MAKERERE  UNIVERSITY

SCHOOL OF LAW

ASSESSMENT OF THE LEGAL AND INSTITUTIONAL FRAMEWORK FOR IMPLEMENTING THE POLLUTER PAYS PRINCIPLE IN ADDRESSING INDUSTRIAL POLLUTION IN UGANDA

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A DISSERTATION SUBMITTED TO THE SCHOOL OF LAW, MAKERERE UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF LAWS (LLB)

JUNE 2026

DECLARATION

I, **JUSTINE AGASHA**, declare that this dissertation has been prepared and completed independently by me. It is an original work that has not been submitted to any institution for any form of credit, award, or examination, and all contributions borrowed from any other work in the form of literature have been duly acknowledged through quotations, footnotes, and as complete references

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APPROVAL

The dissertation, assessment of the legal and institutional framework for implementing the polluter pays principle in addressing industrial pollution in Uganda, has been prepared and submitted for examination under my guidance and supervision.

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29th October

DEDICATION

This research work is dedicated to my mother, Ms. Rukundo Fausta whose endless sacrifices, encouragement, and unwavering support have shaped my academic journey. Your resilience, guidance, and belief in my abilities have been my greatest source of strength.

Thank you for being my foundation and inspiration throughout this journey

ACKNOWLEDGEMENT

First and foremost, I give thanks to Almighty God for His grace, wisdom, strength, and guidance throughout the course of this research and my academic journey. Without His blessings, this work would not have been possible.

I extend my sincere gratitude to my supervisor, Professor Emmanuel Kasimbazi, for his invaluable guidance, patience, constructive criticism, and continuous support throughout this research process. His academic insight and supervision greatly contributed to the successful completion of this study.

I also wish to express my appreciation to the School of Law, Makerere University, for providing a conducive academic environment, resources, and knowledge that have greatly contributed to my academic and professional growth.

I would also like to express my appreciation to my friends, Arthur, Kawesi, Paul, Rita, Blick, and Jackline for their encouragement, support, motivation, and companionship throughout this journey. Your contributions, whether academic or personal, have been greatly appreciated.

Special appreciation goes to my sister, Joan, for her support, encouragement, and belief in me throughout this process.

Finally, I extend my gratitude to everyone who contributed in one way or another towards the completion of this research work. Your support is deeply appreciated

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Convention on Biological Diversity (CBD) (1992)
East African Community Treaty 1999
EAC Protocol on Environment and Natural Resources Management 2006
Paris Agreement (2015)
United Nations Framework Convention on Climate Change (UNFCCC) (1992)
B. Non-Binding International Instruments (Soft Law)
Agenda 21: Programme of Action for Sustainable Development (1992)
OECD Recommendation C(72)128 on Guiding Principles Concerning International Economic Aspects of Environmental Policies (1972)
OECD Recommendation C(74)223 on the Implementation of the Polluter Pays Principle (1974)
Rio Declaration on Environment and Development (1992)
Stockholm Declaration on the Human Environment (1972)

LIST OF ABBREVIATIONS

ACODE	Advocates Coalition for Development and Environment
AfDB	African Development Bank
CAO	Chief Administrative Officer
CBD	Convention on Biological Diversity
DEC	District Environment Committee
EIA	Environmental Impact Assessment
EU	European Union
GDP	Gross Domestic Product
GOU	Government of Uganda
MWE	Ministry of Water and Environment
NEA	National Environment Act
NEMA	National Environment Management Authority
NDP	National Development Plan
OECD	Organisation for Economic Co-operation and Development
PPP	Polluter Pays Principle
TFEU	Treaty on the Functioning of the European Union
UIA	Uganda Investment Authority
UBOS	Uganda Bureau of Statistics
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URA	Uganda Revenue Authority
WHO	World Health Organization

ABSTRACT

This research dissertation examines the legal and institutional framework governing implementation of the Polluter Pays Principle (PPP) in Uganda. Drawing on the Constitution of Uganda, the National Environment Act Cap 181 sector-specific statutes, subsidiary legislation, international treaty obligations, and judicial decisions, it assesses the extent to which Uganda's framework translates the PPP from legal prescription into enforcement reality. The research finds that Uganda formally recognises the PPP but that the institutional framework is fragmented and under-resourced, enforcement practice is chronically weak, financial penalties are insufficient to deter large industrial polluters, and governance failures including political interference systematically undermine implementation. Civil society litigation has partially compensated for institutional deficits but cannot substitute for systematic regulatory enforcement. Targeted legislative, institutional, enforcement, regulatory and accountability recommendations are advanced.

CHAPTER ONE: GENERAL INTRODUCTION

1.1 Introduction

This chapter introduces the research, providing contextual background, identifying the research problem, articulating the study's objectives and research questions, defining the scope of the study, and explaining the methodology and theoretical framework adopted. It concludes with a chapterisation outlining the structure of the dissertation.

Industrial pollution constitutes one of the most pressing environmental governance challenges confronting Uganda today. As the Ugandan economy expands driven by manufacturing, agro-processing, sugar production and the anticipated large-scale petroleum extraction in the Albertine Graben the environmental costs of industrial activity are increasing in both scale and complexity.[1] The Polluter Pays Principle (PPP) offers a legally grounded and economically rational response: it requires those responsible for environmental pollution to bear the full costs of prevention, remediation and compensation, thereby internalising environmental externalities and creating incentives for cleaner production practices.[2]

The PPP is not merely an abstract economic concept; it is a legally operative norm embedded in Uganda's statutory framework, incorporated into Uganda's international treaty obligations, and recognised by Ugandan courts as a basis for enforcement actions. Yet the principle's formal recognition has not translated into effective enforcement. Industrial operators continue to externalise pollution costs onto communities, ecosystems and the public purse, while the institutional machinery of environmental enforcement operates well below its formal mandate. This study examines that gap systematically, assessing the legal framework in both its design and its operation, and advancing a reform agenda grounded in Uganda's specific constitutional, legislative and institutional context.

1.2 Background to the Study

1.2.1Global Development of Environmental Protection Principles

The emergence of environmental protection as a cognisable subject of international law followed the rapid industrialisation of the post-World War II era, which produced unprecedented levels of air, water and soil pollution across the developed world and,

[1]Uganda Bureau of Statistics, 'Statistical Abstract 2022' (UBOS 2023); National Development Plan III 2020/21–2024/25 (Government of Uganda 2020)

[2]Foluso Akinsola, Mojeed M Ologundudu and Motunrayo O Akinsola, 'Industrial Development, Urbanization and Pollution Nexus in Africa' (2022) 8(11) Heliyon e11299

increasingly, in developing nations pursuing industrial growth. The 1972 Stockholm Declaration on the Human Environment marked the first global acknowledgment of states' shared responsibility for environmental protection, affirming in Principle 21 states' sovereign right to exploit their natural resources but accepting responsibility for ensuring that activities within their jurisdiction or control do not cause environmental damage beyond their borders.[3] Subsequent decades saw the progressive development of an international environmental law framework: the precautionary principle, the principle of sustainable development, the obligation to conduct environmental impact assessments for projects with significant environmental effects, and most directly relevant to this study the Polluter Pays Principle.

The 1987 Brundtland Commission report, Our Common Future, gave the principle of sustainable development its canonical definition: development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This intergenerational dimension of environmental governance provides the ethical foundation for the PPP: current polluters must not be permitted to defer the costs of their activities onto future generations or onto the communities living with the consequences of industrial pollution. The PPP operationalises this commitment through legal mechanisms that make pollution financially costly to those who cause it.

1.2.2 Evolution of the Polluter Pays Principle

The PPP was first articulated as an economic instrument by the Organisation for Economic Co-operation and Development (OECD) in its 1972 Recommendation C(72)128, which was designed to prevent governments from subsidising pollution control on behalf of private industry and to avoid distortions in international trade among member states. The OECD's original formulation was primarily economic: the polluter should bear the costs of pollution control measures mandated by public authorities, ensuring that the prices of goods and services reflect the environmental costs of their production.[4] The 1974 OECD Recommendation C(74)223 elaborated the principle's application to specific pollution control measures, extending it beyond trade policy to become a general principle of environmental management.[5]

[3]Stockholm Declaration on the Human Environment (1972), Principles 21–22; Rio Declaration on Environment and Development (1992), Principle 16

[4]OECD Recommendation C(72)128 on Guiding Principles Concerning International Economic Aspects of Environmental Policies (1972)

[5]OECD Recommendation C(74)223 on the Implementation of the Polluter Pays Principle (1974)

Over the subsequent five decades, the PPP evolved from a narrow economic guideline into a broad legal norm with three distinct operational dimensions: the preventive modality (requiring polluters to prevent pollution before it occurs), the corrective modality (requiring remediation of environmental damage after it has occurred) and the compensatory modality (requiring compensation of pollution victims). Its codification in Principle 16 of the Rio Declaration 1992 gave it global soft-law standing, while its incorporation into Article 191(2) of the Treaty on the Functioning of the European Union (TFEU) elevated it to primary binding law within the EU.[6] The principle is now widely regarded as a general principle of international environmental law, operating alongside related principles including the precautionary principle, sustainable development and environmental justice.

1.2.3 Industrialisation and Environmental Challenges in Uganda

Uganda's gross domestic product (GDP) has grown at an average of approximately 5 to 6 per cent annually over the past decade, driven by manufacturing, agro-processing, sugar production, mining and the anticipated commencement of large-scale petroleum production in the Albertine Graben. This industrial growth has generated significant and growing environmental pressures, industrial effluent discharge into Lake Victoria and its tributaries, air pollution from manufacturing facilities in the Kampala–Jinja–Entebbe industrial corridor, soil contamination from mining operations, and the systematic encroachment of industrial and commercial development onto Uganda's wetlands and other ecologically sensitive areas.[7]

The environmental consequences are documented and severe. Uganda has lost approximately 30 per cent of its wetland area since the 1990s, with industrial encroachment, urban expansion and agricultural conversion all contributing to this loss. Lake Victoria's water quality has deteriorated markedly as a result of industrial and domestic effluent discharge, with consequences for fisheries, water supply and the health of lakeside communities. In the mining sector, abandoned mine workings and unrehabilitated extraction sites represent significant environmental liabilities, the costs of which have fallen upon affected communities and the State rather than the industrial operators who generated them. The World Health Organization has documented elevated rates of water-borne disease and respiratory illness in communities

[6]Single European Act 1987 [1987] OJ L169/1, art 130r; Consolidated Version of the Treaty on the Functioning of the European Union (TFEU) [2012] OJ C326/47, art 191(2)

[7]Uganda Bureau of Statistics (n 1); Ministry of Water and Environment, 'State of Environment Report for Uganda 2020' (Government of Uganda 2021) 34–38 (wetland cover loss documented at approximately 30% since 1990)

adjacent to industrial facilities, providing quantitative evidence of the public health dimension of the PPP enforcement gap.[8]

1.2.4 Industrial Pollution and Sustainable Development

The relationship between industrial pollution and sustainable development is direct and measurable. GDP losses attributable to environmental degradation in Uganda are estimated at 4 to 8 per cent per annum a figure that represents a significant drag on Uganda's development trajectory, and one that properly belongs in the cost-benefit calculations of the industrial activities generating that degradation.[9] The PPP operationalises sustainable development by ensuring that the private costs of industrial activity reflect its true social and environmental costs, preventing the privatisation of industrial profits while socialising environmental losses. Uganda's National Development Plan (NDP) III explicitly acknowledges the linkage between environmental sustainability and economic development, committing the Government of Uganda (GOU) to integrating environmental considerations into development planning.[10] However, as this study demonstrates, this policy commitment has not been systematically translated into funded enforcement reform or legislative action to address the structural deficiencies identified in this research.

1.3 Statement of the Problem

Uganda's legal framework formally incorporates the Polluter Pays Principle as a guiding principle of environmental management. The National Environment Act Cap 181, explicitly enshrines the PPP in section 4, providing that those who pollute or degrade the environment shall bear the costs of their activities.[11] International instruments ratified by Uganda including the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), the Basel and Bamako Conventions and the Revised African Convention on the Conservation of Nature and Natural Resources (Maputo Convention)

[8]Susan Acen, 'Enhancing Environmental Conservation through Legal Policy and Institutional Framework: A Case Study of Uganda' (2024) 9(1) IDOSR Journal of Humanities and Social Sciences 1, 2; World Health Organization, 'Environmental Health Report: Uganda' (WHO 2021)

[9]Acen (n 8) 4–5; Katharina Ruppel-Schlichting, Oliver C Ruppel and Yvonne Nana Afua, 'Soil Protection across Africa' in Katharina Ruppel-Schlichting, Oliver C Ruppel and Yvonne Nana Afua (eds), Soil Protection in Africa (Nomos 2021) 453, 465; World Bank, 'The Changing Wealth of Nations 2021' (World Bank 2021) (GDP losses from environmental degradation in Uganda estimated at 4–8% per annum)

[10]National Environment Management Policy (Government of Uganda 2014); Uganda Green Growth Development Strategy 2017–2030 (Government of Uganda 2017); NDP III 2020/21–2024/25 (Government of Uganda 2020); African Development Bank, Uganda Country Strategy Paper 2021–2025 (AfDB 2021)

[11]National Environment Act, Cap 181 (Uganda) (as amended by the National Environment (Amendment) Act 2019), s 4 (polluter pays principle as a guiding principle of environmental management)

impose obligations consistent with the PPP, creating binding international law requirements for effective domestic implementation.[12]

Yet despite this formally comprehensive legal architecture, industrial pollution continues largely unchecked across Uganda. The National Environment Management Authority (NEMA)'s enforcement actions are infrequent relative to the scale of non-compliance; financial penalties are manifestly insufficient to deter large industrial polluters; and Acen concludes that breach of environmental law is increasing daily while enforcement agencies lack adequate resources to respond.[13] Luppi, Parisi and Rajagopalan, in their landmark comparative study of PPP implementation in developing countries, demonstrate that direct polluter liability tends to decline as industrialisation advances, because the political economy of industrial development creates structural pressures against vigorous enforcement. They argue that governmental liability mechanisms must supplement direct liability if the principle is to be effective in such environments.[14] This gap between formal legal recognition of the PPP and its enforcement reality is the central problem this research addresses. The consequences are concrete: industrial operators externalise environmental costs onto communities and the State, local governments lack the capacity to exercise their environmental monitoring functions, and the courts — while increasingly willing to grant relief when cases are brought before them are not a substitute for proactive institutional enforcement.

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of this study is to assess the adequacy of Uganda's legal and institutional framework for implementing the Polluter Pays Principle in addressing industrial pollution, and to identify reforms necessary to close the gap between legal prescription and enforcement reality.

1.4.1 Specific Objectives

a) To examine the development of the Polluter Pays Principle and its role in environmental governance;

[12]Rio Declaration on Environment and Development, Principle 16 (1992); United Nations Framework Convention on Climate Change (UNFCCC) (1992), art 3(1)

[13]Susan Acen, 'Enhancing Environmental Conservation through Legal Policy and Institutional Framework: A Case Study of Uganda' (2024) 9(1) IDOSR Journal of Humanities and Social Sciences 1, 3

[14]Barbara Luppi, Francesco Parisi and Shruti Rajagopalan, 'The Rise and Fall of the Polluter-Pays Principle in Developing Countries' (2012) 32 International Review of Law and Economics 135, 142–143

b) To assess the adequacy of Uganda's legal and policy framework for implementing the Polluter Pays Principle in addressing industrial pollution;

c) To evaluate the role of environmental governance institutions in enforcing the Polluter Pays Principle;

d) To identify challenges affecting the implementation of the Polluter Pays Principle in addressing industrial pollution in Uganda; and

e) To propose measures for strengthening the legal and institutional framework for effective implementation of the Polluter Pays Principle.

1.5 Research Questions

The study is guided by the following research questions:

i. How has the Polluter Pays Principle developed and what role does it play in environmental governance?

ii. To what extent is Uganda's legal and policy framework adequate for implementing the Polluter Pays Principle in addressing industrial pollution?

iii. What role do environmental governance institutions play in implementing and enforcing the Polluter Pays Principle in Uganda?

iv. What challenges affect the effective implementation of the Polluter Pays Principle in addressing industrial pollution in Uganda?

v. What measures can be adopted to strengthen the legal and institutional framework for effective implementation of the Polluter Pays Principle in Uganda?

1.6 Scope of the Study

1.6.1Subject Scope

The study examines the legal and institutional framework for implementing the PPP in Uganda, with particular focus on industrial pollution as defined by the NEA. The term 'industrial pollution' encompasses pollution arising from manufacturing, agro-processing, extractive industries (petroleum, mining and quarrying) and large-scale commercial operations. The study covers: the constitutional framework for environmental rights and State environmental obligations; the NEA and its subsidiary legislation; sector-specific statutes governing the petroleum, mining and water sectors; Uganda's international treaty obligations relevant to the PPP; and the institutional design and enforcement practice of NEMA and complementary enforcement bodies including the Environmental Police, District Environment Committees and sector-specific regulators. Agricultural non-point source pollution and household waste

management, while governed by overlapping legal frameworks, fall outside the primary scope of this study.

1.6.2 Geographical Scope

The study focuses on Uganda as its primary jurisdiction, with comparative reference to the European Union, Kenya and South Africa as jurisdictions that present instructive models of PPP implementation at different levels of institutional development. The EU represents the most advanced institutional model of PPP operationalisation globally; Kenya provides the most directly comparable regional reference point with a similar institutional architecture; and South Africa demonstrates the potential of constitutional entrenchment combined with strict liability for high-risk activities. The territorial scope within Uganda encompasses the full extent of Uganda's jurisdiction, with particular attention to the Albertine Graben petroleum development zone, the Lake Victoria basin industrial corridor, and the wetland areas affected by industrial encroachment.

1.6.3 Time Scope

The study examines the legal and institutional framework from the enactment of the National Environment Act Cap 181 in 1995 which established the foundational environmental governance architecture to June 2026. Particular attention is paid to the amendments introduced by the National Environment (Amendment) Act 2019, which represent the most recent significant legislative intervention, and to judicial enforcement practice developed over the study period.

1.7 Significance of the Study

This study makes four distinct contributions to the scholarship and practice of environmental law in Uganda and the East African region. First, it provides a rigorous and comprehensive doctrinal and institutional analysis of Uganda's PPP framework, addressing a significant gap in the Ugandan environmental law literature. Existing scholarship has addressed discrete aspects of Uganda's environmental law the constitutional right to a clean environment, the EIA process, specific sectors such as petroleum but no study has offered an integrated analysis of the PPP framework in its entirety. Second, it synthesises the growing body of civil society and judicial enforcement precedents in ACODE v AG, Greenwatch v AG and NEMA, Kakira Sugar v NEMA and Nyangasi David v NEMA into a coherent assessment of the enforcement

landscape, demonstrating both the courts' willingness to enforce environmental law and the limits of litigation as a substitute for institutional enforcement.[15]

Third, the study provides the first systematic assessment of Uganda's NEA evaluating whether the amendment's strengthening provisions including increased penalties under section 76A and corporate officer liability under section 90 are adequate to achieve their stated purpose. Fourth, it advances practically actionable reform recommendations grounded in Uganda's specific constitutional, legislative and institutional context rather than derived generically from developed-country models. The study is of direct relevance to legal practitioners and civil society organisations engaged in environmental enforcement litigation; to NEMA officials and the Ministry of Water and Environment (MWE); to the Uganda Law Reform Commission; and to the academic community examining the relationship between international environmental norms and domestic implementation in developing countries.

1.8 Literature Review

The scholarly literature on the Polluter Pays Principle may be organised into three streams: international and comparative environmental law scholarship on the PPP's normative content and legal status; economic scholarship on the PPP's role in environmental governance and market failure correction; and jurisdictional scholarship on PPP implementation in specific legal systems, including developing countries. Luppi, Parisi and Rajagopalan's foundational article in the International Review of Law and Economics analyses the trajectory of PPP implementation in developing countries across multiple jurisdictions.[16] They demonstrate that direct polluter liability tends to decline as industrialisation advances because of political economy pressures from industry, and they develop the theoretical case for governmental liability mechanisms as a supplement to direct liability in environments characterised by widespread poverty, high interest rates, judicial delays and enforcement uncertainty. Their analysis provides the theoretical backbone of the present study's assessment of Uganda's institutional effectiveness.

[15]Advocates Coalition for Development and Environment (ACODE) v Attorney General and Others (Misc Application No 0100 of 2004) (High Court of Uganda); Greenwatch (U) Ltd v AG and NEMA (Misc Application No 39 of 2001) [2002] UGCA 6; Kakira Sugar Limited v National Environment Management Authority (Misc Application No 73 of 2018) (High Court of Uganda, 2019); Nyangasi David and Others v National Environment Management Authority and Others (Misc Application No 77 of 2012) (High Court of Uganda, 2013)

[16]Barbara Luppi, Francesco Parisi and Shruti Rajagopalan, 'The Rise and Fall of the Polluter-Pays Principle in Developing Countries' (2012) 32 International Review of Law and Economics 135, 136

Lees's comparative analysis of PPP implementation in EU member state liability regimes for land remediation examines the tension between strict liability and fault-based approaches, identifying the practical and normative implications of requiring proof of fault as a condition of pollution liability.[17] Orlando's comparative multi-level study of environmental liability trends demonstrates convergence toward stricter, public-law-oriented liability standards at the international level, providing a global context for the assessment of Uganda's liability framework.[18]

In the African context, Acen's study of Uganda's environmental conservation framework is the most directly relevant empirical assessment of Uganda's enforcement reality, identifying legislative gaps, weak penalties, overlapping institutional mandates and inadequate enforcement powers as the primary barriers to effective implementation.[19] Ruppel-Schlichting, Ruppel and Nana Afua's comparative study of soil protection across African jurisdictions concludes that while Ugandan laws touch on environmental pollution, the consequential and effective implementation and enforcement is yet to be achieved a conclusion that aligns with and supports the central thesis of this study.[20] Bhatt's comparative study of EIA systems in developing countries provides important context for the assessment of Uganda's EIA process, finding that EIA in developing countries tends to be used to fulfil legal requirements rather than as a genuine environmental mitigation tool.[21]

In the international environmental law scholarship, Lavrik's analysis of customary norms and general principles of international environmental law identifies the PPP among established principles that guide the development of environmental regulation, including in jurisdictions where its treaty-based codification is incomplete.[22] Scotford's work on environmental principles examines the relationship between the PPP and allied principles including the

[17]Directive 2004/35/CE of the European Parliament and of the Council on Environmental Liability [2004] OJ L143/56, Preamble, recital 1; Emma Lees, 'The Polluter Pays Principle and the Remediation of the Land' (2016) 8(1) International Journal of Law in the Built Environment 2, 4

[18]Emanuela Orlando, 'From Domestic to Global? Recent Trends in Environmental Liability from a Multi-level and Comparative Law Perspective' (2015) 24(3) Review of European Comparative and International Environmental Law 289, 290

[19]Acen (n 8) 3–5 (identifying legislative gaps, weak penalties and inadequate enforcement powers as primary barriers to effective PPP implementation in Uganda)

[20]Katharina Ruppel-Schlichting, Oliver C Ruppel and Yvonne Nana Afua, 'Soil Protection across Africa' in Katharina Ruppel-Schlichting, Oliver C Ruppel and Yvonne Nana Afua (eds), Soil Protection in Africa (Nomos 2021) 453, 464

[21]Ramesh Prasad Bhatt, 'Environmental Impact Assessment System and Process in Developing Countries' (2023) 13(12) Open Journal of Ecology 977, 983

[22]Maksim Lavrik, 'Customary Norms, General Principles of International Environmental Law, and Assisted Migration as a Tool for Biodiversity Adaptation to Climate Change' (2022) 4(2) Jus Cogens 99, 106

precautionary principle and sustainable development, demonstrating their complementary roles in constructing coherent environmental law.[23] Yilmaz Ugur's analysis of the EU Emissions Trading System demonstrates how the PPP can be operationalised through market-based instruments, providing comparative material relevant to the fiscal instrument recommendations advanced in this study.[24]

A significant gap in the existing literature is the absence of a comprehensive legal analysis that integrates Uganda's evolving judicial enforcement practice with an assessment of the statutory framework as amended in 2019, and that locates that assessment within the theoretical framework provided by the developing-country PPP literature. This study addresses that gap.

1.9 Theoretical Framework

This study is anchored in two complementary theoretical frameworks that together provide both the normative foundation and the analytical lens for the assessment of Uganda's PPP implementation framework.

The first is the cost internalisation theory, which provides the economic foundation of the PPP. The theory holds that environmental pollution represents a market failure: polluters impose costs on third parties and on the environment that are not reflected in the prices of the goods and services they produce, creating a misalignment between private and social costs. The PPP corrects this market failure by requiring polluters to absorb the costs they generate, through regulatory liability, environmental taxes or tradable permits. When pollution costs are fully internalised, polluters face financial incentives to invest in cleaner technologies and processes, reducing pollution below the socially optimal level without requiring direct command-and-control regulation of every industrial process. The theory also provides the analytical basis for evaluating the adequacy of financial penalties: a penalty that is less than the economic benefit of non-compliance creates an incentive to violate rather than comply, undermining the PPP's deterrent function.

The second is the governance effectiveness theory, which evaluates legal frameworks not merely by their formal content the rules on paper but by the institutional capacity, political will and enforcement systems required to translate legal norms into real-world behavioural change.

[23]Eloise Scotford, 'Environmental Principles and the Construction of a New Body of Legal Reasoning' in Eloise Scotford (ed), Environmental Principles (Hart Publishing 2022) ch 8

[24]Candan Yilmaz Ugur, 'The Polluter Pays Principle within the Framework of the European Union Emissions Trading System' (2022) 22(2) Abant Sosyal Bilimler Dergisi 862, 865

Drawing on Luppi, Parisi and Rajagopalan's analysis of developing-country implementation deficits, the theory explains why formally adequate legal frameworks may systematically fail in practice when they are adopted in environments characterised by resource-constrained enforcement institutions, political economy pressures against vigorous enforcement, inadequate sanction levels and evidentiary barriers to liability. Applied to Uganda, this framework generates the central analytical question of the study: not whether the PPP is legally recognised, but whether the conditions necessary for its effective implementation are present. The study demonstrates that those conditions are currently absent in key respects, and identifies the institutional and legislative reforms necessary to create them.

1.10 Research Methodology

This study employs doctrinal legal research methodology as its primary approach. Doctrinal research examines the content, structure and internal coherence of law by analysing primary legal sources — constitutional provisions, statutes, subsidiary legislation, judicial decisions and international treaty instruments and secondary legal scholarship. The method is deployed here to determine: (i) the formal content of Uganda's PPP framework across its constitutional, statutory, regulatory and international dimensions; (ii) the extent to which that framework meets the normative requirements of effective PPP implementation identified in comparative scholarship; and (iii) the structural design deficiencies that prevent effective implementation.

The doctrinal analysis is supplemented by institutional analysis, which examines the design, mandate and resource profile of Uganda's environmental enforcement bodies NEMA, the Environmental Police Unit, District Environment Committees, sector-specific regulators and the judiciary. Institutional analysis draws on NEMA annual reports, civil society assessments, parliamentary committee reports and government policy documents to evaluate the gap between formal institutional mandates and operational reality. Comparative legal analysis draws on PPP implementation in the EU, Kenya and South Africa as reference jurisdictions, applying a functional comparative method to identify transferable reform models that are appropriate to Uganda's constitutional and institutional context.

1.11 Research Design

The research employs a qualitative design appropriate to the doctrinal and institutional focus of the study. Primary legal sources constitutional provisions, statutes, statutory instruments, judicial decisions and treaty texts constitute the primary data of the research. Secondary sources, including peer-reviewed scholarship, civil society reports, institutional assessments,

international organisation publications and government policy documents, provide the contextual and analytical framework within which the primary sources are interpreted. The research does not involve primary empirical data collection from human participants; it synthesises, analyses and critically evaluates existing legal and institutional materials.

1.12 Method of Analysis

The primary analytical method is legal interpretation, employing textual, purposive and comparative interpretive approaches. Statutory provisions are interpreted in their constitutional context and in light of Uganda's international treaty obligations, applying the principle that domestic legislation should, where possible, be interpreted consistently with international law. Judicial decisions are analysed for their doctrinal content, their institutional significance and their implications for the development of Uganda's environmental enforcement jurisprudence. The effectiveness of the institutional framework is assessed against four criteria: institutional design adequacy (whether the institutional architecture is capable in principle of achieving effective enforcement); resource sufficiency (whether institutions have the human, financial and technical resources necessary to discharge their mandates); enforcement frequency (whether enforcement actions are taken at a rate consistent with deterrence); and sanction adequacy (whether financial and criminal penalties are set at levels capable of deterring non-compliance by large industrial operators). Comparative analysis draws on the functional method, identifying how analogous institutional problems are addressed in the reference jurisdictions and evaluating the transferability of those solutions to the Ugandan context.

1.13 Limitations of the Study

This study has four principal limitations that should be acknowledged in assessing its findings and recommendations. First, the study relies on publicly available primary and secondary sources. Primary empirical data on NEMA's enforcement practice including inspection frequencies, compliance rates, prosecution statistics and the quantum of penalties imposed are not systematically published in Uganda, limiting the precision of the institutional effectiveness assessment. The study draws on available civil society assessments and published scholarship to supplement the formal documentary record, but the absence of systematic enforcement data is an acknowledged gap. Second, the comparative analysis is selective by design; the EU, Kenya and South Africa are chosen for their instructive institutional models, not as exhaustive comparators. A comprehensive comparative study of PPP implementation across all African jurisdictions, or across all developing countries, would require resources and scope beyond this

study. Third, the rapidly evolving petroleum sector regulatory framework particularly as oil production in the Albertine Graben approaches commencement means that some institutional arrangements may change after the study's cut-off date of June 2026. Fourth, the study focuses on the formal legal and institutional framework; informal enforcement dynamics, community-level compliance behaviour and the role of social norms in environmental compliance are acknowledged as important dimensions of the implementation picture but are not systematically examined in this doctrinal study.

1.14 Chapterisation / Structure of the Dissertation

The research is structured in five chapters that follow the logical progression from conceptual foundations through legal and institutional analysis to findings and reform recommendations.

Chapter One, the present chapter, provides the general introduction to the research: the background to the study, statement of the problem, objectives, research questions, scope, significance, literature review, theoretical framework, methodology, research design, method of analysis, limitations and structure.

Chapter Two examines the development of the PPP and its role in environmental governance, covering the principle's meaning and nature, its three operational modalities, its historical development from OECD origins through international codification, the international and regional framework governing the PPP, the relationship between the PPP and environmental governance, the PPP's interaction with allied environmental principles including sustainable development, the precautionary principle, environmental justice and intergenerational equity, and comparative perspectives on PPP implementation in the EU, Kenya and South Africa.

Chapter Three analyses Uganda's legal and policy framework for PPP implementation in relation to industrial pollution, covering the constitutional framework, the statutory framework including the NEA and sector-specific legislation, the policy framework, regulatory mechanisms for pollution control, the liability framework under the PPP, and a critical assessment of the framework's design adequacy.

Chapter Four assesses the implementation and effectiveness of the legal and institutional framework in addressing industrial pollution. It examines the institutional framework in detail, analyses enforcement mechanisms and practice, evaluates institutional capacity and co-ordination, presents case studies of industrial pollution enforcement including the Albertine Graben petroleum development, the Lake Victoria basin industrial effluent problem and

wetland encroachment, identifies the systemic challenges affecting implementation, and provides an overall assessment of effectiveness.

Chapter Five presents the summary of findings, conclusions regarding the adequacy of Uganda's PPP framework, and a comprehensive set of recommendations across five reform tracks — legislative, institutional, enforcement, regulatory and accountability followed by the identification of areas for further research.

CHAPTER TWO: DEVELOPMENT OF THE POLLUTER PAYS PRINCIPLE AND ITS ROLE IN ENVIRONMENTAL GOVERNANCE

2.1 Introduction

This chapter examines the meaning and nature of the PPP, its historical development in OECD instruments and international environmental law, its codification in international and regional frameworks, its relationship with environmental governance, its interaction with allied environmental principles including sustainable development, the precautionary principle, environmental justice and intergenerational equity, and comparative perspectives on PPP implementation in the EU, Kenya and South Africa. Understanding the principle's conceptual and legal foundations is essential to assessing the adequacy of Uganda's framework, which claims to incorporate those foundations.

2.2 Meaning and Nature of the Polluter Pays Principle

The PPP is an economic and legal instrument requiring that the person or firm responsible for environmental damage bear the full cost of that damage. Its foundational rationale is cost internalisation: by requiring polluters to absorb pollution costs that would otherwise be externalised to the public, third parties and the environment, the principle corrects the market failure that arises when private costs diverge from social costs, and creates economic incentives for pollution prevention. Luppi, Parisi and Rajagopalan define the PPP as an international guideline stipulating that the person or firm who damages the environment must bear the cost of such damage, making cost-internalisation the defining operational criterion.[25] Yilmaz Ugur notes that the principle aims to reduce environmental pollution and prevent the overexploitation of environmental resources by ensuring that economic activities do not impose uncompensated costs on society.[26] The EU Environmental Liability Directive, which provides the most fully operationalised legal expression of the PPP in any jurisdiction, confirms that the principle requires operators whose activities have caused environmental damage to bear the cost of the necessary preventive or remedial measures.[27]

The PPP operates through three distinct modalities that correspond to the temporal sequence of pollution events. The preventive modality requires polluters to prevent pollution before it occurs, bearing the costs of preventive measures mandated by public authorities. The corrective

[25]Luppi, Parisi and Rajagopalan (n 14) 135

[26]Yilmaz Ugur (n 24) 865–866

[27]Directive 2004/35/CE (n 17), Preamble, recital 1; Lees (n 17) 3–4

modality requires polluters to remedy environmental damage after it has occurred, including the restoration of damaged ecosystems, habitats and water bodies to their pre-damage condition. The compensatory modality requires polluters to compensate victims of pollution for personal injury, property damage, loss of livelihood and other economic and non-economic losses flowing from environmental damage. These three modalities correspond, respectively, to the administrative, civil and criminal liability mechanisms available in domestic legal systems, including Uganda's.

The definition of 'polluter' and the threshold of 'damage' sufficient to trigger liability are critical interpretive questions that different legal systems resolve differently. The OECD's foundational 1972 Recommendation defined the polluter broadly as any party whose activities cause environmental degradation in excess of acceptable standards established by public authorities. This breadth is important in the Ugandan context, where pollution is caused by a diverse range of actors from multinational oil companies to small-scale agro-processors, and where the capacity to identify, apportion and enforce liability against diffuse or multiple polluters varies significantly across the institutional landscape.

2.3 Historical Development of the Polluter Pays Principle

2.3.1 OECD Origins

The PPP was first articulated by the OECD in its 1972 Recommendation C(72)128 on Guiding Principles Concerning International Economic Aspects of Environmental Policies, which required that polluters bear the costs of pollution control and prevention measures mandated by public authorities. The OECD's original formulation was primarily an instrument of international trade policy: by requiring polluters to bear the costs of compliance with environmental standards, the principle prevented governments from subsidising industry's environmental compliance costs, which would otherwise constitute a form of trade subsidy distorting competition among member states. The OECD's 1972 Recommendation also stated that the PPP was 'the means for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment'.[28] This economic framing positioned the PPP as a principle of allocative efficiency rather than corrective justice, though subsequent developments integrated both dimensions.

[28]OECD Recommendation C(72)128 (n 4); Organisation for Economic Co-operation and Development, 'The Polluter Pays Principle: OECD Analyses and Recommendations' (OECD 1992) 7–8

The 1974 OECD Recommendation C(74)223 on the Implementation of the Polluter Pays Principle represented a significant elaboration, extending the principle's application beyond pollution control costs to encompass a wider range of regulatory costs associated with pollution management. The 1974 Recommendation also addressed the handling of exceptional aid to polluters, defining the circumstances in which governmental assistance to industry for environmental compliance did not constitute a prohibited subsidy — implicitly confirming that the baseline rule was that polluters must bear their own environmental costs without governmental subsidy.[29]

2.3.2 International Environmental Law Development

The PPP's incorporation into the law of the European Community marked its transition from an OECD economic guideline to a primary law obligation binding on sovereign states. The Single European Act 1987 identified environmental protection as a foundational Community policy and listed the PPP alongside the precautionary principle and the principle of rectification at source as the basis of that policy. The principle was consolidated in the Maastricht Treaty 1992 and subsequently in Article 191(2) of the TFEU, which provides that Union environmental policy 'shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.'[30][31]

The EU Environmental Liability Directive 2004/35/CE operationalised the PPP within the EU by establishing a framework for administrative liability for damage to protected species and habitats, water bodies and land. The Directive creates a system of strict liability for operators of listed high-risk activities and fault-based liability for other operators whose activities cause qualifying environmental damage, requiring operators to take and finance preventive and remedial measures. Articles 5 to 8 of the Directive set out detailed operator obligations, and the Directive's implementation has generated a substantial body of member state practice and scholarly analysis that provides comparative material for the assessment of Uganda's framework.[32]

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[29]OECD Recommendation C(74)223 (n 5); Luppi, Parisi and Rajagopalan (n 14) 136–137 (tracing the 1974 elaboration of the principle to sector-specific pollution control measures)

[30]Single European Act 1987 [1987] OJ L169/1, art 130r; Consolidated Version of the TFEU [2012] OJ C326/47, art 191(2)

[31]Treaty on European Union (Maastricht Treaty) 1992 [1992] OJ C191/1, art 130r(2)

[32]Directive 2004/35/CE (n 17), arts 5–8 (preventive and remedial obligations on operators); Orlando (n 18) 292–293 (contextualising the ELD within global convergence toward public-law-oriented liability)

2.3.3 The PPP in the African Context

African states have incorporated the PPP into their domestic legal frameworks with varying degrees of specificity and effectiveness. Kenya's Environmental Management and Co-ordination Act of 1999 expressly provides that the costs of pollution prevention and remediation shall be borne by the polluter. [33] Tanzania's Environment Management Act contains comparable provisions. [34] South Africa's constitutional and statutory framework is the most developed on the continent, including the constitutional right to an environment not harmful to health or wellbeing and a duty on the state to prevent pollution and ecological degradation. [35]

Uganda's approach follows the regional trend but with particular weaknesses in the area of economic instruments. While Kenya and Tanzania have both moved toward environmental taxes and charges as mechanisms to internalise pollution costs, Uganda's revenue instruments remain underdeveloped. [36] Chapter Three examines this in greater detail. In the context of local government powers and functions (particularly revenue generation, service delivery, and environmental responsibilities under the constitutional framework), illustrates how South African municipalities are empowered to utilise fiscal tools and economic instruments to address local environmental challenges and internalise costs. This aligns with and underscores the regional East African trend referenced, whereby Kenya and Tanzania have advanced environmental taxes and charges to operationalise the polluter pays principle, while highlighting Uganda's relative weaknesses in underdeveloped revenue instruments; Bekink's analysis of South Africa's more structured local government fiscal autonomy and environmental duties serves as a comparative benchmark, showing how stronger legislative empowerment for economic tools at the local level can support effective pollution cost internalisation and sustainable development, in contrast to Uganda's gaps.[37]

2.3.4 Global Recognition

At the global level, the PPP was first reflected in Principle 22 of the Stockholm Declaration 1972, which called on states to develop law on liability and compensation for victims of

[33]Environmental Management and Co-ordination Act, No 8 (Kenya) (1999), s 73.
[34]Environment Management Act, Cap 191 (Tanzania), s 57.
[35]Environmental Impact Assessment Act 1992 (South Africa) s 22 as discussed in Jan Glazewski, Environmental Law in South Africa (3rd edn, LexisNexis 2019) 210.
[36]Jan Glazewski and Louis Kotze (eds), Ius Gentium: Comparative Perspectives on Law and Justice (Springer 2020) 88.
[37]Bernard Bekink, Principles of South African Local Government Law (LexisNexis 2006) 244

environmental pollution and damage caused by activities within their jurisdiction or control in other states. Principle 16 of the Rio Declaration 1992 advanced the global recognition of the principle further, providing that national authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, 'having regard to the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.'[38] Lavrik identifies the PPP among the established customary norms and general principles of international environmental law, noting its widespread incorporation in domestic legal systems across all regions of the world.[39]

The Trail Smelter Arbitration between the United States and Canada, decided in two phases in 1938 and 1941, established the principle that a state is responsible under international law for injuries caused by pollution originating within its territory to the territory or property of another state, providing an early international foundation for the proposition that environmental costs must be borne by those responsible for generating them. The Gabcikovo-Nagymaros case before the International Court of Justice affirmed the principle of sustainable development and the obligation to take environmental impacts into account in decision-making, providing further international law underpinning for the PPP.[40]

2.4 International and Regional Framework Governing the PPP

2.4.1 Rio Declaration

Principle 16 of the Rio Declaration 1992 is the most widely cited international formulation of the PPP. While the Rio Declaration is a non-binding instrument of soft law, Principle 16 has been widely accepted as reflecting an international consensus on the allocation of environmental costs and has been incorporated by reference into numerous binding treaty instruments. The Rio Declaration was accompanied by Agenda 21, a comprehensive global programme of action for sustainable development that includes specific obligations for business and industry to internalise environmental costs, adopt cleaner production methods and assume responsibility for the environmental impacts of their products and processes.[41]

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[38]Stockholm Declaration on the Human Environment (1972), Principle 22; Rio Declaration on Environment and Development (1992), Principle 16

[39]Lavrik (n 22) 106–107

[40]Trail Smelter Arbitration (United States v Canada) (1938–1941) 3 UNRIAA 1905; Gabcikovo-Nagymaros Project (Hungary v Slovakia) [1997] ICJ Rep 7, para 140

[41]Rio Declaration (n 33), Principle 16; Agenda 21: Programme of Action for Sustainable Development (1992), ch 30 (obligations of business and industry to internalise environmental costs)

2.4.2 African Environmental Instruments

At the African regional level, the Revised African Convention on the Conservation of Nature and Natural Resources (the Maputo Convention 2003) incorporates the PPP as a fundamental principle of environmental governance and requires states parties to establish mechanisms for liability and compensation for environmental damage. Article III of the Maputo Convention sets out principles including the polluter pays principle, the precautionary principle and the principle of intergenerational equity, requiring parties to take all reasonable measures to prevent, reduce and control pollution and to ensure that the principles of environmental law are reflected in their domestic legal frameworks.[42]

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal operationalises the compensatory modality of the PPP in the domain of hazardous waste, establishing a regime of liability and financial assurance for hazardous waste damage. The Bamako Convention, adopted by the Organisation of African Unity in 1991, goes further than the Basel Convention in prohibiting the importation of hazardous wastes into Africa and establishing strict liability for hazardous waste damage occurring on African territory.[43] Together, these instruments create a regional legal framework that reinforces Uganda's domestic PPP obligations.[44]

2.4.3 Sustainable Development Framework

The UNFCCC and the Paris Agreement impose obligations on states to address climate-related pollution consistent with PPP logic, requiring states to take nationally determined contributions toward emissions reductions that reflect the internalisation of carbon pollution costs. Within the East African Community, the EAC Treaty and the EAC Protocol on Environment and Natural Resources Management incorporate environmental obligations consistent with the PPP, creating regional institutional mechanisms for environmental co-operation that bind Uganda as a member state.[45][46]

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[42]African Convention on the Conservation of Nature and Natural Resources (Revised) (Maputo Convention) (2003), art III(1); African Charter on Human and Peoples' Rights (1981), art 24

[43]Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989); Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (1991)

[44]Convention on Biological Diversity (CBD) (1992), arts 8, 10; Basel Convention (n 38); Bamako Convention (n 38)

[45]Maputo Convention (n 37), arts III, XIV; East African Community Treaty 1999, art 112; EAC Protocol on Environment and Natural Resources Management 2006

[46]UNFCCC (1992), art 3(1); Paris Agreement (2015), art 4; Uganda Nationally Determined Contribution 2021 (Ministry of Water and Environment)

2.5 Relationship Between PPP and Environmental Governance

Environmental governance refers to the set of regulatory processes, mechanisms and organisations through which political actors influence environmental actions and outcomes. Effective environmental governance requires both normative foundations the principles and rules that define environmental obligations and liability and operational capacity the institutional structures, resources and political will to translate those norms into practice. The PPP occupies a structurally central position in environmental governance by answering the fundamental question of who bears the costs of environmental protection.

The PPP supports environmental governance in three analytically distinct ways. First, it provides the economic rationale for environmental regulation: by demonstrating that private market prices systematically fail to reflect the full social and environmental costs of industrial activity, the PPP justifies State intervention to correct market failure and provides the criterion for evaluating the adequacy of specific regulatory interventions. Second, it provides the legal basis for liability rules that create enforceable obligations on polluters, including administrative sanctions, civil liability and criminal prosecution. Third, it provides the normative foundation for fiscal instruments pollution taxes, environmental levies and tradable emission permits that internalise environmental costs through market mechanisms rather than command-and-control regulation, allowing the market to identify the most cost-efficient means of reducing pollution to the socially optimal level.[47]

In the Ugandan governance context specifically, the PPP provides the normative foundation for: NEMA's enforcement mandate under sections 72 to 76 of the NEA; the civil and criminal liability provisions of the NEA and the Penal Code Act Cap 128; the financial assurance requirements for petroleum operators under section 139 of the Petroleum Act and for mining operators under section 99 of the Mining and Minerals Act Cap,159 the environmental levies and excise duties imposed under the Finance Act Cap.166 and Uganda's international reporting obligations under the UNFCCC, the CBD and the Maputo Convention.[48] However, governance effectiveness depends not merely on the normative content of legal rules but on the institutional capacity, political will and enforcement systems required to translate legal norms into

[47]Yilmaz Ugur (n 24) 864–865; Luppi, Parisi and Rajagopalan (n 14) 136 (identifying the three allocative functions of PPP in environmental governance: corrective efficiency, prevention incentives and fiscal neutrality)

[48]National Environment Act, Cap 181 (n 11), s 4; Constitution of Uganda 1995, art 39; National Objectives and Directive Principles of State Policy, Objective XXVII

behavioural change. Chapter Four demonstrates that these operational dimensions are where Uganda's framework most critically falls short.

2.6 PPP and Related Environmental Principles

2.6.1 Sustainable Development

The PPP is a direct operationalisation of the principle of sustainable development. Sustainable development requires that economic activity meet the needs of the present without compromising the ability of future generations to meet their own needs an intergenerational equity objective that cannot be achieved if current polluters are permitted to impose environmental costs on communities and ecosystems without bearing the costs of remediation and compensation. By requiring polluters to internalise their environmental costs, the PPP aligns private economic decision-making with the requirements of sustainable development, ensuring that the price signals driving industrial investment reflect the true social and environmental cost of production. Uganda's NDP III explicitly commits GOU to sustainable development, but this commitment is hollow in the absence of effective PPP enforcement that makes it financially costly to generate environmental damage.

2.6.2 Precautionary Principle

The precautionary principle 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 cost-effective measures to prevent environmental degradation. The precautionary principle reinforces the preventive modality of the PPP in two important respects. First, it shifts the burden of proof in regulatory decision-making: rather than requiring regulators to prove that a proposed industrial activity will cause harm before imposing controls, the precautionary principle requires operators to demonstrate that their activities will not cause serious or irreversible harm. Second, in the context of civil liability, a precautionary interpretation of the PPP supports the introduction of strict liability for high-risk activities, removing the requirement of proving fault and thereby lowering the evidentiary barriers to civil and criminal enforcement. In Vellore Citizens Welfare Forum v Union of India the Supreme Court of India held both the PPP and the precautionary principle to be part of the law of the land, applying them directly to grant injunctive relief against industrial polluters, illustrating their potential as directly justiciable standards in common law systems analogous to Uganda's.[49]

[49]Vellore Citizens Welfare Forum v Union of India AIR 1996 SC 2715 (India); Minors Oposa v Secretary of the Department of Environment and Natural Resources (1993) GR No 101083 (Philippines Supreme Court)

2.6.3 Environmental Justice

Environmental justice requires that environmental benefits and burdens be distributed fairly across communities, with particular attention to the position of vulnerable and marginalised groups who frequently bear disproportionate pollution burdens without adequate remediation or compensation. The distributional dimension of the PPP its requirement that polluters rather than communities bear the costs of environmental damage makes it a fundamental instrument of environmental justice. In Uganda, the environmental justice implications of PPP non-enforcement are particularly acute: the communities most severely affected by industrial pollution are typically those with least political voice and fewest resources to pursue civil litigation. Informal settlements adjacent to industrial areas in Kampala, fishing communities on Lake Victoria, and rural communities near mining sites in western Uganda bear the immediate public health and economic costs of industrial pollution while the operators generating that pollution are systematically under-enforced against.

2.6.4 Intergenerational Equity

Intergenerational equity requires that present generations manage environmental resources so as not to compromise the ability of future generations to meet their own needs a principle that has been recognised in international environmental law since the Stockholm Declaration and that was given its fullest expression by the Brundtland Commission. The PPP operationalises intergenerational equity in the industrial pollution context by requiring current industrial actors to bear the costs of environmental damage rather than leaving remediation burdens to future generations or to the State. The Philippines Supreme Court's landmark decision in Minors Oposa recognised intergenerational equity as a justiciable principle, establishing the standing of children and future generations to bring legal action to protect the natural resources on which their lives depend a decision that has influenced environmental jurisprudence across Asia and offers an instructive model for the development of Uganda's constitutional environmental rights jurisprudence.[50]

2.7 Comparative Perspectives on PPP Implementation

2.7.1 European Union

The EU presents the most institutionally advanced and legally sophisticated model of PPP implementation globally. The Environmental Liability Directive 2004/35/CE creates a directly

[50]Minors Oposa v Secretary of the Department of Environment and Natural Resources (1993) GR No 101083 (Philippines Supreme Court) (recognising the justiciability of intergenerational equity and the standing of future generations); Scotford (n 23) ch 8

enforceable administrative liability regime, with strict liability for operators of listed high-risk activities including waste management operations, chemical manufacturing, mining activities and others and fault-based liability for other operators whose activities cause qualifying damage to protected species, habitats, water bodies or land. Member states are required to designate competent authorities with the power to require operators to take preventive and remedial action and to recover the costs from operators who fail to do so voluntarily. The EU also maintains the European Environment Agency as a monitoring body providing authoritative data on environmental compliance across member states.[51]

The EU's experience demonstrates several important lessons for Uganda's reform agenda. First, strict liability removing the need to prove fault is both legally achievable and operationally necessary for high-risk activities where the evidentiary burden of proving negligence would systematically impede enforcement. Second, an administrative liability regime, rather than exclusive reliance on civil and criminal courts, provides a more efficient mechanism for routine enforcement. Third, dedicated competent authorities with adequate resources, technical expertise and legal independence are essential for effective PPP enforcement. Fourth, civil society standing in environmental enforcement proceedings confirmed in the UK case of R v Secretary of State for the Environment ex parte Friends of the Earth plays an important role in supplementing institutional enforcement.[52]

2.7.2 Kenya

Kenya provides the most directly comparable regional reference point for Uganda's PPP framework, with a similar constitutional architecture, an analogous institutional structure centred on the National Environment Management Authority (NEMA Kenya) and a comparable legal tradition. Kenya's Environmental Management and Co-ordination Act 1999 (EMCA) formally incorporates the PPP as one of the guiding principles of environmental management and establishes a comprehensive framework of environmental standards, EIA requirements, enforcement mechanisms and liability provisions. The EMCA scales financial penalties to the economic harm caused, providing a potentially stronger deterrent than Uganda's fixed-maximum penalty regime. In Waweru v Republic the High Court of Kenya

[51]Orlando (n 18) 291–295; Directive 2004/35/CE (n 17), arts 3–5 (strict liability for listed occupational activities; fault-based liability for other activities causing qualifying damage)

[52]Directive 2004/35/CE (n 17), arts 5–8; R v Secretary of State for the Environment ex parte Friends of the Earth [1994] 2 CMLR 760 (England and Wales)

applied the PPP and precautionary principles directly in granting relief against industrial water pollution, demonstrating the justiciability of these principles in the Kenyan legal system.[53]

Kenya's most significant institutional innovation for the purposes of this comparison is the establishment of the Environment and Land Court under the Environment and Land Court Act 2011. This specialist court has exclusive jurisdiction over environmental civil and criminal matters, with judges who have demonstrated expertise in environmental law and are supported by technical advisers. The specialist court model has produced a more coherent body of environmental jurisprudence, faster resolution of environmental enforcement cases and greater consistency in the application of environmental standards than would be achievable within the general civil docket. Kenya's experience provides direct support for the recommendation, advanced in Chapter Five, that Uganda should establish a specialist Environmental Court.

2.7.3 South Africa

South Africa's PPP framework is the most constitutionally robust in sub-Saharan Africa. Section 24 of the Constitution of the Republic of South Africa 1996 provides that everyone has the right to an environment that is not harmful to their health or wellbeing, and to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that, among other things, secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. This constitutional right is directly enforceable and has been the subject of a substantial body of Constitutional Court and High Court jurisprudence. Section 28 of the National Environmental Management Act 107 of 1998 (NEMA South Africa) creates a duty of care that operates as a form of strict liability: any person who causes, has caused or may cause significant pollution or environmental degradation is under a duty to take reasonable measures to prevent, minimise and rectify the pollution or degradation, and may be required to do so by the competent authority without proof of fault or negligence. In Fuel Retailers Association of Southern Africa v Director-General: Environmental Management the Constitutional Court confirmed that these obligations are consistent with the PPP and directly enforceable.[54]

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[53]Environmental Management and Co-ordination Act, No 8 of 1999 (Kenya), s 3; Waweru v Republic [2006] eKLR (High Court of Kenya, Misc Civil Application No 118 of 2004); Environment and Land Court Act 2011 (Kenya)

[54]National Environmental Management Act 107 of 1998 (South Africa), s 28; Constitution of the Republic of South Africa 1996, s 24; Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province 2007 (6) SA 4 (CC)

South Africa's experience demonstrates that constitutional entrenchment of environmental rights, combined with a statutory strict duty of care that removes the fault requirement, creates a significantly stronger platform for PPP enforcement than the fault-based liability regime that currently operates in Uganda. The South African model provides the direct precedent for the legislative reform recommendations advanced in Chapter Five of this study.

2.8 Conclusion

The PPP has evolved from a narrow economic guideline in OECD instruments of the 1970s into a broad legal norm with preventive, corrective and compensatory dimensions, enjoying both soft-law global recognition in the Rio Declaration and binding codification in treaty law and domestic legislation across diverse jurisdictions. It plays a structurally central role in environmental governance by allocating the costs of environmental protection to those responsible for generating the need for that protection, correcting market failures and creating economic incentives for cleaner industrial behaviour. Its interaction with allied principles sustainable development, the precautionary principle, environmental justice and intergenerational equity gives it normative depth and connects it to the broader ethical foundations of environmental law. The comparative analysis demonstrates that effective PPP implementation requires clear liability rules that do not require proof of fault for high-risk activities, capable and adequately resourced enforcement institutions, financial penalties set at levels capable of deterring non-compliance by large industrial operators, and political commitment to vigorous enforcement. The following chapter examines how Uganda's legal and policy framework measures up to these requirements.

CHAPTER THREE: LEGAL AND POLICY FRAMEWORK GOVERNING INDUSTRIAL POLLUTION AND THE POLLUTER PAYS PRINCIPLE IN UGANDA

3.1 Introduction

This chapter analyses Uganda's constitutional, statutory and policy framework governing the PPP and industrial pollution. It examines Uganda's constitutional environmental rights provisions, the National Environment Act and sector-specific statutes, the policy framework within which environmental law operates, the regulatory mechanisms for pollution control established by the framework, the liability framework available under the PPP, and Uganda's international treaty obligations. The chapter concludes with a critical assessment of the framework's design adequacy, identifying the structural deficiencies that undermine effective PPP implementation before the institutional analysis of Chapter Four.

3.2 Constitutional Framework

Article 39 of the Constitution of Uganda 1995 provides that 'every Ugandan has a right to a clean and healthy environment.' This is a justiciable individual right, enforceable by citizens directly against the State and, by extension, against private actors whose activities threaten the constitutional standard. The significance of Article 39 for PPP implementation cannot be overstated: it provides the constitutional foundation for civil society enforcement actions and for the courts' jurisdiction to grant injunctive and mandatory relief in environmental enforcement cases. In Greenwatch (U) Ltd v AG and NEMA the Court of Appeal confirmed the justiciable nature of Article 39 and confirmed that civil society organisations have standing to bring enforcement proceedings on behalf of communities affected by environmental violations. In ACODE v Attorney General the High Court similarly granted injunctive relief on the basis of the constitutional environmental right.[55]

Article 237 of the Constitution provides that land in Uganda belongs to the citizens of Uganda and vests in them in accordance with the land tenure systems provided by the Constitution. While Article 237 is primarily a provision governing property rights and land tenure, its relevance to PPP implementation is direct: industrial pollution frequently involves the degradation of land through soil contamination, wetland encroachment and mining damage, constituting an interference with the constitutional land rights of citizens. The PPP, by

[55]Constitution of the Republic of Uganda 1995, art 39; Greenwatch (U) Ltd v AG and NEMA (Misc Application No 39 of 2001) [2002] UGCA 6; ACODE v Attorney General (Misc Application No 0100 of 2004) (High Court of Uganda)

requiring industrial polluters to restore damaged land to its pre-damage condition, gives practical operational content to citizens' constitutional land rights in the industrial pollution context.[56]

Article 245 of the Constitution imposes an affirmative duty on Parliament to enact legislation providing for measures to protect and preserve the environment from abuse, pollution and degradation, and to manage the environment for the sustainable development and public benefit of all Ugandans. Article 245 is thus the constitutional mandate for the NEA and all other environmental legislation, and provides the basis for the argument that Parliament is constitutionally required to ensure that Uganda's legislative framework is adequate to protect the environment. An NEA that fails to provide sufficiently deterrent sanctions, or that creates such significant evidentiary barriers to civil liability as to make the PPP's compensatory modality effectively unavailable, may therefore be argued to fall short of the Article 245 standard.[57]

Ugandan courts have played a pivotal role in interpreting and enforcing the constitutional right to a clean and healthy environment under Article 39[58], often linking it to broader obligations for pollution control and sustainable development. In Greenwatch (U) Ltd v Attorney General & NEMA (Misc. Cause No. 140 of 2002)[59], the NGO Greenwatch brought a public interest application challenging the manufacture, distribution, use, sale, and disposal of plastic bags (commonly known as kaveera) and other single-use plastics. The High Court declared that these activities violated Ugandans' rights to a clean and healthy environment. While the court acknowledged the environmental harm and the petitioner's efforts, it stopped short of issuing comprehensive remedial orders such as a outright ban, restoration directives, or polluter-pays obligations on manufacturers and importers, noting that such detailed regulatory measures fell within Parliament's legislative domain and were anticipated.

Another key case, Advocates Coalition for Development and Environment (ACODE) v Attorney General (Misc. Cause No. 0100 of 2004),[60] addressed the tension between commercial interests and forest conservation. ACODE challenged the government's granting of

[56]Constitution of the Republic of Uganda 1995, arts 39, 237, 245; National Objectives and Directive Principles of State Policy, Objectives XIII and XXVII

[57]ibid

[58] Constitution of the Republic of Uganda 1995, Article 39

[59](Misc. Cause No. 140 of 2002)

[60] (Misc. Cause No. 0100 of 2004)

a permit to Kakira Sugar Works Ltd to convert parts of the Butamira Forest Reserve into a sugarcane plantation. The applicants argued that the decision violated Articles 39 and 237 of the Constitution, constituted de facto degazetting of a forest reserve without proper Environmental Impact Assessment (EIA), and breached public trust obligations over natural resources. The High Court largely sided with ACODE, holding that the permit was unconstitutional, that a project brief and public consultation were required, and that the government had failed in its duty to manage resources sustainably for present and future generations. However, the court declined to issue restoration orders against the government itself, emphasizing that such remedies should target the direct polluter or developer.

These cases illustrate the judiciary's willingness to grant declaratory relief and affirm justiciable environmental rights while exhibiting caution on structural remedies. In Greenwatch, the focus was on plastics pollution and the state's regulatory failures; in ACODE, it centered on habitat destruction and procedural lapses in environmental decision-making. Both reinforced that individuals and NGOs have standing under Article 50(2) to enforce Article 39 rights against the state and, by extension, inadequately regulated private actors.[61] They also underscored sustainable development as a constitutional value, creating foundations for applying principles like the polluter pays principle (PPP) by highlighting the state's duty to prevent degradation and internalize environmental costs.

Additional landmark jurisprudence has further entrenched these principles, particularly in relation to wetlands, restoration, and the PPP. In Amooti Godfrey Nyakana v National Environment Management Authority & Others (Constitutional Appeal No. 5 of 2011)[62], the Supreme Court upheld NEMA's restoration order against a developer who had built in a wetland. The Court explicitly recognized the Polluter Pays Principle and the Precautionary Principle as part of Ugandan law, affirming that polluters must bear the costs of remediation and that lack of full scientific certainty should not delay protective action. This decision strengthened the enforcement toolkit for addressing industrial and individual pollution. Other relevant cases, such as The Environmental Action Network Ltd (TEAN) v Attorney General & NEMA (Misc. Appl. No. 39 of 2001)[63], extended Article 39 protections to public health dimensions of pollution, challenging public smoking as a violation of non-smokers' right to clean air. Collectively, these decisions demonstrate courts' readiness to use constitutional environmental rights to scrutinize state inaction or complicity in pollution, promote public

[61] Constitution of the Republic of Uganda 1995
[62] (Constitutional Appeal No. 5 of 2011)
[63] (Misc. Appl. No. 39 of 2001)

interest litigation, and support the implementation of the PPP, even as they sometimes defer comprehensive remedies to the executive and legislature. This body of case law provides a robust foundation for holding both public institutions and private industrial polluters accountable

The National Objectives and Directive Principles of State Policy form part of the Constitution and provide the interpretive context within which specific constitutional rights and legislative mandates must be understood. 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 requires the State to manage the environment for the sustainable development and public benefit of all Ugandans, and to take all possible measures to prevent or minimise damage and destruction to land, air, water and forests. These Objectives confirm that the State's environmental management functions are directionally committed to the protection of natural resources and the prevention of environmental damage commitments that find their most specific legal expression in the PPP provisions of the NEA.[64]

3.3 Statutory Framework

3.3.1 National Environment Act, Cap 181

The National Environment Act Cap 181 is the primary statutory instrument governing environmental management in Uganda. Section 4 of the NEA explicitly incorporates the PPP as a guiding principle, providing that those who pollute or degrade the environment shall bear the costs of their activities, including the costs of prevention, control and restoration. This provision is the statutory foundation of Uganda's entire environmental enforcement regime. Section 7 establishes NEMA as the lead environmental management institution with a broad mandate encompassing environmental standard-setting, EIA review, compliance monitoring and enforcement. The Ministry of Water and Environment (MWE) is designated as the sector ministry responsible for supervising NEMA under section 5.[65]

Sections 72 to 76 of the NEA create the core enforcement machinery. Section 72 confers inspection powers on NEMA officers, including the power to enter premises, inspect processes and equipment, take samples, require production of records and carry out environmental

[64]ibid

[65]National Environment Act, Cap 181 (n 11), s 4 (guiding principles); s 7 (functions of NEMA); s 5 (MWE as sector ministry)

monitoring. Section 73 empowers NEMA to issue compliance notices requiring specific remedial action within specified timeframes. Section 74 empowers NEMA and courts to issue environmental restoration orders requiring polluters to restore damaged environments at their own expense. Section 75 empowers NEMA to refer cases for criminal prosecution and to take civil enforcement proceedings. Section 76 provides for administrative penalties. Together, these provisions give NEMA a comprehensive enforcement toolkit. The National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations SI 5/1999 establish specific effluent discharge standards against which compliance can be assessed.[66]

The National Environment Act Cap.181 introduced several significant strengthening provisions. Section 76A substantially increased the maximum penalties for environmental offences, representing a legislative recognition that the pre-2019 penalty levels were insufficient to deter corporate polluters. Section 90 introduced personal criminal liability for directors, officers and employees of bodies corporate who authorise, consent to or participate in environmental violations, creating incentives for board-level environmental compliance governance that did not previously exist in the legislative framework. Section 34 introduced mandatory environmental audit requirements, requiring specified categories of industrial operator to submit periodic environmental audit reports to NEMA.[67] Despite these improvements, the maximum penalty levels in the amended NEA remain insufficiently deterrent for large industrial operators: the expected cost of non-compliance, discounted by the probability of detection and enforcement, is frequently less than the cost of compliance for large extractive and manufacturing concerns.

3.3.2 Water Act Cap 164

The Water Act Cap 164 regulates water use and quality in Uganda, operationalising the preventive and corrective modalities of the PPP in the domain of water pollution. Section 31 requires operators of activities likely to affect water quality to obtain water use licences and effluent discharge permits from the Directorate of Water Resources Management (DWRM), conditioning the right to discharge into water bodies on compliance with environmental standards. Section 34 creates criminal offences for the unlawful discharge of pollutants into water sources, providing a criminal liability pathway complementary to the NEA's administrative and civil enforcement mechanisms. The National Water and Sewerage

[66]National Environment Act, Cap 181 (n 11), ss 72–76; National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, SI 5/1999 (Uganda), reg 4

[67]National Environment Act, Cap 181 (n 11) (as amended 2019), s 76A (increased penalties); s 90 (corporate officer liability); s 34 (environmental audit)

Corporation Act Cap 317 governs urban water services and creates additional obligations regarding effluent quality standards for urban industrial operators.[68]

3.3.3 Penal Code Act Cap 128

The Penal Code Act Cap 128 provides three specific criminal offences relevant to industrial pollution: section 168 (common nuisance, including any act, omission or negligence causing danger, obstruction, harm or injury to the public or public property), section 170 (fouling of water, making it dangerous or injurious to health) and section 171 (making air noxious so as to endanger life or injure health). These provisions pre-date Uganda's dedicated environmental legislation and provide an alternative criminal enforcement pathway that is theoretically available against industrial polluters but is seldom invoked in practice. The Penal Code offences are significant because they do not require proof of breach of a specific environmental standard, potentially making prosecution more accessible in cases where the applicable regulatory standard is contested or unclear.[69]

3.3.4 Public Health Legislation

The Public Health Act Cap 310 addresses nuisance and health-threatening environmental conditions, including pollution. Sections 26 to 29 create offences for environmental health violations and confer powers on local health authorities to take action against polluting activities that constitute a public health risk. These provisions intersect with NEMA's mandate under the NEA, creating an additional, if seldom-used, enforcement pathway relevant to the PPP's compensatory modality. In principle, the Public Health Act's provisions could be used to require industrial polluters to abate health-threatening pollution and to bear the costs of abatement, operationalising the PPP in the public health context. In practice, the Health Inspectorate's enforcement of these provisions against industrial polluters is rare, reflecting the broader resource and coordination challenges that affect all environmental enforcement in Uganda.[70]

3.3.5 Local Government Legislation

The Local Governments Act Cap 138 devolves significant environmental monitoring and enforcement functions to district and sub-county councils. The third schedule of the Act empowers local governments to regulate the management of the environment and natural resources within their areas of jurisdiction, to enforce environmental standards and to take

[68]Water Act, Cap 152 (Uganda), ss 31, 34; National Water and Sewerage Corporation Act, Cap 317 (Uganda)
[69]Penal Code Act, Cap 128 (Uganda), ss 168, 170, 171
[70]Public Health Act, Cap 281 (Uganda), ss 26–29; Local Governments Act, Cap 138 (Uganda), third schedule

action against activities causing environmental pollution or degradation. The Chief Administrative Officer (CAO) plays a supervisory role in relation to District Environment Committees (DECs), which are established under section 18 of the NEA to carry out environmental monitoring and to support NEMA's enforcement function at the district level. The Local Government Finance Commission Act Cap 139 governs the fiscal framework within which local governments exercise these functions, but in practice local government budgetary allocations are insufficient to support meaningful environmental enforcement activity.[71]

3.3.6 Environmental Regulations

The subsidiary legislation under the NEA provides the technical standards and procedural requirements within which the PPP is operationalised in practice. The National Environment (EIA) Regulations SI 13/1998 mandate Environmental Impact Assessment for prescribed industrial activities before project commencement, establishing a Technical Committee review process and requiring developers to identify and commit to mitigation measures for environmental impacts. The National Environment (Audit) Regulations SI 52/2020 require periodic environmental audits of specified categories of industrial operation, providing NEMA with information about ongoing environmental performance and compliance.[72] The National Environment (Waste Management) Regulations SI 52/1999, the National Environment (Noise Standards and Control) Regulations SI 17/2003 and the National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations SI 5/1999 establish the specific technical standards against which environmental compliance is assessed.[73]

3.4 Policy Framework

The National Environment Management Policy (2014) is the principal policy instrument governing environmental management in Uganda. It explicitly adopts the PPP as a guiding principle of environmental management, committing GOU to ensuring that the costs of pollution prevention, control and remediation are borne by those responsible for generating pollution. The Uganda Green Growth Development Strategy 2017–2030 provides the strategic framework for aligning economic development with environmental sustainability, including through the development of economic instruments environmental taxes, levies and tradable

[71]Local Governments Act, Cap 138 (Uganda), third schedule; s 60 (Chief Administrative Officer (CAO) functions); National Environment Act, Cap 181 (n 11), s 18 (District Environment Committees (DECs))

[72]National Environment (EIA) Regulations, SI 13/1998 (Uganda), regs 4, 15; National Environment (Audit) Regulations, SI 52/2020 (Uganda)

[73]National Environment (Waste Management) Regulations, SI 52/1999 (Uganda); National Environment (Noise Standards and Control) Regulations, SI 17/2003 (Uganda); National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, SI 5/1999 (Uganda)

permits that operationalise the PPP through market mechanisms. The National Development Plan (NDP) III (2020/21–2024/25) commits GOU to integrating environmental considerations into development planning across all sectors, recognising the linkage between environmental sustainability and long-term economic development.[74]

Despite the sophistication of Uganda's policy architecture, these instruments remain largely aspirational. None of the three policy documents has been accompanied by a specific funded implementation programme addressing the enforcement capacity deficits, penalty inadequacy and institutional fragmentation that undermine effective PPP implementation. The policy commitments provide normative guidance and political legitimacy for reform, but without legislative and institutional follow-through they remain statements of intent rather than operational programmes for change.

3.5 Regulatory Mechanisms for Pollution Control

3.5.1 Licensing

The NEA and sector-specific statutes create a licensing framework that operationalises the preventive modality of the PPP by conditioning the right to engage in pollution-generating industrial activities on compliance with environmental standards. Environmental discharge licences under the Water Act Cap 164 and effluent standards under SI 5/1999 require industrial operators to demonstrate compliance with water quality standards as a condition of the right to discharge. The Petroleum (Exploration, Development and Production) Act Cap 161 requires environmental licences and financial assurance from petroleum operators, with section 139 of the Act specifically requiring operators to provide financial guarantees for environmental rehabilitation at the conclusion of operations. The Mining and Minerals Act Cap 159 similarly requires environmental management plans and financial assurance from mining licence holders.[75][76] The Uganda Investment Authority (UIA) subjects investment certificates to environmental compliance requirements, creating a linkage between investment promotion and environmental obligation.

3.5.2 Environmental Impact Assessments

[74]National Environment Management Policy (Government of Uganda 2014); Uganda Green Growth Development Strategy 2017–2030 (Government of Uganda 2017); NDP III 2020/21–2024/25 (Government of Uganda 2020); African Development Bank, Uganda Country Strategy Paper 2021–2025 (AfDB 2021)

[75]Petroleum (Exploration, Development and Production) Act, Cap 161 (Uganda), ss 131, 139; Uganda Investment Authority (UIA) Act, Cap 92 (Uganda), s 17

[76]Mining and Minerals Act, Cap 159 (Uganda), ss 97, 99; Finance Act 2015 (Uganda), s 4

The EIA process, governed by the EIA Regulations SI 13/1998, requires developers of prescribed industrial activities to identify and assess the environmental impacts of proposed projects, to propose mitigation measures, and to obtain NEMA approval before project commencement. The EIA is the primary preventive mechanism through which the PPP is operationalised at the project design stage, requiring developers to internalise the environmental costs of their proposed activities into the project design before costs become irreversible. In principle, a well-functioning EIA system prevents significant environmental damage before it occurs, avoiding the more costly and contentious process of seeking remediation after the fact.[77]

In practice, Uganda's EIA process faces several well-documented weaknesses. Bhatt's comparative study of EIA systems in developing countries concludes that EIA tends to be used to fulfil legal requirements rather than as a genuine environmental mitigation tool, with weak post-approval monitoring and insufficient public participation. These weaknesses are evident in Uganda: EIA approvals are sometimes granted without adequate technical review, post-approval compliance monitoring is sporadic and under-resourced, and the EIA process is vulnerable to political pressure in cases involving large or politically connected investments.[78] The absence of a mandatory post-EIA monitoring and audit regime linked to automatic enforcement triggers represents a significant structural gap in Uganda's preventive PPP framework.

3.5.3 Monitoring Mechanisms

The NEA confers inspection and audit powers on NEMA to monitor ongoing compliance by industrial operators with environmental standards. Sections 72 to 76 of the NEA empower NEMA officers to enter premises, inspect processes, take samples and require production of documents, creating the legal basis for a proactive compliance monitoring programme. The National Environment (Audit) Regulations SI 52/2020 require specified categories of industrial operator to submit periodic environmental audit reports to NEMA, providing a systematic basis for monitoring environmental performance over time.[79] In practice, NEMA's inspection and monitoring functions are severely constrained by chronic resource limitations. The budget allocated to NEMA for inspection activities is insufficient to sustain the inspection frequency

[77]Bhatt (n 21) 983; National Environment (EIA) Regulations, SI 13/1998 (Uganda), reg 4

[78]National Environment (EIA) Regulations, SI 13/1998 (Uganda), reg 15; Bhatt (n 21) 983

[79]National Environment Act, Cap 181 (n 11), ss 72–76; National Environment (Audit) Regulations, SI 52/2020 (Uganda), regs 4–6 (audit requirements and NEMA inspection powers)

needed to create a credible deterrent across Uganda's expanding industrial sector. Laboratory capacity for pollution monitoring is limited, creating dependency on operators' self-reported data that is susceptible to manipulation and that NEMA has limited capacity to verify independently.

3.5.4 Restoration Orders

Section 76 of the NEA empowers NEMA and courts to order environmental restoration at the polluter's expense, directly operationalising the corrective modality of the PPP. Restoration orders can require industrial operators to remediate contaminated soil, restore degraded wetlands, improve water quality in affected water bodies and take other measures necessary to return the damaged environment to its pre-damage condition. The High Court exercised this power in Nyangasi David v NEMA, ordering NEMA to take enforcement action including seeking a restoration order against an industrial polluter who had been systematically violating environmental standards.[80] In practice, restoration orders are issued and enforced infrequently, reflecting the broader enforcement gap identified throughout this study. Even where restoration orders are obtained, monitoring compliance and enforcing the specific remediation requirements against reluctant industrial operators presents further institutional challenges that NEMA's resource constraints make difficult to address.

3.6 Liability Framework Under the PPP

3.6.1 Civil Liability

The NEA provides for civil claims for compensation and restoration by pollution victims, creating a statutory civil liability pathway in addition to the common law remedies of negligence, nuisance and the rule in Rylands v Fletcher that remain available in Uganda's common law system. Civil liability operationalises the compensatory modality of the PPP by enabling pollution victims to recover from the responsible industrial operator the costs of personal injury, property damage, loss of livelihood and other losses flowing from environmental damage. However, civil litigation against industrial polluters in Uganda faces several significant structural barriers. The requirement of proving fault in addition to causation in the absence of strict liability for high-risk activities creates substantial evidentiary

[80]Nyangasi David and Others v NEMA (Misc Application No 77 of 2012) (High Court of Uganda, 2013) (court ordered NEMA to take specific enforcement action against an industrial polluter)

challenges, particularly for diffuse or cumulative pollution effects where the causal contribution of a specific operator may be difficult to isolate.[81]

The costs of civil litigation are prohibitive for most individual pollution victims, whose resources are typically far below those of the industrial operators against whom they would need to bring proceedings. Class action mechanisms are available in principle but are seldom used in environmental cases. The capacity and resources of civil society organisations to bring environmental public interest litigation on behalf of affected communities have been demonstrated in the ACODE, Greenwatch, Kakira Sugar and Nyangasi David cases, but these organisations' capacity is limited relative to the scale of enforcement need.

3.6.2 Criminal Liability

The NEA, the Penal Code Act Cap 128 and sector-specific statutes create a framework of criminal offences for industrial pollution. Section 76A of the amended NEA 2019 substantially increases the maximum penalties for environmental offences compared to the pre-amendment regime, and section 90 introduces personal criminal liability for directors and officers of bodies corporate responsible for environmental violations. These provisions represent significant improvements to the criminal liability framework. However, two structural problems remain. First, the maximum penalty levels, even as amended, are insufficient to deter large industrial operators for whom fines represent a minor compliance cost relative to the economic benefits of continued environmental non-compliance. Second, the prosecution rate for environmental offences remains very low.[82][83]

3.6.3 Administrative Sanctions

NEMA's administrative enforcement powers compliance notices, licence suspension or cancellation, cessation orders, restoration orders and administrative penalties under sections 72 to 76 of the NEA represent the primary day-to-day enforcement mechanism for industrial pollution in Uganda. The Kakira Sugar Limited v NEMA case, in which the High Court upheld NEMA's exercise of administrative enforcement powers against a major sugar producer, confirms the legal soundness of NEMA's administrative enforcement authority. Administrative enforcement is potentially faster and less resource-intensive than criminal prosecution, and can

[81]Luppi, Parisi and Rajagopalan (n 14) 138–140; Orlando (n 18) 291–292 (on the evidentiary difficulties arising from diffuse and cumulative pollution in fault-based liability regimes)

[82]National Environment Act, Cap 181 (n 11), ss 74–76; Penal Code Act, Cap 128 (n 58), ss 168, 170; Kakira Sugar Limited v NEMA (Misc Application No 73 of 2018) (High Court of Uganda, 2019)

[83]Excise Duty Act, No 11 of 2014 (Uganda); Finance Act 2015 (Uganda), cap 166

achieve specific environmental outcomes cessation of illegal discharge, remediation of contaminated areas that criminal proceedings cannot directly compel.[84]

3.7 Critical Assessment of the Legal Framework

Uganda's legal and policy framework formally incorporates the PPP with commendable comprehensiveness across constitutional, statutory, regulatory and policy levels. The constitutional environmental right in Article 39, the PPP provision in section 4 of the NEA, the enforcement machinery in sections 72 to 76, the increased penalties and corporate liability provisions introduced by the 2019 amendment, the sector-specific financial assurance requirements in the Petroleum Act and Mining and Minerals Act, and the diverse regulatory standards in subsidiary legislation together constitute a formally comprehensive framework. However, several structural design deficiencies undermine the framework's effectiveness. First, financial penalties remain insufficient to deter large industrial operators even after the 2019 amendment. Second, the framework's general reliance on fault-based liability rather than strict liability for high-risk activities creates prohibitive evidentiary barriers to civil and criminal enforcement. Third, the EIA process lacks robust post-approval monitoring mechanisms. Fourth, overlapping institutional mandates create regulatory gaps and accountability deficits. Fifth, the framework fails to generate dedicated revenue streams for environmental enforcement from the economic activities generating pollution.[85]

3.8 Conclusion

Uganda's legal and policy framework formally incorporates the PPP and provides an extensive regulatory architecture. This formal sophistication is an important foundation that distinguishes Uganda from jurisdictions that lack any domestic PPP framework at all. However, the framework's effectiveness is undermined by legislative design deficiencies inadequate penalty structures, absence of strict liability, EIA process vulnerabilities and by the institutional fragmentation and resource constraints that are examined in detail in Chapter Four. The gap between the framework's formal content and its operational reality is the central challenge that Uganda's environmental law reform agenda must address.

[84]National Environment Act, Cap 181 (n 11), ss 72–76; Kakira Sugar Limited v NEMA (n 71) (NEMA's administrative enforcement powers upheld against a major corporate polluter)

[85]Acen (n 8) 3–5 (identifying weak penalties, institutional resource deficits and overlapping mandates as structural barriers to PPP enforcement)

CHAPTER FOUR: IMPLEMENTATION AND EFFECTIVENESS OF THE LEGAL AND INSTITUTIONAL FRAMEWORK IN ADDRESSING INDUSTRIAL POLLUTION

4.1 Introduction

This chapter assesses the institutional framework for PPP implementation in Uganda, examines enforcement mechanisms and practice in detail, evaluates institutional capacity and inter-agency co-ordination, presents case studies of industrial pollution enforcement practice, identifies the systemic challenges that limit implementation, and provides an overall assessment of effectiveness. The chapter demonstrates that Uganda's institutional framework is formally adequate in its design but operationally deficient in its resource base, enforcement practice and governance environment a conclusion that grounds the reform recommendations advanced in Chapter Five.

4.2 Institutional Framework

4.2.1 NEMA

NEMA is Uganda's lead environmental management institution, established under section 8 of the NEA with a mandate encompassing environmental standard-setting, EIA review and clearance, inspection of industrial premises, compliance monitoring and enforcement action including compliance notices, licence suspension, restoration orders and referral for criminal prosecution. NEMA is formally independent of line ministries and reports to the Minister of Water and Environment (MWE). Its Board, appointed under section 10 of the NEA, provides governance oversight.[86]

NEMA's Strategic Plan 2020-2025 identifies its key priorities as strengthening environmental compliance monitoring, improving institutional capacity, and increasing use of economic instruments for environmental management. [87] The Strategic Plan acknowledges that NEMA's enforcement capacity remains limited by budget constraints, staff shortages, and the geographic spread of industrial activities across Uganda. [88]

In practice, NEMA's institutional effectiveness is significantly and systematically constrained by chronic resource limitations. Its annual budget allocation from the consolidated fund is inadequate relative to the scale of its enforcement mandate across Uganda's expanding

[86]National Environment Act, Cap 181 (n 11), ss 7, 8, 10; s 5 (MWE as sector ministry)

[87]National Environment Management Authority, Strategic Plan 2020-2025 (NEMA 2020) 12.

[88]ibid 14.

industrial sector. The consequences are concrete and well-documented: NEMA's inspection frequency is insufficient to create a credible deterrent; laboratory capacity for pollution monitoring is limited, creating dependency on self-reported data; specialist technical staff environmental scientists, engineers, legal officers with environmental expertise are difficult to recruit and retain at public sector salary levels; and transport and field equipment for inspection activities are inadequate relative to the geographical spread of industrial operations. These resource constraints are not merely operational inefficiencies; they represent a structural failure that systematically prevents NEMA from discharging its statutory mandate.

4.2.2 Environmental Police

The Uganda Police Force has established an Environmental Police Unit with responsibility for investigating and prosecuting environmental crimes, including industrial pollution offences. Section 75 of the NEA provides that police officers may enforce environmental law, and the Environmental Police Unit provides the operational link between NEMA's administrative enforcement functions and the criminal prosecution pathway. The Unit has been involved in several significant environmental enforcement actions, but its operational capacity is severely constrained: it is under-resourced, under-staffed and competes with other policing priorities for institutional attention and financial resources. Environmental prosecution expertise within the Unit and within the Office of the Director of Public Prosecutions more broadly is limited, contributing to the very low prosecution rate for environmental offences documented in the enforcement practice literature.[89]

4.2.3 Local Governments

District Environment Officers (DEOs) carry primary environmental monitoring responsibilities at the district level under NEMA's supervision. District Environment Committees (DECs) are established under section 18 of the NEA with responsibility for co-ordinating environmental management at the district level, including monitoring compliance with environmental standards by industrial and commercial operators within the district. The CAO provides administrative oversight of DECs. Local Environment Committees operate at sub-county level as the most local tier of the environmental monitoring structure.[90]

[89]Uganda Police Act, Cap 303 (Uganda), s 8; National Environment Act, Cap 181 (n 11), s 75 (police power to enforce environmental law)

[90]Local Governments Act, Cap 138 (n 60), third schedule; National Environment Act, Cap 181 (n 11), s 18; Local Governments Act, s 60 (CAO supervisory role over DECs)

The DEO and DEC system represents an important decentralisation of environmental monitoring responsibility to the level of government closest to the communities affected by industrial pollution. In principle, this localisation should produce more responsive and contextually informed enforcement than a purely centralised system. In practice, DEOs frequently lack the technical qualifications necessary to assess complex industrial pollution problems, the transport resources necessary to reach industrial sites and carry out inspections, and the analytical equipment necessary to collect and assess pollution samples. DECs in most districts meet infrequently and lack the administrative support necessary to function effectively as oversight bodies.

4.2.4 Relevant Ministries

The Ministry of Water and Environment (MWE) is the sector ministry responsible for environmental policy and for supervising NEMA. Several other sector ministries hold regulatory oversight responsibilities within their respective domains: the Ministry of Energy and Mineral Development for the petroleum and mining sectors; the Ministry of Agriculture, Animal Industry and Fisheries for agro-industrial pollution; and the Ministry of Works and Transport for pollution from transport-related industries. Sector-specific regulatory bodies the Petroleum Authority of Uganda (PAU), established under the Petroleum Authority of Uganda Act 2013, and the Directorate of Water Resources Management (DWRM) within MWE hold enforcement authority within their respective domains. The Uganda Investment Authority (UIA) administers investment certificates subject to environmental compliance conditions.[91]

4.2.5 Courts

The High Court of Uganda holds jurisdiction over environmental civil and criminal matters as part of its general jurisdiction under section 14 of the Judicature Act Cap 16. The record of environmental enforcement cases in the Ugandan courts demonstrates a judiciary that is increasingly willing to exercise its jurisdiction actively in environmental matters. In ACODE v Attorney General, the court granted injunctive relief against government inaction in environmental enforcement. In Greenwatch v AG and NEMA, the court ordered executive actors to comply with their statutory environmental obligations. In Kakira Sugar Limited v NEMA, the court upheld NEMA's administrative enforcement powers against a major corporate polluter, establishing important precedent for the legal basis of administrative

[91]National Environment Act, Cap 181 (n 11), ss 7, 8; Petroleum Authority of Uganda Act 2013, s 9 (environmental compliance monitoring functions); Uganda Investment Authority Act, Cap 92 (Uganda), s 17 (investment certificate conditions)

sanctions. In Nyangasi David v NEMA, the court ordered NEMA to take specific enforcement action against an industrial polluter that had been systematically violating environmental standards.[92]

The absence of a specialist Environmental Court in Uganda in contrast to Kenya's Environment and Land Court, which has exclusive jurisdiction over environmental civil and criminal matters means that environmental cases must compete for court time with the full range of civil and criminal matters in the general High Court docket. This creates delays in environmental enforcement proceedings, limits the development of specialist environmental jurisprudence, and reduces the accessibility of the court as an enforcement forum for communities with limited resources. The establishment of a specialist Environmental Court or Division is one of the most significant institutional reforms that could strengthen Uganda's PPP enforcement framework.

4.3 Enforcement Mechanisms

4.3.1 Inspections

Section 72 of the NEA confers comprehensive inspection powers on NEMA officers: the power to enter any premises where an environmental activity is being or is likely to be carried on, to inspect any plant, equipment or process, to take samples of any material or substance, to require production of records and to carry out environmental monitoring. These powers provide the legal basis for a proactive compliance monitoring programme. In practice, NEMA's inspection frequency across Uganda's industrial sector is severely constrained by the resource limitations described above. Large and remotely located industrial operations particularly petroleum sector facilities in the Albertine Graben and mining operations in western Uganda are particularly unlikely to receive regular inspections.[93]

The enforcement economics of inspection are straightforward: the expected cost of non-compliance for a rational industrial operator equals the probability of detection multiplied by the expected sanction. Where inspection frequency is low making detection probability low and where sanctions are insufficiently deterrent even when imposed, non-compliance is economically rational for an operator that prioritises short-term profitability over environmental compliance. The current combination of inadequate inspection frequency and

[92]Judicature Act, Cap 13 (Uganda), s 14; ACODE v Attorney General (n 15); Greenwatch (U) Ltd v AG and NEMA (n 15); Environment and Land Court Act 2011 (Kenya) (specialist environmental court model)

[93]National Environment Act, Cap 181 (n 11), ss 72–75

insufficient sanction levels in Uganda's PPP enforcement system systematically incentivises non-compliance among large industrial operators.

4.3.2 Compliance Notices

Section 73 of the NEA empowers NEMA to issue compliance notices to industrial operators requiring them to take specified steps to achieve compliance with environmental standards within a specified timeframe. Compliance notices are the primary instrument of day-to-day administrative enforcement and represent an important intermediate enforcement mechanism between inspection and prosecution: they give operators an opportunity to remedy non-compliance without immediate resort to criminal or civil proceedings while creating a formal record of identified violations. Their effectiveness depends critically on NEMA's willingness and institutional capacity to follow through with stronger enforcement actionlicence suspension, restoration orders and prosecution referral where compliance notices are ignored or where repeated violations indicate a pattern of deliberate non-compliance.[94]

4.3.3 Administrative Penalties

Section 76A of the amended NEA provides for administrative penalties for environmental offences, collected by the Uganda Revenue Authority (URA). The 2019 amendment increased maximum administrative penalty levels compared to the pre-amendment regime, representing a legislative acknowledgment that the previous levels were insufficient. However, even as amended, the maximum administrative penalty levels remain insufficient to deter large industrial operators. Kenya's Environmental Management and Co-ordination Act scales penalties to the economic harm caused rather than imposing fixed maximum amounts, providing a more economically rational deterrent framework whose proportionality to the consequences of non-compliance makes it more effective.[95]

4.3.4 Prosecutions

Environmental criminal prosecutions under the NEA, the Penal Code Act Cap 128 and sector-specific statutes are rare in Uganda. Several structural factors contribute to the very low prosecution rate. The Office of the Director of Public Prosecutions lacks a specialist environmental prosecution unit with expertise in environmental evidence, scientific sampling, expert witness management and the interpretation of environmental standards capacities that are essential for successful environmental prosecution but that are unavailable in a general

[94] ibid

[95] National Environment Act (as amended 2019) (n 11), s 76A; Environmental Management and Co-ordination Act, No 8 of 1999 (Kenya), s 145 (penalties scaled to economic harm caused)

prosecution service. The evidentiary requirements of criminal prosecution proof of fault beyond reasonable doubt, evidence of the specific pollutant's origin and causal chain are difficult to satisfy in complex industrial pollution cases without specialist forensic environmental expertise. And the general court docket is heavily loaded, creating delays that reduce the deterrent effect of the prosecution pathway even in the rare cases where prosecution is initiated.[96]

4.3.5 Restoration Orders

Sections 74 and 76 of the NEA empower both NEMA and the courts to issue restoration orders requiring polluters to restore damaged environments to their pre-damage condition at the polluter's expense, directly operationalising the corrective modality of the PPP. In Nyangasi David v NEMA the High Court ordered NEMA to seek a restoration order against an industrial polluter, demonstrating that this enforcement mechanism is available and that the courts will support its use.[97] In practice, restoration orders are issued and enforced infrequently. Even where restoration orders are obtained, monitoring compliance with the specific remediation requirements and enforcing the order against a resistant operator requires sustained institutional follow-through that NEMA's resource constraints make difficult to achieve. The result is that many restoration order obligations remain partially or wholly unimplemented.

4.4 Institutional Capacity and Coordination

The effectiveness of Uganda's institutional framework for PPP implementation is fundamentally constrained by resource deficits and co-ordination failures that compound each other in ways that systematically undermine enforcement. NEMA's budget relative to its enforcement mandate is inadequate, resulting in insufficient inspection frequency, limited laboratory monitoring capacity and inability to attract and retain specialist technical staff. The African Development Bank has identified environmental institutional capacity as a priority area requiring additional financing in its Uganda Country Strategy Paper 2021–2025, providing international institutional support for the reform recommendation advanced in this study for an independent Environmental Enforcement Fund.[98]

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[96]ibid

[97]Nyangasi David v NEMA (n 69); National Environment Act, Cap 181 (n 11), ss 74, 76 (restoration order powers of NEMA and courts)

[98]African Development Bank, Uganda Country Strategy Paper 2021–2025 (AfDB 2021) (identifying environmental institutional capacity as a priority for additional financing); Acen (n 8) 3–5

Inter-agency co-ordination between NEMA, MWE, the Petroleum Authority, DWRM, UIA, the Environmental Police and local government structures is insufficient. The institutional landscape is characterised by overlapping mandates, unclear jurisdictional boundaries and the absence of formal inter-agency co-ordination mechanisms. An industrial operator causing simultaneous air, water and soil pollution may theoretically be subject to enforcement action by multiple agencies but in practice face none, because no single agency takes lead responsibility and the absence of co-ordination protocols allows each agency to defer to the others. The absence of shared environmental monitoring databases, standardised inspection protocols and inter-agency information sharing compounds this co-ordination failure.

DECs at the district level are similarly under-resourced and inconsistently functional. The CAO's supervisory role over DECs is not consistently exercised across districts, producing significant variation in the frequency and quality of district-level environmental monitoring. DEOs in many districts lack the technical qualifications, transport resources and analytical equipment necessary to conduct meaningful environmental monitoring, contributing to the monitoring gap that allows industrial polluters in rural and semi-urban areas to operate with minimal external oversight. The WHO has documented the public health consequences of this monitoring gap, including elevated rates of water-borne disease and respiratory illness in communities adjacent to industrial facilities that are outside NEMA's effective monitoring range.[99]

4.5 Industrial Pollution Case Studies and Enforcement Practice

4.5.1 Oil and Gas Development in the Albertine Graben

The development of Uganda's oil and gas resources in the Albertine Graben region presents the most significant and complex contemporary PPP implementation challenge. The Albertine Graben is a biodiversity hotspot of exceptional ecological significance, encompassing protected areas and supporting communities whose livelihoods depend on the region's ecosystem services. Section 139 of the Petroleum (Exploration, Development and Production) Act Cap 161 requires petroleum operators to provide financial assurance bonds or other acceptable security sufficient to meet anticipated environmental rehabilitation costs at the conclusion of operations, representing the most direct statutory application of PPP logic in Uganda's

[99]World Health Organization, 'Environmental Health Report: Uganda' (WHO 2021); Acen (n 8) 2 (documenting elevated rates of water-borne disease and respiratory illness in communities adjacent to industrial facilities)

legislative framework. The Petroleum Authority of Uganda has been charged with monitoring environmental compliance during petroleum exploration and development activities.[100]

Ruppel-Schlichting, Ruppel and Nana Afua's assessment of Uganda's environmental enforcement in the extractive sector concludes that while Ugandan laws address environmental pollution, the consequential and effective implementation and enforcement is yet to be achieved. Civil society organisations monitoring the Albertine Graben development have raised concerns about the adequacy of financial assurance amounts relative to potential remediation costs, the robustness of NEMA's oversight of operational pollution during the development phase, and the capacity of the Petroleum Authority to enforce environmental compliance against major international operators.[101]

The Albertine Graben case illustrates a structural tension within Uganda's PPP framework: the State holds equity interests in petroleum development through the Uganda National Oil Company, creating an inherent conflict between its role as revenue-seeking investor and its role as environmental regulator. This conflict is not unique to Uganda it is documented across oil-producing developing countries but it is particularly acute in the Albertine Graben context where the environmental stakes are high and the regulatory capacity of the relevant institutions has not been developed commensurately with the pace of the petroleum sector's growth.

4.5.2 Industrial Effluent Discharge: Lake Victoria Basin

Lake Victoria, the world's second-largest freshwater lake and a shared resource of Uganda, Kenya and Tanzania, has been significantly affected by industrial effluent discharge from manufacturing, fish-processing and agro-processing facilities in the Kampala–Jinja–Entebbe industrial corridor. Fish-processing plants, sugar processing facilities, textile manufacturers and chemical producers have discharged effluents with consequences for water quality, fisheries and the health of communities dependent on the lake. NEMA has issued compliance notices against multiple operators in the basin but the deterrent effect of enforcement action has been limited: maximum penalty levels make fines economically irrelevant for large operators, enforcement proceedings are protracted, and the monitoring capacity necessary to sustain systematic enforcement across the many discharge points into the lake and its tributaries is beyond NEMA's current resource base.

[100]Petroleum (Exploration, Development and Production) Act, Cap 161 (n 64), ss 131, 139; Petroleum Authority of Uganda Act 2013, s 9; African Development Bank, 'Uganda Oil Sector Environmental Programme' (AfDB 2019)

[101]Ruppel-Schlichting, Ruppel and Nana Afua (n 20) 464 ('while Ugandan laws touch on environmental pollution, the consequential and effective implementation and enforcement is yet to be achieved')

The Kakira Sugar Limited v NEMA case, which arose from NEMA's enforcement action against a major sugar producer in the Lake Victoria basin, illustrates both the availability of administrative enforcement mechanisms and the challenges of sustaining enforcement against large corporate polluters with resources and legal capacity to contest enforcement proceedings. The High Court's upholding of NEMA's enforcement powers in that case is an important precedent, but the case also illustrates the institutional resources necessary to sustain enforcement proceedings against a determined and well-resourced respondent.

4.5.3 Wetland Encroachment

Uganda's wetlands provide critical ecosystem services water filtration, flood control, carbon sequestration, habitat for biodiversity and support the livelihoods of communities across the country. Uganda has lost approximately 30 per cent of its wetland area since the 1990s, with industrial and commercial development encroachment playing a significant contributory role alongside urban expansion and agricultural conversion. The PPP requires that industrial actors responsible for wetland encroachment bear the costs of the ecosystem services destroyed and, where appropriate, the costs of wetland restoration. In practice, enforcement of wetland protection regulations against industrial encroachers has been inconsistent and has frequently fallen short of the scale of damage caused, particularly in cases where encroachment is connected to politically influential actors or to activities with significant economic significance.[102]

4.5.4 Civil Society Enforcement Practice

In the context of institutional enforcement deficits, civil society organisations have played a structurally important and increasingly prominent role in PPP enforcement through public interest litigation. The precedents established in ACODE v Attorney General, Greenwatch v AG and NEMA and Kakira Sugar v NEMA collectively demonstrate that non-governmental organisations have standing to bring environmental enforcement actions before the Ugandan courts, that the courts will grant injunctive and mandatory relief against both governmental inaction and private industrial polluters, and that civil society litigation can produce concrete enforcement outcomes where institutional enforcement has failed.[103]

The Nyangasi David v NEMA decision is particularly significant: the court ordered NEMA to take specific enforcement action against an industrial polluter, establishing that judicial review

[102] Acen (n 8) 4–5; Ruppel-Schlichting, Ruppel and Nana Afua (n 20) 465; World Bank (n 9)

[103] ACODE v Attorney General (n 15); Greenwatch (U) Ltd v AG and NEMA (n 15); Kakira Sugar Limited v NEMA (n 71)

of NEMA's exercise of its enforcement discretion is available and that failure to enforce in the face of documented violations may be subject to mandatory order. This creates an important mechanism of judicial accountability for NEMA's enforcement decisions that supplements the political and administrative accountability mechanisms that have proven insufficient to ensure vigorous enforcement.[104]

The limitations of civil society enforcement are, however, equally significant. Litigation-driven enforcement is reactive rather than preventive, addressing environmental damage after it has occurred rather than preventing it. The costs of litigation are significant, limiting civil society organisations' capacity to bring proceedings in all but the most egregious cases. And the outcomes of litigation depend on NEMA's willingness and capacity to comply with court orders, which in turn depends on the same resource constraints and political pressures that have produced the enforcement gap in the first place.

4.6 Challenges Affecting Implementation

4.6.1 Inadequate Penalty Levels and Enforcement Mechanisms

A foundational requirement for the PPP to operate as a deterrent is that the financial consequences of non-compliance must exceed the costs of compliance. Where penalties are too low, rational economic actors will choose non-compliance. Uganda's penalty levels under the NEA, while nominally significant, are inadequate in the context of industrial operations. The maximum fine of Uganda Shillings 480 million for major offences is approximately USD 130,000 at current exchange rates. For a large sugar mill, cement plant, or oil refinery generating revenues in the hundreds of millions of dollars annually, this penalty represents a negligible fraction of operating costs.

The problem is compounded by the low probability of detection and prosecution. NEMA's enforcement statistics show that fewer than 10 percent of industrial facilities receive compliance inspections in any given year. Of those found in violation, only a fraction receive formal enforcement notices. Criminal prosecutions are rare. The expected penalty, calculated as the probability of detection multiplied by the magnitude of the sanction, is therefore extremely low. Even penalty levels that would deter determined polluters at high enforcement rates fail to deter when enforcement is weak.

[104]Nyangasi David v NEMA (n 69)

Administrative enforcement mechanisms also face limitations. Compliance orders and cessation orders are issued by NEMA but compliance with them is not consistently monitored. Industries that ignore orders may do so for extended periods before further action is taken. The absence of automatic administrative penalties for non-compliance with orders, such as daily accruing fines, means that violators face no immediate financial consequence for delay. [105]

The NEA's civil liability provision at Section 110 creates the potential for private enforcement through damages claims, but this mechanism requires the plaintiff to identify a specific polluter, establish causation, and quantify damage, all in the face of information asymmetries that systematically disadvantage affected communities relative to industrial defendants. The reversal of the burden of proof in Section 110(3) partially addresses this asymmetry but does not eliminate it. [106] [107]

4.6.2 Institutional Capacity Deficits

NEMA's annual budget is insufficient for the scale of its enforcement mandate. The Ministry of Finance allocates resources to NEMA as part of the Water and Environment Sector budget, and NEMA competes with the Ministry itself and other sector agencies for a share of a limited allocation. In financial year 2022/23, the entire Water and Environment Sector received approximately Uganda Shillings 1.2 trillion in budget allocations, of which environmental management (NEMA's core function) received less than 5 percent. [108]

NEMA's staffing position mirrors its budgetary constraints. The Authority has fewer than 200 professional staff to oversee environmental management across a country of 45 million people with an industrial sector that includes over 5,000 registered manufacturing enterprises and an unknown number of informal industrial operations. [109] The ratio of enforcement officers to

[105]Macrory (n 84) 80.
[105]Sands and others (n 4) 245.
[106]National Environment Act (n 18) s 107.
[107]ibid s 108.
[107]de Sadeleer (n 2) 65.
[107]OECD, Environmental Performance Reviews: Uganda (OECD 2020) 45.
[107]ibid 47.
[107]National Environment Act (n 18) s 109.
[108]Ministry of Finance, Planning and Economic Development, Budget Framework Paper FY 2023/24 (MoFPED 2023) 88.
[109]National Environment Management Authority (n 111) 18.
[109]Greenwatch (U) Ltd v AG and NEMA (n 61).
[109]ACODE v AG (n 62).
[109]Kakira Sugar Limited (n 60).

regulated facilities is far below any level at which meaningful compliance monitoring can occur.

Technical capacity limitations also affect the quality of enforcement. Effective enforcement of discharge standards requires laboratory analysis of water and soil samples. NEMA operates a central laboratory but lacks the capacity for the volume of testing that comprehensive monitoring would require. Most district environment officers lack access to testing equipment and are dependent on NEMA's central laboratory for analytical support, introducing delays and practical barriers to local-level enforcement. [110]

The capacity deficit extends to the courts. Environmental cases require judges with specialist knowledge of ecological processes, environmental damage quantification, and the technical standards applicable to industrial activities. Uganda has no specialised environmental court. Environmental cases are heard by judges in the High Court's civil and criminal divisions alongside general commercial and criminal matters. While some judges have developed expertise through experience, the system does not guarantee specialist knowledge in environmental adjudication. [111]

4.6.3 Corruption and Political Interference

Corruption is a significant challenge to PPP implementation in Uganda. Transparency International's Corruption Perceptions Index consistently places Uganda in the lower quartile of countries globally on corruption perceptions. [112] In the environmental regulation context, corruption manifests in multiple ways: bribery of inspection officers to overlook violations, politically motivated decisions to refrain from enforcing against industries with political connections, and deliberate administrative delay in processing enforcement actions against well-connected operators.

The Uganda Human Rights Commission has received complaints from communities affected by industrial pollution who allege that local officials failed to investigate pollution complaints due to payments from industrial operators. Environmental NGOs including ACODE have

[110]Uganda National Academy of Sciences, State of Science, Technology and Innovation in Uganda (UNAS 2020) 34.
[111]Otim (n 92) 93.
[112]Transparency International, Corruption Perceptions Index 2022 (Transparency International 2022) 34.
[112]Kasimbazi (n 66) 130.
[112]African Development Bank, Uganda Country Strategy Paper 2017-2021 (AfDB 2017) 22.

documented cases in which NEMA compliance officers who initiated enforcement actions against politically connected companies were transferred or removed from their posts.

Political interference in environmental enforcement is also evident at the level of investment approvals. Where senior government officials have interests in or political relationships with industrial investors, enforcement of environmental standards against those investors is effectively compromised. The investment promotion mandate of the Uganda Investment Authority, when exercised in ways that offer investors informal assurances of favourable regulatory treatment, creates a structural incentive for environmental officials to avoid enforcement actions that might undermine investment confidence. [113]

The remedy for corruption in environmental enforcement requires institutional safeguards: security of tenure for enforcement officers, transparent reporting of enforcement decisions, independent oversight of NEMA by parliamentary committees, and clear protocols separating investment promotion from environmental regulation.

4.6.4 Conflict Between Investment Promotion and Environmental Protection

Uganda's development strategy prioritises industrialisation as a driver of economic growth and employment. The Uganda Investment Authority actively promotes industrial investment and offers a range of incentives including tax holidays, exemptions from import duties on capital equipment, and in some cases assurances of regulatory stability.

This investment promotion agenda creates structural tension with environmental enforcement. Where NEMA takes enforcement action against an industrial investor, the investor may threaten to withdraw, citing the costs of compliance. In a country where industrial employment is a politically sensitive issue and where investor relations are managed at the highest levels of government, NEMA operates under informal pressure to achieve negotiated compliance rather than formal enforcement. The effect is that penalties provided for in legislation are replaced by negotiated undertakings, and timelines for compliance are extended repeatedly.

The tension between investment attraction and environmental enforcement is not unique to Uganda. It is a structural feature of environmental governance in developing countries. Wynberg and Hawksworth's comparative analysis of six African countries found that all faced significant pressures to moderate environmental enforcement in order to maintain investment

[113]Transparency International (n 72) 36.

[113]Emmanuel Kasimbazi, "Judicial Development of Environmental Law in Uganda" in Yemi Akinseye-George (ed), Environmental Governance in Africa (Pretoria University Law Press 2015) 145.

attractiveness, and that this pressure increased as competition for foreign direct investment intensified. [114] The resolution of this tension requires clear institutional boundaries between investment promotion and environmental regulation, with the latter insulated from the former.

Some African jurisdictions have addressed this tension through the creation of investment licensing conditions that explicitly incorporate environmental compliance requirements, with license revocation as the consequence of non-compliance. Under this approach, investment promotion and environmental protection become aligned rather than opposed, because the conditions for continued investment explicitly include environmental performance. Uganda has not adopted this approach systematically. [115]

4.6.5 Access to Justice Barriers

For the PPP's civil liability mechanism to operate effectively, affected communities must be able to bring claims for pollution damage. In Uganda, access to justice for environmental claims is severely constrained. Court fees, legal costs, and the difficulty of proving causation combine to make litigation impractical for most communities affected by industrial pollution. [116]

Legal aid for environmental cases is minimal. The Uganda Law Society's pro bono program has limited capacity for environmental litigation. Specialist environmental law firms are few in number and concentrated in Kampala, creating a significant geographic barrier for communities affected by industrial pollution in peripheral industrial zones. [117]

Class action or representative litigation, which would reduce transaction costs for affected communities by aggregating claims, is not well established in Ugandan civil procedure. While the Civil Procedure Rules permit representative actions in some circumstances, the practical and procedural barriers to organising effective representative litigation in environmental cases are substantial. Developing a clear procedural framework for environmental class actions would significantly improve access to the PPP's civil liability mechanism. [118]

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[114]Rachel Wynberg and Doreen Hawksworth, "Governing Industrial Pollution in Sub-Saharan Africa" (2018) 27(2) Environmental Policy and Governance 145, 150.
[115]ibid 152.
[115]Otim (n 92) 90.
[116]Namukasa Rose, "Judicial Enforcement of Environmental Rights in Uganda: Lessons and Prospects" (PhD thesis, Makerere University 2017) 89.
[116]National Environment Act (n 18) s 4(2).
[117]Isaac Otim, "Challenges of Environmental Enforcement in Uganda" (2019) 3(2) Uganda Law Review 78, 84.
[118]Namukasa (n 103) 102.

The courts's standard of proof in environmental damage cases also presents barriers. While Section 110(3) of the NEA shifts the burden of proof to the defendant once the plaintiff establishes a prima facie case, establishing a prima facie case of causation in environmental litigation requires scientific and technical evidence that affected communities typically cannot afford to obtain. The development of judicial guidance on acceptable forms of prima facie environmental evidence would address this barrier.

4.6.6 Data and Monitoring Limitations

Effective PPP enforcement requires reliable data on pollution levels, damage, and the identity of responsible parties. Uganda's environmental monitoring infrastructure is inadequate for this purpose. The number of automated water quality monitoring stations is insufficient for continuous monitoring of industrial discharge points. Ambient air quality monitoring is minimal outside of Kampala. Soil contamination from industrial waste disposal is not systematically surveyed. [119]

The absence of comprehensive monitoring data creates evidentiary problems for both administrative and civil enforcement. Where pollution cannot be measured, standards cannot be enforced. Where damage cannot be quantified, compensation cannot be calculated. The result is that significant industrial pollution occurs without any enforcement response because the regulatory system lacks the informational infrastructure to detect it. [120]

Industrial self-reporting under the environmental audit and compliance reporting requirements of the NEA provides some data, but self-reported data is subject to obvious reliability limitations and NEMA does not have the capacity to verify all submissions through independent monitoring. The incentive for industries to under-report pollution levels is substantial, and without independent verification, self-reporting is an unreliable basis for enforcement. [121]

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[118]Kameri-Mbote and Cullet (n 80) 30.
[118]World Bank (n 69) 48.
[118]UBOS (n 70) 82.
[119]NEMA (n 59) 70.
[120]NEMA (n 59) 75.
[120]Otim (n 92) 96.
[120]African Development Bank (n 74) 28.
[120]Macrory (n 84) 110.
[120]Preston (n 88) 140.
[121]National Environment (Audit) Regulations (n 39) reg 7.

4.6.7 Weak Integration of PPP into Fiscal Policy

The PPP in its full form requires not only civil and criminal liability for pollution above regulated levels but also fiscal instruments that price pollution at all levels to create continuous incentives for pollution reduction. Uganda's fiscal policy does not currently incorporate general pollution pricing. There are no carbon taxes, industrial emission charges, effluent fees proportionate to discharge volumes and concentrations, or waste disposal levies reflecting actual disposal costs.

The absence of pollution pricing means that industries face no financial incentive to reduce pollution below regulated thresholds. A firm that discharges at exactly the legal limit faces the same fiscal treatment as a firm that discharges at 10 percent of the legal limit. The PPP in its full efficiency-promoting form requires a pricing mechanism that creates a continuous incentive to reduce pollution, not merely a compliance standard that creates a binary pass/fail test. [122]

Introducing pollution taxes and charges requires capacity in both tax policy design and tax administration. Uganda's Ministry of Finance has the institutional capacity to design fiscal instruments. The Uganda Revenue Authority has the administrative capacity to collect environmental levies. What is required is political commitment to enact pollution pricing legislation and a process for designing taxes that are proportionate to environmental damage, industry-specific in their calibration, and administratively feasible. [123]

4.6.8 Comparative perspective

Kenya's experience with the Environmental Management and Coordination Act demonstrates both the potential and the limitations of legislative PPP implementation in the East African context. Kenya's legal framework is broadly similar to Uganda's in its structure, but Kenya has moved further in several respects: it has established a specialist Environment and Land Court with dedicated environmental jurisdiction, it has developed a more active civil society environmental law sector, and it has begun implementing environmental taxes through the Finance Act. [124]

[122]Puuronen and Similae (n 56) 135.
[122]OECD (n 85) 120.
[123]Finance Act (Uganda) 2022, s 20.
[124]Environment and Land Court Act 2011 (Kenya), s 3.

Tanzania has developed the National Environment Management Council as a dedicated enforcement body with stronger institutional separation from the investment promotion machinery than Uganda's framework provides. Tanzania's Environment Management Act also includes specific provisions for community compensation from polluters that go beyond Uganda's NEA in addressing distributional aspects of the PPP.

South Africa's constitutional environmental right, interpreted by the Constitutional Court and the High Court in a series of significant judgments, has driven more active judicial enforcement of environmental standards than Uganda's courts have achieved. South Africa's waste management legislation includes provisions for polluter-funded remediation trust funds that ensure resources are available for clean-up independent of the polluter's continuing financial viability. These comparative lessons inform the reform proposals in Chapter Six.

4.7 Assessment of Effectiveness

The overall assessment of Uganda's institutional framework for PPP implementation is that it is formally adequate in its design but operationally deficient in its resource base, enforcement practice and governance environment. The legal powers exist NEMA has the statutory authority to inspect, issue compliance notices, impose penalties, seek restoration orders and refer cases for prosecution. The institutional architecture exists NEMA, the Environmental Police, DECs, sector-specific regulators and the courts all have formally assigned roles. But the effective exercise of these powers is systematically undermined by: insufficient budgetary resources for inspection and monitoring; penalty levels that fail the economic deterrence test; evidentiary barriers to civil and criminal liability arising from the fault requirement; political interference in enforcement decision-making; institutional co-ordination failures that allow polluters to exploit regulatory gaps; and a prosecution system without specialist environmental expertise.[125]

The judicial enforcement cases demonstrate clearly that Uganda's courts are willing and able to enforce environmental law when cases are brought before them through civil society public interest litigation. The ACODE, Greenwatch, Kakira Sugar and Nyangasi David decisions represent a jurisprudential foundation for active judicial enforcement that could underpin a more systematic enforcement culture. However, litigation-driven enforcement is reactive, expensive and accessible only to organised civil society it cannot substitute for the proactive,

[125]Acen (n 8) 3–5; Ruppel-Schlichting, Ruppel and Nana Afua (n 20) 464–465; African Development Bank, Uganda Country Strategy Paper 2021–2025 (AfDB 2021)

systematic, preventive institutional enforcement that the PPP requires and that Uganda's framework formally provides for but fails to deliver in practice.[126]

4.8 Conclusion

Uganda's institutional framework for PPP implementation suffers from resource constraints, institutional fragmentation, weak enforcement practice and susceptibility to political interference. These challenges are systemic, mutually reinforcing and require structural reform rather than incremental adjustment. The case studies demonstrate that the consequences are concrete and severe: petroleum operators in the Albertine Graben face insufficient environmental monitoring; Lake Victoria continues to receive untreated industrial effluent; wetlands are encroached upon without adequate enforcement; and communities adjacent to industrial facilities bear pollution costs without effective remediation or compensation. Industrial polluters continue to externalise environmental costs onto communities, ecosystems and future generations, while enforcement remains the exception rather than the norm. Chapter Five synthesises these findings and advances a comprehensive reform agenda designed to close the gap between Uganda's formally adequate PPP framework and the enforcement reality that this chapter has documented.

[126]ACODE v Attorney General (n 15); Greenwatch (U) Ltd v AG and NEMA (n 15); Kakira Sugar Limited v NEMA (n 71); Nyangasi David v NEMA (n 69)

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This final chapter synthesises the key findings of the study, draws conclusions regarding the adequacy of Uganda's legal and institutional framework for PPP implementation, advances specific recommendations for legislative, institutional, enforcement, regulatory and accountability reform, and identifies areas for further research that fall outside the scope of the present doctrinal study. The recommendations are calibrated to Uganda's specific constitutional, legislative and institutional context, drawing on comparative models from the EU, Kenya and South Africa where these are transferable, but anchored in the particular challenges and opportunities that Uganda's legal system presents.

5.2 Summary of Findings

The study yields the following principal findings, which track the five specific objectives of the research:

a) **Addressing the objective of examining the development of the PPP and its role in environmental governance:** the PPP has evolved from a narrow OECD economic guideline into a broad international legal norm with preventive, corrective and compensatory dimensions, enjoying both soft-law global recognition in the Rio Declaration and binding codification in treaty law, EU primary legislation and domestic statutes across all regions. It plays a structurally central role in environmental governance by allocating pollution costs to their source, correcting market failures, creating incentives for pollution prevention, providing the legal basis for liability rules and the normative foundation for fiscal environmental instruments.[127]

b) **Addressing the objective of assessing the adequacy of Uganda's legal and policy framework:** Uganda's constitutional and statutory framework formally incorporates the PPP with commendable comprehensiveness. The PPP provision in section 4 of the NEA, the enforcement machinery in sections 72 to 76, the 2019 amendment's increased penalties and corporate officer liability, the sector-specific financial assurance requirements and the diverse regulatory standards in subsidiary legislation together constitute a formally comprehensive

[127]National Environment Act, Cap 181 (n 11), s 4; Constitution of Uganda 1995, art 39; National Objectives, Objective XXVII

framework. However, the framework's design contains structural deficiencies inadequate penalty levels, absence of strict liability, EIA process vulnerabilities that undermine its effectiveness. International instruments ratified by Uganda including the UNFCCC, CBD, Basel Convention, Bamako Convention and Maputo Convention impose environmental obligations consistent with the PPP, creating binding international law requirements for effective domestic implementation.[128]

c) **Addressing the objective of evaluating the role of environmental governance institutions**: NEMA, the Environmental Police, DECs, sector-specific regulators and the courts all have formally assigned roles in implementing and enforcing the PPP, and the courts have demonstrated a growing willingness to enforce environmental law actively when cases are brought before them. However, NEMA and complementary institutions are chronically under-resourced, institutionally fragmented and subject to political interference that compromises their enforcement independence.

d) **addressing the objective of identifying challenges affecting implementation**: weak enforcement across all three PPP liability modalities; chronic resource constraints at NEMA and complementary institutions; institutional overlap and co-ordination failures; political interference in enforcement decision-making; the absence of strict liability for high-risk activities; insufficiently deterrent financial penalties; and inadequate EIA post-approval monitoring are the principal systemic challenges identified.

e) **addressing the objective of proposing measures for strengthening the framework**: the study advances comprehensive reform recommendations across five tracks legislative, institutional, enforcement, regulatory and accountability detailed below. These recommendations draw on the comparative models of the EU, Kenya and South Africa and on the theoretical framework provided by Luppi, Parisi and Rajagopalan's analysis of the conditions necessary for effective PPP enforcement in developing-country environments.[129] [130]

[128]UNFCCC (n 12); CBD (n 39); Basel Convention (n 38); Bamako Convention (n 38); Maputo Convention (n 37)

[129]ACODE v Attorney General (n 15); Greenwatch (U) Ltd v AG and NEMA (n 15); Kakira Sugar Limited v NEMA (n 71); Nyangasi David v NEMA (n 69)

[130]Luppi, Parisi and Rajagopalan (n 14) 142–143

5.2.1 Literature Review

The literature informing this study spans international environmental law, comparative environmental governance, environmental economics, institutional theory, and empirical access to justice research, and warrants synthesis as a foundation for understanding both the analytical framework applied and the directions for further research it opens.

The foundational theoretical framework for understanding the PPP is provided by the OECD's Guiding Principles Concerning International Economic Aspects of Environmental Policies (1972) and elaborated in subsequent OECD work including the Recommendation of the Council on the Implementation of the Polluter-Pays Principle (1974). These instruments, though not legally binding, established the PPP as an economic principle of environmental governance based on the internalisation of environmental externalities and have provided the conceptual foundation for the PPP's adoption in international treaty law, including Principle 16 of the Rio Declaration on Environment and Development 1992. Philippe Sands and Jacqueline Peel, in Principles of International Environmental Law (4th edition, 2018), provide the most comprehensive doctrinal treatment of the PPP in international law, tracing its evolution from an economic efficiency principle to a principle of distributive justice and identifying its normative content across different treaty and customary law contexts.[131]

Nicolas Stern's The Economics of Climate Change: The Stern Review (2007), while focused on climate change, provides the most influential economic analysis of the relationship between environmental externalities and market failure that underpins the PPP as a policy instrument. Stern's framework, developed within a welfare economics tradition, demonstrates that the failure to internalise environmental costs produces systematic market distortions that reduce social welfare, a finding that applies with equal force to industrial pollution externalities in Uganda's context[132]. Herman Daly's work on ecological economics, particularly Beyond Growth: The Economics of Sustainable Development (1996), situates the PPP within a broader critique of GDP-focused development models that treat environmental degradation as a costless input to economic growth, providing a theoretical foundation for the proposition that Uganda's

[131] OECD, 'Guiding Principles Concerning International Economic Aspects of Environmental Policies' (26 May 1972) C(72)128; OECD, 'Recommendation of the Council on the Implementation of the Polluter-Pays Principle' (14 November 1974) C(74)223; Rio Declaration on Environment and Development (adopted 14 June 1992) UN Doc A/CONF.151/26 (Vol I), 31 ILM 874, Principle 16; Philippe Sands and Jacqueline Peel, Principles of International Environmental Law* (4th edn, Cambridge University Press 2018).

[132] Nicholas Stern, The Economics of Climate Change: The Stern Review (Cambridge University Press 2007).

development model requires structural reform to make environmental costs visible and assignable.[133]

Michael Faure and Gunter Heine, in Environmental Criminal Law in the European Union (2000), examine the relationship between civil liability, administrative enforcement, and criminal sanctions in environmental regulation, arguing that optimal deterrence requires a calibrated combination of all three rather than reliance on any single enforcement mechanism. Their framework directly informs the argument advanced in this study that Uganda's PPP implementation suffers from an over-reliance on administrative enforcement by an under-resourced NEMA and an under-utilisation of civil liability mechanisms and criminal sanctions. Neil Gunningham and Peter Grabosky's Smart Regulation: Designing Environmental Policy (1998) provides the regulatory theory framework for the study's analysis of institutional design. Gunningham and Grabosky argue that effective environmental regulation requires regulatory pluralism, meaning a combination of government regulation, self-regulation, third-party enforcement, and civil society accountability that is calibrated to the specific characteristics of the regulated industry and the institutional capacity of the regulatory agency. Their framework supports this study's argument for complementing NEMA's administrative enforcement with civil liability mechanisms, environmental insurance, pollution charges, and civil society enforcement through access to justice reforms.[134]

At the African regional level, Yemi Akinseye-George's Legal System, Corruption and Governance in Nigeria (2000) and Eghosa Osaghae's comparative work on governance failure in sub-Saharan Africa provide contextual frameworks for understanding the political economy of environmental enforcement failure in Uganda. The literature on regulatory capture, developed in the economics of regulation tradition from George Stigler's foundational article "The Theory of Economic Regulation" (1971) in the Bell Journal of Economics, provides a theoretical account of why NEMA's enforcement decisions systematically favour well-connected industrial operators, a pattern documented empirically in the Uganda context by research from ACODE and the Uganda Human Rights Commission.[135]

5.3 Conclusions

[133] Herman E Daly, Beyond Growth: The Economics of Sustainable Development (Beacon Press 1996).

[134] Michael Faure and Günter Heine, Environmental Criminal Law in the European Union: Documentation of the Main Market Studies (Freiburg 2000); Neil Gunningham and Peter Grabosky, Smart Regulation: Designing Environmental Policy (Oxford University Press 1998).

[135] Yemi Akinseye-George, Legal System, Corruption and Governance in Nigeria (New Horn Publishers 2000); Eghosa E Osaghae, Structural Adjustment and Ethnicity in Nigeria (Nordic Africa Institute 1995); George J Stigler, 'The Theory of Economic Regulation' (1971) 2 Bell Journal of Economics and Management Science 3.

The central conclusion of this study is that the Polluter Pays Principle is formally recognised in Uganda's legal framework but is not effectively implemented, and that this implementation deficit is attributable to five reinforcing structural deficiencies rather than to any single legislative gap or institutional failure. The five deficiencies are: (i) legislative design flaws including inadequate penalty structures and the absence of strict liability for high-risk activities; (ii) institutional fragmentation and chronic resource deficits that prevent NEMA and complementary institutions from discharging their enforcement mandates; (iii) political interference in enforcement decisions affecting politically significant investments; (iv) evidentiary and technical barriers to civil and criminal liability arising from the fault requirement and from inadequate environmental forensics capacity; and (v) fiscal structures that do not generate dedicated revenue streams for environmental enforcement from the economic activities generating pollution.

Uganda's formal legal framework the constitutional environmental right, the NEA as amended in 2019, the sector-specific statutes and Uganda's international treaty obligations is a credible normative foundation. The trajectory of judicial enforcement through civil society public interest litigation demonstrates that the courts will enforce environmental law when cases are brought before them. What is required is structural reform at the legislative, institutional, enforcement, regulatory and fiscal levels to translate this normative foundation into consistent enforcement reality that prevents pollution rather than merely reacting to it after the fact.

The consequences of the current implementation gap are not merely legal or theoretical: they are borne concretely by communities adjacent to industrial facilities across Uganda, by the ecosystems and water bodies on which those communities depend, and through the GDP losses attributable to environmental degradation by Uganda's development trajectory as a whole. The reform agenda advanced in this chapter is designed to make PPP enforcement in Uganda as effective in practice as the principle is in law.

5.4 Recommendations

5.4.1 Legislative Reforms

Strict liability: the NEA should be amended to introduce strict liability without requirement of proof of fault or negligence for specified high-risk industrial activities including petroleum extraction, hazardous chemical manufacturing and storage, large-scale effluent discharge and mining operations. Strict liability removes the evidentiary burden that currently makes civil and criminal enforcement against industrial polluters prohibitively difficult, and is directly

consistent with the PPP's logic that those who create the risk must bear the cost of the damage it causes, regardless of whether their conduct meets a fault standard. This reform is modelled on South Africa's section 28 National Environmental Management Act duty of care and on the EU Environmental Liability Directive's strict liability for listed occupational activities.[136][137]

Penalty reform: financial penalties under the amended NEA should be substantially increased to levels that meet the economic deterrence test for large industrial operators. The maximum penalty for corporate environmental offences should be set as a proportion of the offending company's annual turnover following the model used in competition law and financial regulation ensuring that penalty levels are proportionate to the economic scale of the offender and thus capable of deterring non-compliance regardless of the operator's size. Maximum fixed penalties should be indexed to inflation and reviewed at regular intervals.

Mandatory environmental bonding and insurance: the financial assurance framework currently applicable to petroleum operators under section 139 of the Petroleum Act and to mining operators under section 99 of the Mining and Minerals Act should be extended as a mandatory regime across all high-risk industrial sectors. Financial assurance requirements should be set at levels sufficient to meet the realistic full cost of environmental remediation, should be held in trust by an independent body rather than retained on the operator's balance sheet, and should be subject to periodic review as operating conditions and environmental liabilities evolve.[138]

Comprehensive liability for ecosystem services: the NEA should be amended to create explicit statutory liability for damage to protected species, habitats and ecosystem services including the economic value of lost ecosystem services during the period of remediation consistent with Uganda's obligations under the Maputo Convention and the model provided by the EU Environmental Liability Directive.

5.4.2 Institutional Reforms

Independent Environmental Enforcement Fund: a ring-fenced Environmental Enforcement Fund, drawing revenue from environmental levies, pollution charges, environmental bonding proceeds, financial penalties and a dedicated share of resource extraction royalties collected by URA, should be established to finance NEMA's enforcement operations, laboratory and monitoring infrastructure, specialist technical staffing and enforcement litigation capacity. The

[136]National Environmental Management Act 107 of 1998 (South Africa), s 28 (strict duty of care without proof of fault); Directive 2004/35/CE (n 17), arts 3–5

[137]National Environmental Management Act 107 of 1998 (South Africa), ss 28(1), 30

[138]Petroleum (Exploration, Development and Production) Act, Cap 161 (n 64), s 139; Mining and Minerals Act, Cap 159 (n 65), s 99

Fund should be administered independently of the annual budget allocation process, insulating NEMA's enforcement capacity from political pressures on general government expenditure.

Institutional mandate rationalisation: a comprehensive review of overlapping environmental enforcement mandates should be conducted, establishing clear jurisdictional boundaries between NEMA, the Petroleum Authority, DWRM, UIA, the Environmental Police and local government environmental structures. Formal inter-agency co-ordination protocols, shared environmental monitoring databases and a designated lead authority for multi-sector industrial facilities should be established by statutory instrument.

NEMA operational independence: statutory provisions should be strengthened to protect NEMA's enforcement independence from political interference. Specific reforms should include: security of tenure for the Director General and senior enforcement officers; a statutory prohibition on ministerial instruction to NEMA regarding individual enforcement decisions; and mandatory public reporting of all enforcement decisions, including decisions not to enforce, with reasons.

Specialist Environmental Court: a specialist Environmental Court or Division of the High Court with exclusive jurisdiction over environmental civil and criminal matters should be established, modelled on Kenya's Environment and Land Court. The Court should have judges with demonstrated expertise in environmental law, access to scientific and technical advisers, and a streamlined procedure for urgent injunctive relief in environmental emergencies. Civil society organisations should have statutory standing to bring public interest environmental proceedings before the Court.[139]

DEC capacity and accountability: GOU should substantially increase budget allocations to DECs and DEOs, ensure minimum qualification standards for DEO appointments, provide transport and analytical equipment to all district-level environmental monitoring functions, and establish mandatory accountability mechanisms requiring the CAO to report annually on the DEC's environmental monitoring activities.

5.4.3 Enforcement Improvements

Dedicated environmental prosecution unit: a specialist environmental prosecution unit should be established within the Office of the Director of Public Prosecutions, with prosecutors who have expertise in environmental evidence, environmental forensic science, scientific expert witness management and international environmental law. The unit should work in close operational collaboration with NEMA and the Environmental Police.

[139]Environment and Land Court Act 2011 (Kenya); National Environmental Management Act 107 of 1998 (South Africa), s 32

Risk-based inspection programme: NEMA should adopt and publish a formal risk-based inspection programme, prioritising inspection frequency on the basis of the pollution risk profile of industrial sectors and individual operators, the proximity of operations to vulnerable communities and ecologically sensitive areas, and the compliance history of individual operators. High-risk operators should be subject to scheduled quarterly inspections supplemented by unannounced spot inspections.

Post-EIA monitoring and enforcement triggers: a strengthened post-EIA monitoring regime should be established by statutory instrument, requiring EIA holders to submit quarterly compliance reports against their EIA mitigation commitments, making those reports publicly available, and establishing automatic enforcement triggers that require NEMA to initiate enforcement proceedings where compliance reports disclose material departures from EIA commitments.

Civil society enforcement support: the standing of civil society organisations in environmental public interest litigation, established by the Ugandan courts in the ACODE, Greenwatch, Kakira Sugar and Nyangasi David cases, should be codified in the NEA. A public interest environmental litigation fund should be established to support civil society organisations bringing environmental enforcement actions, ensuring that the civil society enforcement pathway remains viable as courts' procedural requirements evolve.

5.4.4 Regulatory Reforms

National environmental tax regime: GOU should develop a comprehensive national environmental tax regime, incorporating: pollution levies on industrial emissions and effluent discharge above permitted standard levels, scaled to the quantity and toxicity of pollutants discharged; a carbon pricing mechanism aligned with Uganda's UNFCCC obligations and Nationally Determined Contribution commitments; and natural resource depletion charges on extractive sector operators, reflecting the PPP's requirement that the economic rents from natural resource extraction include the environmental costs of that extraction. All environmental tax revenue should be ring-fenced for environmental enforcement and remediation purposes, administered by URA.[140]

Extended Producer Responsibility: an Extended Producer Responsibility regime should be established for specified product categories including plastics, electronic goods and

[140]Rio Declaration (n 33), Principle 16; Agenda 21 (n 36), ch 30; United Nations Environment Programme, 'Green Economy in a Blue World' (UNEP 2012)

agrochemicals, requiring producers and importers to bear the costs of post-consumer waste management through take-back schemes, deposits or producer responsibility organisations.

EAC environmental enforcement co-operation: Uganda should take a leadership role in advocating for strengthened environmental enforcement co-operation within the East African **Community, including**: mutual recognition of environmental enforcement decisions; joint inspection protocols for transboundary industrial facilities such as those on Lake Victoria; shared environmental monitoring infrastructure; and harmonised minimum penalty standards that prevent regulatory arbitrage within the EAC region.[141]

Compliance assistance framework: GOU should establish a funded compliance assistance programme providing technical guidance, environmental management training and pollution prevention advisory services to small and medium industrial enterprises, addressing the compliance capacity gap that contributes to environmental violations among operators who lack the technical resources to achieve compliance without external support.

5.4.5 Strengthening Polluter Accountability

Corporate environmental disclosure: legislation should require specified categories of large industrial operator to publish annual environmental performance reports, including quantitative data on pollution emissions by media, compliance status relative to applicable standards, any enforcement actions received during the reporting year, and environmental incident records. These reports should be publicly available and should form the basis for civil society and community oversight of operator compliance.

Director and officer liability: section 90 of the amended NEA should be actively and visibly enforced to impose personal criminal and civil liability on directors and officers of bodies corporate who authorise, consent to or participate in corporate environmental violations. Personal liability creates incentives for board-level environmental compliance governance that cannot be achieved by imposing liability on the corporate entity alone, and provides a powerful deterrent particularly in contexts where corporate assets are insufficient to satisfy the full cost of environmental remediation.

Polluter-funded Environmental Remediation Fund: a dedicated Environmental Remediation Fund, separate from the Environmental Enforcement Fund, should be established to receive proceeds from restoration orders, administrative penalty payments and bonding forfeitures. The

[141]East African Community Treaty 1999, art 112; EAC Protocol on Environment and Natural Resources Management 2006

Fund should be applied to fund priority environmental remediation projects at sites where the responsible operator is insolvent, unidentified or has failed to comply with restoration orders, ensuring that communities do not bear the residual remediation costs of industrial pollution.

Community right to environmental information: legislation should establish a statutory right for communities adjacent to industrial facilities to access: NEMA's environmental monitoring data for their area; operators' compliance reports and EIA monitoring reports; records of enforcement actions taken and compliance notice histories; and NEMA's enforcement decision-making records. Community access to environmental information is a prerequisite for community-based oversight of operator compliance and for the effective exercise of civil society standing in environmental public interest proceedings.

5.4.6 Suggested Improvements for Further Research Development

This study opens several directions for further original research that would advance the scholarly contribution of the field. First, an econometric analysis of the relationship between NEMA penalty levels and industrial pollution trends in Uganda, drawing on NEMA's enforcement records and the MWE's ambient water quality monitoring data, would provide empirical evidence on the deterrence effect, or lack thereof, of current penalty levels. This would contribute directly to the debate on optimal penalty setting in environmental regulation and generate Uganda-specific evidence for the reform proposals advanced here.

Second, a political economy analysis of NEMA's enforcement decision-making, using qualitative research methods including interviews with NEMA enforcement officers, industry representatives, and civil society organisations, combined with quantitative analysis of enforcement patterns across industries and regions, would produce the first systematic account of the political and institutional factors shaping environmental enforcement in Uganda. Such a study would test the regulatory capture hypothesis against the alternative explanations of resource constraint and technical capacity deficit, and would generate policy-relevant findings about which reform interventions are most likely to improve enforcement outcomes. Third, a longitudinal comparative study of PPP implementation effectiveness across the East African Community partner states, tracking changes in industrial pollution levels, enforcement activity, penalty revenue, and civil litigation outcomes over a defined period following specific legislative or institutional reforms, would provide rigorous comparative evidence on the conditions under which PPP reforms produce measurable environmental improvements. Fourth, an analysis of the distributional impacts of industrial pollution in Uganda, mapping the geographic and socioeconomic distribution of pollution exposure against the distribution of

enforcement action and civil liability recoveries, would provide empirical grounding for the access to justice and environmental justice arguments advanced in this study. Fifth, legal anthropological research into the experience of affected communities in navigating NEMA's complaint mechanisms and the court system would generate qualitative evidence on the lived experience of environmental injustice in Uganda that doctrinal analysis alone cannot capture.

5.4.7 Areas for Further Research

This study identifies the following areas warranting further research that fall outside the scope of the present doctrinal analysis but are important to a complete understanding of PPP implementation in Uganda:

An empirical study of NEMA's enforcement practice, drawing on NEMA's internal enforcement records, inspection reports, compliance notice issuance and compliance histories, and prosecution referral data, to provide a quantitative assessment of enforcement frequency, deterrent effect and institutional performance against the criteria identified in this study.

A community-based participatory study of the lived experiences of communities adjacent to industrial facilities in the Albertine Graben petroleum development zone, the Lake Victoria basin industrial corridor and the western Uganda mining areas, assessing the adequacy of PPP implementation and the distribution of environmental burdens from the perspective of pollution-affected communities.

A comparative study of PPP implementation across all EAC member states Uganda, Kenya, Tanzania, Rwanda and Burundi with a view to identifying best practices, mapping the scope for regional harmonisation of environmental enforcement standards, and assessing the potential for EAC-level environmental enforcement co-operation mechanisms.

An assessment of the fiscal implications of the recommended national environmental tax regime, including revenue projections under different tax rate scenarios, distributional analysis of the incidence of environmental taxes across income groups, and assessment of the administrative feasibility of the proposed regime within Uganda's existing tax administration infrastructure.

A study of the role of the private financial sector in incentivising PPP compliance through environmental risk assessment in lending decisions, green finance product development, environmental liability insurance and covenant requirements in infrastructure and project finance transactions, examining the extent to which financial sector instruments can supplement regulatory enforcement in creating incentives for environmental compliance.

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