimate development purposes, rather it would require that the exercise of that power be reconciled with the State's broader constitutional responsibilities to protect property, safeguard the environment and manage natural resources for the benefit of present and future generations.

Ultimately, the central constitutional deficiency is not the complete absence of environmental norms but the limited extent to which those norms constrain land-acquisition integrated with environmental decisions at the point when development choices are made. A stronger constitutional approach would require environmental considerations to form part of the initial public-interest assessment rather than being addressed only through subsequent mitigation measures. In the context of the Albertine Graben, this approach would provide a stronger basis for ensuring that petroleum development and associated land acquisition are consistent with ecological integrity, environmental justice, sustainable development and intergenerational equity.[90]

3.4 The Land Act, Cap. 236 and the Environmental Implications.

The Land Act is the principal legislation governing land tenure, ownership, management and administration in Uganda. It gives effect to the constitutional framework under which land is owned under tenures such as customary, freehold, mailo and leasehold. This framework is particularly significant in the Albertine Graben, where petroleum development and associated infrastructure may require access to or acquisition of land held under diverse tenure

[89] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.

[90] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139 National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

arrangements, including customary tenure and land occupied by lawful and bona fide occupants. The Act recognizes customary tenure and provides legal protection for lawful and bona fide occupants. Section 29 defines lawful and bona fide occupants, while section 31 confers security of occupancy on tenants by occupancy. These provisions are important in ensuring that land acquisition does not focus exclusively on registered title but also takes account of legally recognized occupancy interests.[91]

The Land Act nevertheless has a predominantly proprietary and administrative orientation. Its principal concerns are tenure, ownership, occupation, land management, transactions and compensation. This does not mean that the Act is indifferent to environmental protection, the land Act recognizes the constitutional mandate to environmental protection by expressly connects compulsory acquisition with public development, under Section 42 that provides for the Government or a local government to acquire land in accordance with Articles 26 and 237(2) of the Constitution, additionally is **Section 44** which expressly requires every person who owns or occupies land to manage and utilize it in accordance with environmental and natural-resource legislation, including the National Environment Act, the National Forestry and Tree Planting Act, the Mining and Minerals Act, the Water Act and the Uganda Wildlife Act. The act **Section 45**[92] further requires Government and local governments to hold in trust for the people and protect natural lakes, rivers, groundwater, wetlands, forest reserves, national parks and other land reserved for ecological and touristic purposes for the common good.[93]

These provisions establish an important legal principle: land ownership and occupation are not absolute rights and must be exercised consistently with environmental and natural-resource obligations. However, sections 44 and 45 do not create a comprehensive environmental assessment or ecological compensation regime for land acquisition. Environmental considerations therefore remain substantially dependent upon other legislation and regulatory processes. This is particularly important in the Albertine Graben, where petroleum-related land acquisition may affect wetlands, forests, agricultural land, water resources, wildlife habitats and other ecologically sensitive areas.[94]

[91] Land Acquisition Act, Cap 226, ss 2–7.
[92] Land Act Cap 236 Ss 45(1).
[93] Land Act, Cap 236, ss 44–45 of the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.
[94] Land Act, Cap 236, S 43–44, The Constitution of the Republic of Uganda 1995, art 26(2)(b).

3.5 Land Acquisition Act chapter 235 and Environmental Implications for Oil Exploration and Development

The Land Acquisition provides the principal statutory procedure for the compulsory acquisition of land for public purposes in Uganda. Its relevance to oil exploration and development arises through its interaction with the Land Act, Cap. 236, under which the prospecting, exploration, mining and extraction of petroleum resources and associated infrastructure constitute "public works". The Land Acquisition Act should therefore be understood as providing the procedural machinery through which land may be compulsorily acquired, while the Land Act, the Petroleum (Exploration, Development and Production) Act, 2013 and environmental legislation provide the broader substantive framework governing petroleum activities, land rights and environmental protection.[95] We are to analyze the provisions of the act and look at whether compulsory land acquisition for oil and gas projects in the Albertine Graben takes into consideration the environmental implications and as follows;

3.5.1 Public purpose and acquisition of land for petroleum development

The starting point is section 3(1) of the Land Acquisition Act[96], which empowers the Minister, where satisfied that land is required by Government for a public purpose, to make a declaration to that effect by statutory instrument. Section 3(2) requires the declaration to identify the location and approximate area of the land and, where a plan exists, specify where and when it may be inspected. Section 3(3) further requires the declaration to be served on the registered proprietor or controlling authority and, where the proprietor is not the occupier, on the occupier.[97]

This requirement is important in the Albertine Graben because petroleum projects may affect land under different forms of tenure and occupation. The requirement to notify the occupier, in addition to the registered proprietor, supports a broader understanding of affected interests and reduces the risk that compulsory acquisition will proceed solely on the basis of registered title.[98] The relationship between the Land Acquisition Act and petroleum development is strengthened

[95] Land Acquisition Act, Cap 226, ss 2–7, the Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.
[96] Land Acquisition Act Cap 235.
[97] Land Acquisition Act, Cap 226, ss 2–7.
[98] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139 of the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

by section 74 of the Land Act, which provides for public works and expressly includes the prospecting, exploration, mining and extraction of petroleum resources and associated works. Thus, although the Land Acquisition Act does not itself identify petroleum exploration as a category of public purpose, the Land Act establishes the statutory link between petroleum development and the compulsory-acquisition framework.[99]

This statutory arrangement reflects the constitutional position under Article 244(1) of the Constitution, which vests property in and control of petroleum in, on or under land or waters in Uganda in the Government on behalf of the Republic, subject to Article 26. Petroleum ownership by the State, however, does not extinguish private or customary interests in the surface land. Those interests remain subject to the constitutional and statutory safeguards governing acquisition and compensation.[100]

3.5.2. Entry onto land and preliminary investigations according to the Land Acquisition Act cap 236.

Section 2 of the Land Acquisition Act permits an authorized person to enter land for the purpose of determining its suitability for a public purpose. The authorized person may survey the land, dig or bore into the subsoil, remove samples and undertake other necessary activities. Importantly, section 2(2) requires Government to compensate a person who suffers damage as a result of exercising these powers, while section 2(3) provides for disputes concerning such compensation to be referred to court.[101] This provision is relevant to petroleum exploration because preliminary investigations can themselves disturb land, crops, soils and other resources before formal acquisition occurs. The compensation obligation under section 2 therefore provides a limited safeguard against uncompensated physical damage caused by preliminary investigations.[102]

However, the provision is primarily concerned with physical damage and compensation, rather than environmental assessment. It does not require the authorized officer to demonstrate that the proposed investigation represents the least environmentally damaging alternative, nor does it establish an ecosystem-based assessment of the consequences of surveying, drilling,

[99] Land Act, Cap 236, s 74 and the Land Acquisition Act, Cap 226, ss 2–7.
[100] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.
[101] Land Acquisition Act, Cap 226, ss 2–7.
[102] Land Acquisition Act, Cap 226, ss 2–7.

sampling or other preliminary activities. For petroleum projects, this gap is addressed more directly by the Petroleum (Exploration, Development and Production) Act, cap 161 and the National Environment Act cap 181, which provide environmental and social assessment, pollution-control and petroleum-sector safeguards. For example, the National Environment Act requires environmental and social impact assessment of qualifying projects and expressly requires cumulative effects to be considered.[103]

3.5.3 Notice and participation of affected persons

Section 5 of the Land Acquisition Act provides an important procedural safeguard. Following publication of a declaration, the assessment officer must publish and exhibit a notice stating that Government intends to take possession of the land and inviting claims for compensation. The notice must require persons having an interest in the land to appear before the assessment officer and state: the nature of their respective interests; the amount and particulars of their compensation claims and any objections to the land plan.[104] The notice must ordinarily provide between 15 and 30 days for affected persons to appear, unless the Minister directs otherwise and copies must also be served on the registered proprietor and, where different, the occupier. This provision is particularly significant for the Albertine Graben because petroleum-related acquisition may affect customary landholders, tenants by occupancy, lawful and bona fide occupants, farmers and other persons whose interests may not be fully reflected in the land register. Section 5 therefore provides a mechanism through which potentially affected persons can bring their interests to the attention of the assessment officer.[105]

From an environmental perspective, however, the participation mechanism is principally directed towards property interests and compensation claims. It does not expressly require the assessment officer to consult communities concerning ecological impacts, ecosystem services, biodiversity, cultural landscapes or cumulative environmental effects. Environmental participation therefore has to be supplemented through the environmental and petroleum regulatory framework.

[103] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020 and the Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.
[104] Land Acquisition Act, Cap 226, ss 2–7.
[105] Land Acquisition Act, Cap 226, ss 2–7.

3.5.4 Inquiry, assessment and award

Section 6(1) requires the assessment officer, following the section 5 notice, to conduct an inquiry into claims and objections and to make an award specifying the true area of land, the compensation considered payable and the apportionment of compensation among persons known or believed to have an interest in the land. Section 6(4) requires the award to be served on relevant persons and provides for payment of compensation after expiry of the applicable appeal period, subject to the statutory exceptions in section 6(5).[106] This procedure promotes procedural fairness by requiring the assessment officer to identify affected interests and determine the allocation of compensation. It is particularly important in areas where multiple interests may exist over the same land.

Nevertheless, the inquiry remains essentially a land and compensation inquiry. The Act does not expressly require the assessment officer to determine whether the proposed acquisition would cause significant environmental harm, whether alternative sites or routes exist, or whether the acquisition would contribute to cumulative environmental impacts. This distinction is important in the Albertine Graben. A compensation inquiry may determine the value of a parcel of agricultural land, crops and buildings without necessarily accounting for the ecological functions performed by wetlands, forests, wildlife corridors, water sources or other natural systems located on or connected to the acquired land.[107]

3.5.5 Taking possession and the effect of the decision in Irumba Asumani

The most significant constitutional issue arises under section 7(1) of the Land Acquisition Act. In its original form, the provision permitted an assessment officer to take possession after making an award under section 6 and, where the Minister certified that it was in the public interest, even after publication of the declaration. Section 7(2) provided that upon taking possession the land vested in the Uganda Land Commission and the interests of persons previously holding interests in the land were converted into claims for compensation.[108] This provision was considered by the Supreme Court in Uganda National Roads Authority v Irumba & Another[109]. The Supreme Court upheld the constitutional challenge to section 7(1) to the

[106] Land Acquisition Act, Cap 226, ss 2–7.
[107] Land Act, Cap 236, ss 29, 31, 43–45, 60, 74 and 78 and the Constitution of the Republic of Uganda 1995, art 26(2)(b).
[108] Land Acquisition Act, Cap 226, s 2–7.
[109] Constitutional Appeal No. 02 of 2014 [2015] UGSC 131

extent that it permitted Government to take possession of property before prior payment of compensation. The Court therefore held that the provision was inconsistent with Article 26(2) of the Constitution insofar as it did not require prior payment of compensation before compulsory acquisition or taking possession.[110]

The significance of Irumba Asumani for petroleum-related land acquisition is substantial, Article 26(2)[111] requires prompt payment of fair and adequate compensation prior to taking possession or acquisition, together with access to a court of law. The decision therefore establishes that compulsory acquisition cannot lawfully be reduced to a process in which Government takes possession first and resolves compensation afterwards.[112] For the Albertine Graben, this protection is especially important because petroleum projects can result in substantial displacement and loss of agricultural, residential and livelihood resources. Prior compensation strengthens the bargaining and protective position of affected landholders and reduces the risk of irreversible displacement without adequate financial protection.[113] At the same time, Irumba Asumani demonstrates the limitation of a compensation-centered conception of land acquisition, the case primarily protects the proprietary right of the affected person; it does not establish a requirement that compulsory acquisition be environmentally sustainable.

3.5.6 Environmental protection: limitations of the Land Acquisition Act

A critical limitation of the Land Acquisition Act is that it contains no comprehensive environmental-protection regime. Its principal provisions address: the power to enter and examine land under section 2, declaration of land required for a public purpose under section 3, plans under section 4, notice and identification of interests under section 5, inquiry and compensation awards under section 6, taking possession under section 7 and related procedures concerning compensation and disputes.[114] The Act therefore regulates how land is acquired, rather than comprehensively determining whether acquisition is environmentally appropriate, this is particularly significant for oil exploration and development, Petroleum activities may

[110] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII and the Land Acquisition Act, Cap 226, ss 2–7.
[111] 1995 Constitution of the Republic of Uganda.
[112] Constitution of the Republic of Uganda 1995, arts 26, 39, 237(2)(b), 244(1) and National Objectives XIII and XXVII.;*Uganda National Roads Authority v Irumba and Another* (Constitutional Appeal No 02 of 2014) [2015] UGSC 131.
[113] Land Act, Cap 236, ss 29, 31, 43–45, 60, 74 and 78.;Constitution of the Republic of Uganda 1995, art 26(2)(b).
[114] Land Acquisition Act, Cap 226, ss 2–7.

require roads, pipelines, well pads, processing facilities, storage infrastructure and other associated facilities, and their impacts can extend beyond the boundaries of the individual parcels acquired. A parcel-by-parcel acquisition process may consequently fail to capture cumulative effects such as fragmentation of wildlife habitats, loss of agricultural land, degradation of wetlands, alteration of drainage patterns and pressure on water resources.[115]

The absence of an express environmental test in the Land Acquisition Act does not, however, mean that petroleum-related acquisition is exempt from environmental regulation. The National Environment Act, 2019 establishes an environmental and social impact assessment framework, including consideration of cumulative effects, while the Petroleum (Exploration, Development and Production) Act, 2013 regulates petroleum activities and provides for environmental management and impact assessment. The National Environment Act specifically recognizes cumulative environmental and social impacts and permits environmental risk assessment in relation to petroleum commodities and activities presenting significant ecological risks.[116]

Accordingly, the appropriate legal interpretation is that the Land Acquisition Act cannot be applied in isolation to petroleum development. Compulsory acquisition must operate alongside environmental and petroleum legislation.[117]

3.6 Petroleum Legislation and Implications for Land Acquisition and Environmental Governance in the Albertine Graben

Petroleum legislation constitutes an important component of the legal framework governing land acquisition and environmental protection in the Albertine Graben. The principal legislation is the Petroleum (Exploration, Development and Production) Act Chapter 161, together with regulations made under it. The Act was enacted to establish a comprehensive framework for petroleum exploration, development, production, cessation and decommissioning, while ensuring public safety and protection of public health and the environment. It expressly requires

[115] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020, the Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.
[116] Land Acquisition Act, Cap 226, ss 2–7, the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.
[117] Land Acquisition Act, Cap 226, ss 2–7.

petroleum activities to comply with environmental principles and safeguards under the National Environment Act and other applicable laws.[118]

The adequacy of the petroleum legislation must, however, be assessed not only by examining its environmental safeguards in isolation but also by considering how petroleum development interacts with land acquisition, biodiversity conservation, community rights and environmental governance. This is particularly important in the Albertine Graben, where petroleum infrastructure including well pads, roads, pipelines, processing facilities and associated infrastructure requires access to and, in some cases, acquisition or restriction of land. The petroleum framework therefore has significant implications for the distribution of environmental burdens, the security of land rights and the protection of ecologically sensitive areas[119] and law by law can be analyzed as follows;

3.6.1 Petroleum (Exploration, Development and Production) Act Chapter 161

The Petroleum (Exploration, Development and Production) Act, chapter 161 regulates upstream petroleum activities, including reconnaissance, exploration, development, production, and cessation and decommissioning. It establishes the licensing regime and assigns regulatory responsibilities to the Minister responsible for petroleum and the Petroleum Authority of Uganda. The Act expressly identifies protection of public health and the environment as one of its purposes and requires licensees and persons exercising functions under the Act to comply with environmental principles and safeguards under the National Environment Act and other applicable legislation.[120]

The Act therefore provides an important legal foundation for environmental governance in the petroleum sector. Its adequacy is strengthened by provisions requiring environmental assessment, environmental protection measures in field development plans, and environmental

[118] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020, the Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.
[119] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139, the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.
[120] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020, the Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.

impact assessment as a condition of petroleum production licenses, pollution liability, and restoration and decommissioning. For example, section 71(2)(i)[121] requires a field development plan to include an assessment of the potential effects of petroleum activities on the environment and social activities, measures for environmental protection and the effects of development on land use. Section 76(1) (f) further requires a petroleum production license to require the licensee to carry out an environmental impact assessment.[122] Nevertheless, the Act is principally designed to facilitate the orderly exploration, development and production of petroleum resources. Environmental protection is integrated into this framework but remains substantially dependent upon its interaction with the National Environment Act and other sectoral legislation. This creates a potential governance gap where petroleum development decisions are taken before the full ecological, social and cumulative implications of land acquisition and associated infrastructure have been adequately considered.[123]

The distinction is particularly significant in the Albertine Graben. A regulatory framework that focuses primarily on managing environmental impacts after a petroleum development pathway has been selected may reduce individual project impacts but may be less effective in determining whether particular developments should proceed in ecologically sensitive locations. Environmental governance should therefore extend beyond mitigation of project impacts to include avoidance, alternative site selection, ecological thresholds and cumulative impact considerations at the earliest stages of petroleum planning.[124]

Additionally, the Act contains some mechanisms for integrating environmental considerations into decisions concerning petroleum areas and production, starting from evaluating areas proposed for petroleum activities, environmental impacts, pollution risks and economic and social effects are relevant considerations, the Act also requires public views to be considered before an area is declared open for petroleum activities.[125] At the development stage, the environmental safeguards are more explicit and section 71 requires a field development plan to include environmental protection measures and information concerning the effects of development on land use, section 72 prevents substantial contractual obligations or construction

[121] Petroleum (Exploration, Development and Production) Act Cap 161.
[122] Petroleum (Exploration, Development and Production) Act Cap 161.
[123] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.
[124] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139, the National Environment Act 2019, Cap 181 and the National Environment (Environmental and Social Assessment) Regulations 2020.
[125] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.

from commencing before approval of the field development plan, while section 76 requires environmental impact assessment as part of the production licensing framework.[126]

These provisions demonstrate that the petroleum framework does not completely separate licensing from environmental considerations. However, an important limitation remains: environmental assessment is more strongly institutionalized at the project and field-development level than at the broader strategic level. The legislation does not establish a comprehensive strategic environmental assessment mechanism specifically for petroleum licensing that would systematically compare alternative development scenarios, ecosystem-level impacts, climate implications, biodiversity sensitivity and cumulative impacts across the Albertine Graben.[127] This is significant because once petroleum licenses, field development plans and associated land requirements have been approved, considerable economic and institutional commitments may already have been made. Land acquisition can consequently become an implementation requirement rather than a decision that remains open to reconsideration. A stronger framework would ensure that environmental and land-use considerations influence the choice of development options before substantial commitments to land acquisition and infrastructure are made.

The institutional structure also requires effective coordination. The Minister, Petroleum Authority of Uganda, National Environment Management Authority, Uganda Wildlife Authority, National Forestry Authority, local governments and land administration institutions exercise different responsibilities. Although this division of functions allows for sectoral expertise, it can also generate fragmentation. Effective environmental governance therefore requires clear coordination mechanisms, information sharing and mechanisms for resolving conflicts between petroleum development objectives and environmental protection mandates.

3.6.2 Biodiversity and Ecologically Sensitive Areas

The Albertine Graben contains national parks, wildlife habitats, forests, wetlands, Lake Albert and other areas of high ecological significance. Petroleum development in or near such areas therefore presents environmental risks that cannot always be addressed through conventional

[126] The Petroleum (Exploration, Development and Production) Act 2013, Cap 161, s 71.
[127] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138, section 139 of the National Environment Act 2019, Cap 181 and the National Environment (Environmental and Social Assessment) Regulations 2020.

mitigation measures.[128] The Petroleum Act recognizes this concern by imposing restrictions on petroleum activities in protected and environmentally sensitive areas. Section 135(1)(c), for example, requires relevant authorization for petroleum activities in national parks, wildlife reserves and forest reserves. However, the Act does not itself establish a comprehensive biodiversity conservation regime or detailed ecological exclusion zones for all categories of environmentally sensitive areas.[129] Protection of biodiversity consequently depends heavily on the interaction between petroleum legislation and the National Environment Act, wildlife legislation, forestry legislation, wetlands regulation and protected-area governance. This integrated approach is necessary because petroleum impacts frequently cross sectoral boundaries. Nevertheless, it may also result in fragmented decision-making if the different institutions apply different standards or priorities.[130]

For the Albertine Graben, however, biodiversity governance should go beyond project-specific mitigation. Petroleum decisions should incorporate habitat connectivity, wildlife movement corridors, ecological thresholds, cumulative impacts and ecosystem services. Where ecological values are irreplaceable, the law should favor avoidance rather than treating environmental damage as an impact that can always be mitigated or compensated.[131]

3.6.3 Pollution, Liability, Restoration and Decommissioning

Petroleum operations create risks of oil spills, drilling-waste contamination, produced-water pollution, chemical releases, soil degradation and damage to water systems and biodiversity. The Petroleum Act contains significant liability provisions. Section 130 establishes liability of a licensee for pollution damage without regard to fault, subject to specified circumstances, while section 139(4) requires restoration of land affected by petroleum activities. The Act also provides for cessation and decommissioning of petroleum facilities.[132] These provisions represent important strengths of the petroleum environmental governance framework. In

[128] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and section 139 of the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

[129] Petroleum (Exploration, Development and Production) Cap 161, ss 71, 76, 130, 135, 138

[130] National Environment Act 2019, Cap 181, the National Environment (Environmental and Social Assessment) Regulations 2020.

[131] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and section 139 of the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

[132] The Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.

particular, liability without regard to fault strengthens the polluter-pays principle by placing responsibility for pollution damage on the petroleum operator rather than requiring affected persons to establish negligence.

However, environmental liability should be considered together with the practical capacity to finance long-term remediation and restoration. Petroleum-related environmental damage may become apparent years after an activity has ceased. Effective governance therefore requires adequate financial security, decommissioning arrangements, environmental restoration funds and monitoring mechanisms capable of operating beyond the productive life of a petroleum project.[133] Restoration should also be understood in ecological rather than merely physical terms, removing infrastructure, filling excavations and replanting vegetation may not restore the ecological functions of a wetland, forest, wildlife habitat or water system, restoration obligations should therefore include measurable ecological recovery objectives, biodiversity considerations, water-quality standards and long-term monitoring.

3.7 The Petroleum (Exploration, Development and Production) Regulations, 2016 (S.I No 47 of 2016)

The Petroleum (Exploration, Development and Production) Regulations, 2016 (S.I No 47 of 2016) operationalize the Petroleum (Exploration, Development and Production) Act, cap 161 and provide more detailed requirements for petroleum operations. The Regulations should be read together with the Petroleum (Exploration, Development and Production) (Health, Safety and Environment) Regulations, 2016, which establish more specific requirements relating to health, safety and environmental management.[134]

The regulatory framework is therefore broader than the principal Act alone. The general Petroleum Regulations provide the operational framework for upstream petroleum activities, while the Health, Safety and Environment Regulations strengthen requirements concerning environmental management, pollution prevention, occupational health and safety and emergency preparedness. The Regulations are consequently important in translating the broad environmental obligations in the Act into operational requirements.[135] Nevertheless, the

[133] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.
[134] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.
[135] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.

existence of detailed regulations does not by itself resolve the broader governance challenge. The central issue is whether petroleum operations are being assessed within an integrated land-use and environmental governance framework. In the Albertine Graben, petroleum infrastructure interacts with agricultural land, settlements, protected areas, forests, wetlands, fisheries and other natural resources. Effective regulation therefore requires coordination between petroleum regulation, land administration, environmental assessment, wildlife conservation and local government planning.[136]

3.8 Environmental Laws (The National Environment Act Cap 181, The National Environmental (Environmental and Social Assessment Regulations) 2020

The central question is not simply whether the law requires environmental assessment, but whether it sufficiently integrates the decision to acquire and convert land with the prevention, assessment and management of environmental harm. This distinction is important because land acquisition may be lawful as a matter of property law while the project enabled by that acquisition may still create unacceptable ecological risks. The Act and Regulations establish a relatively comprehensive preventive framework. They recognize environmental rights and principles, allocate duties to developers and public authorities, require environmental and social assessment for prescribed projects, and provide for mitigation, monitoring and enforcement, the analysis therefore distinguishes the content of the legal rules from any claim about how effectively public institutions have implemented them.

3.8.1. The National Environment Act Cap 181.

The National Environment Act, Cap 181, provides the statutory foundation for environmental protection and management in Uganda. Section 3 recognizes the right to a clean and healthy environment, while section 4 addresses the rights of nature and section 5 sets out principles for environmental management. Read together, these provisions frame environmental protection as a substantive legal concern rather than a discretionary consideration to be weighed only after development choices have effectively been made. For land acquisition connected to oil and gas projects, the implications are significant: a decision to assemble land for roads, well pads, processing facilities, camps or pipelines should be assessed in light of the environmental consequences of the resulting land-use change, not merely the validity of the title transfer or

[136] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and section 139 of the National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

the adequacy of monetary compensation[137]. A critical strength of the Act is that it treats environmental governance as a matter involving both public institutions and private developers. The National Environment Management Authority (NEMA) has central regulatory responsibilities under the Act, while lead agencies retain sectoral functions. This institutional design can support specialist review and coordination across sectors. Yet it also creates a governance risk for example where petroleum development involves several approvals, agencies may evaluate different aspects of a project without fully integrating land-use planning, environmental protection, wildlife conservation, water management and petroleum-sector priorities. The statutory framework must consequently be applied in a coordinated manner, with NEMA's assessment role operating as a substantive safeguard rather than a procedural formality[138].

Part X of the Act is central to the present research as Section 110 identifies the purpose of environmental and social impact assessment, section 111 places responsibility on the developer, section 112 provides for projects requiring project briefs, section 113 addresses categorization of projects for environmental and social impact assessment, section 114 concerns environmental risk assessment and section 115 establishes a mitigation hierarchy and provides for biodiversity or other offsets and compensation mechanisms. Section 116 addresses decommissioning[139]. These provisions create a project-cycle framework intended to identify and manage risks before and during implementation, rather than leaving environmental protection entirely to remedies after damage has occurred.

The legal significance of section 111 is that responsibility for assessment rests with the developer, even where the assessment is prepared by qualified practitioners. This makes the developer accountable for the information submitted and for taking the assessment seriously throughout the project lifecycle. Nevertheless, because the developer is also the party seeking approval and anticipating commercial benefit, the framework depends on independent scrutiny by NEMA and relevant lead agencies. The existence of a developer-prepared assessment should not be treated as proof that environmental risks have been adequately addressed; its adequacy depends on the quality of baseline information, the completeness of the alternatives considered, the treatment of uncertainty, the proposed mitigation measures and the regulator's reasoned evaluation.

[137] National Environment Act, Cap 181 (formerly National Environment Act 2019, Act 5 of 2019) ss 3–5.
[138] National Environment Act, Cap 181 ss 8–9; see also ss 122–133 on compliance monitoring and enforcement
[139] National Environment Act, Cap 181 ss 110–116

The distinction between a project brief and a detailed environmental and social impact assessment is especially important. A brief may be suitable for activities whose likely effects can be adequately understood and controlled through a less intensive process, for major petroleum developments however, the potential for significant, interrelated or long-term impacts makes the threshold for requiring detailed assessment a central safeguard. If project components are treated in isolation, the assessment may fail to reveal how land clearance, access roads, worker settlements, water abstraction, waste facilities and pipelines interact. The statutory framework is strongest when categorization reflects the real scale and connected character of the development, rather than the narrow description of an individual component.

Section 115's mitigation hierarchy is also material to land acquisition. In principle, environmental harm should first be avoided, then minimized and restored where possible, with offsets or compensation considered for residual impacts in accordance with the applicable legal requirements. This ordering matters because financial compensation to a landowner is not equivalent to ecological compensation and does not itself remedy damage to a wetland, habitat, water system or ecosystem service. Nor should biodiversity offsets be used to justify avoidable damage where alternatives exist. A rigorous application of the hierarchy requires the decision-maker to examine whether a different site, route, design or technology could prevent harm before relying on mitigation or offset measures.

The Act's express attention to decommissioning under section 116 is a further strength, environmental consequences may persist after construction and production cease, and including contaminated land, abandoned infrastructure, disturbed drainage and incomplete restoration. In the context of land acquired for petroleum projects, the regulatory assessment should therefore account for the end-of-life condition of the site and the means by which restoration will be funded and verified. A framework that evaluates only construction and operational phases risks externalizing long-term environmental costs to local communities and the state.

3.8.2 The National Environment (Environmental and Social Assessment) Regulations, 2020.

The National Environment (Environmental and Social Assessment) Regulations, 2020 (S.I. No. 143 of 2020), give procedural effect to the Act's environmental and social assessment regime. Regulation 3 applies the Regulations to projects requiring project briefs, environmental and social impact studies or environmental risk assessment, projects proposed in or near environmentally sensitive areas, similar projects undertaken together or within the same landscape, and redevelopment or expansion of an existing project. Regulation 4 prohibits

implementation of a covered project without NEMA's certificate of approval and prevents a public authority from issuing a relevant license, permit or approval without proof of that certificate. Regulation 5 places responsibility on the developer and requires environmental and social assessments to be taken into account throughout the project lifecycle[140] regulation 5 is significant because it allows NEMA to defer a project brief and require redesign, an alternative technology or an alternative location, request further information; or reject a project. It also requires a detailed assessment where significant environmental, health, socio-economic or cultural impacts are likely, or where proposed mitigation is insufficient. These powers indicate that environmental assessment is not legally intended to be a rubber-stamping exercise. NEMA can require changes to the proposed project itself, which is more preventive than simply attaching conditions to an otherwise unchanged proposal. Regulation 6 of the regulations sets the projects to which project briefs are required, and the regulation points to section 112 of the act[141]and set out in schedule 4 of the act. Schedule 4 of the act is relevant to the research because it sets out petroleum activities and operations as those requiring project briefs, thereby setting a regulatory framework to curb environmental effects.

The Regulations' schedules strengthen the substantive content of assessment. Schedule 2 requires consideration of ecological matters including biodiversity, vegetation regeneration, soil productivity, fish and animal populations, aquatic and wetland resources, the livelihoods of communities dependent on living natural resources, ecosystem functions and services, and surface- and groundwater hydrology. It also identifies physical-environment matters such as water quantity and quality, rivers and drainage systems, lakes, springs and aquifers, air quality, waste and pollution management, and climate-related considerations[142]. These requirements are directly relevant to the Albertine Graben, where the environmental implications of land conversion cannot be reduced to the number of hectares acquired: the significance of a site also depends on its ecological sensitivity, connectivity, hydrological role and use by affected communities. Schedule 5, paragraph 3, sets out the information expected in an environmental and social impact statement. It requires a description of the project and its physical boundaries for linear activities, a description of the route and analysis of site-selection procedures and alternative routes; evaluation of project alternatives, including a zero or no-project alternative; baseline environmental and socio-economic conditions; assessment of environmental, health, social, economic and cultural impacts across project phases; assessment of climate-related

[140] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regs 3–5.
[141] National Environment Act Cap 181.
[142] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 2

impacts; consideration of alternative resettlement areas or compensation plans where relevant; assessment of secondary or cumulative impacts; residual-impact and offset proposals; an environmental management and monitoring plan; and evidence of stakeholder consultation[143].

3.8.2.1 Critical assessment: strengths and limitations.

The principal strength of the Act and Regulations is the breadth of the preventive assessment framework. It combines environmental rights and management principles with project categorization, developer responsibility, environmental risk assessment, alternatives analysis, a mitigation hierarchy, cumulative-impact assessment, public consultation, monitoring and decommissioning. The Regulations' explicit treatment of projects in the same landscape and of secondary or cumulative impacts is especially pertinent to petroleum development, where ecological effects may extend beyond the boundaries of an individual parcel or facility.

The environmental framework has its limitations that may include the following;

1. The first limitation is that the framework is substantially organized around projects and their assessment documents. A project-level assessment can be detailed yet still be inadequate if the wider spatial and strategic context is not assessed. Where multiple petroleum-related developments are planned within the same ecosystem, effective protection requires coherent baseline information, coordination among competent authorities and a clear explanation of how the combined effects are considered. The Regulations mitigate fragmentation risk but do not, on their face, eliminate it. This is particularly important where development decisions are sequential and the environmental consequences of earlier approvals constrain the alternatives available for later projects.
2. A second limitation concerns the distinction between procedural compliance and substantive environmental protection. Submission of an impact statement, consultation record and management plan does not itself establish that the selected site is the least damaging feasible option or that mitigation will be effective. The Act's powers to require further information, redesign or rejection are therefore crucial. A robust application of the law should demonstrate reasoned scrutiny of baseline data, alternatives, uncertainty, cumulative effects, residual impacts and the enforceability of proposed mitigation. Where these matters are not transparently addressed, the assessment may meet documentary expectations without adequately protecting the environment.

[143] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 5 para 3(c)–(e), (j)–(s).

3. A third limitation concerns the relationship between mitigation, offsetting and compensation. The statutory mitigation hierarchy is a sound principle, but offsets should not be treated as an interchangeable substitute for avoiding or minimizing damage to irreplaceable or highly sensitive ecosystems. Nor can compensation paid for acquired land be treated as compensation for loss of biodiversity or ecosystem services. The legal analysis should insist on clear identification of residual impacts, a reasoned justification for any offset, and monitoring capable of verifying whether the promised ecological outcome has been achieved.
4. A fourth issue is the implementation gap, which must be handled carefully in a doctrinal thesis. The legislation establishes duties and powers, but it does not by itself prove whether regulators have sufficient resources, whether monitoring has been consistent, or whether individual developers have complied. Those propositions require evidence from judgments, official reports, approved assessment documents, audit reports or other reliable documentary sources. In the absence of such evidence, the defensible conclusion is that the framework creates legal mechanisms whose effectiveness depends on institutional practice—not that implementation has necessarily failed. This distinction preserves the doctrinal character of the research and avoids presenting assumptions as findings.

Finally in conclusion, the framework does not merge environmental assessment with land acquisition law into a single decision-making process. Environmental assessment can inform site selection and mitigation, but it does not replace the constitutional and statutory rules on compulsory acquisition, land tenure, valuation, compensation and resettlement. This separation creates a risk that environmental concerns are considered after land acquisition decisions have already narrowed practical options. A more integrated approach would require environmental assessment to influence the identification and selection of land at the earliest feasible stage and to be coordinated with land-use planning and acquisition procedures.

3.9 Conclusion

Uganda’s regulatory framework provides a substantial legal and institutional foundation for addressing the environmental implications of land acquisition in the Albertine Graben. The Constitution protects property and environmental rights and establishes principles for the stewardship of natural resources; the Land Act provides safeguards relating to tenure and compensation; the National Environment Act establishes environmental principles, assessment procedures and institutional oversight; and petroleum legislation imposes environmental

obligations throughout the petroleum lifecycle. Nevertheless, these safeguards remain insufficiently integrated, inconsistently enforced and, in practice, frequently subordinated to the imperatives of petroleum development.[144]

The principal weakness is therefore not the absence of environmental regulation, but the fragmented and predominantly project-oriented character of the existing framework. Land acquisition continues to be addressed largely through questions of ownership, public purpose and compensation, while environmental consequences are considered under separate processes. Although ESIA provides an important safeguard, it does not adequately address the cumulative, indirect and landscape-scale impacts arising from multiple petroleum developments. Similarly, SEA has not consistently operated as a binding strategic mechanism capable of shaping petroleum licensing, infrastructure planning and ecological zoning. Institutional fragmentation, limited coordination and information sharing further weaken effective oversight.

The framework is consequently best characterized as procedurally developed but substantively and institutionally incomplete. It is relatively effective in authorizing land acquisition, processing compensation and managing environmental impacts at the individual project level, but less effective in preventing environmentally harmful acquisitions, protecting ecosystem integrity, addressing cumulative impacts and ensuring meaningful community participation before strategic decisions become irreversible. Existing compensation mechanisms also remain focused primarily on proprietary loss and do not adequately recognise ecosystem services, collective environmental interests or the costs of long-term ecological restoration. Preventive and accountability mechanisms—including requirements for less harmful alternatives, ecological thresholds, financial assurance, clear liability and enforceable post-closure obligations also require strengthening.

Reform should therefore prioritize early and integrated environmental decision-making, ensuring that environmental considerations inform land acquisition, petroleum licensing and infrastructure planning from the outset. SEA outcomes should have binding influence on strategic decisions, while cumulative-impact thresholds and ecological exclusion or protection

[144] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

zones should be established for environmentally sensitive areas. Compensation and restoration frameworks should better recognize ecosystem services and collective environmental loss. At the institutional level, stronger coordination, independent oversight and integrated information systems are required, alongside meaningful community participation supported by adequate access to information and technical capacity. Finally, stronger liability, financial-assurance and decommissioning requirements should be adopted to ensure that environmental risks and long-term restoration costs are not transferred to affected communities or the State.[145]

Taken together, these reforms would shift Uganda's regulatory approach from one that primarily manages the consequences of land acquisition and petroleum development to one that more effectively prevents avoidable environmental harm and safeguards ecological integrity at the landscape level. Such an approach would better reconcile petroleum development with Uganda's constitutional commitment to environmental stewardship and the long-term social, ecological and economic interests of the Albertine Graben.[146]

[145] National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

[146] Petroleum (Exploration, Development and Production) Act 2013, Cap 161, ss 71, 76, 130, 135, 138 and 139.National Environment Act 2019, Cap 181; National Environment (Environmental and Social Assessment) Regulations 2020.

CHAPTER FOUR:

COMPARATIVE ANALYSIS WITH INTERNATIONAL AND NATIONAL STANDARDS

4.1 Introduction

This chapter examines the extent to which international environmental standards and comparative legal approaches can assist in evaluating Uganda's legal framework. It considers the legal status of international instruments, the reasoning of selected judicial decisions and particular regulatory mechanisms adopted in Tanzania, Nigeria, and Ghana. The comparison is intended to identify relevant legal principles and institutional safeguards rather than suggest that foreign legislation automatically applies in Uganda. The chapter adopts a doctrinal and comparative approach, it examines legal instruments, statutory provisions and judicial decisions to determine the obligations they establish and the extent to which those obligations address the environmental consequences of land acquisition. Particular attention is given to environmental impact assessment, cumulative impacts, biodiversity conservation, public participation, compulsory acquisition and regulatory accountability.

The central argument is that the adequacy of Uganda's framework should be evaluated by examining whether land acquisition for Oil and Gas projects specifically in the Albertine Graben, environmental assessment, participation and continuing environmental management operate as complementary legal requirements. The existence of environmental legislation is important, but the legal framework must also ensure that environmental considerations can influence project decisions before land use becomes difficult to reverse.

4.2.Legal Status of International Environmental Standards.

4.2.1 Binding international treaties.

International environmental treaties provide important standards against which national environmental legislation may be evaluated. However, the legal status of each instrument must be established before it is used to support a legal argument. A treaty should not be treated as automatically creating a directly enforceable domestic cause of action merely because a state has undertaken an international commitment. Its domestic relevance must be assessed in light of the applicable constitutional and statutory framework, the treaty's terms and Uganda's treaty

status, this distinction is important because international legal obligations, domestic enforceability and the persuasive value of international standards are separate questions.

4.2.1.1 Convention on Biological Diversity

The Convention on Biological Diversity (CBD) is relevant to petroleum-related land acquisition because its objectives include the conservation of biological diversity and the sustainable use of its components. Article 6 addresses national strategies and programs for biodiversity conservation, while articles 7 and 8 concern the identification, monitoring and conservation of biodiversity. Article 14 addresses environmental impact assessment and the minimization of adverse effects on biological diversity[147]. These provisions are relevant to the Albertine Graben because petroleum development may affect habitats and ecological relationships extending beyond the immediate project site, infrastructure may require vegetation clearance, road construction and the establishment of facilities in areas connected to wider ecosystems. An assessment confined to the precise boundaries of an acquired parcel may consequently fail to identify the broader environmental effects of a connected development. Article 14 is particularly significant because it supports the consideration of activities likely to have significant adverse effects on biodiversity before those activities are implemented, and in the context of land acquisition, this principle supports an assessment process that considers the proposed location, reasonable alternatives, likely environmental consequences and appropriate mitigation measures.

The Convention does not establish a blanket prohibition on petroleum development. Rather, it provides a framework for integrating biodiversity conservation into relevant decision-making, its significance for Uganda lies in evaluating whether the domestic environmental assessment system adequately identifies and addresses the biodiversity risks associated with petroleum-related land acquisition. The relevant domestic connection is found in the National Environment Act 2019 and the National Environment (Environmental and Social Assessment) Regulations 2020. These instruments provide mechanisms for assessing environmental and social impacts before certain projects are implemented[148]. The critical question is whether those mechanisms adequately address the combined ecological consequences of connected

[147] Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79, arts 6–8 and 14

[148] National Environment Act 2019 (Uganda), Act 5 of 2019; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regs 3–5.

infrastructure and whether the assessment process influences the decisions made by the relevant authorities.

4.2.1.2 Ramsar Convention on Wetlands (1971)

The Convention on Wetlands of International Importance especially as Waterfowl Habitat, commonly known as the Ramsar Convention, provides a legal framework for the conservation and wise use of wetlands. Article 3(1) requires parties to formulate and implement planning so as to promote the conservation of listed wetlands and, as far as possible, the wise use of wetlands within their territory, Article 3(2) addresses the transmission of information about changes in the ecological character of listed wetlands, while article 4 concerns conservation and management measures[149]. The Convention is relevant where petroleum infrastructure may affect wetlands and associated water systems. Roads, pipelines and industrial facilities can potentially alter drainage, affect water quality or disrupt the relationships between wetlands and surrounding land, these effects may extend beyond the land directly occupied by the project.

The legal significance of the Ramsar framework is that wetlands should not be regarded merely as vacant or developable land, their ecological functions and relationship with surrounding areas are relevant to decisions concerning land use and infrastructure development. For the Albertine Graben, this supports an assessment that considers hydrological relationships and the potential consequences of related developments. However, the specific obligations of the Convention must be applied according to its scope. It would be inaccurate to assume that every wetland in the Albertine Graben is a Ramsar-listed site or that every provision of the Convention applies identically to every development.

4.2.1.3 United Nations Framework Convention on Climate Change and Paris Agreement.

The United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement provide the principal international framework for climate change governance. Their relevance to petroleum-related land acquisition arises from the relationship between infrastructure development, greenhouse gas emissions, land-use change and climate resilience.

[149] Convention on Wetlands of International Importance especially as Waterfowl Habitat (adopted 2 February 1971, entered into force 21 December 1975) 996 UNTS 245, arts 3–4

The UNFCCC establishes general principles and commitments concerning climate change, while the Paris Agreement addresses the global temperature goal, mitigation, adaptation and transparency[150], these instruments provide a basis for considering climate-related consequences within environmental planning and assessment.

For the Albertine Graben, the relevant legal question is whether climate-related risks and impacts are incorporated into the assessment of petroleum infrastructure where required by the applicable domestic law and international commitments, a project assessment that considers only the immediate physical footprint may fail to consider other legally relevant effects. Nevertheless, neither the UNFCCC nor the Paris Agreement should be interpreted as automatically prohibiting Uganda from producing petroleum, such a conclusion would overstate the legal effect of these instruments, the more defensible argument is that climate considerations must be addressed within the scope of the obligations applicable to the project.

Uganda's Environmental and Social Assessment Regulations provide an important domestic basis for this analysis. Schedule 5 requires the environmental and social impact statement to include an assessment of climate-related impacts, potential climate benefits, carbon footprints, project vulnerability to climate change and proposed adaptation and mitigation measures[151]. This provision gives the dissertation a direct statutory foundation for evaluating climate considerations. Rather than relying exclusively on international climate principles, the analysis can examine whether the domestic assessment requirements adequately address the climate-related implications of petroleum development.

4.2.1.4 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm

[150] United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107; Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) TIAS No 16-1104

[151] . National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 5(3)(m). The provision addresses climate-related impacts, climate benefits, carbon footprints, vulnerability to climate change and proposed adaptation and mitigation measures.

Convention on Persistent Organic Pollutants address distinct environmental risks[152].The Basel Convention concerns transboundary movements and disposal of hazardous wastes, while the Rotterdam Convention addresses the international trade of specified hazardous chemicals and pesticides, while the Stockholm Convention regulates persistent organic pollutants. These conventions may be relevant to particular substances, wastes or activities associated with industrial operations. However, their relevance must be established by reference to the specific activity or material concerned.

4.2.1.5 African Charter on Human and Peoples' Rights

The African Charter on Human and Peoples' Rights provides an important regional framework for environmental rights. Article 24 recognizes the right of all peoples to a generally satisfactory environment favorable to their development, Article 7 addresses the right to have one's cause heard, while article 9 concerns the right to receive information and express opinions within the terms of the Charter[153]. Article 24 is relevant because it places environmental protection within a framework of collective welfare and development. Environmental degradation associated with petroleum development may affect more than the value of acquired land. It may also affect health, access to natural resources and the conditions necessary for communities to sustain their livelihoods.

The Charter therefore provides a relevant regional standard for evaluating environmental protection and accountability. Its provisions must, however, be interpreted in their legal context and considered alongside Uganda's Constitution and environmental legislation.The Charter is particularly relevant because it assess whether the state has established adequate safeguards against environmental harm associated with private economic activity. Its importance is demonstrated by the African Commission's decision in Social and Economic Rights Action Center and Center for Economic and Social Rights v Nigeria, discussed below

[152] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (adopted 22 March 1989, entered into force 5 May 1992) 1673 UNTS 57; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (adopted 10 September 1998, entered into force 24 February 2004) 2244 UNTS 337; Stockholm Convention on Persistent Organic Pollutants (adopted 22 May 2001, entered into force 17 May 2004) 2256 UNTS 119.

[153] African Charter on Human and Peoples' Rights (adopted 27 June 1981, entered into force 21 October 1986) 1520 UNTS 217, arts 7, 9 and 24

4.2.2. Non-binding declarations and international principles

International environmental law also contains declarations and principles that have influenced the development of environmental governance. These instruments must be distinguished from treaties because they do not ordinarily create treaty obligations merely by virtue of their adoption and these include the following;

4.2.2.1 The Stockholm Declaration 1972[154].

With this we are to discuss principle 1, 2, 21 and 22 and their relevance to state responsibility and environmental protection in extractive industries.

Principle 1; the principle mentions that; man has the fundamental right to freedom, equity and adequate conditions of life , in an environment of quality that permits a life of dignity and well-being and bears the solemn responsibility to protect and improve the present and future generations.. The principle imposes a duty on the state to ensure that extractive activities don't undermine the human dignity and public welfare, the obligation requires the government to adopt adequate environment legislation, conduct environmental and social impact assessment, regulate pollution and guarantee public participation in environmental decision making. The principle has significantly influenced later developments in international environmental law including the recognition of a rights to a healthy environment by the United Nations Human Rights council and various human rights instruments such as the African Charter on Human and People's Rights.

Principle 2: mentions that; the natural resources of the earth including air, water, land and flora and fauna and especially representative samples of natural eco-systems must be safe guarded for the benefit of the present and future generations through careful planning or management as appropriate. The principle is relevant in a way that Oil extraction, mining and large-scale infrastructure often result into irreversible environmental damage if not properly regulated. The principle obliges that states to establish mechanisms that balance economic benefits from extraction against long-term environmental sustainability. The principle 2 supports the view that states must ensure that resource exploitations don't destroy eco-systems or comprise the welfare of future generations. The principle underpins the modern environment governance

[154] Stockholm Convention on Persistent Organic Pollutants (adopted 22 May 2001, entered into force 17 May 2004) 2256 UNTS 119; United Nations Treaty Collection, Status of Stockholm Convention, Uganda.

tools such as Environmental Impact Assessment and Strategic Environment Assessments and climate change mitigation obligations. International Financial Institutions like the World Bank and I.F.C incorporate sustainability principle into their environmental safe-guard policies for extractive policies.

Principle 21; Mentions; those states have in accordance to the charter of the United Nations and the Principle of international law, the sovereign right to exploit their own resources pursuant to their own environment policies, and the responsibility to ensure that activities within their own jurisdiction or control don't cause damage to the environment of other states or of areas beyond the limits of national jurisdiction. The relevance of the principle is that it establishes the balance between state sovereignty over natural resources and the duty not to cause trans-boundary environment harm, the principle affirms that although states possess sovereign rights to exploit natural resources, such rights are not absolute and must be exercised responsibly. The principle forms the foundation of the customary international law doctrine of prevention and the "no-harm" rule, it has been re-affirmed in several instruments including the Rio-Declaration on Environment and Development. The international judicial decisions like the Trial Smelter (**United States Vs Canada), 3 U.N Rep. Intel arbitration Awards 1905(1941),** further reinforces the principle that states must prevent activities within their territory from causing trans-boundary environmental injury. Principle also imposes obligations upon states to regulate multi-national corporations operating within jurisdictions, government cannot evade international responsibility by attributing environmental harm solely to private extractive companies.

Principle 22; the principle states that; states shall corporate to develop further international law regarding liability and compensation for victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such states to areas beyond their jurisdiction. The relevance of the principle 22, is that, it recognizes that environmental harm may require legal remedies, compensation mechanisms and accountability mechanisms and accountability frameworks, it emphasizes the need for International Corporation in developing rules governing liability and compensation for affected persons and communities.

According to the principle, communities might face challenges in obtaining adequate compensation due to weak domestic legal systems, limited access to justice or financial and political influence of multi-national companies. The principle therefore supports the establishment of legal mechanisms through which victims of environmental harm can obtain

redress, it encourages the establishment of strict liability regimes, restoration obligations and corporate accountability standards. Principle 22 highlights the need for stronger legal frameworks governing environmental liability restoration of damaged eco-systems and effective remedies for affected communities.

The Stockholm declaration 1972 laid the foundation for modern international environmental law by establishing core principles governing environmental protection and state responsibility. The above principles remain highly relevant to the extractive sector especially in the Albertine Garben where Oil and Gas development prevents significant environmental and social risks. They collectively impose obligations upon states to regulate extractive industries responsibly, protect eco-systems and affected communities, and ensure that economic development occurs at the expense of environmental sustainability and integral equity.

The international law is relevant to Uganda because petroleum resources may be economically important, but their exploitation remains subject to environmental responsibility, resource development should not be considered independently of the environmental consequences it may produce. In the context of land acquisition, the most important is Principle 21 that supports the general proposition that resource sovereignty does not eliminate environmental responsibility. However, it should not be presented as an independently enforceable domestic rule automatically invalidating a land acquisition. Its relevance is principally interpretative and normative, subject to the applicable Ugandan legal framework.

4.2.2.2 Rio Declaration on Environment and Development.

The Rio Declaration of 1992 provides several principles relevant to the environmental implications of petroleum development. Principle 2 addresses state sovereignty over natural resources and responsibility for environmental harm beyond national jurisdiction. Principle 4 states that environmental protection should form an integral part of the development process rather than be considered in isolation from it. Principle 10 addresses public participation and access to environmental information, while Principles 15 and 16 address the precautionary approach and the polluter-pays principle respectively[155].

[155] Rio Declaration on Environment and Development (1992), principles 2, 4, 10, 15 and 16.

Principle 4 is especially relevant to the Albertine Graben because it challenges an approach in which land acquisition is treated primarily as an administrative or economic process, with environmental protection considered only after the main development decisions have been made. An integrated approach requires environmental considerations to inform decisions about project location, design, alternatives and mitigation. The acquisition of land should not become a mechanism through which environmental concerns are separated from development planning. Another relevant Principle is 10 for it relates that affected communities may possess knowledge concerning customary land use, water resources, local ecosystems and livelihood practices. Meaningful participation allows such information to be considered before decisions are finalized. These principles provide useful standards for evaluating the adequacy of environmental governance. However, they should not be described as binding treaty obligations. Their relevance to Uganda must be established through their relationship with applicable constitutional provisions, statutes, regulations and judicial decisions

4.2.2.3 United Nations Declaration on the Rights of Indigenous Peoples.

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is a declaration rather than a treaty. It provides standards concerning participation, land, resources and the relationship between indigenous peoples and decisions affecting their interests'[156].Its relevance to land acquisition lies in the recognition that land may have cultural, social and economic significance beyond its market value, a conventional valuation may not fully capture the importance of land to people whose livelihoods, cultural practices or social relationships depend on continued access to particular areas. Their comparative significance lies in the quality of decision-making they demand where projects affect communities with distinctive customary relationships to land and natural resources[157].

The Inter-American Court's decisions in Saramaka People v Suriname and Kichwa Indigenous People of Sarayaku v Ecuador are persuasive comparative authorities, they link large-scale resource development on traditional lands to effective participation, prior environmental and social assessment, benefit-sharing and, in circumstances involving major impacts on collective territory, heightened consent requirements. For Uganda, the transferable lesson is not that every

[156] United Nations Declaration on the Rights of Indigenous Peoples, GA Res 61/295 (13 September 2007).
[157] United Nations Declaration on the Rights of Indigenous Peoples, UNGA Res 61/295 (13 September 2007) arts 10, 18, 19 and 32; ILO Convention concerning Indigenous and Tribal Peoples in Independent Countries (No 169) (adopted 27 June 1989, entered into force 5 September 1991) arts 6, 15 and 16.

compulsory acquisition automatically requires consent, but that consultation must be early, informed, culturally appropriate and capable of influencing project design; more intrusive impacts on customary or culturally significant land demand correspondingly stronger safeguards.[158]

4.2.2.4 Kunming–Montreal Global Biodiversity Framework.

The Kunming–Montreal Global Biodiversity Framework was adopted under the Convention on Biological Diversity to guide global biodiversity action. It is not a standalone treaty creating a separate set of directly enforceable international obligations. Rather, it provides policy direction for implementing biodiversity objectives under the CBD[159].

The Framework is relevant because it reinforces the importance of biodiversity conservation and the protection of ecosystems affected by development. It may assist in evaluating whether environmental planning adequately considers habitat integrity and cumulative pressures on natural systems. However, the Framework should be used as a policy benchmark, while binding legal conclusions should be grounded in the CBD and applicable Ugandan legislation.

4.3 International Environmental Principles

Environmental impacts of Oil and Gas activities are regulated on the global level by customary international laws and agreements; In the **Chorzow (indemnity) case**[160]; the I.C.J held that the obligation to restore the environment as well as to make representation as well as to restitute and compensate the victims of Oil Pollution was the cardinal principle of international law. Additionally in the case of **Kuwait Vs Iran**, the UNCC in the "74" panel held that environmental loss of a country occasioned by the act of another country was compensable if it can be shown that the loss was directly due to another country's action. This creates principles of international law relevant to compulsory acquisition of land for oil and Gas projects specifically in the Albertine Garben; The principles will include; the precautionary principle, the principle of sustainable development, the source principle, the principle of common but differential responsibility, the principle of international and inter-generational equity,

[158] Saramaka People v Suriname (Preliminary Objections, Merits, Reparations and Costs) Inter-American Court of Human Rights Series C No 172 (28 November 2007) paras 129–137, 143–146; Kichwa Indigenous People of Sarayaku v Ecuador (Merits and Reparations) Inter-American Court of Human Rights Series C No 245 (27 June 2012) paras 177–178, 205–211.
[159] Kunming–Montreal Global Biodiversity Framework, CBD/COP/DEC/15/4 (19 December 2022).
[160] Case concerning the factory at Chorzow (Germany Vs Poland)(merits)[1928]PCIJ Rep series A No 17.

environmental procedural rights, common concern of human kind, common heritage and the principle of stakeholder participation and partnership, the principle of conducting a comprehensive environmental impact assessment and the duty to warn other states promptly about environmental emergencies.

International environmental law establishes principles and obligations intended to guide state conduct in relation to environmental protection, sustainable development, and natural resource management. Although many international environmental instruments are classified as soft law and therefore not directly enforceable unless domesticated into national legal systems, they nevertheless influence domestic legislation, judicial interpretation, policy development, and international accountability.

One of the most significant principles applicable to petroleum development is the **principle of sustainable development**. The principle emerged prominently from the report of the World Commission on Environment and Development titled Our Common Future, commonly known as the Brundtland Report, which defined sustainable development to mean development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[161] Sustainable development subsequently became a foundational principle of international environmental law following its incorporation into the Rio Declaration on Environment and Development 1992. Principle 4 of the Rio Declaration provides that environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.[162]

The principle is particularly relevant to Uganda because petroleum exploitation within the Albertine Graben occurs in environmentally sensitive ecosystems. Sustainable development requires Uganda to balance economic development and petroleum revenue generation against environmental conservation, social justice, and protection of future generations. However, Uganda's petroleum governance framework has often been criticized for prioritizing economic development over environmental sustainability.[163]

[161] World Commission on Environment and Development, Our Common Future (Oxford University Press 1987)
[162] Rio Declaration on Environment and Development 1992, Principle 4.
[163] Emmanuel Kasimbazi, 'Environmental Regulation of Oil and Gas Activities in Uganda' (2020) 12 Journal of Energy and Natural Resources Law 233

Closely connected to sustainable development is the **precautionary principle** and that's Principle 15 of the Rio Declaration**;** and it provides that where there are threats of serious or irreversible environmental damage, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation.[164]The precautionary principle is especially relevant to petroleum development because oil and gas activities involve substantial environmental risks including oil spills, habitat destruction, pollution, greenhouse gas emissions, and biodiversity loss. Uganda has incorporated aspects of the precautionary principle within the National Environment Act 2019.[165] Nevertheless, environmental governance challenges remain substantial due to weak institutional capacity, inadequate monitoring mechanisms, political influence, and limited enforcement capability. Environmental Impact Assessments conducted for oil projects have frequently been criticized for inadequately assessing cumulative ecological impacts and climate-related consequences.[166]

The polluter pays principle is another significant principle of international environmental law. The principle requires persons responsible for environmental harm to bear the costs associated with prevention, mitigation, restoration, and compensation. The principle aims to ensure that environmental costs are internalized within economic activities rather than transferred to society. In the context of Uganda's petroleum sector, pollution may arise from drilling operations, waste disposal, gas flaring, pipeline leaks, and contamination of ecosystems. The National Environment Act cap 181 provides for environmental restoration orders and liability for environmental harm.[167] However, enforcement remains problematic due to limited institutional resources and inadequate environmental accountability mechanisms. Critics argue that the current framework insufficiently addresses long-term environmental restoration and ecological compensation.

The **principle of public participation** has also become central within modern environmental governance under Principle 10 of the Rio Declaration and it emphasizes that environmental issues are best handled with the participation of all concerned citizens.[168] Public participation includes access to information, consultation, transparency, and access to justice in environmental decision-making processes. Meaningful public participation is especially

[164] Rio Declaration on Environment and Development 1992, Principle 15.
[165] Section 4(g) of the act.
[166] Greenwatch Uganda, Environmental Governance and Oil Development in Uganda (2021) 17.
[167] National Environment Act 2019, ss 152–154.

[168] Rio Declaration on Environment and Development 1992, Principle 10.

important in land acquisition processes because affected communities bear the direct consequences of displacement and environmental degradation. However, communities affected by oil projects in the Albertine region have repeatedly raised concerns regarding inadequate consultation, limited access to information, coercive acquisition practices, and insufficient compensation. Although Uganda's legal framework formally requires stakeholder consultations during Environmental and Social Impact Assessments[169], implementation often remains weak and procedural rather than substantive.

International environmental law also increasingly recognizes environmental protection as a human rights issue. The **African Charter on Human and Peoples' Rights** recognizes the right of all peoples to a satisfactory environment favorable to their development under article 24.[170] The landmark African Commission decision in Social and Economic Rights Action Centre (SERAC) v Nigeria established that environmental degradation caused by oil exploitation may constitute a violation of human rights obligations.[171]

Uganda therefore bears obligations under international human rights law to ensure that petroleum development does not undermine environmental rights, livelihoods, public health, or socio-economic welfare. Nevertheless, concerns persist regarding forced displacement, delayed compensation, and environmental degradation affecting local communities within the Albertine Graben.

4.4Critical Evaluation of Uganda's Compliance

Uganda has made significant legislative and institutional efforts toward incorporating the principles of the Rio Declaration into its domestic legal framework. Constitutional environmental rights, environmental impact assessment requirements, public participation provisions, and environmental restoration obligations all demonstrate formal compliance with international environmental governance standards. However, substantial gaps remain between legal norms and practical implementation. Uganda's extractive sector continues to face challenges relating to weak institutional enforcement, political interference, inadequate public

[169] Section 5(2)(a).
[170] African Charter on Human and Peoples' Rights 1981, art 24
[171] Social and Economic Rights Action Centre (SERAC) and Another v Nigeria (2001) AHRLR 60 (ACHPR 2001).

participation, limited transparency, insufficient environmental monitoring, and prioritization of economic development over ecological sustainability.

The country's oil development strategy illustrates the tension between environmental protection and economic ambitions. While Uganda officially embraces sustainable development principles, practical governance often reflects developmental pragmatism rather than strict environmental stewardship. Consequently, Uganda's compliance with Principles 4, 10, 15, and 16 of the Rio Declaration may be described as partial and evolving. Although the country has established important legal and policy frameworks consistent with international environmental standards, effective implementation, institutional independence, and environmental accountability remain inadequate, particularly within the extractive industries sector.

4.5 Conclusion

The Rio Declaration 1992 significantly advanced international environmental law by establishing principles promoting sustainable development, participatory governance, precautionary environmental management, and environmental accountability. Principles 4, 10, 15, and 16 are particularly relevant to the regulation of extractive industries because they impose obligations upon states to integrate environmental protection into development planning, ensure public participation, adopt preventive environmental measures, and hold polluters financially accountability

4.5.1 African Charter on Human and Peoples' Rights: Article 24 and Environmental Rights Jurisprudence

Article 24 of the African Charter on Human and Peoples' Rights (ACHPR) provides that:

Unlike most global human rights instruments adopted at the time, the ACHPR explicitly constitutionalizes an environmental right. However, Article 24 is framed collectively ("all peoples") and broadly ("general satisfactory environment"), which initially raised interpretive uncertainty regarding its justifiability, scope, and enforceability, the provision is best understood as both substantive (guaranteeing environmental quality), and development-oriented (linking environment to economic and social development).This dual character has allowed the African Commission on Human and Peoples' Rights to progressively interpret

Article 24 as encompassing individual, communal, and intergenerational environmental protections.

The foundational case on Article 24 is Social and Economic Rights Action Centre (SERAC) and Center for Economic and Social Rights (CESR) v Nigeria.[172]The complainant concerned extensive oil exploitation in Ogoniland by the Nigerian government in partnership with Shell, resulting in: Oil spills contaminating water and soil, destruction of livelihoods (fishing and farming) and health hazards and forced displacement, the African Commission examined oil-related pollution in Ogoniland and held that the State had duties to prevent pollution and ecological degradation, regulate private actors, monitor activities, provide information, facilitate participation and provide remedies. The decision is especially instructive for Uganda because it arose from petroleum operations and rejects the proposition that the State can avoid responsibility merely because immediate harm is caused by private companies.

Similarly, in the case of Centre for Minority Rights Development (Kenya) and Minority Rights Group International v Kenya,[173]the Commission addressed eviction of the Endorois community from ancestral land for conservation and tourism purposes, the Endorois decision further established the importance of consultation, participation, cultural protection and benefit-sharing where communities are removed from ancestral land. Another decision was in the case of African Commission on Human and Peoples' Rights v Kenya (Ogiek), where the African Court confirmed that environmental or conservation objectives cannot be used as a blanket justification for arbitrary displacement and disregard of community land and cultural rights, taken together, this jurisprudence requires Uganda to view compulsory acquisition as a multi-rights process rather than a valuation exercise[174].

Although the case is primarily known for indigenous rights, Article 24 was crucial because environmental protection measures (wildlife conservation) must not unjustifiably violate sustainable livelihoods and cultural survival and the Commission emphasized consultation, benefit-sharing, and sustainable development, Article 24 contributes that the environmental

[172] African Charter on Human and Peoples' Rights (adopted 27 June 1981, entered into force 21 October 1986) art 24

[173] Centre for Minority Rights Development (Kenya) and Minority Rights Group International v Kenya Communication 276/2003 (2009) AHRLR 11 (ACHPR 2009).

[174] Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya, Communication No 276/2003, (2009) AHRLR 75 (ACHPR 2009) paras 227–251

rights are not only ecological but also socially embedded and that the conservation policies must be human-centered and participatory, Article 24 implies that the right to a satisfactory environment includes indigenous stewardship of ecosystems and that environmental protection must align with human rights-based conservation models.

4.5.2 Emerging principles from jurisprudence.

From these cases, several doctrinal principles under Article 24 emerge and that is; **Preventive obligatio**n: States must adopt preventive regulatory measures against environmental harm, especially in extractive sectors (SERAC v Nigeria)Due diligence standard, as states are liable not only for direct harm but also for failure to regulate non-state actors such as multinational corporations. There has also been interdependence of rights as article 24 is interpreted in conjunction with other rights, reinforcing the doctrine of indivisibility of human rights, there is Community-centered environmentalism as environmental protection must incorporate indigenous and local community rights, particularly in conservation contexts (Endorois; Ogiek).

In conclusion, article 24 of the ACHPR represents one of the earliest and most progressive regional recognitions of a standalone environmental right, through jurisprudence such as SERAC v Nigeria, Endorois, and Ogiek, the African human rights system has developed a robust interpretive framework that links environmental protection to dignity, livelihood, culture, and development. However, the effectiveness of Article 24 remains constrained by enforcement weaknesses and vague normative language, meaning its transformative potential depends heavily on domestic incorporation and political will.

4.6 International Environmental Standards

International financial institutions have developed environmental and social safeguard standards that significantly influence global extractive industry governance. These standards are particularly important because they establish internationally recognised best practices regarding environmental protection, involuntary resettlement, biodiversity conservation, stakeholder participation, and sustainability.

Although these standards are primarily applicable to projects financed by international financial institutions, they increasingly shape global expectations regarding responsible

petroleum development. Uganda's environmental governance framework may therefore be assessed against these international safeguards in order to determine its adequacy;

4.6.1 World Bank Standards

The World Bank Environmental and Social Framework establishes comprehensive safeguards governing development projects financed by the World Bank.[175]The framework contains ten Environmental and Social Standards (ESSs), several of which are highly relevant to petroleum-related land acquisition and environmental governance.

Environmental and Social Standard 1 requires comprehensive assessment and management of environmental and social risks throughout the project lifecycle[176].The standard emphasizes cumulative impact assessment, stakeholder engagement, climate risk assessment, environmental monitoring, and adaptive environmental management. Uganda's Environmental Impact Assessment framework has often been criticized for inadequate assessment of cumulative impacts arising from multiple petroleum projects within the Albertine ecosystem.

Environmental and Social Standard 5 governs land acquisition and involuntary resettlement[177].The standard requires avoidance or minimization of displacement, fair compensation, livelihood restoration, protection of vulnerable groups, and meaningful consultation with affected communities. Uganda's compensation framework has frequently been criticized for focusing narrowly on physical property valuation while inadequately addressing livelihood restoration, cultural disruption, and long-term socio-economic consequences.

Environmental and Social Standard 6 addresses biodiversity conservation and sustainable management of natural resources[178]. The standard requires protection of critical habitats, biodiversity conservation, ecosystem restoration, and scientific ecological monitoring. This is particularly important because petroleum activities in Uganda intersect with ecologically sensitive ecosystems including Murchison Falls National Park and surrounding protected areas. The World Bank standards are significantly more comprehensive than Uganda's domestic safeguards because they adopt a holistic approach that integrates human rights, environmental

[175] World Bank, Environmental and Social Framework (2017)
[176] ibid, Environmental and Social Standard 1.
[177] ibid, Environmental and Social Standard 5
[178] ibid, Environmental and Social Standard 6

sustainability, climate governance, biodiversity protection, and long-term socio-economic welfare. Uganda's legal framework remains comparatively procedural and compensation-oriented rather than sustainability-oriented.

4.6.2 IFC Standards

The International Finance Corporation Performance Standards constitute another globally influential environmental governance framework applicable to extractive industries. The IFC Performance Standards establish environmental and social obligations for private sector investments and are widely recognized as international best practice standards. IFC Performance Standard 1 requires integrated assessment and management of environmental and social risks[179]. The standard emphasizes stakeholder engagement, transparency, grievance mechanisms, and continuous environmental monitoring. Uganda's petroleum governance framework lacks sufficiently independent grievance resolution mechanisms for communities affected by oil projects. IFC Performance Standard 5 addresses land acquisition and involuntary resettlement.[180]The standard requires compensation at full replacement cost, avoidance of forced evictions, livelihood restoration, transitional support, and protection of vulnerable communities. Uganda's valuation framework has often been criticized because government valuation rates may not reflect full replacement cost or adequately compensate for livelihood losses.

IFC Performance Standard 6 addresses biodiversity conservation and sustainable management of living natural resources[181]. The standard requires avoidance of critical habitat destruction, no net biodiversity loss, ecological restoration, and long-term biodiversity monitoring. These safeguards are particularly important within the Albertine Graben because petroleum development occurs in areas containing protected ecosystems and endangered wildlife species.

The IFC standards provide stronger environmental protections than Uganda's domestic laws because they emphasize accountability, sustainability, transparency, community rights, and long-term environmental management. Uganda's petroleum governance framework remains

[179]International Finance Corporation, IFC Performance Standards on Environmental and Social Sustainability (2012).
[180]ibid, Performance Standard 5.

[181] ibid, Performance Standard 6

heavily focused on facilitating investment and state control over petroleum resources rather than ensuring community-centered environmental governance.

4.6.3 African Development Bank Standards

The African Development Bank Integrated Safeguards System establishes environmental and social safeguards applicable to development projects financed within Africa[182]. The safeguards include environmental assessment, involuntary resettlement protection, biodiversity conservation, pollution prevention, and climate risk management.

The AFDB safeguards are particularly important because they adopt an African-centered approach to environmental governance that recognizes local socio-economic realities, customary land tenure systems, poverty concerns, and developmental priorities. The safeguards require minimization of displacement, compensation prior to relocation, protection of customary land rights, and restoration of livelihoods. The AFDB standards also integrate climate resilience into infrastructure planning. This is increasingly significant because petroleum exploitation contributes to greenhouse gas emissions and climate vulnerability. Uganda's petroleum governance framework has been criticized for insufficiently integrating climate governance and carbon risk assessment into oil sector planning.

Although Uganda has adopted several environmental laws and regulations, substantial implementation gaps remain due to weak institutions, inadequate financing, political influence, and regulatory fragmentation. The AFDB standards therefore expose the limitations of Uganda's current environmental governance framework.

4.7 National Standards from Selected Countries

Comparative analysis with selected national jurisdictions provides important insights regarding best practices and governance failures associated with petroleum development and environmental protection.

1. **Tanzania.**

[182] African Development Bank, Integrated Safeguards System (2013).

Tanzania provides a particularly relevant comparative jurisdiction because petroleum development in Tanzania and Uganda involves shared regional environmental concerns and the development of infrastructure associated with the East African Crude Oil Pipeline. The two countries also face the challenge of regulating petroleum development in landscapes containing agricultural land, water resources, settlements and ecologically sensitive areas. Tanzania's principal environmental legislation is the Environmental Management Act 2004, which establishes a framework for environmental management, environmental impact assessment, strategic environmental assessment, environmental enforcement and the restoration of degraded environments. The Act's provisions on strategic environmental assessment are especially relevant to the present research because they address environmental effects at the level of policies, plans and programs rather than restricting environmental assessment to individual projects[183].

The distinction between strategic and project-level environmental assessment is fundamental to the regulation of petroleum-related land acquisition. Project-level assessment examines the likely effects of a particular development, such as a processing facility, pipeline section or drilling site. Strategic environmental assessment, by contrast, considers the environmental consequences of a wider development strategy or programme before the detailed implementation of individual projects. The latter approach can identify environmental constraints that should influence the location, scale and sequencing of petroleum infrastructure. For the Albertine Graben, this distinction is important because the cumulative environmental consequences of petroleum development cannot necessarily be identified through separate assessments of individual well pads, roads, camps, processing facilities and pipeline sections. The combined effects of these developments may be greater than the impacts identified in any single project assessment.

Tanzania also has a Strategic environmental assessment of petroleum development. One of the most significant comparative provisions is section 105 of Tanzania's Environmental Management Act 2004, the provision requires strategic environmental assessment where mineral or petroleum resources have been identified and before specific development details are planned, it identifies matters that must be considered in the assessment, including baseline environmental conditions, ecologically sensitive and protected areas, surrounding communities, existing socioeconomic conditions, proposed developments, infrastructure

[183] Environment Management Act 2004(Tanzania) Ss 81-105

requirements, potential environmental and social impacts, and recommendations concerning land reclamation and development limitations[184]. Particularly important is the express requirement to consider the cumulative development of multiple mining or petroleum sites. This requirement recognizes that petroleum development must be assessed within the wider geographical and environmental context in which it occurs. It also provides a legal basis for examining how multiple projects interact with one another and with existing land uses, the provision has significant implications for land acquisition. Before a petroleum development programme determines the location and extent of infrastructure, a strategic assessment can identify areas where development would threaten sensitive ecosystems, disrupt important ecological functions or impose unacceptable environmental costs on surrounding communities. Such information can influence the allocation of land for petroleum activities and the selection of alternative development locations.

The legal significance of section 105 lies not merely in its requirement for an environmental assessment, but in the stage at which the assessment is undertaken. By requiring assessment before detailed development planning, the legislation creates an opportunity to influence the fundamental decisions that determine where petroleum infrastructure will be located and how much land will be required, this is important because environmental safeguards applied after a land acquisition decision has effectively been made may be less capable of preventing harm. Once land has been acquired, infrastructure contracts concluded and substantial investment committed, the practical and financial incentives may favor mitigation of the selected development rather than reconsideration of its location. Strategic assessment can help address this problem by requiring environmental considerations to inform planning before the development becomes substantially committed.

The approach is particularly relevant to Uganda's petroleum sector. The Albertine Graben contains interconnected ecosystems and multiple forms of petroleum infrastructure. If land acquisition for Tilenga, Kingfisher, the East African Crude Oil Pipeline and associated facilities is evaluated only through separate project assessments, the regulatory process may fail to adequately account for the combined effects of road construction, vegetation clearance, habitat fragmentation, increased settlement pressure and changes in drainage patterns,

[184] Environmental Management Act 2004 (Tanzania), s 105. See also s 104 on strategic environmental assessment of bills, regulations, policies, strategies, programmes and plans. The official legislative text contains the specific requirements concerning cumulative petroleum development and land reclamation.

Tanzania's statutory approach therefore offers a useful model for strengthening the relationship between petroleum planning and environmental protection in Uganda.

Nevertheless, the existence of a strategic environmental assessment requirement does not establish that cumulative environmental impacts will necessarily be prevented. The effectiveness of such a requirement depends on the quality of baseline information, the independence and technical capacity of reviewing institutions, the consideration given to alternatives, the availability of meaningful public participation and the extent to which the resulting recommendations influence actual development decisions. For Uganda, the appropriate lesson is therefore not simply to recognize strategic environmental assessment in law, but to ensure that the assessment has a clearly defined legal relationship with petroleum development approvals and land acquisition decisions.

Tanzania's environmental framework also provides for project-level environmental impact assessment. The Environmental Management Act 2004 establishes the general statutory basis for assessing the environmental consequences of projects, while the Environmental Impact Assessment and Audit Regulations 2005 provide a more detailed regulatory framework for environmental assessment and auditing[185]. The relationship between project-level assessment and land acquisition is important because petroleum infrastructure can alter the environmental character of land long before petroleum production begins. Vegetation may be removed, land levelled, access roads constructed and drainage patterns altered during site preparation. Such activities can affect soil stability, water movement, vegetation cover and wildlife habitats.

An environmental assessment conducted before these activities commence can identify foreseeable impacts and establish measures to avoid or minimize them. However, its legal value depends on whether it influences the decision to proceed with the project and the conditions under which land is acquired and developed. A weakness that may arise in any environmental assessment framework is the separation of the environmental approval process from the legal process of acquiring land. If environmental assessment is treated as a technical requirement that operates independently of the acquisition decision, a developer may satisfy the procedural requirements for obtaining environmental approval without adequately demonstrating why a particular parcel of land is the most environmentally appropriate location for the proposed infrastructure, a stronger framework would require the environmental assessment to explain

[185] Environmental Management Act 2004 (Tanzania); Environmental Impact Assessment and Audit Regulations 2005 (Tanzania), as amended

how alternative locations were considered, how environmentally sensitive areas were identified and why the selected site represents an acceptable environmental outcome when compared with reasonably available alternatives. The relevance of this observation to Uganda is considerable. The National Environment (Environmental and Social Assessment) Regulations 2020 recognise environmental and social assessment as a process for taking environmental and social impacts into account when approving projects. They also define linear activities to include pipelines and roads, which are especially important in petroleum-related land acquisition[186].[4]

However, the existence of assessment requirements for individual projects should not be confused with a complete system for evaluating the cumulative environmental implications of petroleum development across the Albertine Graben. Tanzania's express statutory treatment of strategic environmental assessment for petroleum development therefore provides a more specific legislative model for addressing environmental impacts at the planning stage.

Tanzania's Environmental Management Act contains provisions governing public participation in environmental management and provides a framework for public review of strategic environmental assessment statements[187]. These provisions recognize that environmental decision-making should not be confined to interactions between the developer and regulatory authorities. The importance of participation becomes particularly clear where land acquisition affects customary landholders and communities whose livelihoods depend on access to forests, wetlands, grazing areas and agricultural land. A compensation assessment focused on formally registered interests or the market value of acquired land may fail to capture the environmental resources and customary uses that support community livelihoods. Participation can assist in identifying such interests before development begins. It can also improve the quality of environmental assessment by bringing local knowledge into the identification of environmental risks and the design of mitigation measures, nevertheless, participation should not be treated as an automatic guarantee of environmental protection. Consultation may be procedurally adequate but substantively ineffective if community objections do not influence project design, if technical information is inaccessible or if affected persons cannot challenge unlawful decisions. Uganda can draw from the Tanzanian framework by strengthening the legal

[186] National Environment (Environmental and Social Assessment) Regulations 2020 (Uganda), regs 2 and 5–20, subject to verification of the precise provisions applicable to the assessment procedure under consideration. The Regulations define environmental and social assessment and expressly include pipelines and roads within the definition of linear activities

[187] Environmental Management Act 2004 (Tanzania), provisions governing public participation and strategic environmental assessment, including s 104

relationship between public participation, strategic environmental assessment and decisions concerning petroleum-related land acquisition. Participation should occur early enough to influence the choice of development locations and should not be reduced to consultation after the principal land acquisition and infrastructure decisions have already been made.

a. Critical assessment and lessons for Uganda

Tanzania's principal comparative contribution is its express statutory recognition of strategic environmental assessment for petroleum development and its requirement to consider cumulative development, ecologically sensitive areas, and surrounding communities and land reclamation. This approach addresses an important weakness that can arise where environmental assessment focuses predominantly on individual projects. It creates a legal basis for considering the wider environmental consequences of petroleum development before specific development details are settled.

However, the Tanzanian framework should not be presented as inherently superior in every respect. The effectiveness of strategic environmental assessment depends on the implementation of its requirements, the quality of environmental information, the coordination of relevant institutions and the extent to which recommendations influence final decisions. The appropriate lesson for Uganda is consequently a targeted one. Uganda should strengthen the legal integration of strategic environmental assessment into petroleum planning and land acquisition, with particular emphasis on cumulative impacts, alternative locations, eco-system connectivity and restoration obligations.

This would be particularly valuable in the Albertine Graben, where petroleum development may affect several interconnected ecosystems and communities. It would also help ensure that land acquisition decisions are informed by the environmental consequences of the wider development programme rather than solely by the requirements of individual project sites.

2. Nigeria

Nigeria provides an important comparative jurisdiction because its long history of petroleum extraction demonstrates the environmental and governance challenges that may arise when petroleum development takes place in areas where communities depend heavily on land and natural resources. Petroleum-related environmental problems in the Niger Delta have included oil spills, contamination of land and water, damage to vegetation, disruption of fishing and

agricultural livelihoods, and disputes concerning environmental responsibility and remediation. These experiences are relevant to Uganda because they illustrate why environmental regulation must extend beyond the initial acquisition of land and the grant of petroleum licenses.

The Nigerian experience also demonstrates the limitations of treating compensation for acquired land as equivalent to compensation for environmental harm. A landowner may receive compensation for the acquisition of a parcel of land while continuing to experience environmental damage to water sources, fishing grounds, adjoining agricultural land or other resources on which the wider community depends, such harm may not be adequately addressed by a compensation regime concerned primarily with the value of the land acquired. It requires separate legal mechanisms governing pollution prevention, environmental liability, remediation and the restoration of affected environments.

Nigeria's petroleum regulatory framework has evolved through several legislative instruments, such as the Petroleum Industry Act 2021 is particularly significant because it establishes a comprehensive legal, governance and regulatory framework for the petroleum industry, including environmental management and the development of host communities[188].The Act should be examined alongside Nigeria's environmental legislation, applicable regulations and constitutional provisions governing environmental protection and access to justice.

The Petroleum Industry Act 2021 introduces specific environmental management obligations for petroleum licensees and lessees, section 102 addresses environmental management plans and the regulatory consideration of those plans, section 103 provides for contributions to an environmental remediation fund as a condition associated with the grant of a license or lease and approval of the environmental management plan[189].[7]These provisions are important because they address two different dimensions of environmental protection; First, environmental management plans establish a framework for identifying and managing environmental risks arising from petroleum operations, they can provide a basis for specifying mitigation measures, monitoring obligations and management responsibilities.

Secondly, the remediation fund mechanism addresses the financial dimension of environmental responsibility, environmental protection legislation may impose obligations on a petroleum

[188] Petroleum Industry Act 2021 (Nigeria).

[189] Petroleum Industry Act 2021 (Nigeria), ss 102–103. Section 102 addresses environmental management plans, while s 103 provides for contributions to an environmental remediation fund. See the official text of the Act.

operator, but those obligations may be difficult to enforce effectively if the operator lacks sufficient resources to undertake remediation or if funds are unavailable when environmental damage occurs. A statutory mechanism requiring financial contributions towards environmental remediation can reduce the risk that the costs of environmental damage will be transferred entirely to affected communities or the public and the legal significance of the Nigerian approach is therefore that it combines regulatory planning with a financial mechanism intended to support environmental rehabilitation.

For Uganda, this raises an important question: whether the existing framework provides sufficiently effective and financially secure mechanisms to ensure that environmental restoration obligations associated with petroleum development can be fulfilled throughout the life of a project and after operations cease. Where land acquisition involves clearing vegetation, altering drainage systems, constructing access roads or establishing petroleum installations, the environmental consequences may persist after the land has been acquired and the original construction activities have ended. The legal framework should therefore ensure that responsibility for rehabilitation is not exhausted by compliance with the initial environmental approval or by payment of compensation to the landowner. A remediation mechanism can complement environmental assessment by ensuring that the obligation to address environmental harm is supported by identifiable financial resources, nevertheless, the existence of a statutory fund does not itself establish that remediation will be timely, sufficient or effective. The operation of such a mechanism depends on the adequacy of contributions, the independence of the administering authority, the transparency of withdrawals, the availability of technical expertise and the ability to hold responsible operators accountable. It is therefore necessary to distinguish between the legal design of a remediation mechanism and its actual environmental performance.

The Petroleum Industry Act 2021 also provides for Host Communities Development Trusts. The relevant provisions appear in Chapter Three of the Act, which establishes a framework for addressing aspects of host-community development and petroleum-related impacts[190].[8] The Host Communities Development Trust mechanism is relevant because petroleum development can affect communities in ways that extend beyond the acquisition of particular parcels of land. Infrastructure may alter access to resources, affect local economic activities and create pressures on existing community facilities. A community development mechanism can provide

[190] Petroleum Industry Act 2021 (Nigeria), Chapter Three, provisions concerning Host Communities Development Trusts.

a structured framework for directing resources towards host communities and supporting development initiatives, however, a critical distinction must be maintained between community development funding and environmental remediation. Funding a community development project does not necessarily remedy contaminated land, restore a degraded wetland, rehabilitate a damaged habitat or compensate an individual whose property has been unlawfully damaged.

Similarly, contributions to community development should not automatically be treated as a substitute for compensation for compulsory acquisition, damages for environmental harm or the discharge of statutory restoration obligations, this distinction is particularly important for Uganda. Communities affected by petroleum development may experience both direct land acquisition impacts and wider environmental changes. A coherent legal framework should identify which losses are addressed through land compensation, which require environmental remediation and which may justify community-level development interventions. Nigeria's framework offers a useful institutional model for considering community development as part of petroleum governance. However, Uganda should avoid assuming that community development funds, by themselves, provide an adequate response to environmental degradation or land-related losses.

Equally, Nigeria's Constitution provides that the State shall protect and improve the environment and safeguard the country's water, air, land, forests and wildlife under section 20[191]. However, section 6(6)(c) of the Constitution generally limits the judicial enforceability of Chapter II's fundamental objectives and directive principles, subject to the operation of other applicable laws, this qualification is important. The existence of a constitutional environmental objective does not necessarily mean that an individual can rely directly on that provision as an independently enforceable right in every circumstance, Nigeria's environmental protection framework must therefore be understood through the interaction of constitutional provisions, statutory obligations, environmental regulations and applicable judicial decisions.

The comparison is relevant to Uganda because it illustrates the importance of distinguishing between a constitutional policy commitment and a legally enforceable right or obligation. Uganda's Constitution contains a more direct individual environmental right in article 39, which provides that every Ugandan has a right to a clean and healthy environment. Article 50 also provides a mechanism for the enforcement of rights and freedoms, subject to the applicable

[191] Constitution of the Federal Republic of Nigeria 1999, ss 6(6)(c) and 20.

constitutional and procedural requirements[192]. Uganda's constitutional framework can therefore provide a legal basis for challenging environmental harm where the relevant constitutional requirements are satisfied.

Nevertheless, the existence of an environmental right does not eliminate the need for clear statutory duties, accessible procedures, effective remedies and institutions capable of enforcing environmental obligations, for land acquisition in the Albertine Graben, the critical question is whether affected persons can obtain effective remedies where petroleum development causes environmental harm that is not adequately addressed by the original land acquisition or compensation process. The Nigerian experience demonstrates the importance of ensuring that environmental responsibility extends beyond the formal acquisition of land and that affected persons are not left without an effective remedy for pollution or other environmental damage.

1. Critical assessment and lessons for Uganda

Nigeria's most significant comparative contribution lies in the specific attention given to petroleum environmental management, remediation funding and host-community development under the Petroleum Industry Act 2021. These mechanisms illustrate that effective environmental governance requires more than the approval of environmental assessments. It also requires enforceable management obligations, financial arrangements for remediation and a clear allocation of responsibility for environmental harm.

However, Nigeria's history of petroleum-related environmental disputes also cautions against equating the existence of legislation with successful environmental protection. The environmental consequences experienced in the Niger Delta demonstrate the importance of enforcement, accountability and effective remedies. For Uganda, the principal lesson is that environmental protection obligations associated with petroleum-related land acquisition should be supported by clear rules on restoration, adequate financial arrangements and accessible remedies.

Uganda should also distinguish between compensation for land acquisition, compensation for environmental damage and community development funding. These mechanisms address different legal interests and should not be treated as interchangeable. Such an approach would strengthen protection for affected landowners and communities while reducing the risk that

[192] Constitution of the Republic of Uganda 1995, arts 39 and 50

environmental rehabilitation costs are transferred to the public when petroleum operators fail to discharge their obligations.

3. Ghana.

Ghana provides a further comparative perspective because its legal framework addresses environmental regulation, land administration and petroleum development within a system in which landholding interests and public regulatory responsibilities must be reconciled. The comparison is useful because petroleum-related land acquisition frequently involves more than the formal transfer of ownership or the exercise of compulsory acquisition powers, it may affect customary interests, existing land uses, community access to resources and the environmental character of the land.

Ghana's framework must be considered in light of the Environmental Protection Act 2025 (Act 1124), which establishes the Environmental Protection Authority and provides for the regulation and protection of the environment. The Act is an important legislative development and should not be confused with the earlier Environmental Protection Agency Act 1994 (Act 490), which formed part of the previous institutional framework[193]. The Environmental Protection Act 2025 provides for environmental oversight and compliance, including ensuring adherence to environmental assessment procedures in the planning and implementation of policies, plans, programs and projects.

The Act should be considered alongside Ghana's applicable environmental assessment regulations, land legislation and petroleum laws. These instruments regulate different aspects of environmental approval, land rights and petroleum operations, and their respective functions must be distinguished. For comparative purposes, the important question is whether environmental regulation and land administration operate in a coordinated manner capable of preventing or reducing the environmental consequences of petroleum-related land acquisition.

Environmental assessment is important because the physical preparation of land for petroleum infrastructure can create environmental impacts before production begins, the construction of roads, drilling sites, processing facilities and pipelines may require vegetation clearance,

[193] Environmental Protection Act 2025 (Ghana) (Act 1124); Environmental Protection Agency Act 1994 (Ghana) (Act 490), relevant to the former institutional framework. The 2025 Act is identified in the Ghana Environmental Protection Authority's official legislative materials.

excavation, land levelling and changes to natural drainage. These activities can contribute to habitat fragmentation, erosion, sedimentation and the disturbance of nearby water resources.

Environmental assessment can identify these risks before development proceeds and provide a basis for selecting alternative locations, designing mitigation measures and establishing monitoring requirements. Ghana's Environmental Protection Act 2025 expressly addresses compliance with environmental assessment procedures in the planning and implementation of policies, plans, programs and projects[194].This is relevant to the present research because it recognizes the importance of environmental assessment beyond the narrow stage of obtaining an initial project approval. The reference to policies, plans and programs is especially significant for petroleum development, it suggests that environmental considerations should inform decisions at different levels of the development process, rather than being confined to the assessment of individual construction activities.

Nevertheless, the legal value of this approach depends on the applicable assessment procedures and the extent to which environmental findings influence decisions about land acquisition and development. A project-level environmental assessment may identify the direct impacts of a particular facility without adequately considering how the facility interacts with other petroleum infrastructure. Similarly, an assessment may identify environmental risks but fail to prevent harm if its recommendations are not incorporated into binding approval conditions. The comparison therefore reinforces the need to examine not only whether an environmental assessment is required, but also whether it has a meaningful influence on the decisions that determine the location and extent of land acquisition, for Uganda, this is particularly relevant to the regulation of multiple petroleum developments within the Albertine Graben. Environmental assessment should influence the selection of development sites, the alignment of pipelines and access roads, and the avoidance of sensitive habitats and the coordination of restoration obligations.

Land acquisition in Ghana must be understood within the broader constitutional and statutory framework governing property rights and the acquisition of land for public purposes, Article 20 of Ghana's Constitution regulates compulsory acquisition of property and provides safeguards concerning public purpose, necessity, compensation and access to legal

[194] Environmental Protection Act 2025 (Ghana) (Act 1124), s 3 and the applicable provisions governing environmental assessment and compliance. The exact assessment requirements should be read with the Environmental Protection (Environmental Assessment) Regulations 2025 and any applicable transitional provisions.

redress[195].These protections are relevant because the acquisition of land for infrastructure may impose substantial costs on landowners and other persons holding recognized interests in the affected property. However, the legal requirements governing compulsory acquisition and those governing environmental protection address different interests.

Compulsory acquisition law primarily regulates the circumstances in which property may be acquired, the rights of affected persons and the compensation or other safeguards available to them. Environmental law addresses the effects of proposed activities on ecosystems, natural resources and human wellbeing, the existence of lawful authority to acquire land therefore does not, by itself, establish that the environmental consequences of the intended development have been adequately assessed, equally, environmental approval does not automatically establish that the acquisition process has complied with the applicable property rights protections, this distinction is fundamental to the present dissertation. Land acquisition and environmental assessment are related legal processes, but neither should be treated as a substitute for the other.

For Uganda, article 26 of the Constitution protects against compulsory deprivation of property except in accordance with the applicable constitutional requirements, including prompt payment of fair and adequate compensation before possession or acquisition as provided by the Constitution. Article 39 separately recognizes the right to a clean and healthy environment[196]. Read together, these provisions establish distinct constitutional interests that must be considered in petroleum-related land acquisition. Respect for the property rights of affected persons does not remove the obligation to protect the environment, while environmental protection does not eliminate the need to comply with the legal safeguards governing the acquisition of property. The comparative lesson is that Uganda should ensure that land acquisition and environmental assessment are coordinated through clear legal procedures, while retaining their distinct substantive requirements.

An effective environmental framework requires institutions with clearly defined responsibilities and adequate authority to enforce legal obligations, Ghana's Environmental Protection Act 2025 establishes the Environmental Protection Authority and provides it with functions relating to environmental regulation, oversight, compliance and enforcement[197]. The establishment of a statutory environmental authority is relevant because petroleum development involves several institutional actors whose responsibilities may overlap, these

[195] Constitution of the Republic of Ghana 1992, art 20.
[196] Constitution of the Republic of Uganda 1995, arts 26 and 39.
[197] Environmental Protection Act 2025 (Ghana) (Act 1124), ss 2–3.

may include institutions responsible for petroleum licensing, environmental approval, land administration, wildlife conservation, physical planning and local government.

Where the legal responsibilities of these institutions are poorly coordinated, important environmental risks may fall between regulatory mandates. An environmental authority may assess the effects of a proposed project, while a petroleum regulator supervises operational compliance and a land administration institution oversees the acquisition process. Without clear coordination, no single decision-making process may adequately integrate the environmental implications of the entire development.

For Uganda, the relevant institutions include the National Environment Management Authority, the Ministry of Energy and Mineral Development, the Petroleum Authority of Uganda, the Ministry of Lands, Housing and Urban Development, the Uganda National Oil Company, the Uganda Wildlife Authority and the relevant local government institutions. Their responsibilities differ, but their decisions may influence the environmental consequences of land acquisition. The effectiveness of the regulatory framework consequently depends on the coordination of their statutory mandates.

Ghana's institutional framework provides a basis for examining the importance of clear environmental oversight. However, the existence of a central environmental authority does not itself resolve the coordination problem. The relevant question is whether environmental decisions are integrated into petroleum planning and land acquisition and whether regulatory institutions can enforce the conditions attached to project approvals. The lesson for Uganda is that institutional coordination should be supported by clear statutory responsibilities, information-sharing procedures, consistent monitoring and mechanisms for resolving conflicts between regulatory decisions.

1. Critical assessment and lessons for Uganda.

Ghana's principal contribution to the comparative analysis lies in the relationship between environmental oversight, environmental assessment and the legal safeguards governing compulsory acquisition. Its framework reinforces the proposition that environmental approval and lawful land acquisition are distinct legal requirements. A petroleum development should not be regarded as environmentally acceptable merely because the land has been lawfully acquired, nor should environmental approval excuse non-compliance with property rights protections.

The framework also demonstrates the importance of environmental institutions capable of overseeing compliance with environmental assessment requirements. However, the existence of environmental legislation and an environmental authority does not establish that environmental impacts are necessarily prevented or that affected communities always obtain effective remedies.

The principal lesson for Uganda is therefore to strengthen the legal coordination between environmental assessment, land acquisition and petroleum regulation while preserving the separate legal safeguards governing each process. This would help ensure that decisions about the acquisition and development of land in the Albertine Graben are made with proper consideration of both environmental consequences and the rights of affected persons.

4.8 Lessons for Uganda (Strengthening Environmental Safeguards in Uganda: Comparative Lessons and Reform Options)

The comparative analysis indicates that Uganda already possesses important constitutional, environmental, land and petroleum-law foundations. The central weakness is not a complete absence of safeguards, but fragmentation in the relationship between compulsory acquisition, environmental assessment, livelihood protection, biodiversity conservation and continuing operator liability. The National Environment Act 2019 itself recognises strategic environmental assessment, land-use integration, environmental and social assessment, biodiversity offsets, ecosystem services and decommissioning. The reform priority should therefore be to make these environmental tools operate coherently with land acquisition and petroleum approvals[198].

The comparative analysis undertaken in this chapter reveals several important lessons for Uganda regarding environmental governance and land acquisition for petroleum development and they include the following;

[198] National Environment Act 2019 ss 5–7, 41–45, 47, 50, 52, 53, 69–73 and 106; Petroleum (Exploration, Development and Production) Act cap 161.

4.8.1 Strengthen institutional independence, coordination and technical capacity

NEMA, the Petroleum Authority of Uganda, land institutions, local governments and other lead agencies require clearly defined and coordinated responsibilities. Environmental regulators should possess adequate technical staff, field presence, laboratories, monitoring technology and predictable financing. Coordination should not become a mechanism for diluting accountability: each institution should retain a clear legal duty for the decisions within its mandate, and monitoring results should be capable of independent scrutiny[199].

Uganda should strengthen the institutional independence, technical capacity, and financing of environmental regulatory institutions including the National Environment Management Authority and the Petroleum Authority of Uganda. Weak institutional capacity undermines environmental enforcement and increases vulnerability to political interference and regulatory capture.

4.8.2 Strengthen meaningful participation, disclosure and grievance redress

Participation should begin during alternatives analysis and continue through acquisition, construction, operation, monitoring and closure. Information should be timely, understandable and available in appropriate local languages and formats. Communities should have genuine opportunities to influence routes, mitigation, valuation procedures, resettlement design and monitoring. Grievance mechanisms should be accessible, predictable, culturally appropriate and non-retaliatory, but they should never replace access to courts, tribunals or public regulatory bodies[200].

Uganda should also strengthen public participation mechanisms in petroleum governance. Effective participation requires access to information, meaningful consultation, community monitoring mechanisms, and access to environmental justice. Participation should occur before major project decisions are finalized rather than after decisions have already been made.

[199] National Environment Act 2019; Petroleum (Exploration, Development and Production) Act 2013; institutional mandates of NEMA, Petroleum Authority of Uganda and land administration bodies
[200] Rio Declaration (n396)

4.8.3 Uganda should strengthen its compensation framework.

Uganda's compensation and resettlement framework should be reformed in order to align with international best practices. Compensation should extend beyond physical property valuation to include livelihood restoration, socio-economic rehabilitation, transitional support, and protection of vulnerable groups.

The comparative analysis further demonstrates the importance of integrating climate governance into petroleum regulation. Uganda's current framework inadequately addresses greenhouse gas emissions, climate risk assessment, carbon accountability, and long-term transition planning. Future reforms should therefore integrate climate resilience and sustainability considerations into petroleum governance.

4.8.4 Protect biodiversity, ecosystem services and culturally significant landscapes

Biodiversity safeguards should extend beyond species inventories to ecosystem functions and community dependence on ecosystem services. Environmental assessment should evaluate effects on water regulation, soil fertility, fisheries, pollination, carbon storage, cultural landscapes and access to natural resources. Critical habitats and highly sensitive areas should be subject to clear avoidance or exceptionally restrictive rules. Biodiversity-management and restoration plans should contain measurable indicators, independent monitoring and transparent reporting[201].

Uganda should also adopt stronger biodiversity protection mechanisms, particularly within ecologically sensitive ecosystems in the Albertine Graben. Environmental governance should prioritize ecosystem restoration, biodiversity offsets, independent ecological monitoring, and strict environmental liability.

4.8.5 Strengthen transparency and access to environmental justice

Public access to ESIAs, environmental-management plans, monitoring and audit reports, restoration obligations, compensation procedures and other non-confidential project information is essential for accountability. Standing rules and procedural requirements should facilitate public-interest environmental claims. Courts and tribunals should be able to grant

[201] . Rio Declaration (n 396) Principle 10

timely interim and preventive relief where acquisition or construction threatens irreversible environmental harm, and final remedies should include restoration, compensation and enforcement of continuing obligations where appropriate[202].

4.8.6 Adopt an integrated statutory safeguard for petroleum-related land acquisition

The most important comparative lesson is integration. Uganda would benefit from a clear statutory or regulatory framework specifically connecting petroleum land acquisition to environmental and social safeguards. Such a framework should require environmental justification of the footprint before final acquisition; alternatives analysis; application of the mitigation hierarchy; recognition of customary and livelihood interests; livelihood restoration; biodiversity and climate safeguards; continuing participation; financial assurance; monitoring; grievance redress; restoration; and decommissioning. This would close the conceptual gap between land law, which traditionally focuses on the legality and compensation of the taking, and environmental law, which focuses on the consequences of converting the land to petroleum use[203]

4.9 Conclusion

This chapter has demonstrated that environmental safeguards in land acquisition for oil and gas projects extend far beyond the payment of compensation. Binding international environmental and human-rights law requires conservation, prevention of environmental harm, protection of human dignity and community rights, and effective remedies. Soft-law principles add integration, precaution, participation, polluter pays and intergenerational responsibility. International financial institution standards demonstrate how these principles can be operationalized through avoidance of displacement, livelihood restoration, and protection of non-title interests, biodiversity safeguards, continuing engagement and lifecycle monitoring[204].

Comparative national experience reinforces the same conclusion. Strong institutions and early environmental integration, as illustrated by Tanzania, reduce the risk that environmental protection becomes an afterthought. Nigeria shows the long-term costs of weak enforcement

[202] African Charter (n 379) arts 7 and 24; Rio Declaration (n 396) Principle 10,Save Lamu (n 148).

[203] National Environment Act 2019; Land Act 1998, as amended; Petroleum (Exploration, Development and Production) Act CAP 161.

[204] National Environment Act CAP 181

and delayed remediation. Ghana highlights transparency and differentiated oversight. Kenya demonstrates the importance of constitutional environmental rights, public participation and access to adjudication.

For Uganda, the appropriate response is not wholesale transplantation of any foreign model. It is a context-sensitive integration of international standards with Uganda's constitutional, environmental, land and petroleum framework. Land should not be compulsorily acquired for a petroleum footprint that has not first been environmentally justified; compensation should not terminate obligations to restore livelihoods and ecosystems; and environmental approval should not be regarded as complete without monitoring, participation, liability, and restoration and decommissioning. Such an approach would better reconcile petroleum development with the ecological sensitivity of the Albertine Graben, the rights and livelihoods of affected communities, and the interests of future generations.[107]

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CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of findings, conclusions and recommendations of the study on the environmental implications of land acquisition for oil and gas projects in Uganda, with particular reference to the Albertine Graben. The study examined the intersection between land acquisition, environmental protection, petroleum development, property rights, community livelihoods and sustainable development. Its central concern was whether Uganda's existing legal, policy and institutional framework adequately anticipates, prevents, mitigates and remedies the environmental consequences associated with acquiring and converting land for petroleum infrastructure[205].The central research question was: How effectively does the current legal and regulatory framework in Uganda mitigate the environmental impacts of land acquisition for oil and gas projects within the Albertine Graben?

The study addressed this central question through five sub-research questions concerning: the scale, forms, processes and patterns of petroleum-related land acquisition; the environmental and associated social impacts of such acquisition; the adequacy of Uganda's policy, legal and institutional framework; the extent to which Uganda's safeguards correspond with international standards and comparative best practice; and the legal, policy and institutional reforms required to strengthen environmental protection and sustainable land acquisition. The study establishes that Uganda has developed an increasingly elaborate legal framework for environmental management and petroleum development, the Constitution protects both property rights and the right to a clean and healthy environment, Article 26 guarantees protection against compulsory deprivation of property and requires prompt, fair and adequate compensation prior to the taking of possession, while Article 39 guarantees every Ugandan the right to a clean and healthy environment. Article 245 further requires Parliament to provide measures for protecting and preserving the environment from abuse, pollution and degradation and for managing the environment for sustainable development. The National Objectives and Directive Principles of State Policy, particularly Objective XXVII, reinforce sustainable management of land, air, water and natural resources for present and future generations[206]. These constitutional guarantees are supplemented by the National Environment Act cap 181, Petroleum legislation

[205] Constitution of the republic of Uganda 1996, articles 26, 39 and 245, the National Environment Act cap 181, the Petroleum (Exploration, Development and Production) Act cap 16

[206] Constitution of the republic of Uganda 1995 articles 26, 39 and 245, the National objectives and directive, principles of state policy, objective xxvii.

land legislation and subsidiary environmental regulations. The National Environment Act cap 181 is particularly significant because it incorporates different principles including; the precautionary principle, polluter-pays principle, and mitigation hierarchy, restoration of damaged ecosystems, intergenerational equity, public participation and prior environmental and social assessment into Uganda's environmental governance framework[207].

The principal finding of this study, however, is that the existence of an extensive legal framework does not by itself ensure environmentally sustainable land acquisition. A significant gap remains between formal legal protection and implementation in practice. In particular, land acquisition, compensation and environmental assessment have tended to operate as related but insufficiently integrated regulatory processes. The environmental consequences of transferring land from existing agricultural, customary, ecological and livelihood uses to petroleum infrastructure therefore require more systematic treatment throughout the project life cycle[208].

5.1 Summary of Findings

5.2 Findings on the Scale, Forms, Processes and Patterns of Land Acquisition for Oil and Gas Projects in the Albertine Graben

The first research question examined the scale, forms, processes and patterns of land acquisition associated with petroleum development in the Albertine Graben. The study found that petroleum development creates land requirements extending considerably beyond drilling sites. Land is required for well pads, access roads, central processing facilities, feeder pipelines, construction camps, storage areas, transmission infrastructure, water-abstraction facilities, waste-management installations, the refinery and associated infrastructure, as well as the East African Crude Oil Pipeline and related facilities[209]. The resulting pattern is therefore not simply one of isolated parcels being acquired for individual petroleum installations. Rather, petroleum development creates a network or corridor of interconnected land-use changes across a wider landscape. This distinction has important environmental implications, individually, a well pad,

[207] National Environment Act 2019 ss 3, 5, 112–115 and 164; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020

[208] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regulations 3–5.

[209] Petroleum (Exploration, Development and Production) Act 2013; Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act 2013; East African Crude Oil Pipeline (EACOP) Act 2021

access road, pipeline corridor or construction camp may appear to occupy a relatively limited area. Collectively, however, these installations can generate cumulative and induced impacts extending substantially beyond the formally acquired land. They can fragment habitats, alter drainage systems, increase human access to previously less disturbed ecosystems, stimulate settlement and economic activity, change patterns of natural-resource use and create additional demand for water, fuelwood, construction materials and waste-disposal facilities.

The study further found that petroleum-related acquisition occurs within a pluralistic land-tenure system. Article 237 of the Constitution recognizes customary, freehold, mailo and leasehold tenure. This creates particular difficulties where customary interests are communally or familiarly held, boundaries are not formally surveyed, secondary interests are not documented, or households depend upon common-property resources that are not adequately captured by conventional valuation methodologies[210]. The environmental significance of customary and communal land rights is particularly important as affected persons may depend upon wetlands, forests, grazing areas, fisheries, water sources, medicinal plants and other ecosystem services without holding individually registered proprietary interests over those resources. The compensation system that focuses predominantly upon land ownership and physical improvements can therefore underestimate the environmental and livelihood value of land[211].

The study also establishes that the distinction between compulsory acquisition, negotiated acquisition, easements, rights of way and restrictions on land use matters less environmentally than the actual consequences of land conversion. Whether land is acquired compulsorily or consensually, its conversion from agriculture, forest, wetland, grazing, settlement or other uses to petroleum infrastructure can produce comparable ecological impacts[212].

A further finding and most important is that environmental assessment and land acquisition are not sufficiently synchronized at the earliest stages of project planning, this creates a risk that the selection of land and project corridors becomes substantially settled before environmental alternatives have been fully evaluated, Yet the National Environment (Environmental and

[210] Constitution of the Republic of Uganda 1995 art 237(3).
[211] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, reg 34 and schedule 2.
[212] Constitution of the Republic of Uganda 1995.

Social Assessment) Regulations 2020 adopt a broader approach; They recognize pipelines as linear activities, require assessment of alternative routes and require an environmental and social impact statement to examine project alternatives, baseline conditions, land affected, alternative resettlement areas, cumulative impacts, residual impacts, climate effects and mitigation measures[213]. The finding is therefore that environmental assessment should inform the question whether particular land should be acquired in the first place, rather than operating primarily as a mechanism for mitigating environmental impacts after the preferred location and land requirements have effectively been determined[214].

6.2.2 Findings on the Environmental and Associated Social Impacts of Land Acquisition

The second research question examined the key environmental and associated social impacts arising from land acquisition for petroleum infrastructure in the Albertine Graben.

The study found that the environmental effects of land acquisition extend well beyond the physical loss of land. Conversion of land to petroleum infrastructure can contribute to vegetation clearance, habitat fragmentation, biodiversity loss, soil disturbance, erosion, alteration of drainage and hydrological systems, wetland degradation, pollution risks, waste generation, landscape change and increased pressure upon natural resources[215]. The original draft similarly identifies deforestation, biodiversity loss, wetland degradation, soil erosion and disruption of ecological systems among the principal impacts. These impacts are especially significant because the Albertine Graben is both a petroleum-producing region and an ecologically sensitive landscape containing important forests, wetlands, water systems, wildlife habitats, agricultural areas and protected areas. Environmental harm in such a landscape may therefore have consequences considerably beyond the boundaries of individual acquired parcels[216].

[213] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regs 3–5 and sch 5
[214] ibid
[215] National Environment Act 2019; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 2.
[216] Constitution of the Republic of Uganda 1995 arts 245 and 237; Uganda Wildlife Act 2019; National Environment Act 2019

A major finding is that environmental and social impacts are inseparable in many land-acquisition contexts; Loss of agricultural land may reduce food security, loss of wetlands may affect water access, fisheries and flood regulation, forest clearance may remove sources of fuelwood, medicinal plants and other products and the restrictions on access to natural resources may undermine livelihood strategies, displacement may move households into areas where they exert additional pressure on forests, wetlands and marginal land[217]. This relationship is recognized in Uganda's contemporary environmental assessment framework. Regulation 34 of the National Environment (Environmental and Social Assessment) Regulations 2020 that requires environmental risk assessment to consider compulsory land acquisition, restrictions on access to natural resources, displacement, loss of livelihoods, land tenure, land-use patterns, food security, vulnerable groups, conflict over natural resources and human-rights risks associated with the environment and ecosystem services[218].

The study consequently finds that compensation cannot be treated as exclusively a property-law issue. Environmental loss may itself constitute livelihood loss, while inadequate livelihood restoration may generate secondary environmental impacts and this creates an important nexus between compensation, livelihood restoration and environmental sustainability[219]. The research further found that project impacts need to be assessed at different spatial and temporal scales as immediate site-specific impacts may arise during land clearance and construction. Operational impacts may continue throughout petroleum production and other consequences may appear only after several years, including altered settlement patterns, habitat fragmentation, invasive species, changes in resource use and cumulative pressure upon water and biodiversity[220]. The 2020 Environmental and Social Assessment Regulations provide a legal foundation for addressing this problem because an environmental and social impact statement must include assessment of secondary or cumulative impacts and residual impacts and must consider mitigation, offsets and compensation mechanisms[221]. The principal challenge is therefore not merely absence of legal authority, but ensuring rigorous implementation at landscape and cumulative-impact levels.

[217] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, reg 34
[218] ibid reg 34.

[219] ibid; Land Act 1998.
[220] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 5
[221] ibid schedule 5 paras 3(o)–(p)

The study also identifies pollution and hazardous-waste risks as important long-term consequences of petroleum land use as land used for drilling, processing, storage, workshops or waste-management facilities can be affected by hydrocarbons, drilling wastes, produced water, waste oils, chemicals and contaminated materials, therefore environmental responsibility must consequently extend beyond acquisition and production to remediation and closure[222]. This conclusion is reinforced by the National Environment Act cap181 as the Act requires the polluter to bear the cost of pollution and empowers NEMA to issue environmental restoration orders requiring cessation of harmful activities, clean-up, and restoration of land and ecosystem functions and removal of waste[223].

A related finding concerns climate change. Petroleum-related land conversion can contribute to greenhouse-gas emissions through vegetation clearance, loss of carbon sinks, construction and operational emissions and associated land-use changes, at the same time, degradation of forests, wetlands and other ecosystems can weaken the adaptive capacity of communities by reducing water regulation, erosion control, food security and resilience to floods and drought[224], Uganda's National Climate Change Act 2021 gives the UNFCCC, Kyoto Protocol and Paris Agreement force of law in Uganda and establishes a domestic framework for mitigation, adaptation and climate resilience[225], The 2020 Environmental and Social Assessment Regulations likewise require consideration of a project's impacts on climate, its vulnerability to climate change, carbon footprint and proposed adaptation and mitigation measures[226].Climate considerations should therefore be incorporated more systematically into petroleum-related land acquisition.

6.2.3 Findings on the Adequacy of Uganda's Policy, Legal and Institutional Framework

The third research question considered how adequate Uganda's policy, legal and institutional framework is in balancing property rights, environmental protection and enforcement of ESIA

[222] National Environment Act 2019; Petroleum (Exploration, Development and Production) Act 2013 ss 112–118.

[223] National Environment Act 2019 ss 3, 5 and provisions relating to pollution, restoration and environmental restoration orders

[224] National Climate Change Act 2021; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 5.

[225] National Climate Change Act 2021 ss 3–4.

[226] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 5 para 3(m).

mitigation measures during land acquisition and handover for petroleum projects. The study found that Uganda's legal framework is relatively comprehensive in substantive environmental principles but fragmented in its treatment of the relationship between land acquisition and environmental protection, at constitutional level, Articles 26 and 39 protect property and environmental rights respectively, Article 26 requires prompt payment of fair and adequate compensation prior to compulsory taking, while Article 39 guarantees a clean and healthy environment[227], these provisions should be interpreted harmoniously. Lawful acquisition should not be understood as authorizing environmental degradation, while environmental protection should form part of determining the conditions under which land is selected, acquired, occupied, used and eventually restored.

The National Environment Act cap 181 significantly strengthens this position, as Section 3 recognizes the right to a clean and healthy environment and permits civil proceedings to prevent environmental harm, compel environmental assessment or monitoring, require restoration and obtain compensation for pollution and loss of beneficial uses, Section 5 incorporates participation, sustainable development, ecosystem restoration, precaution, ESIA, the mitigation hierarchy, polluter pays, environmental-cost internalization and climate resilience among the principles of environmental management[228].The Act is therefore considerably more sophisticated environmentally than the traditional acquisition framework. The study finds a need to connect these modern environmental obligations expressly to the land-acquisition process.

A central weakness identified by the study is the tendency to conceptualize compensation largely through proprietary and economic valuation, fair compensation is indispensable, but monetary compensation for land and improvements does not necessarily restore ecosystem services, ecological functions, communal-resource access, and cultural relationships with land or long-term livelihood resilience[229]. The study therefore finds that the concept of environmental compensation must be distinguished from, but coordinated with, property compensation. Property compensation addresses the deprivation of legally recognized interests in land and improvements as environmental restoration addresses damage to ecological

[227] Constitution of the Republic of Uganda 1995 arts 26 and 39.

[228]National Environment Act 2019 sections 3 and 5

[229] Constitution of the Republic of Uganda 1995 art 26; Land Act 1998.

systems. Biodiversity offsets address significant residual biodiversity impacts after avoidance, minimization and restoration and livelihood restoration seeks to restore or improve the economic and social position of affected persons, these remedies overlap but are not interchangeable[230].

The study also finds that Uganda's ESIA framework provides a comparatively strong statutory basis for integrating these concerns, the 2020 Regulations define mitigation broadly to include avoidance, reduction, control, offsets, replacement, restoration and compensation. They require alternatives analysis, baseline assessment, assessment of environmental, health, social, economic and cultural impacts, cumulative impacts, climate impacts, alternative resettlement areas, residual impacts, environmental management and monitoring plans, and stakeholder consultation[231]. The principal weakness therefore lies in sequencing, implementation, monitoring and enforcement, environmental conditions identified during ESIA need to follow the land through acquisition, construction, operation, closure and restoration. The handover of acquired land to a petroleum operator should not sever the relationship between the acquisition process and environmental obligations[232].

The petroleum legislation similarly contains important safeguards. The Petroleum (Exploration, Development and Production) Act Cap 160 expressly identifies protection of public health and the environment and sustainable petroleum development among its purposes and also regulates cessation of petroleum activities and decommissioning. Sections 112–115 provide for decommissioning plans, decommissioning funds and directions concerning disposal of facilities; importantly, disposal obligations may continue even after expiry of a license[233], this provides an important foundation for the study's finding that environmental liability should survive termination of land occupation or petroleum rights. Land should not simply be returned, transferred or abandoned after petroleum use without evidence that contamination has been remediated and ecological functions restored as far as reasonably practicable[234].

[230] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, reg 2 (definition of 'mitigation measures' and 'biodiversity offsets')
[231] ibid regulation 2, 5 and schedule 5.

[232] ibid reg 5(2), which requires the developer to take environmental and social assessments into account during the project life cycle
[233] Petroleum (Exploration, Development and Production) Act 2013
[234] ibid ss 112–115.

Institutionally, the study found that environmental governance involves several institutions, including NEMA, the Petroleum Authority of Uganda (PAU), the Ministry responsible for energy and petroleum development, the Ministry responsible for lands, the Uganda Wildlife Authority, water and forestry institutions, district local governments and other lead agencies. The multiplicity of institutions is not inherently problematic because petroleum projects necessarily engage different areas of regulatory competence, the problem arises where mandates overlap without adequate coordination, information sharing and clearly assigned accountability, the original chapter similarly identified institutional fragmentation and overlapping mandates as a weakness in environmental monitoring and enforcement. The study therefore finds that the central institutional challenge is not simply the number of institutions but the absence of a sufficiently integrated land–environment–petroleum governance mechanism linking acquisition, valuation, ESIA approval, compensation, construction monitoring, pollution control, livelihood restoration and decommissioning[235].

The study further found that public participation remains an important weakness. Consultation may become procedural rather than deliberative where communities receive technical information late, lack independent expertise, face language barriers, or have limited ability to influence alternatives that have already been substantially determined[236]. Meaningful participation requires engagement before key land and project-location decisions become irreversible, it should include accessible information about project alternatives, environmental risks, compensation, livelihood restoration, ecosystem-service losses, pollution risks, grievance mechanisms and monitoring results. The 2020 Regulations recognize stakeholder consultation as an integral component of the environmental and social impact statement[237], the challenge is to ensure that participation influences substantive decision-making rather than merely documenting consultation.

[235] National Environment Act 2019; Petroleum (Exploration, Development and Production) Act 2013.
[236] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020
[237] ibid sch 5 para 3(s)

6.2.4 Findings from International Standards and Comparative Jurisdictions

The fourth research question examined how Uganda's environmental safeguards compare with international environmental standards and best practices in selected comparative jurisdictions. The study found that Uganda has adopted many principles reflected in international environmental law. These include sustainable development, prevention, precaution, polluter pays, public participation, environmental assessment, biodiversity conservation, climate mitigation and adaptation, and restoration of environmental damage[238].

The Convention on Biological Diversity, Ramsar Convention, UNFCCC and Paris Agreement, Basel Convention, Rotterdam Convention and Stockholm Convention provide additional international normative frameworks relevant to biodiversity, wetlands, climate change, hazardous chemicals and hazardous waste[239], together these instruments support a life-cycle approach to petroleum development extending from project planning and site selection to construction, operation, waste management, decommissioning and restoration. The comparative analysis undertaken in the dissertation demonstrates that Uganda's principal weakness is not necessarily the absence of environmental legislation, rather the comparative jurisdictions illustrate the importance of effective institutions, transparent decision-making, strategic and cumulative assessment, credible enforcement, adequate financial provision for environmental liabilities, meaningful participation and long-term restoration planning[240].

The original chapter identifies Tanzania, Nigeria and Ghana as the principal comparative jurisdictions and concludes that Uganda can draw lessons from their approaches to institutional independence, transparent petroleum management and public participation. The comparative analysis produces several broader lessons. First, environmental safeguards are most effective where they operate before land and investment decisions become irreversible. Alternatives analysis should therefore precede or inform final acquisition decisions.

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[238] Rio Declaration on Environment and Development (1992) principles 4, 10, 15 and 16; Convention on Biological Diversity (1992); Paris Agreement (2015); African Charter on Human and Peoples' Rights (1981) art 24

[239] Convention on Biological Diversity (1992); Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) (1971); United Nations Framework Convention on Climate Change (1992); Paris Agreement (2015); Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989); Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998); Stockholm Convention on Persistent Organic Pollutants (2001)

[240] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regs 3 and 34 and sch 5

Second, project-by-project ESIA is insufficient where numerous related facilities are developed within the same landscape. Strategic, regional and cumulative assessment is necessary to evaluate the combined consequences of pipelines, roads, processing facilities, settlements and other associated infrastructure[241]. Third, environmental conditions must be enforceable throughout the project life cycle. Approval of an ESIA is not the end of environmental regulation. Compliance auditing, monitoring, publication of environmental information, adaptive management, enforcement and restoration are equally important[242].

Fourth, environmental liability should be backed by financial security. Decommissioning funds, restoration bonds, insurance or other financial-assurance mechanisms reduce the risk that environmental liabilities will ultimately be transferred to the State or affected communities[243]. Fifth, participation must be substantive. Communities should have access to relevant information at a stage when they can influence alternatives and mitigation measures[244].

Finally, international best practice increasingly treats biodiversity, ecosystem services, climate resilience, livelihood restoration and human rights as interconnected concerns. Uganda's legal framework contains many elements necessary to implement such an integrated approach, but their practical application requires stronger coordination and enforcement[245].

6.2.5 Findings on the Legal and Institutional Reforms Required

The fifth research question examined the reforms necessary to strengthen environmental protection, ensure sustainable land acquisition and establish an effective nexus between land compensation and environmental sustainability. The study finds that reform should not be limited to increasing compensation, the fundamental requirement is to transform petroleum-related land acquisition from a predominantly transactional process into a life-cycle environmental governance process, such an approach should begin with strategic planning and

[241] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regs 3 and 34 and sch 5
[242] ibid; National Environment Act 2019
[243] Petroleum (Exploration, Development and Production) Act 2013 s 113
[244] Rio Declaration on Environment and Development (1992) principle 10; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, sch 5 para 3(s)
[245] Convention on Biological Diversity (1992); Paris Agreement (2015); African Charter on Human and Peoples' Rights (1981) art 24; World Bank, Environmental and Social Framework (World Bank 2017)

alternatives assessment; continue through land identification, ESIA, acquisition, compensation, livelihood restoration and construction; extend throughout operation through compliance monitoring and pollution control; and conclude with decommissioning, remediation, restoration and appropriate post-closure monitoring[246].

The central legal reform required is therefore explicit integration of environmental safeguards into land-acquisition law and practice. Before land is finally acquired for major petroleum infrastructure, the competent authorities should be satisfied that environmental alternatives have been assessed; environmentally sensitive areas have been avoided where reasonably possible; cumulative effects have been considered; compensation and livelihood restoration adequately address ecosystem dependence; and restoration and decommissioning liabilities are financially secured[247].

The study further finds that institutional reform should focus on coordination and accountability rather than creating additional institutions. NEMA, PAU, land authorities, local governments and natural-resource agencies should operate through an integrated compliance framework that clearly identifies responsibilities at each stage of the project.

6.3 Conclusion

The study concludes that Uganda possesses a substantially developed legal framework capable of providing meaningful environmental protection, but its effectiveness is weakened by insufficient integration of land acquisition, environmental assessment, compensation, livelihood restoration, petroleum regulation and post-project restoration. The Constitution establishes a strong normative foundation by simultaneously protecting property under Article 26 and the environment under Article 39. The National Environment Act cap 181 further embeds precaution, polluter pays, sustainable development, public participation, restoration, the mitigation hierarchy and environmental assessment into domestic law. The 2020 (Environmental and Social Assessment) Regulations expressly recognize land acquisition, displacement, livelihood loss, ecosystem services, cumulative impacts, climate change, alternatives and residual impacts as matters requiring environmental and social

[246] National Environment Act 2019; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020; Petroleum (Exploration, Development and Production) Act 2013 ss 112–118

[247] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regs 5 and 34 and sch 5; Petroleum (Exploration, Development and Production) Act 2013 s 113

assessment[248],the problem is therefore not accurately characterized as a complete absence of environmental law, it is more appropriately understood as an integration and implementation deficit.

Land acquisition has traditionally focused upon identifying proprietary interests, valuing land and improvements, paying compensation and securing possession. Environmental regulation, by contrast, has focused upon project assessment, mitigation, pollution control and compliance, petroleum regulation has concentrated upon licensing, technical operations, safety, resource management and decommissioning. The study demonstrates that these processes converge on the same physical and social landscape and must therefore be regulated as interconnected components of petroleum governance[249].

A sustainable framework must recognize that acquisition changes not only ownership and possession but also the ecological function and social use of land. Land can simultaneously constitute property, habitat, agricultural capital, cultural space, a source of ecosystem services, a carbon sink, a watershed and the basis of community identity and livelihoods. Compensation based solely on proprietary valuation cannot adequately address all these dimensions[250] The study accordingly concludes that environmental safeguards must operate throughout the petroleum project life cycle, the preferred hierarchy should be avoidance first, minimization second, restoration third and compensation or biodiversity offsets for unavoidable residual impacts thereafter, consistent with Uganda's National Environment Act and environmental assessment framework[251].

The study further concludes that petroleum development in the Albertine Graben need not necessarily place property rights, economic development and environmental protection in irreconcilable opposition, the legal challenge is to ensure that development decisions internalize their environmental and social costs and that communities do not disproportionately

[248] Constitution of the Republic of Uganda 1995 arts 26, 39 and 245; National Environment Act 2019 ss 3 and 5; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, Reg 34 and schedule 5

[249] Constitution of the Republic of Uganda 1995, the Land Act 1998 and the National Environment Act 2019; Petroleum (Exploration, Development and Production) Act 2013

[250] National Environment Act 2019; National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, regulation 2 and schedule 2

[251] National Environment (Environmental and Social Assessment) Regulations 2020, SI 143 of 2020, Reg 2 and the National Environment Act 2019

bear environmental burdens while project benefits accrue elsewhere. Ultimately, the sustainability of petroleum development in Uganda will depend not merely upon whether land is lawfully acquired and compensation paid, but upon what happens to that land, its ecosystems and the people who depend upon them before, during and after petroleum development. Environmental sustainability must therefore become an integral legal condition of land acquisition rather than an ancillary consideration addressed after possession has been secured[252].

Additionally, the study established that Uganda possesses an extensive constitutional and statutory framework governing environmental protection, land rights and petroleum activities. Article 39 of the Constitution guarantees the right to a clean and healthy environment while Objective XIII imposes obligations upon the State to protect natural resources on behalf of present and future generations.[253]However, despite these constitutional guarantees, the practical implementation of environmental rights within the context of oil and gas development The research found that the process of compulsory land acquisition for petroleum infrastructure has generated substantial environmental consequences within the Albertine Graben. These impacts include deforestation, biodiversity loss, wetland degradation, soil erosion and disruption of ecological systems[254].Infrastructure projects such as roads, pipelines, industrial camps and drilling facilities have altered fragile ecosystems and intensified pressure on protected conservation areas including Murchison Falls National Park[255].

The study further established that the Land Acquisition Act remains outdated and inadequately aligned with modern environmental governance principles. Although the law provides procedures for compulsory acquisition and compensation, it fails to comprehensively integrate environmental sustainability considerations into acquisition decisions[256].The absence of clear statutory requirements for cumulative environmental impact assessment prior to land acquisition weakens environmental accountability and increases ecological risks. The research additionally found that Environmental and Social Impact Assessment processes are frequently characterized by procedural weaknesses. Public participation mechanisms are

[252] National Environment Act 2019; Petroleum (Exploration, Development and Production) Act 2013 ss 112
[253] Constitution of the Republic of Uganda 1995, art 39 and National Objectives and Directive Principles of State Policy, Objective XIII
[254] National Environment Management Authority, State of the Environment Report for Uganda (NEMA 2022) 45
[255] Uganda Wildlife Authority, Conservation Challenges in Murchison Falls National Park (UWA 2021) 17.
[256] Land Acquisition Act, Cap 226

often formalistic and fail to ensure meaningful involvement of affected communities[257].Many local communities reported inadequate access to information concerning environmental risks associated with petroleum projects. The study established that limited transparency undermines environmental justice and weakens public confidence in regulatory institutions. The study also found that compensation mechanisms associated with land acquisition are frequently delayed and inadequate. Undervaluation of land and livelihood losses has contributed to economic insecurity among displaced communities[258]. As a consequence, affected populations often resort to unsustainable exploitation of natural resources including forests and wetlands, thereby aggravating environmental degradation within the Albertine region.

Institutional fragmentation emerged as another major finding of the study. Multiple agencies including the National Environment Management Authority, the Petroleum Authority of Uganda, district local governments and the Ministry of Energy exercise overlapping mandates without effective coordination mechanisms[259].This fragmentation weakens environmental monitoring and enforcement while creating opportunities for regulatory inconsistency and political. The research further established that Uganda's implementation of international environmental obligations remains inconsistent. Uganda is party to major environmental instruments including the African Charter on Human and Peoples' Rights, the Convention on Biological Diversity, the Stockholm Declaration and the Rio Declaration.[260]These instruments impose obligations relating to sustainable development, precautionary environmental management and protection of biodiversity. However, domestic implementation within the petroleum sector remains weak due to prioritization of economic growth over ecological sustainability.

Comparative analysis with jurisdictions such as Tanzania, Ghana and Nigeria demonstrated that effective environmental governance requires strong institutional independence, transparent petroleum management and meaningful public participation.[261] The study found that Uganda

[257] National Environment Act 2019 and the National Environment (Environmental and Social Assessment) Regulations 2020.

[258] Human Rights Watch, 'Uganda: Oil Project Displacement Concerns' (2023) <https://www.hrw.org> accessed 11 May 2026

[259] Petroleum Authority of Uganda, Annual Petroleum Sector Report (PAU 2023) 33

[260] African Charter on Human and Peoples' Rights (adopted 27 June 1981, entered into force 21 October 1986) 1520 UNTS 217

[261] Philippe Sands and Jacqueline Peel, Principles of International Environmental Law (4th edn, CUP 2018) 203

can draw valuable lessons from these jurisdictions in strengthening environmental accountability and promoting sustainable resource governance.

5.2 Conclusion

The study concludes that although Uganda has adopted a relatively comprehensive legal and policy framework governing environmental protection and land acquisition, substantial weaknesses undermine its effectiveness in regulating the environmental implications of oil and gas projects within the Albertine Graben. Environmental governance remains constrained by implementation failures, institutional fragmentation, inadequate public participation and insufficient enforcement mechanisms. The research concludes that compulsory land acquisition for petroleum development has produced significant environmental impacts including ecosystem degradation, biodiversity loss and increased pressure on fragile natural resources[262], these environmental consequences are exacerbated by weak compensation frameworks and limited livelihood restoration measures for displaced communities.

The study further concludes that Uganda's petroleum governance framework prioritizes economic development and revenue generation at the expense of environmental sustainability and ecological preservation. Despite constitutional guarantees relating to environmental protection, environmental concerns are frequently subordinated to extractive industry objectives[263]. This imbalance threatens long-term sustainable development.

The research additionally concludes that public participation within Environmental and Social Impact Assessment processes remains insufficient. Effective environmental governance requires meaningful community involvement in decision-making processes affecting land rights, livelihoods and ecological systems[264]. The exclusion of local communities from substantive participation undermines environmental justice and increases social conflict.

The study also concludes that Uganda's climate obligations under international environmental law are inadequately reflected within domestic petroleum governance policies, the expansion

[262] Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.
[263] Rio Declaration on Environment and Development 1992, Principle 4
[264] John C Dernbach and James R May (eds), Environmental Laws and Their Enforcement (EOLSS Publishers 2017) 111.

of fossil fuel extraction raises serious concerns regarding compatibility with global climate governance frameworks including the Paris Agreement[265], Sustainable development within Uganda therefore requires integration of climate considerations into petroleum policy and land acquisition processes. Ultimately, the study concludes that sustainable management of the Albertine Graben requires balancing economic development with environmental protection, social justice and human rights. Without substantial legal and institutional reforms, environmental degradation associated with oil and gas projects is likely to intensify and undermine Uganda's constitutional and international environmental obligations.

5.3 Recommendations

The study recommends comprehensive reform of the Land Acquisition Act to ensure compatibility with constitutional environmental rights and international environmental law principles. Legislative reforms should expressly require integration of environmental sustainability considerations into compulsory acquisition processes associated with extractive industries[266].

The research further recommends strengthening the institutional independence and technical capacity of the National Environment Management Authority and other environmental regulatory agencies. Regulatory institutions should be provided with adequate resources, specialized expertise and enforcement powers to effectively monitor compliance within the petroleum sector.

The study recommends enhancement of Environmental and Social Impact Assessment procedures to ensure meaningful public participation and transparency. Affected communities should receive timely access to information regarding environmental risks, compensation arrangements and project impacts[267]. Consultation processes should move beyond procedural formalities towards genuine incorporation of community concerns into environmental decision-making.

The research additionally recommends establishment of comprehensive compensation and livelihood restoration frameworks capable of addressing both economic and environmental

[265] Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016).
[266] Land Act, Cap 227
[267] Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters 1998.

losses resulting from land acquisition. Compensation mechanisms should incorporate environmental rehabilitation obligations and long-term community development programs. The study further recommends stronger judicial protection of environmental rights through expansion of legal aid services, public interest litigation mechanisms and specialized environmental adjudication systems. Courts should adopt progressive interpretations of constitutional environmental rights in order to strengthen environmental accountability and sustainable development.

The research recommends integration of climate change considerations into Uganda's petroleum governance framework. Environmental decision-making processes should incorporate principles of precaution, sustainability and intergenerational equity in accordance with Uganda's obligations under the Paris Agreement and related international instruments[268]. Finally, the study recommends investment in renewable energy development and economic diversification strategies in order to reduce long-term dependence on fossil fuels. Sustainable development within Uganda requires balancing resource extraction with ecological conservation and climate resilience.

[268] Stockholm Declaration on the Human Environment 1972.

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