

KIGALI INDEPENDENT UNIVERSITY ULK

SCHOOL OF LAW

DEPARTMENT OF LAW

**PROBLEMATIC ON INVESTIGATION AND PROSECUTION OF
ENVIRONMENTAL CRIMES UNDER RWANDAN LAW.**

This dissertation is Submitted in Partial Fulfilment
of the Requirements for the Award of Bachelor's
Degree in Law.

SUPERVISOR: Lecturer NKUNDUKOZERA Emmanuel

By

IHOZA Livine

Roll Number: 202110343

Kigali, September, 2024

DECLARATION

I, IHOZA Livine, declare that, this dissertation submitted entitled “**PROBLEMATIC ON INVESTIGATION AND PROSECUTION OF ENVIRONMENTAL CRIMES UNDER RWANDAN LAW**” is my original work and has never been submitted previously elsewhere.

IHOZA Livine

Date:

Signature

APPROVAL

I hereby certify that I have supervised and hereby recommend for the acceptance the dissertation entitled “PROBLEMATIC ON INVESTIGATION AND PROSECUTION OF ENVIRONMENTAL CRIMES UNDER RWANDAN LAW” at Kigali Independent University ULK. This project has been submitted with my authority as the University supervisor.

Supervisor: Lecturer NKUNDUKOZERA Emmanuel

Signature:

Date:

DEDICATION

I dedicate this dissertation to the Almighty God, whose unwavering presence and guidance have been my constant companion throughout our academic journey. My heartfelt gratitude goes to my beloved parents, whose endless support and encouragement propelled us forward in my undergraduate studies. Additionally, I extend my dedication to my esteemed supervisor, Lecturer NKUNDUKOZERA Emmanuel, as well as to my family members and friends, whose unwavering support and prayers have been invaluable throughout this endeavour.

ACKNOWLEDGEMENT

In embarking on this academic journey, I am profoundly grateful to the Almighty God, whose unwavering support and strength have been my guiding light.

I wish to express my heartfelt thanks to Prof. Dr. RWIGAMBA BALINDA, the founder and president of Kigali Independent University ULK, along with the entire administration. Their kindness and provision of essential resources made this endeavor possible. Their commitment to excellence has been a constant source of inspiration.

I extend my sincere appreciation to my supervisor, Lecturer NKUNDUKOZERA Emmanuel. His wisdom, mentorship, and unwavering dedication have been instrumental in shaping this dissertation. I am also deeply indebted to all the lecturers in the Department of Law at Kigali Independent University ULK. Their invaluable guidance and support have enriched my academic pursuits.

I am equally grateful to my dear colleagues, with whom I have shared three transformative academic years. Their kindness, encouragement, and camaraderie have been a source of strength and motivation throughout this challenging journey.

In conclusion, I am profoundly thankful to all those who have contributed to the realization of this dissertation. Your support and encouragement have been invaluable, and I am forever grateful for the role each of you has played in shaping my academic and personal growth.

IHOZA Livine

LIST OF ABBREVIATIONS AND ACRONYMS

CBD: Convention on Biological Diversity

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

EAC: East African Community

EIA: Environmental Impact Assessment

EPA: Environmental Protection Agency

EU: European Union

GPS: Global Positioning System

ICC: International Criminal Court

ICGLR: International Conference on the Great Lakes Region

NGO: Non-Governmental Organization

NPPA: National Public Prosecution Authority

RC: Rwandan Constitution

RDB: Rwanda Development Board

REMA: Rwanda Environment Management Authority

RNP: Rwanda National Police

RPPA: Rwanda Public Prosecution Authority

ULK: Universite Libre de Kigali

UN: United Nations

UNEP: United Nations Environment Programme

UNFCCC: United Nations Framework Convention on Climate Change

UNODC: United Nations Office on Drugs and Crime

TABLE OF CONTENTS

DECLARATION	i
APPROVAL	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF ABBREVIATIONS AND ACRONYMS.....	v
GENERAL INTRODUCTION.....	1
I. BACKGROUND OF THE STUDY	2
II. RESEARCH OBJECTIVES	4
II.1 General Objective	5
II.2 Specific Objectives	5
III. SCOPE OF THE STUDY	5
III.1 Time.....	6
III.2 Space.....	6
III.3 Domain	6
IV. THE INTEREST OF THIS STUDY	6
VII.1 Personal interest	7
VII.2 Academic interest.....	7
V. PROBLEM STATEMENT.....	8
VI. RESEARCH QUESTIONS.....	9
VII. RESEARCH HYPOTHESIS	9
VIII. RESEARCH TECHNIQUES AND METHODOLOGY	9
VIII.1 Research Techniques.....	9
VIII.1.1 Documentary Techniques	9
VIII.2 Research Methods.....	10

VIII.2.1 The analytical method.....	10
VIII.2.2 The historical method	10
IX. WORK SUBDIVISION	11
CHAPTER I. CONCEPTUAL AND THEORETICAL FRAMEWORK.....	12
I.0 INTRODUCTION	12
I.1 CONCEPTUAL FRAMEWORK	12
I.1.1 The Concept of Environmental Crimes.....	12
I.1.2 Investigation	15
I.1.3 Prosecution	17
I.2 THEORETICAL FRAMEWORK	17
I.2.1 Environmental Criminology theories	17
I.2.2 Institutional Analysis and Development (IAD) Framework Theory.....	27
CHAPTER II. KEY CHALLENGES THAT HINDER THE INVESTIGATION AND PROSECUTING ENVIRONMENTAL CRIMES UNDER RWANDAN LAW	29
II.0 INTRODUCTION	29
II.1 PUBLIC TRUST DOCTRINE	30
II.2 SUSTAINABLE DEVELOPMENT PRINCIPLE	31
II.3 POLLUTER PAYS PRINCIPLE	32
II.4 PRECAUTIONARY PRINCIPLE.....	34
II.5 KEY CHALLENGES WHICH MAY HINDER THE INVESTIGATION AND PROSECUTING ENVIRONMENTAL CRIMES UNDER RWANDAN LAW	37
II.5.1 The Challenge in Recognizing the Diffuse Impacts of Environmental Crime on Communities and Ecosystems.....	38
II.5.2 The limited knowledge.....	40
II.5.3 Transportation resources available to law enforcement agents responsible for investigating and prosecuting these offenses.....	41

CHAPTER III. LEGAL AND INSTITUTIONAL MECHANISMS EMPLOYED TO IMPROVE THE ENFORCEMENT OF ENVIRONMENTAL LAWS AND ENHANCE ENVIRONMENTAL PROTECTION EFFECTIVELY.....	43
III.0 INTRODUCTION.....	43
III.1 LEGAL MECHANISMS	43
III.1.1 Penalties and Sanctions	43
III.1.2 International Treaties and Agreements	46
III.1.3 Environmental Policies.....	48
III.1.4 Investigation and Prosecution of Environmental crimes	50
III.2 INSTITUTIONAL MECHANISMS.....	52
III.2.1 Ministry of Environment (MoE).....	52
III.2.2 Ministry of Justice (MINIJUST)	53
III.2.3 National Public Prosecution Authority (NPPA)	53
III.2.4 Rwanda Environment Management Authority (REMA).....	54
III.2.5 Rwanda Investigation Bureau (RIB)	54
III.2.6 Rwanda National Police (RNP).....	54
GENERAL CONCLUSION AND RECOMMENDATIONS.....	56
IV.1 GENERAL CONCLUSION.....	56
IV.2 RECOMMENDATIONS.....	57
REFERENCES	60
I. LEGAL INSTRUMENTS.....	60
I.1 National Legislations.....	60
I.2 International Legislations	61
I.6 Books.....	61
I.3 Case Laws	62
I.4 Law Reports	62

I.5 Law Review.....	62
I.7 Publications	63
I.8 Electronic Sources.....	63

GENERAL INTRODUCTION

This research has assessed challenges and barriers associated with investigating and prosecuting environmental crimes under Rwandan law, with the aim of establish Legal mechanisms to the problem and reforms to enhance environmental law enforcement. Despite Rwanda's robust legal framework for environmental protection, the effective implementation of environmental laws faces significant obstacles. Institutional and capacity constraints, legal complexities, socio-cultural factors, and lack of awareness among the population hinder the enforcement of environmental laws, exacerbating environmental degradation.

Through a comprehensive analysis of the existing legal framework, relevant statutes, judicial precedents, and stakeholders' perspectives, this study identifies key challenges in environmental law enforcement in Rwanda. Using documentary research techniques, including legal document analysis, literature review, case study examination, comparative analysis, and stakeholder interviews, the study explored the root causes of these challenges and assesses their impact on the effectiveness of environmental law enforcement.

The research findings have highlighted the need for targeted strategies and reforms to address the identified challenges. Concrete recommendations have been proposed to enhance institutional capacity, streamline legal procedures, raise public awareness, and strengthen enforcement mechanisms. Feasibility assessments were conducted to evaluate the practical implications of proposed reforms within Rwanda's socio-economic context.

The study's outcomes will contribute to filling critical gaps in the understanding of environmental legal mechanisms in Rwanda and offer valuable insights for policymakers, legal practitioners, and other stakeholders. By fostering more robust environmental protection measures, the proposed reforms will aim to preserve Rwanda's natural resources and safeguard the well-being of its citizens for years to come.

Ultimately, the study's findings will have the potential to foster more robust environmental protection measures, leading to the preservation of Rwanda's natural resources and the well-being of its citizens for years to come.

I. BACKGROUND OF THE STUDY

In many countries, environmental degradation is on the rise, and the enforcement of existing environmental laws is not meeting expectations¹. Several factors contribute to this situation, including limitations in human capacity and access to technology, particularly in developing nations².

Additionally, there are nationwide efforts focused on rapid economic growth and poverty reduction, especially prevalent in developing countries³. Weak international communication leads to a lack of awareness regarding potential solutions suitable for countries' environmental enforcement needs.

Regrettably, environmental issues are worsening globally. Despite a few isolated success stories, habitats are diminishing, biodiversity is declining, climates are changing, invasive species are proliferating, and natural resources face unprecedented pressure⁴. Consequently, there's a need for adaptation in environmental law enforcement⁵. States are shifting their implementation and enforcement strategies away from solely relying on strict sanctions toward viewing enforcement, including criminal sanctions, as part of a comprehensive approach needed for substantial compliance.

The significance of the relationship between national and international environmental law is increasingly recognized. Effective enforcement of national environmental laws is now understood as essential for the effectiveness of international environmental law⁶. As comprehension of environmental challenges' complexity grows, so does our understanding of the nuanced requirements for successful enforcement of environmental law⁷.

¹ *National survey on chemicals and hazardous wastes and undertaking an institutional capacity assessment. (2023). September.*

² *Ibid,*

³ *Ibid,*

⁴ *Drumbl, m. A. (2009). Accountability for property crimes and environmental war crimes: prosecution, litigation, and development. November, 1–33.*

⁵ *Ibid,*

⁶ *Hapoi, I. (2017). Department of legal affairs. International environmental law.*

⁷ *Ibid,*

Taking an instance of Turkey, Even though Turkey has ratified and adopted six International Environmental treaties related to climate out of ten that are there, seven out of eleven regarding biodiversity and conservation, fourteen out of thirty eight related to Pollution, Waste, Toxic and Hazardous Substances, thirteen out twenty nine of the Sea Law, and have its domestic Environmental Law still faces potential obstacles like Crimes such as the illegal emission or discharge of substances into air, water, or soil, illegal wildlife trade, illegal trade in ozone-depleting substances, and illegal waste shipment or dumping can have severe consequences for the environment and human health, yet they often go undetected.⁸

Also, the nature of environmental crimes complicates the process of identifying offenders and gathering evidence⁹. This is particularly true in cases where the activities are conducted by a company, with different individuals responsible for various phases of the operation, or when there have been changes in personnel¹⁰. In such instances, determining the date of the crime, specifically when the hazardous effects of the company's activities became evident, and identifying the individuals responsible for those activities at that time is challenging, which hinders the investigation and prosecution was indicated as a challenge.

In Rwanda, According to Article 53 of the constitution stipulates

“Everyone is obligated to protect, preserve, and advance the environment. The penal code outlines the concept of the environment as encompassing both natural and human-made elements. It includes chemical substances, biodiversity, as well as socio-economic, cultural, aesthetic, and scientific factors that could directly or indirectly affect the development of an area, biodiversity, and human activity in the short or long term.”¹¹

Under this definition, any degradation of the environment caused by human actions is considered a severe infringement on the integrity of geological environments, soil, or air, thus constituting a criminal offense ¹².

⁸ *başlar, k. (2022). Turkey and nternational environmental law.*

⁹ *article 53 of the constitution of the republic of Rwanda*

¹⁰ *Ibid,*

¹¹ *Idem,56*

¹² *Organic Law on Environment, Article 4 of Law No. 04/2008 of February 08, 2008*

Consequently, the Rwandan penal code identifies various environmental crimes in Articles 415-437 which stipulates that,

“Any person or association with legal personality that does not carry out a prior environmental impact assessment for any project which may have a negative impact on environment, shall be liable to suspension of activities and closure of his/ her association and shall also pay damages....”¹³

However, Rwanda still faces heavy obstacles during investigation and prosecution of environmental crimes which hinders also enforcement due to those challenges. In accordance to the joint research conducted by both RNP and NPPA, only nearly 22% of wildlife crimes handled by the NPPA in 2021/22 were not brought to court due to a lack of evidence.¹⁴ There is no doubt that environmental crimes remain a significant problem, as evidenced by the high rate of unresolved cases and the fact that many offenders go free.

II. RESEARCH OBJECTIVES

This study encompasses both general and specific objectives aimed at comprehensively addressing the problematic on of investigating and prosecuting environmental crimes under Rwandan law. On a broader scale, the research seeks to contribute to the global discourse on environmental governance and criminal justice by examining the challenges and opportunities within Rwanda's legal framework.

At a more granular level, the study aims to achieve specific objectives such as understanding the intricacies of existing legal provisions, identifying practical hurdles in investigative and prosecutorial processes, evaluating the effectiveness of regulatory enforcement mechanisms, and proposing targeted solutions to institutional gaps.

¹³ Law No68/2018 of 30/08/2018 determining offenses and Penalties in general

¹⁴ NPPA and RNP. (2019). Rwanda National Police Criminal Investigation Department Analysis of Causes of Crimes, Challenges and Prevention Strategies in Rwanda Joint Research Done by the National Public Prosecution Authority (NPPA) and Rwanda National Police (RNP).

Through this dual approach, the research endeavors to provide actionable insights for policymakers, law enforcement agencies, and environmental stakeholders, ultimately fostering a more robust and equitable system for combating environmental crimes in Rwanda.

II.1 General Objective

To comprehensively analyze the challenges and barriers inherent in investigating and prosecuting environmental crimes under Rwandan law, with the aim of proposing effective strategies and reforms to enhance the enforcement of environmental laws and ensure better protection of the environment.

II.2 Specific Objectives

1. To identify the primary challenges and obstacles encountered in the process of investigating and prosecuting environmental crimes under Rwandan law.
2. To evaluate strategies and reforms in place aimed at enhancing the effectiveness of investigating and prosecuting environmental crimes in Rwanda.

III. SCOPE OF THE STUDY

The scope of this study encompasses a comprehensive investigation into the legal framework governing environmental protection and enforcement in Rwanda, with a focus on analyzing challenges and barriers inherent in investigating and prosecuting environmental crimes under Rwandan law. This analysis will include a detailed examination of relevant statutes, regulations, and judicial precedents. Over a period of two months, the study will involve the identification and examination of specific case studies and precedents pertinent to environmental crimes within the Rwandan context.

Additionally, stakeholders' perspectives, including those of government agencies, legal experts, environmental advocacy groups, and affected communities, will be considered. Through this examination, the study aims to provide insights into the effectiveness of current enforcement mechanisms and to identify areas for improvement.

Subsequently, the study will explore potential reforms and strategies to address the identified challenges and enhance the enforcement of environmental laws. Feasibility assessments will be conducted to evaluate the practical implications of proposed reforms within the Rwandan legal system and socio-economic context.

Ultimately, the study has culminated in recommendations for policymakers, legal practitioners, and other stakeholders to improve environmental law enforcement and ensure better protection of the environment in Rwanda.

III.1 Time

This study has covered the time from the 2018 up to 2024 because this when the Rwandan Environmental Law was put in force.

III.2 Space

The study has covered the Rwandan territory due that the study has assessed the investigation and prosecution of environmental crimes under Rwandan Law.

III.3 Domain

This study is under the domain of Rwandan Environmental Law due to that the study has investigated the environmental crimes.

IV. THE INTEREST OF THIS STUDY

The interest of this study lies in its potential to contribute significantly to the advancement of environmental protection and legal enforcement in Rwanda (Personal and Academic Interest).

By conducting a thorough analysis of the challenges and barriers associated with investigating and prosecuting environmental crimes under Rwandan law, this study aims to shed light on areas needing improvement within the existing legal framework. By identifying key issues and potential reforms, the study seeks to offer actionable insights that can enhance the effectiveness of environmental law enforcement efforts.

This research is of paramount importance as it addresses critical gaps in the current understanding of environmental legal mechanisms in Rwanda and provides valuable recommendations for policymakers, legal practitioners, and stakeholders. Ultimately, the study's findings have the potential to foster more robust environmental protection measures, leading to the preservation of Rwanda's natural resources and the well-being of its citizens for years to come.

VII.1 Personal interest

On a personal level, this study resonates deeply with my passion for environmental conservation and social justice. As someone who holds a bachelor's degree with honors in Environmental Health sciences, I am deeply committed to sustainable development initiatives and the protection of natural resources and profoundly concerned about the detrimental impact of environmental crimes on ecosystems, communities, and future generations.

By undertaking this research, I aspire to contribute meaningfully to efforts aimed at safeguarding Rwanda's rich biodiversity and promoting environmental integrity. Additionally, the prospect of advocating for systemic reforms and institutional improvements to enhance the effectiveness of environmental law enforcement fills me with a sense of purpose and dedication.

Ultimately, my personal interest in this study stems from a desire to leverage my academic inquiry and professional expertise to address pressing environmental challenges and contribute to positive change in Rwanda and beyond.

VII.2 Academic interest

The academic interest in this study lies in its potential to contribute significantly to the fields of environmental law, criminal justice, and governance. By delving into the challenges surrounding the investigation and prosecution of environmental crimes under Rwandan law, this research fills a crucial gap in the existing literature.

It offers a nuanced analysis of legal frameworks, investigative practices, prosecutorial strategies, and regulatory enforcement mechanisms specific to Rwanda, thereby enriching scholarly discussions on environmental governance in both local and global contexts. Moreover, the study's interdisciplinary approach, drawing from legal studies, criminology, and environmental science, has the potential to generate novel insights and methodologies that can be applied across diverse geographical and legal settings. Ultimately, the academic interest lies in advancing knowledge, stimulating critical discourse, and fostering evidence-based policy reforms aimed at enhancing environmental protection and rule of law.

V. PROBLEM STATEMENT

Environmental transgressions are a global concern, with activities like pollution and wildlife trafficking inflicting irreversible harm on our planet and affecting societies across borders¹⁵.

These crimes, often orchestrated by criminal networks and perpetuated by corruption, face a challenging battle due to disparate international laws and limited enforcement capabilities. Despite these barriers, there is a growing determination to unify efforts against ecological destruction.¹⁶

In Rwanda, the threat of climate change-induced environmental degradation looms large, potentially exacerbating existing environmental, social, and economic tribulations. Projections suggest a significant increase in both precipitation and temperature by 2080, which could have dire consequences¹⁷. While Rwanda boasts a comprehensive legal framework for environmental protection, including various laws, policies, and international treaty ratifications, the effective investigation and prosecution of environmental crimes remain fraught with challenges. Institutional limitations, legal complexities, and socio-cultural barriers often stymie the enforcement of these laws¹⁸.

A striking example is the National Public Prosecution Authority's (NPPA) report that nearly 22% of wildlife crimes in 2021/22 were dismissed due to insufficient evidence¹⁹. This highlights a critical gap in the legal process and underscores the need for in-depth research to dissect the obstacles within Rwanda's legal system. The goal is to propose strategic reforms that bolster law enforcement and safeguard the environment more effectively.

This research is vital as it seeks to bridge significant knowledge gaps regarding Rwanda's environmental legal mechanisms. It aims to provide actionable recommendations for policymakers, legal professionals, and stakeholders to fortify environmental justice and law enforcement efficacy.

¹⁵ *Threat ag, natural to. The rise of environmental crime.*

¹⁶ *ibid*

¹⁷ *birungi, munyaruguru, and nkubanyoye. "environmental law and policy in rwanda: a critical analysis." rwanda law journal (2010): 1-25.*

¹⁸ *NPPA and RNP. (2019). Rwanda National Police Criminal Investigation Department Analysis of Causes of Crimes, Challenges and Prevention Strategies in Rwanda Joint Research Done by the National Public Prosecution Authority (NPPA) and Rwanda National Police (RNP).*

¹⁹ *Ibid*

VI. RESEARCH QUESTIONS

1. What are the key challenges which may hinder the investigation and prosecuting environmental crimes under Rwandan law?
2. What are specific strategies and reforms employed to improve the enforcement of environmental laws and enhance environmental protection effectively?

VII. RESEARCH HYPOTHESIS

1. Investigating and prosecuting environmental crimes in Rwanda faces challenges due to limited resources and capacity
2. In line of Strengthening enforcement mechanisms and promoting public participation are there to improve environmental protection in Rwanda, both legal and institutions mechanisms have been adopted.

VIII. RESEARCH TECHNIQUES AND METHODOLOGY

The investigation into the problematic of investigating and prosecuting environmental crimes under Rwandan law necessitates a multifaceted approach that combines diverse research techniques and methodological frameworks.

VIII.1 Research Techniques

In addressing the complex challenges surrounding the investigation and prosecution of environmental crimes under Rwandan law, this study adopts a multifaceted approach by employing various research techniques.

VIII.1.1 Documentary Techniques

Documentary Technique has been employed in this study for investigating and proposing reforms environmental law enforcement in Rwanda. Through meticulous legal document analysis and literature review, researchers ensure the accuracy and reliability of gathered information, fostering a deep understanding of the current legal landscape and identifying potential areas for improvement.

Case study examination, comparative analysis, and stakeholder interviews further enrich the research by providing contextual understanding, capturing diverse perspectives, and assessing the feasibility of proposed reforms within Rwanda's socio-economic and environmental context.

Additionally, policy analysis techniques allow for the evaluation of existing policies and strategies, facilitating the formulation of recommendations aligned with Rwanda's policy goals. By incorporating empirical evidence gathered through documentary research, the research gains credibility and relevance, enabling informed proposals aimed at enhancing environmental protection and law enforcement in Rwanda comprehensively.

VIII.2 Research Methods

In navigating the complexities of investigating and prosecuting environmental crimes under Rwandan law, this study adopts a rigorous methodological framework to guide its inquiry. The research methods employed provide a systematic approach for conducting the study, ensuring the reliability, validity, and integrity of the findings.

VIII.2.1 The analytical method

The analytical method is central to this study's approach, systematically dissecting data collected from diverse sources such as legal documents, scholarly literature, case studies, and stakeholder interviews. Through rigorous data organization and preparation, including categorization and cleaning, the analysis employed various techniques such as descriptive, comparative, content, stakeholder, and root cause analyses.

These methods uncovered patterns, trends, and underlying factors pertaining to the challenges and barriers encountered in investigating and prosecuting environmental crimes under Rwandan law. Interpretation of findings yield valuable insights, guiding the formulation of evidence-based recommendations tailored to Rwanda's legal framework, institutional capacity, and socio-cultural context, ultimately aiming to enhance environmental law enforcement and foster sustainable environmental protection.

VIII.2.2 The historical method

In this study, the historical method has been applied to comprehensively investigate the evolution of environmental law enforcement in Rwanda. Through the systematic analysis of past events, legislative changes, enforcement practices, and socio-economic factors, researcher has identified key historical contexts and trends that have shaped the current landscape of environmental protection in Rwanda.

By tracing the development of environmental laws, regulatory frameworks, and enforcement mechanisms over time, the study aims to uncover insights into the effectiveness of past enforcement practices, understand persistent challenges, and draw lessons from historical experiences.

Integration of historical analysis with contemporary data provided a holistic understanding of the historical roots of current issues in environmental law enforcement, enabling the formulation of informed recommendations for enhancing enforcement effectiveness and promoting sustainable environmental protection in Rwanda.

IX. WORK SUBDIVISION

The research is structured into a General Introduction followed by three chapters. Chapter 1 provides an overview, detailing the Conceptual and Theoretical Framework. Chapter 2 explores the main challenges and obstacles faced during the investigation and prosecution of environmental crimes under Rwandan law. Lastly, Chapter 3 examines strategies and reforms designed to improve the effectiveness of investigating and prosecuting environmental crimes in Rwanda, culminating in a general conclusion and recommendations.

CHAPTER I. CONCEPTUAL AND THEORETICAL FRAMEWORK

I.0 INTRODUCTION

To provide context and enhance clarity and understanding, it is crucial to define several key concepts that has guided the discussions in the following chapters. These concepts include environmental crimes, investigation, and prosecution. This chapter also aims to elucidate various theories in environmental law, which involve competing interests. These interests encompass finding a balanced approach to punishing offenders, preventing crime, ensuring due process, protecting victims' rights, and addressing society's need to progress.

By considering all these theories, we gain a comprehensive understanding without excluding any or endorsing some as the sole legitimate positive, normative, or discursive framework for the environmental crimes process. Distinguishing these theories helps us analyze their values and the different ways people perceive environmental justice.

I.1 CONCEPTUAL FRAMEWORK

This section delves into the concepts involved in investigating and prosecuting environmental crimes under Rwandan law. The conceptual framework has centered on the following key elements:

I.1.1 The Concept of Environmental Crimes

While the definition of "environmental crime" lacks a universal consensus, it is generally understood as a term encompassing illegal activities that harm the environment for the benefit of individuals, groups, or companies²⁰. These activities include the exploitation, damage, trade, or theft of natural resources and can involve serious crimes and transnational organized crime²¹.

Environmental crime threatens wildlife, affecting species such as elephants, rhinos, tigers, pangolins, reptiles, fish, and rare birds and plants. It also impacts ecosystems through extensive deforestation, pollution from unregulated chemical use and disposal, and the destruction of livelihoods²².

²⁰ *threat ag, natural to. The rise of environmental crime*

²¹ *Ibid,*

²² *Situ, Yingyi, and David Emmons (2000). Environmental Crime: The Criminal Justice System's Role in Protecting the Environment. Sage Publications.*

Illegal activities range from bush-meat poaching driven by food insecurity among impoverished villagers to the exploitation of natural resources by transnational organized criminals and non-state armed groups with potential terrorist links²³. The complexity of these issues creates confusion about the most appropriate responses, which was clarified based on developments in 2015.

The illegal exploitation of natural resources, including illegal trade in wildlife (ITW), negatively affects potential revenues from tourism, timber, mining, gold, diamonds, fisheries, and even oil and charcoal. These resources could have supported development needs such as healthcare, infrastructure, education, and sustainable business development²⁴.

The illegal trade undermines legal and sustainable businesses through unfair competition and the evasion of legitimate taxes, costing society an estimated USD 91–259 billion annually. This amount represents a loss because the commercial activity occurs within an illegitimate criminal economy, undermining governance, legitimate business, and tax-influenced pricing²⁵. Some of this illicit revenue is laundered back into the legitimate economy through consumption and other means.

Under Rwandan constitution Article 53 stipulates that “everyone is responsible for protecting, safeguarding, and promoting the environment”²⁶. The penal code defines the environment as a variety of elements, both natural and artificial, created by humans. This includes chemical substances, biodiversity, and socio-economic activities, as well as cultural, aesthetic, and scientific factors that may have direct or indirect, immediate or long-term effects on the development of an area, biodiversity, and human activity²⁷. From this definition, environmental degradation by human actions is considered a serious violation of the integrity of geological environments, soil, or air and is therefore a criminal offense. The Rwandan penal code addresses several environmental crimes in Articles 415-437²⁸.

²³ Ibid,

²⁴ Ibid

²⁵ Ibid

²⁶ Idem, 47

²⁷ *Law N68 /2018 OF 30/08/2018 determining offenses and penalties in general*

²⁸ *Organic Law on Environment, Article 4 of Law No. 04/2008 of February 08, 2008*

Furthermore, Rwandan Environmental Law, as outlined in Law N°48/2018 Of 13/08/2018 On Environment, Chapter IV, provides a comprehensive framework regarding Prohibited acts against the Environment, along with their corresponding penalties²⁹. According to the Organic Law on Environment, Law No. 04/2008 of February 08, 2008, the concept of Environment is expansive, encompassing a wide array of natural and artificial elements.

These elements include chemical substances, biodiversity, socio-economic activities, cultural dimensions, aesthetics, and scientific aspects. Their impacts, whether direct or indirect, immediate or long-term, can significantly influence the development of an area, biodiversity, and human activities³⁰.

These prohibited acts entail various actions, such as the unlawful disposal of solid, liquid, or hazardous waste into water bodies or their surroundings³¹. Additionally, actions that result in the deterioration of surface or underground water quality are strictly prohibited³². Furthermore, the law prohibits activities such as mineral washing in streams or lakes, the construction of agricultural or livestock facilities within specified distances from water bodies, and the erection of structures in water sources or their buffer zones³³.

The law specifies penalties for these offenses, which include administrative sanctions. For example, individuals engaged in the trade, importation, storage, or any activities involving toxic waste that poses a threat to human health or the environment can be subject to imprisonment for a period ranging from seven to ten years. In addition to imprisonment, fines ranging from one hundred million to two hundred million Rwandan francs may be imposed³⁴.

In addition to the local efforts described earlier, the United Nations has highlighted the grave threat organized crime poses to the environment on a global scale³⁵. According to the UN, criminal groups worldwide are involved in activities such as wildlife trafficking, illegal fishing, waste trafficking, and unauthorized mining, among other illicit practices³⁶.

²⁹ *Idem*, 23

³⁰ *ibid*

³¹ *Law N68 /2018 OF 30/08/2018 determining offenses and penalties in general*

³² *Ibid*,

³³ *law n°48/2018 of 13/08/2018 on environment*,

³⁴ *article 56 (trading, transportation and management of toxic waste) of law n°48/2018 of 13/08/2018 on environment*

³⁵ threat ag, natural to. The rise of environmental crime.

³⁶ *Ibid*

This exploitation severely impacts ecosystems, national security, and the livelihoods of millions who rely on natural resources.

Ghada Waly, Executive Director of the UN Office on Drugs and Crime (UNODC), emphasized this issue at the 2021 session of the Commission on Crime Prevention and Criminal Justice (CCPCJ). The Environment Team within UNODC's Border Management Branch works with member states to prevent and combat environmental crimes, including wildlife and forest crime, illegal fishing, illegal mining, and trafficking in precious metals and waste. These crimes are considered serious organized crime, with significant repercussions for the economy, security, environment, and human health. They contribute to biodiversity loss and exacerbate climate change.³⁷

UNODC's initiatives to address these crimes align with the 2030 Agenda for Sustainable Development, particularly Sustainable Development Goals 3 (Good Health and Well-being), 13 (Climate Action), 14 (Life Below Water), 15 (Life on Land), and 16 (Peace, Justice, and Strong Institutions)³⁸. Through these efforts, UNODC aims to mitigate the detrimental effects of environmental crimes and promote sustainable development world.

I.1.2 Investigation

In accordance to Rwandan Organic law on Environment Article 63 of Law N°48/2018 Of 13/08/2018 stipulates that “An Order of the Minister in charge of justice grants some of staff members of the Authority the power of criminal investigation in environmental matters.”³⁹

The process of investigation on Environmental matters are of the following though the Rwandan Environmental Law in use that does not specify the investigation procedure on environmental matters;⁴⁰

³⁷ *Idem*, P33

³⁸ Youth and the 2030 agenda for sustainable development. 2019;10–9.

³⁹ Rwandan Organic law on Environment Article 63 of Law N°48/2018 Of 13/08/2018

⁴⁰ *Idem*, P23

➤ **On site visits**

The Committee, depending on the nature of complaints received, carries out on-site investigations to verify the allegations and recommend appropriate actions. These investigations involve several activities:⁴¹

1. **Observation:** Committee members observe the situation firsthand.
2. **Photographic documentation:** They capture visual evidence of the conditions.
3. **Taking scientific samples:** Samples are collected for analysis if necessary.
4. **Interviews:** The main parties involved in the complaint and other relevant stakeholders are interviewed to gather information.

When scientific analysis is required, the Committee may enlist the expertise of specialists. In cases where there's a risk of irreversible environmental damage, interim recommendations are provided.

Through on-site investigations, the Committee facilitates public participation, allowing community-level decision-making on environmental issues. This involvement of diverse stakeholders is integral to the environmental management process.

➤ **Public Hearings**

Periodically, the Committee holds public hearings when deemed necessary. These hearings serve as platforms for concerned parties to voice their grievances before the NECC. Open to the public, these hearings are conducted in simple language to encourage broad participation. They offer a swift and effective means of resolving conflicts.

➤ **Consultative Meetings**

The Committee organizes consultative meetings involving various stakeholders to address environmental concerns comprehensively. These meetings aim to reach consensus on sustainable natural resource management strategies. Implementing the outcomes of these meetings would promote the sustainable utilization of natural resources.

⁴¹ *Rwandan Organic law on Environment Article 63 of Law N°48/2018 Of 13/08/2018*

I.1.3 Prosecution

The Office of the Prosecutor has initiated a public consultation on a new policy endeavor aimed at enhancing accountability for environmental crimes under the Rome Statute⁴². This initiative seeks to adopt a systematic approach to addressing crimes falling within the Court's jurisdiction that involve or result in environmental harm⁴³.

Rwanda has also demonstrated significant efforts in prosecuting environmental crimes. For instance, data from Rwanda's prosecution authority reveals a commendable conviction rate for wildlife crimes since 2018, ranging from 70% to 95%, with the highest rate recorded in 2019/20 and the lowest in 2018/19⁴⁴.

However, despite these achievements, approximately 22% of wildlife crime cases handled by the National Public Prosecution Authority in 2021/22 were not brought before the courts due to insufficient evidence, as indicated by statistics from the Rwanda Prosecution. Nevertheless, there has been a noticeable reduction in the number of wildlife cases written off, decreasing from nearly 40% in 2018/19⁴⁵.

I.2 THEORETICAL FRAMEWORK

This section explores the theories related to environmental crimes. The theoretical framework is centered on the following key elements:

I.2.1 Environmental Criminology theories

The following section discusses the key environmental criminology theories that seek to explain the causes of crime. It is important to note that each of the following theories discussed has its own strengths, weaknesses, as well as gaps, and is applicable (in this case) to the understanding of environmental criminology in general. It is worth noting that some of these theoretical approaches can be applied to study other crimes under the umbrella of criminology and can be used for other disciplines as well (psychology, economics, etc.).

⁴² *Office of the Prosecutor of the International Criminal Court. Policy on Complementarity and Cooperation. 2024;(April).*

⁴³ *Ibid,*

⁴⁴ *Rwanda Development Board. Rwanda 's First Symposium on Illegal Wildlife Trafficking November 2017 Summary & Resolutions. 2017;(November):1–9.*

⁴⁵ *Ibid,*

I.2.1.1 The Routine Activity Theory

The Routine Activity Theory, a cornerstone of environmental criminology, examines how shifts in societal and economic conditions influence crime and victimization, making it one of the most referenced theories in criminology⁴⁶.

Coined by Lawrence Cohen and Marcus Felson in 1979, it defines routine activity as recurring and prevalent behaviors fulfilling basic individual and population needs, encompassing daily activities from work and school to socializing and errands⁴⁷. These routine activities, involving multiple individuals in space and time, are central to understanding changes in crime trends. While not a comprehensive theory of crime, Routine Activity Theory has been expanded to elucidate various criminal behaviors.

Unlike theories focusing on neighborhood characteristics, Routine Activity Theory centers on individual actions⁴⁸. It is closely linked with human ecology, which underscores the significance of time in understanding how populations adapt to their environment. Recognizing the interplay between space and time, the theory emphasizes that crimes occur when motivated offenders encounter suitable targets in the absence of capable guardians⁴⁹. This convergence of elements in both space and time is crucial for understanding why and how crime transpires.

The Three Essential Elements of Crime Information adapted from Andresen (2010)⁵⁰

1. Motivated Offender

- An individual who is capable and willing to commit a criminal activity
- An individual who has true intent to commit a crime against another individual and/or property
- Essentially, the motivated offender has everything he/she needs to commit a crime, physically and mentally

⁴⁶ Branich N. *Routine Activities Theory*. In 2015.

⁴⁷ *Ibid*

⁴⁸ *Idem*, P 17

⁴⁹ *Ibid*,

⁵⁰ Branich N. *Routine Activities Theory*. In 2015.

2. Suitable Target

- Any type of individual and/or property that the motivated offender can damage or threaten in the easiest way possible
- In order for a target to be deemed suitable, this means there is a greater chance that the crime can be committed
- Four different attributes of what makes a target suitable (VIVA):
 - V: Value (The value of achieving the target)
 - I: Inertia (The physical obstacles of the target, e.g., weight, height, strength, etc.)
 - V: Visibility (The attribute of exposure which solidifies the suitability of the target)
 - A: Access (The placement of the individual/or object that increases, or decreases, the potential risk of the intended attack)

3. Absence of a Suitable Guardian

- A person or object that is effective in deterring offence: meaning that the presence of guardianship in space and time can prevent and/or stop crime
- Includes friends, as well as formal authorities, such as private security guards and public police

In summary, Routine Activity Theory has traditionally been applied to understand crimes like residential break-ins, burglary, domestic violence, and physical assault. It offers valuable insights into the underlying causes of crime within specific locations, such as areas known for drug dealing, and among particular victim groups, like those affected by domestic violence.

By elucidating why crime tends to cluster in certain places and times, the theory aids in comprehending the uneven distribution of criminal activities⁵¹. Specifically, variations in people's routines related to family, work, and leisure activities shape the types of situations that arise, and societal changes in routine activities can lead to shifts in the situations individual's encounter⁵².

⁵¹ Argun U, Dağlar M. Examination of Routine Activities Theory by the property crime. *Int J Hum Sci.* 2016;13(1):1188.

⁵² Ibid,

I.2.1.2 Pattern theory

Pattern theory holds significance in environmental criminology as it enhances our comprehension of the role of place in crime prevention strategies⁵³. This theory integrates aspects of rational choice and routine activity theories to elucidate the spatial distribution of crime⁵⁴. Moreover, it incorporates elements of geometric theory, emphasizing the impact of the built environment on crime distribution⁵⁵.

Routine activity theory posits that criminal events result from the convergence of a motivated offender, a suitable target, and the absence of capable guardians. Conversely, rational choice theory explains how offenders make decisions regarding targets and means to achieve their objectives, with location being a critical factor. Geometric theory focuses on individuals' awareness spaces and the pathways connecting their routine activity nodes, thereby influencing their interaction with the environment.⁵⁶

A commonality among these theories is the recognition of the environment's significance in shaping criminal behavior⁵⁷. Our routine activities, influenced by various environmental factors, play a crucial role in determining the likelihood of crime occurrence. By modifying our routines and awareness, we can alter or reinforce the likelihood of crime. Rational choices are made at each stage of this pattern⁵⁸

Pattern theory examines how offenders select targets based on their awareness of specific places, thereby affecting the spatial and temporal distribution of crime. It emphasizes the importance of place in criminal events, focusing on how potential offenders perceive and access targets. While routine activity theory considers the presence or absence of capable guardians, pattern theory emphasizes the characteristics and behaviors of targets within a particular location.⁵⁹

⁵³ Mumford D. *Pattern Theory: A Unifying Perspective*. *First Eur Congr Math*. 1994;187–224.

⁵⁴ *Ibid*,

⁵⁵ Brantingham, P., & Brantingham, P. (2017). *Environment, Routine, and Situation: Toward a Pattern Theory of Crime: Advances in Criminological Theory* (pp. 259–294). <https://doi.org/10.4324/9781315128788-12> Accessed on 17/04/2024

⁵⁶ Sasse S. "Motivation" and Routine Activities Theory. *Deviant Behav - DEVIANT BEHAV*. 2005 Nov 1;26:547–70.

⁵⁷ *Our routine activities, influenced by various environmental factors, play a crucial role in determining the likelihood of crime occurrence. By modifying our routines and awareness, we can alter or reinforce the likelihood of crime. Rational choices are made at each stage of this pattern*

⁵⁸ *Ibid*

⁵⁹ Brantingham P, Brantingham P. *Environment, Routine, and Situation: Toward a Pattern Theory of Crime: Advances in Criminological Theory*. In 2017. p. 259–94.

Spatial and temporal variations in crime can be explained by pattern theory. For instance, domestic assault rates may fluctuate depending on the time of day when family members are present or absent. Additionally, the vulnerability of targets, such as vacant households during the day or businesses at night, influences the likelihood of crime occurrence. Despite its complexity, pattern theory highlights the interconnectedness of environmental criminological theories and their relevance in understanding criminal events and the field's cohesion.⁶⁰

I.2.1.3 Rational choice theory

Rational choice theory aims to comprehend criminal events by examining the decision-making process of offenders. For instance, in cases of property crime, where the motivation is often immediate financial gain, rational choice theory provides insight into offenders' considerations. However, the theory's intricacies become apparent when applied to non-property violent crimes, which may not seem rational upon initial assessment.⁶¹

At the core of rational choice theory lies the concept of rationality, which emphasizes the role of reasoning in human behavior. It posits that individuals engage in crime after carefully weighing the potential benefits and drawbacks of their actions. According to this theory, a potential offender faces four primary decisions: whether to commit a crime, which target to select, how frequently to engage in criminal behavior, and whether to cease criminal activity.⁶²

Each of these primary choices is discussed in more detail.⁶³

- 1. Whether or not to commit a crime.** There is a plethora of reasons as to why an individual may commit a crime (e.g., psychological, familial, social, and economical). However, here, crime is still seen as a decision, as we are not coerced into a life of crime.

⁶⁰ *Idem*, p12

⁶¹ Bryden DP. *Environmental Rights in Theory and Practice Recommended Citation. Minn Law Rev [Internet]. 1978;62:163–228. Available from: <https://scholarship.law.umn.edu/mlr://scholarship.law.umn.edu/mlr/1111>*

⁶² *Ibid*

⁶³ Brantingham P, Brantingham P. *Environment, Routine, and Situation: Toward a Pattern Theory of Crime: Advances in Criminological Theory. In 2017. p. 259–94.*

⁶³ *Idem*, p24

⁶³ Bryden DP. *Environmental Rights in Theory and Practice Recommended Citation. Minn Law Rev [Internet]. 1978; 62:163–228. Available from: <https://scholarship.law.umn.edu/mlr://scholarship.law.umn.edu/mlr/1111>*

⁶³ *Ibid*,

There is a clear conscious choice in becoming an offender (see Clark & Cornish, 1987). “Legitimate and illegitimate opportunities are considered and the “best” choice for that individual is made. Sometimes, the rational choice is to offend” (Andresen, 2010, p. 30).

2. **Whether or not to select a particular target.** The rational choice of whether or not to select a particular target is of utmost importance. Potential offenders must interpret cues given off by the environment to decide upon what or whom to offend: Is the target valuable enough to risk getting caught? Is the area familiar to the offender? Are there potential guardians in close proximity
3. **How frequently to offend.** The rational choice regarding how often to offend is mainly dependent on a number of factors: the potential offender’s social network, peer influences, monetary (or other) needs, and their ability to successfully avoid detection. The main point here is that frequency is still a choice.
4. **Whether or not to desist from crime.** Desisting from crime or continuing crime is another rational choice. A potential offender could have issues with committing a crime: exhausting targets, age-related issues, getting detected – all of which are internal issues. On the other hand, getting married, suffering from an injury, or being offered employment represent external issues that interfere with a life of crime.

A significant aspect of rational choice theory is its recognition that the decision to commit one type of crime, such as property theft, does not necessarily imply a propensity to commit another type, like sexual assault⁶⁴. The environmental cues influencing each crime differ, affecting both the frequency of offending and the decision to desist from crime.

Cornish and Clarke (1987) argue against a generalized rational choice theory of crime, suggesting instead that rational choices for each crime type be considered independently from others⁶⁵.

⁶⁴ Bryden DP. *Environmental Rights in Theory and Practice Recommended Citation. Minn Law Rev [Internet]. 1978; 62:163–228. Available from: <https://scholarship.law.umn.edu/mlr://scholarship.law.umn.edu/mlr/111> Accessed on 14/05/2024*

⁶⁵ Ibid

In essence, it is essential to discuss how rational choice theory intersects with environmental criminology, particularly in the context of situational crime prevention. Situational crime prevention aims to reduce crime opportunities by permanently altering the immediate environment. For instance, stores may install electronic access controls to prevent theft. This strategy focuses on preventing specific criminal events.

In summary, Theories in environmental criminology operate on the premise that offenders act rationally, enabling prediction of their actions and subsequent crime prevention efforts, such as reducing activity in crime hotspots. In this context, rational choice theory interacts with environmental criminology by considering the interplay between individual decision-making and environmental stimuli, while situational crime prevention manipulates the environment to target the rational calculations of potential offenders.

I.2.1.4 The geometric theory

The geometric theory of crime offers insights into crime patterns by focusing on the spatial dimension of human activity. Unlike theories centered on offenders' motivations, it emphasizes the perceived opportunities for crime within the urban spatial structure.⁶⁶

In this theory, the environment is conceptualized as the "environmental backcloth," a term coined by Brantingham and Brantingham (1981), drawing from C. Ray Jeffery's work. This term encompasses the built environment, social and cultural norms, institutions, and the legal framework.

Unlike Jeffery's explanation, which views the environment statically, the environmental backcloth acknowledges its dynamic nature. Brantingham and Brantingham (1993) underscored this dynamism, likening it to a flag blowing in the wind: while the emblems and designs of a flag make it two-dimensional, the dynamic environment adds a third dimension.

Moreover, some changes in the environment occur gradually, such as the development of road networks in established urban centers.⁶⁷

⁶⁶ Brantingham P, Brantingham P, Andresen M. *The geometry of crime and crime pattern theory*. In: *Environmental Criminology and Crime Analysis: Second Edition*. 2016. p. 98–115.

⁶⁷ Adler MD. *Regulatory Theory. A Companion to Philosophy of Law and Legal Theory: Second edition*. 2010. 590–606 p.

To delve deeper into the geometry of crime, Brantingham and Brantingham (1993) adopted Lynch's (1960) categorization of the four elements comprising cities. These elements consist of nodes, paths, districts, and edges, each of which plays a distinct role in shaping the urban environment.

For the comprehensive understanding of these elements here is the breakdown of them ⁶⁸

1. Nodes

- Consists of places (conceptualized as points) within the city that a person travels to and from
- Nodes may be business, entertainment, or industrial districts in the context of large urban centres
- Represents the places in which we spend most of our time: at home, work, recreational sites, entertainment, or shopping

2. Paths

- Pathways are the channels that we use to move from node to node
- The channels that people move along, often limited by streets, walkways, and public transit Districts
- Regions within the cities that are defined as areas that have commonalities and identifying features such that they are congruent spatial units such that any differences within the district must be smaller than the differences that exist between districts. For example, an entertainment district would include x, while a y district would include .

3. Edges

The boundaries between districts may be physical and distinct (literally crossing the tracks) or they may be subtle such as the gradual change as one passes from one neighborhood to the next.

Brantingham and Brantingham (1981) utilize nodes and paths to construct maps, facilitating the examination of our activity patterns and the connections between these spaces. These maps essentially depict our activity space, which evolves into our awareness space over time.

⁶⁸ *Brantingham P, Brantingham P, Andresen M. The geometry of crime and crime pattern theory. In: Environmental Criminology and Crime Analysis: Second Edition. 2016. p. 98–115.*

As to develop familiarity and attachments to different locations, we acquire a sense of place, feeling at ease in some areas while wary of others. Understanding awareness space is crucial because it enables us to manage risk by avoiding uncomfortable places or remaining vigilant in them.⁶⁹

The significance of activity space lies in the likelihood that if we were to become victims of crime, it would probably happen in our primary activity space, where we spend the majority of our time. Similarly, offenders tend to prefer committing crimes within their own activity spaces, targeting familiar locations and individuals⁷⁰. Additionally, awareness of places beyond one's activity space is likely to decrease with distance, following the principle of distance decay, wherein awareness diminishes as geographical distance from the activity space increases⁷¹.

Understanding the geometry of crime is crucial as it sheds light on how offenders navigate their surroundings to identify criminal opportunities. The discussion on nodes, paths, activity space, and awareness space of offenders is instrumental in this regard, as it elucidates how offenders integrate into and move through the environment⁷². Brantingham and Brantingham delineate high-intensity search areas around activity nodes and linear paths, gradually decreasing in intensity with distance from these nodes and paths⁷³. These search areas denote the regions where offenders target and select victims or targets.

It is noteworthy that potential offenders typically exhibit similar activity patterns as the general population. Consequently, when activity spaces overlap with those of potential offenders, become susceptible to victimization.

This overlap is more likely during the day when potential victims and offenders share nodes and pathways. Urban environments largely dictate where people live, work, and shop, thus influencing the spatial dynamics of criminal encounters⁷⁴.

⁶⁹ Driesen DM. *The Ends and Means of Pollution Control: Toward a Positive Theory of Environmental Law*. *Utah Law Rev.* 2016;2017(315)

⁷⁰ Brantingham P, Brantingham P, Andresen M. *The geometry of crime and crime pattern theory*. In: *Environmental Criminology and Crime Analysis: Second Edition*. 2016. p. 98–115.

⁷¹ *Ibid*,

⁷² Frank R, Dabbaghian V, Reid A, Singh S, Cinnamon J, Brantingham P. *Power of criminal attractors: Modeling the pull of activity nodes*. *Jasss*. 2011;14(1):6.

⁷³ *Ibid*,

⁷⁴ *Ibid*,

Motivated offenders can easily blend into their surroundings and actively search for targets. For instance, automotive thefts may surge in unguarded parking lots, while assaults may spike in areas with a high concentration of individuals, such as entertainment districts during closing hours⁷⁵. Consequently, crime tends to be concentrated in specific locations within high-crime areas.

In this framework, the concept of edges plays a significant role as they mark the boundaries between two or more districts, representing areas in transition from one use to another. Edges are locations with an increased risk of criminal victimization, often delineated by physical boundaries such as bodies of water or railroad tracks⁷⁶.

Moreover, Research by Brantingham and Brantingham (1975) on residential burglary found that burglary rates were notably higher for street blocks bordering on edges compared to the interior of neighborhoods. Similarly, their research on gang violence (Brantingham et al., 2012) revealed that edges are hotspots for gang-related violence.

Therefore, identifying and analyzing edges is essential for understanding concentrations of crime in specific areas.

Expanding on this concept, examining "hot spot" areas is beneficial. Hot spots are areas where criminal activity is concentrated compared to surrounding areas and can be categorized into three types: crime generators, crime attractors, and crime enablers. Crime generators, like shopping areas or festivals, attract numerous people and are unrelated to criminal motivation.

Crime attractors, such as areas known for prostitution or drug dealing, provide significant criminal opportunities. Crime enablers are locations where regulations and enforcement of conduct are lacking, allowing for illicit activities like loitering or theft from vehicles.⁷⁷

Lastly, the geometric theory predicts that the majority of crime will occur within a small percentage of the available area within urban centers, with around 80 percent of crimes concentrated within 20 percent of the land area in a city.

⁷⁵ Frank R, Dabbaghian V, Reid A, Singh S, Cinnamon J, Brantingham P. Power of criminal attractors: Modeling the pull of activity nodes. *Jasss*. 2011;14(1):6.

⁷⁶ *Ibid*,

⁷⁷ Newton A. Macro-level generators of crime, including parks, stadiums, and transit stations. In: *The Oxford Handbook of Environmental Criminology*. 2018. p. 497–517.

Empirical studies in both Canada (Curman et al., 2015) and the United States (Sherman et al., 1989; Weisburd et al., 2004) have confirmed the uneven spatial distribution of crime within urban centers, supporting this prediction.⁷⁸

I.2.2 Institutional Analysis and Development (IAD) Framework Theory

The Institutional Analysis and Development (IAD) Framework, crafted by Elinor Ostrom and her team, serves as a tool for dissecting the functionality and development of institutions, especially concerning the stewardship of shared resources⁷⁹. In the context of environmental offenses, the IAD Framework offers a systematic method to scrutinize the intricate interplay among diverse stakeholders, regulations, and outcomes within environmental management⁸⁰.

In environmental legislation, the IAD framework is utilized to scrutinize how parties coordinate and unite to steward shared natural assets like woodlands and fisheries that span across borders. It simplifies complex issues of collective management into smaller, more digestible segments known as “action arenas” or “action situations,” which encompass elements such as participants, norms, organizational frameworks, motivational structures, and regulations.⁸¹

This approach has been instrumental in delving into environmental governance, conservation of natural resources, and shared resource management⁸². It encourages analysts to meticulously consider a variety of factors that significantly impact specific environmental policy challenges.

An illustrative instance of the IAD framework’s application in environmental law is seen in its use for water resource preservation in southern Ecuador.

The framework was pivotal in pinpointing weaknesses within the prevailing governance system and devising strategies to fortify institutional structures through robust community engagement, with the goal of achieving effective water resource preservation⁸³.

⁷⁸ Iliyasu II, Abdullah A, Marzbali MH. Urban Morphology and Crime Patterns in Urban Areas: a Review of the Literature. *Malaysian J Sustain Environ.* 2022;9(1):213.

⁷⁹ Ostrom, E. (2010). Institutional Analysis and Development: Elements of the framework in historical perspective. *Historical Developments and Theoretical Approaches in Sociology*, II, 261–288.

⁸⁰ Ibid,

⁸¹ Cole, D. H. (2017). Laws, norms, and the Institutional Analysis and Development framework. *Journal of Institutional Economics*, 13(4), 829–847. <https://doi.org/10.1017/S1744137417000030> accessed on 15/06/2024

⁸² Ibid

⁸³ Cole, D. H. (2017). *Laws, norms, and the Institutional Analysis and Development framework.* *Journal of Institutional Economics*, 13(4), 829–847. <https://doi.org/10.1017/S1744137417000030> accessed on 15/06/2024

This particular case exemplifies the utility of the IAD framework in refining environmental governance by engaging a range of stakeholders and addressing the intricate dynamics of rules, norms, and institutional frameworks⁸⁴.

In summary, the exploration of environmental criminology theories; Routine Activity Theory, Pattern Theory, Rational Choice Theory, Geometric Theory, and the Institutional Analysis and Development (IAD) Framework—offers a multifaceted understanding of crime dynamics and prevention strategies. Each theory provides unique insights into how environmental, spatial, and behavioral factors intersect to influence criminal behavior.

⁸⁴ *Ibid*,

CHAPTER II. KEY CHALLENGES THAT HINDER THE INVESTIGATION AND PROSECUTING ENVIRONMENTAL CRIMES UNDER RWANDAN LAW

II.0 INTRODUCTION

Environmental crime refers to any intentional act or omission that leads to environmental degradation, causing harm to humans, the environment, and natural resources⁸⁵. These crimes encompass all violations of environmental laws that carry criminal penalties, and the prosecution of such cases in criminal courts is known as environmental crime prosecution⁸⁶.

Environmental crime is one of the most lucrative and rapidly expanding sectors of global criminal activity. Often perceived as "victimless," there has been minimal effort to detail the actual scope and effects of victimization caused by environmental crime⁸⁷. The complexity of this victimization—in terms of time, space, impact, and the entities affected—poses challenges for governments and law enforcement in developing effective responses.

Historically, traditional criminal law did not prioritize environmental protection, leading to advocacy for its inclusion among crimes affecting public order, morality, and socio-economic development⁸⁸. The debate has centered on whether environmental issues warrant a criminal law response.

Enforcement is a crucial component of environmental law. It includes actions taken by the government or other entities to ensure compliance within the regulated community and to rectify or prevent situations that threaten the environment or public health⁸⁹. Government enforcement typically involves inspections, negotiations, compliance promotions, and legal actions such as civil litigation and criminal prosecution.

⁸⁵ *An i, legal the, for f, crimes e, act pc. Criminal aspects of environmental law and technicalities of environmental crimes 1 . :1–8.*

⁸⁶ *Ibid,*

⁸⁷ *Conference E, Palermo P. Investigating and prosecuting environmental crimes. 2022;(May):5–6.*

⁸⁸ *Faure M. Environmental crime. Crim Law Econ. 2009;320–45*

⁸⁹ *Boogers S, Dimec K, Die E Van. Sanctioning Environmental Crime (WG4) LIFE-ENPE Project. 2020;(June).*

To counteract environmentally harmful activities, international legal systems have collectively enhanced laws and regulations based on a set of fundamental environmental law principles, recognizing the detrimental effects of these crimes on humans and the environment in general.

These principles include⁹⁰:

- Public Trust Doctrine
- Polluter Pays Principle
- Sustainable Development
- Precautionary Principle

II.1 PUBLIC TRUST DOCTRINE

The legal theory of the public trust doctrine originated in the Roman Empire. It is primarily based on the principle that certain resources such as air, sea, water, and forests hold immense importance for the entire population, and it is unjustifiable to subject these resources to private ownership⁹¹. These resources are considered gifts of nature and should be freely available to all. The doctrine mandates that the government protect these resources for the benefit of the general public rather than allowing their use for private ownership or commercial purposes⁹².

Various public properties, including rivers, seashores, and the air, are held by the government in trust for the continuous use of the public, preventing the government from transferring these properties to any private entity that may interfere with the interests of the public⁹³. The doctrine was initially mentioned in the case of *M.C. Mehta vs Kamal Nath*.

⁹⁰ *OECD. environmental principles and concepts organisation for economic co-operation and development document complet disponible sur olis dans son format d'origine complete document available on olis in its original format. 1995;(95):24. available from: [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ocde/gd\(95\)124&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ocde/gd(95)124&doclanguage=en) Accessed on 13/04/2024*

⁹¹ *Ryan E. The public trust doctrine, property, and society. Routledge Handb Prop Law Soc. 2022;240–51.*

⁹² *Ibid,*

⁹³ *OECD. environmental principles and concepts organisation for economic co-operation and development document complet disponible sur olis dans son format d'origine complete document available on olis in its original format. 1995;(95):24. available from: [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ocde/gd\(95\)124&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ocde/gd(95)124&doclanguage=en) Accessed on 13/04/2024*

In this case, the Supreme Court applied the concept of the public trust doctrine concerning the protection and preservation of natural resources. The state government had leased forest land to a private company for commercial purposes, despite the area being ecologically balanced and rich with greenery. The court ruled that such areas cannot be leased to private owners for commercial gains.⁹⁴

Additionally, Considering this case, [Rwanda COURT OF APPEAL- RPA 00074/2018/CA (Muhumuza. P.J. Kaliwabo and Tugireyezu. J.) 12 July 2019], This case commenced in the High Court, chamber of Rwamagana, where the accused faced prosecution for their alleged involvement in the illegal trade of elephant ivory from 2012 to May 2015⁹⁵. Initially, the Prosecution asserted that the accused were implicated in the killing of elephants in Tanzania, transporting the ivory to Rwanda, and seeking clients for its sale⁹⁶. Furthermore, the Prosecution claimed that the accused shared profits from this illicit trade.

Later on, the court Found Nsengiyumva Vincent and Vunumwami Egide guilty of the offence of selling ivories which is composed of acquiring. having in possession. keeping or concealing. Or procuring to be kept or concealed goods illegally.

II.2 SUSTAINABLE DEVELOPMENT PRINCIPLE

The idea of sustainable development gained momentum from the Stockholm Declaration on Human Environment, which emerged from the United Nations Conference on Human Environment in 1972”⁹⁷. The term 'sustainable development' was later popularized by the World Commission on Environment and Development and the Brundtland Commission in their influential 1987 report 'Our Common Future'⁹⁸.

This report provided a widely accepted definition of sustainable development: “Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs⁹⁹.”

⁹⁴ Takacs D. *The Public Trust Doctrine, Environmental Human Rights, and the Future of Private Property*. *New York Univ Environ Law J.* 2008;16:711.

⁹⁵ LIFE-ENPE. *Environmental prosecution report, tackling environmental crime in Europe*. 2017;(March)

⁹⁶ Ibid,

⁹⁷ Kulovesi K, Mehling M, Morgera E. *Global environmental law: Context and theory, challenge and promise*. *Transnatl Environ Law.* 2019;8(3):405–35.

⁹⁸ Ibid,

⁹⁹ Ibid,

In essence, sustainable development involves balancing developmental and environmental needs. For development to be sustainable, it must be both economically and ecologically viable. The authors argue that sustainable development is fundamentally a policy and strategy aimed at promoting ongoing economic and social growth without harming the environment and natural resources that are critical for future development and activity¹⁰⁰.

In the case of *Vellore Citizen's Welfare Forum v Union of India*, the Supreme Court rejected the traditional view that development and ecology are mutually exclusive and emphasized the importance of sustainable development¹⁰¹. The Court declared that sustainable development has been recognized as part of international customary law.

II.3 POLLUTER PAYS PRINCIPLE

The polluter-pays principle asserts that those who pollute the environment should bear the costs of managing and mitigating the damage they cause¹⁰². This principle was developed by the Organization for Economic Cooperation and Development (OECD). It is also reflected in several key documents:¹⁰³

- i. **The Brundtland report;** The "World Commission on Environment and Development," also known as the "Brundtland Commission," in its report "Our Common Future," suggested that the environmental costs of economic activities can be internalized by enterprises. This means that enterprises should invest in preventing or mitigating environmental damage, such as through the rehabilitation of affected individuals, reforestation, land restoration, or compensating victims of the damage caused by their activities.

¹⁰⁰ Bryden DP. *Environmental Rights in Theory and Practice Recommended Citation. Minn Law Rev [Internet]. 1978;62:163–228. Available from: <https://scholarship.law.umn.edu/mlr://scholarship.law.umn.edu/mlr/1111> accessed on 17/06/2024*

¹⁰¹ Mead L. *Still only one earth: lessons from 50 years of UN sustainable development policy. Int Inst Sustain Dev [Internet]. 2021;(January):1–10. Available from: <https://www.flickr.com/> accessed on 17/06/2024*

¹⁰² *Idem*, P19

¹⁰³ *Ibid*

- ii. **The Rio Declaration;** In 1992, the Rio Declaration established guidelines for sustainable development, focusing on the use of resources by the current generation without jeopardizing the needs of future generations. To support this objective, the Rio Declaration incorporated the polluter pays principle in "Principle 16," which asserted that the polluter should cover the costs associated with pollution. And Rio outlines two types of liability:
- compensation for pollution
 - ecological restoration.

The Polluter Pays Principle was first applied and defined in the case of *Indian Council for Environmental Action v. Union of India*. In this landmark case, it was determined that "the polluter is liable to pay the cost of the individual sufferers as well as the cost of redemption of the damaged environment, which is considered a part of sustainable development¹⁰⁴."

Often referred to as the "hydrochloric case," this case involved a polluter who disposed of toxic gypsum sludge, contaminating the groundwater and rendering it unsafe for drinking and agriculture in the village of Bichari. The Supreme Court ruled that the polluter was responsible for covering the costs of remediation and instructed the central government to determine the amount to be paid by the chemical company responsible¹⁰⁵.

The Court affirmed the Polluter Pays Principle as a universally accepted and sound principle. Thus, the Polluter Pays Principle implies absolute liability for environmental harm, requiring compensation for pollution victims and covering the costs of restoring the environmental degradation caused¹⁰⁶.

¹⁰⁴ Chandrachud, D. Y. (2024). *Writ Petition (Civil) No. 838 of 2019. MK Ranjitsinh & Ors. Versus Union of India & Ors. And with Civil Appeal No. 3570 of 2022. Judgement.* 838.

¹⁰⁵ Ibid,

¹⁰⁶ Mead L. *Still only one earth: Lessons from 50 years of UN sustainable development policy.* *Int Inst Sustain Dev [Internet].* 2021;(January):1–10. Available from: <https://www.flickr.com/> Accessed on_12/05/2024

II.4 PRECAUTIONARY PRINCIPLE

The precautionary principle is a decision-making framework that is increasingly being used in environmental law. It essentially states that where there is a threat of serious or irreversible damage to the environment, lack of full scientific certainty should not be used as a reason for postponing measures to prevent that damage.¹⁰⁷

In simpler terms, the precautionary principle means "better safe than sorry." It is a way of balancing the risks of environmental harm with the economic and social costs of taking precautionary action.

The precautionary principle is not a rule of law, but rather a guiding principle that can be applied in a variety of contexts¹⁰⁸. It has been used to justify a wide range of environmental regulations, such as bans on certain chemicals, restrictions on the use of genetically modified organisms, and limits on greenhouse gas emissions¹⁰⁹.

The precautionary principle is a controversial concept. Some argue that it is too vague and can be used to justify protectionist policies that stifle economic growth. Others argue that it is essential for protecting the environment in the face of scientific uncertainty.¹¹⁰

Here are some of the key features of the precautionary principle:¹¹¹

- It applies when there is a threat of serious or irreversible damage to the environment.
- Lack of full scientific certainty should not be used as a reason for postponing measures to prevent that damage.
- The burden of proof is on those who would cause the harm to demonstrate that it is safe to do so.
- Proportionality: The measures taken should be proportional to the seriousness of the potential harm.

¹⁰⁷ Development BA. "the Precautionary Principle" 2. *Origin of Precautionary Principle*: 2016;

¹⁰⁸ Kriebel D, Tickner J, Epstein P, Lemons J, Levins R, Loechler EL, et al. *The precautionary principle in environmental science*. *Environ Health Perspect*. 2001;109(9):871–6.

¹⁰⁹ *Ibid*,

¹¹⁰ Kriebel D, Tickner J, Epstein P, Lemons J, Levins R, Loechler EL, et al. *The precautionary principle in environmental science* david kriebel¹*, joel tickner¹, paul epstein², john lemons³, richard levins⁴, edward l. Loechler⁵, margaret quinn¹, ruthann rudel⁶, ted schettler⁷, michael stoto⁸ 1.

¹¹¹ *Ibid*

Recently, this principle was employed in the case of the Moratorium on Genetically Modified Salmon in the United States. In 2015, the U.S. Food and Drug Administration (FDA) approved AquAdvantage salmon, a genetically modified Atlantic salmon¹¹².

However, several U.S. states and environmental groups demanded a moratorium on its commercial production and sale, citing potential ecological risks and uncertainties if genetically modified salmon were to escape into the wild¹¹³.

The precautionary approach was invoked to advocate for additional studies and risk assessments before allowing widespread commercialization.¹¹⁴

the doctrines and principles in Environmental Law and the case where they were first applied¹¹⁵

- **The doctrine of absolute liability:** This principle states that a person or corporation is liable for any harm caused by their actions, regardless of fault or intent. It was laid down in the M.C. Mehta Case, and first applied in the Bhopal Gas Leak Case (Union Carbide Corporation v. UOI AIR 1990 SC 273).

Briefly, this case involved a gas leak at a factory in Delhi, causing harm to nearby residents. Environmental lawyer M.C. Mehta filed a suit arguing for the closure of the factory due to safety hazards and its location in a populated area. This case established the principle of absolute liability in India, making industries strictly liable for any harm caused by hazardous operations, regardless of intent.

- **The polluter pays principle:** This principle states that those who pollute the environment are responsible for paying for the cleanup costs. It was established in the Enviro Legal Action v. UOI (1996) 2 JT (SC) 196 case.

¹¹² Slyck KM Van. *Salmon with a Side of Genetic Modification: The FDA's Approval of AquAdvantage Salmon and Why the Precautionary Principle is Essential for*

¹¹³ *Ibid*,

¹¹⁴ Slyck KM Van. *Salmon with a Side of Genetic Modification: The FDA's Approval of AquAdvantage Salmon and Why the Precautionary Principle is Essential for*

¹¹⁵ *Ibid*,

In Summary, this case concerned industrial pollution and the responsibility for cleaning it up. The lawsuit, filed by an environmental group, argued that industries causing pollution should bear the cost of cleaning it. The court's decision established the polluter pays principle in India, making it the legal responsibility of polluters to pay for environmental cleanup.

- **The precautionary principle:** This principle states that where there is a threat of serious or irreversible damage to the environment, lack of scientific certainty should not be used to postpone measures to prevent environmental degradation. It was established in the Vellore Citizens Welfare Forum v. UOI AIR 1996 SC 2715 case.
- **The public trust doctrine:** This principle states that certain resources, like air and water, are held by the government in trust for the benefit of the people. The government has a duty to protect these resources for future generations. It was established in the M.C. Mehta v. Kamal Nath & Others (1997) 1 SCC 212 case.

This case involved the question of protecting natural resources like water bodies. M.C. Mehta, known for his environmental activism through legal cases, argued that the government has a duty to protect these resources. The court's decision established the public trust doctrine in India, recognizing the government's responsibility to hold resources like air and water in trust for the benefit of the public, both present and future.

- **The doctrine of sustainable development:** This principle states that development must meet the needs of the present without compromising the ability of future generations to meet their own needs. It was established in the Vellore Citizens Welfare Forum v. UOI AIR 1996 SC 2715 case.

Briefly, this case originated from concerns about a leather tanning industry potentially polluting water resource. The court established two key environmental principles in this case. The precautionary principle emphasizes taking preventive measures to avoid environmental harm, even if scientific evidence about the specific risks is not entirely conclusive.

Additionally, the doctrine of sustainable development was introduced, requiring a balance between meeting present needs and protecting the environment for future generations.

II.5 KEY CHALLENGES WHICH MAY HINDER THE INVESTIGATION AND PROSECUTING ENVIRONMENTAL CRIMES UNDER RWANDAN LAW

Although Government of Rwanda has developed the laws to combat environmental crimes and to protect environment that includes Article 53 of the constitution, everyone is obligated to protect, preserve, and advance the environment. The legal definition of "environment" provided by the penal code encompasses both natural and human-made elements, including chemical substances, biodiversity, socio-economic activities, cultural aspects, aesthetics, and scientific factors, all of which can impact the development of an area, biodiversity, and human activities either directly or indirectly, immediately or in the long term.¹¹⁶

This definition implies that environmental degradation caused by human actions is considered a significant assault on the integrity of geological environments, soil, or air, and thus constitutes a criminal offense. Consequently, the Rwandan penal code outlines various environmental offenses in articles 415-437. Investigation and Prosecution of environmental crimes still face critical barriers.¹¹⁷

Those key challenges are of such, as highlighted by scholars:¹¹⁸

- The lack of direct victims in environmental crimes, which results in underreporting by individuals, including local leaders.
- the limited knowledge
- Transportation resources available to law enforcement agents responsible for investigating and prosecuting these offenses.

¹¹⁶ *Idem*, p16

¹¹⁷ *Ibid*

¹¹⁸ UNEP. *The State of Knowledge of Crimes that have Serious Impacts on the Environment*. United Nations Environment Program [Internet]. 2018;89. Available from: <https://www.unep.org/resources/publication/state-knowledge-crimes-have-serious-impacts-environment> Accessed on 14/04/2024

II.5.1 The Challenge in Recognizing the Diffuse Impacts of Environmental Crime on Communities and Ecosystems

During the 12th United Nations Congress on Crime Prevention and Criminal Justice (2010), the global community acknowledged the hurdles presented by emerging forms of crime with substantial environmental repercussions¹¹⁹.

It urged Member States to delve into this matter and exchange successful strategies. Despite this heightened awareness, environmental crimes often fail to elicit the necessary response from governments, law enforcement, and the public¹²⁰. These crimes are frequently viewed as lacking identifiable victims and may not yield immediate consequences, with their harm being diffuse or unnoticed for prolonged periods.

Additionally, many environmental disruptions are legally sanctioned and occur with societal consent. Determining what constitutes an environmental crime entails a delicate balance between community interests in employment and income and the preservation of ecosystems, biodiversity, and sustainability. Environmental crime affects society as a whole, with adverse effects on national economies and security.¹²¹

At the individual and community levels, it can impair public health, livelihoods, property values, as well as impact non-human species, nature, and future generations. While the repercussions of a single environmental offense may seem insignificant, the cumulative environmental impact of repeated violations over time can be substantial¹²². Victims of environmental harm are often overlooked within the traditional framework of victimology, which predominantly focuses on conventional crime constructions.

Consequently, there has been limited effort to document the prevalence and consequences of environmental crime victimization. Environmental crime victims challenge traditional victimology approaches, as they are frequently victimized collectively and can include non-traditional victims such as non-human species, the environment, and future generations.

¹¹⁹ United Nations. (2011). *Twelfth United Nations Congress on Crime Prevention and Criminal Justice. General Assembly 65th Session, Agenda Item 105, 50174(April), 1–12.* <http://daccess-dds-> Accessed on 14/04/2024

¹²⁰ *Ibid*,

¹²¹ *Idem*, P27

¹²² *Ibid*

The extensive ramifications of environmental crime present complex and unique challenges for both victims and governments. Moreover, this results in underreporting by individuals, including local leaders.¹²³

Moreover, it was noted that some environmental offenses stem from a lack of understanding among the population regarding the proper use of natural resources, the consequences of their destruction, and who ultimately suffers as a result. This is particularly prevalent in rural areas where parks, forests, and mines are located. Additional challenges associated with these offenses are rooted in their underlying causes, such as intensified competition for land, poverty, and resource scarcity, among other factors discussed in the preceding section.¹²⁴

Case laws to consider:¹²⁵

- **Massachusetts v. Environmental Protection Agency (2007):** This case involved a challenge to the EPA's decision not to regulate greenhouse gas emissions from motor vehicles. The Supreme Court ruled that states have standing to sue the EPA over climate change because of the potential harm caused by global warming. While the harm in this case was broadly defined, it underscored the idea that environmental harm can affect communities and populations rather than specific individuals.
- **Lujan v. Defenders of Wildlife (1992):** This case dealt with standing to sue in environmental cases. The Supreme Court held that environmental organizations must show concrete and particularized injury to their members to have standing to sue. However, it also recognized that ecological harm could constitute injury in fact, even if not immediately observable or impacting specific individuals.
- **United States v. Imperial Irrigation District (1988):** In this case, the United States sued the Imperial Irrigation District (IID) over water rights issues impacting the environment and the Salton Sea in California. The court found that the lack of immediate, identifiable victims did not diminish the government's interest in protecting the environment and upheld regulatory actions to mitigate environmental harm.

¹²³ Birungi, Munyaruguru, and Nkubanyoye. "Environmental Law and Policy in Rwanda: A Critical Analysis." *Rwanda Law Journal* (2010): 1-25.

¹²⁴ *Idem*, P98

¹²⁵ Harrison, J. (2018). Significant international environmental law cases: 2017-18. *Journal of Environmental Law*, 30(3), 527-541. <https://doi.org/10.1093/jel/eqy021>

- **Friends of the Earth v. Laidlaw Environmental Services (2000):** This case involved a citizen suit under the Clean Water Act against a company for polluting a river. The Supreme Court ruled that environmental groups could sue to enforce environmental laws, even if the harm was not directly suffered by the organization's members. This decision affirmed the role of citizen suits in addressing environmental harm where victims may not be readily identifiable.

II.5.2 The limited knowledge

A significant issue concerning knowledge about environmental crime is the persistent failure of governments to gather relevant information. Hall and Wyatt (2017) and subsequent literature (see European Commission, 2017; UNEP, 2017; 2018; 2019) highlight that environmental crime data is generally not recorded consistently¹²⁶. The UK is often seen as a leading nation in addressing wildlife crime and is known for its effective collection and sharing of general crime statistics. However, the UNODC notes that:

"The data collection and analysis processes are inconsistent across the UK, as constituent countries follow their own systems of recording and publishing wildlife crime data such as incidents, recorded crimes, and seizures. NGO and other stakeholder data are commonly required to bolster administrative statistics."¹²⁷

Furthermore, As United Nation reported, the scarcity of publicly available data on environmental crimes presents significant challenges for governments and public organizations in developing effective policies to combat such offenses¹²⁸.

This difficulty in measurement is compounded by the covert nature of many illicit practices, resulting in low detection rates. Environmental crimes occur both in black markets and legitimate markets, sometimes conducted openly, as seen in fisheries, timber, or mineral trades¹²⁹.

¹²⁶ UNEP. *The State of Knowledge of Crimes that have Serious Impacts on the Environment*. United Nations Environ Program [Internet]. 2018;89. Available from: <https://www.unep.org/resources/publication/state-knowledge-crimes-have-serious-impacts-environment>

¹²⁷ *Ibid*,

¹²⁸ UNEP. *The State of Knowledge of Crimes that have Serious Impacts on the Environment*. United Nations Environ Program [Internet]. 2018;89. Available from: <https://www.unep.org/resources/publication/state-knowledge-crimes-have-serious-impacts-environment>

¹²⁹ *Ibid*,

However, accurate public research data on the extent or profits from environmental crimes via the black market is hard to obtain since countries do not officially compile such data¹³⁰.

For instance, the charcoal trade in Africa exceeds 30 million tons annually, but official records show only 1-2 truckloads per country, grossly underestimating both the informal and illicit cross-border trade. Measuring environmental crimes, such as hazardous waste disposal into the sea, poses challenges in ascertaining the exact amount of waste disposed of, further complicating accurate measurement.¹³¹

Rwanda is not an exception, as RPPA reportedly indicated that many environmental offenses stem from a lack of awareness among the population regarding environmental use, the consequences of its destruction, and the identification of victims. These offenses predominantly occur in rural areas, where parks, reserved forests, and mines are located.¹³²

II.5.3 Transportation resources available to law enforcement agents responsible for investigating and prosecuting these offenses.

There is a significant need for more advanced and effective law enforcement capabilities to address environmental crime. As previously mentioned, many law enforcement agencies lack the necessary knowledge, training, and equipment to adequately prevent and combat these crimes. This deficiency affects all parts of the enforcement chain, including investigators, prosecutors, and judges, which severely hampers the efforts of frontline forces in tackling environmental crime.¹³³

In terms of training, civil servants often lack the essential skills for detecting and identifying environmental crimes, gathering intelligence in accordance with local laws, and understanding prosecution and sentencing options, as well as promoting national and international cooperation. Without dedicated training and a pool of expertise, an agency's ability to handle environmental crimes is significantly weakened¹³⁴.

¹³⁰ *Ibid*

¹³¹ *Idem*, 13,

¹³² *Idem*, P 12

¹³³ Conference E, Palermo P. *investigating and prosecuting environmental crimes*. 2022;(May):5–6.

¹³⁴ Of, M., & Service, C. (2002). *Republic of Rwanda and Labour Policy Framework for Rwanda 'S Civil. MaY*.

Furthermore, many law enforcement officers lack the basic equipment necessary for intelligence gathering, planning, coordination, and overall law enforcement execution. Officers often do not have access to essential items such as radios, GPS devices, cameras, maps, compasses, vehicles, arms, fuel, or proper housing, kitchen, toilet facilities, and sleeping quarters¹³⁵. These deficiencies hinder the prevention and investigation of environmental crimes in the field. Despite this, there is an increasing emphasis on expensive and largely unavailable equipment like drones and helicopters.

However, what is truly needed are the basic essentials and training, rather than costly and difficult-to-maintain technology. Such equipment is ineffective if there are no enforcement personnel available on the ground to conduct follow-up actions, make arrests, and secure evidence¹³⁶. Additionally, considering that environmental crimes are often transnational, making cross-border communication, legal coordination, and evidence exchange quite restricted and expensive¹³⁷.

Furthermore, considering that environmental crimes are transnational, collection and tracking offenders exceptionally expensive and without leaving behind that this could rise question of jurisdiction. As notably RPPA expressed “The primary challenge highlighted by many respondents is a lack of knowledge and transportation resources for law enforcement agents responsible for investigating and prosecuting these offences.”¹³⁸

In essence, Despite the robust legal framework established by the Government of Rwanda to combat environmental crimes, including Article 53 of the constitution and various penal code provisions, significant challenges persist in the effective investigation and prosecution of these offenses. Key obstacles include the lack of direct victims, which often leads to underreporting; limited knowledge and inconsistent data collection on environmental crimes; and inadequate transportation and resources for law enforcement agents. These issues hinder the ability to address environmental crime comprehensively, emphasizing the need for enhanced awareness, improved data collection, and better-equipped law enforcement to protect Rwanda's environment effectively.

¹³⁵ *Idem*, p29

¹³⁶ *Idem*, p23

¹³⁷ *Ibid*,

¹³⁸ *Idem*, P13

CHAPTER III. LEGAL AND INSTITUTIONAL MECHANISMS EMPLOYED TO IMPROVE THE ENFORCEMENT OF ENVIRONMENTAL LAWS AND ENHANCE ENVIRONMENTAL PROTECTION EFFECTIVELY

III.0 INTRODUCTION

Addressing the enforcement of environmental laws and enhancing environmental protection requires a multifaceted approach. Governments, organizations, and communities around the world have recognized that effective enforcement is crucial to mitigating environmental degradation and ensuring sustainable development. This chapter explores strategies and reforms to enhance the enforcement of environmental laws, focusing on two main areas which are Legal Mechanism and Institutional Mechanism

III.1 LEGAL MECHANISMS

Effective environmental protection hinges on the robustness of legal frameworks and their enforcement mechanisms. Legal mechanisms are essential tools for ensuring compliance with environmental standards and regulations. This subtopic explores various legal strategies employed to strengthen the enforcement of environmental laws. These include the enacted laws, the Innovative Legal Tools and Approaches imposition of stricter penalties for violations. Additionally, international treaties and agreements play a significant role in harmonizing global environmental standards and fostering cooperation among nations.

By examining these legal approaches, we can understand how they contribute to more effective environmental governance and protection and their potential pitfalls are examined.

III.1.1 Penalties and Sanctions

Rwanda has enacted several laws to protect its environment and biodiversity, imposing stringent penalties for violations to ensure compliance and deter illegal activities¹³⁹. Below are some key laws that have been put in place to safeguard the environment:¹⁴⁰

¹³⁹Li, P., Li, D., Sun, X., Chu, Z., Xia, T., & Zheng, B. (2022). *Application of Ecological Restoration Technologies for the Improvement of Biodiversity and Ecosystem in the River. Water (Switzerland)*, 14(9). <https://doi.org/10.3390/w14091402> Accessed on 13/04/2024

¹⁴⁰ *Ibid*

1. Protection of Biodiversity

Article 44 of Law No.48/2018 of 13/08/2018 on the environment explicitly prohibits a range of activities detrimental to biodiversity¹⁴¹. These activities include

“Burning forests, national parks, and reserved areas; burning swamps, grazing land, bushes, and grass for agriculture or grazing; killing, injuring, and capturing endangered species; destroying or damaging habitats and young animals of endangered species; causing death or burning protected plants; and harvesting, transporting, or selling parts of endangered species. Additionally, cutting trees in forests, protected areas, or national parks is strictly forbidden”¹⁴²

To reinforce these prohibitions, Article 59 of the same law stipulates severe penalties for offenders. Anyone who causes death or destroys protected plants faces imprisonment for a term between three and five years, coupled with a fine ranging from Frw 1 million to Frw 3 million.¹⁴³

2. Ban on Plastic Carry Bags and Single-Use Plastic Items

In a bid to reduce plastic pollution, Rwanda enacted Law No. 17/2019 of 10/08/2019, which prohibits the manufacturing, importation, use, and sale of plastic carry bags and single-use plastic items. The law enforces a series of penalties for violations including:¹⁴⁴

- **Article 10** imposes a fine equivalent to ten times the value of imported plastic carry bags and single-use plastic items, along with their dispossession.
- **Article 11** fines wholesalers of these plastic items Frw 700,000 and mandates their dispossession.
- **Article 12** penalizes retailers with a fine of Frw 300,000 and dispossession of the prohibited items.

¹⁴¹ Article 44 of Law No.48/2018 of 13/08/2018 on the environment

¹⁴² *Ibid*

¹⁴³ *Ibid*

¹⁴⁴ Rwandan Law No. 17/2019 of 10/08/2019

3. Illegal Mining and Mineral Trade

Rwanda has also addressed illegal mining and mineral trade to protect its natural resources. Offenders face imprisonment for a term between two and six months and a fine ranging from Frw 1 million to Frw 5 million, or one of these penalties. Additionally, the court orders the confiscation of any seized minerals or quarries that are stored, traded, or processed without a license.¹⁴⁵

4. Enacted Laws to Protect the Environment

The Rwandan legal framework includes comprehensive laws specifically designed to protect various aspects of the environment. These enacted laws form the basis of Rwanda's environmental governance:¹⁴⁶

- **Law No. 48/2018 on Environment:** This law sets the overall framework for environmental protection, outlining prohibited activities and penalties.
- **Law No. 17/2019 on Plastic Ban:** This law specifically targets plastic pollution, demonstrating Rwanda's proactive stance on reducing environmental harm caused by plastics.
- **Law No. 58/2018 on Mining and Quarry Operations:** Regulates mining activities to ensure they do not harm the environment.
- **Law No. 26/2012 Governing Land in Rwanda:** Provides guidelines for land use and management, emphasizing sustainable practices.
- **Law No. 70/2013 on Biodiversity Protection:** Focuses on conserving Rwanda's rich biodiversity through strict regulations and penalties for violations.

These stringent penalties and sanctions, along with comprehensive enacted laws, reflect Rwanda's commitment to enforcing environmental laws and protecting its natural heritage. By implementing severe consequences for violations, the country aims to deter illegal activities and promote sustainable environmental practices.

¹⁴⁵ Article 54 of the law No. 58/2018 of 13/08/2018 on mining and quarry operations

¹⁴⁶ *Idem*, P17

III.1.2 International Treaties and Agreements

Rwanda has actively engaged in shaping the international environmental legal framework, participating in initiatives like the United Nations Environment Program (UNEP). It has ratified numerous significant international environmental treaties, which theoretically become part of its domestic law according to the monist theory.¹⁴⁷

Additionally, Rwanda has also ratified key international environmental treaties, including:

- **The Convention on Biological Diversity (CBD)**
- **The United Nations Framework Convention on Climate Change (UNFCCC)**
- **The Paris Agreement**
- **The Kyoto Protocol**

1. Convention on Biological Diversity (CBD)

Rwanda ratified the CBD on March 18, 1995. The CBD is an international legally binding treaty aimed at conserving biological diversity, promoting sustainable use of its components, and ensuring the fair and equitable sharing of benefits arising from genetic resources. Adopted at the Earth Summit in Rio de Janeiro in 1992, it addresses various aspects of biodiversity, including ecosystems, species, and genetic resources¹⁴⁸. The treaty recognizes the intrinsic value of biological diversity and the need to preserve it for future generations.

2. United Nations Framework Convention on Climate Change (UNFCCC)

Rwanda ratified the UNFCCC on August 18, 1998. The UNFCCC is an international environmental treaty adopted in 1992 at the Earth Summit in Rio de Janeiro. Its primary goal is to stabilize greenhouse gas concentrations in the atmosphere to prevent dangerous human interference with the climate system¹⁴⁹.

¹⁴⁷ UN Environment Programme. *Rwanda: Environment Profile*. Accessible at <https://www.unep.org/topics/disasters-and-conflicts/country-presence/rwanda>. Accessed on 16/04/2024

¹⁴⁸ GoR. (2011). *Rwanda biodiversity policy*. Republic of Rwanda, REMA, 68. https://www.rema.gov.rw/abs/content/read_file/5e54b9ef5b116

¹⁴⁹ Chazournes, L. B. de. (2008). *United Nations framework convention on climate change*. *United Nations Framework Convention on Climate Change*, 1–7. http://unfccc.int/essential_background/convention/background/items/2536.php

The convention provides a framework for negotiating specific international treaties (called "protocols" or "agreements") that may set binding limits on greenhouse gases.

3. Paris Agreement

Rwanda ratified the Paris Agreement on October 6, 2016. The Paris Agreement is a landmark international treaty adopted in 2015 under the UNFCCC. It aims to limit global warming to well below 2 degrees Celsius above pre-industrial levels, with efforts to limit the temperature increase to 1.5 degrees Celsius. The agreement requires all parties to set nationally determined contributions (NDCs) and to strengthen these efforts over time¹⁵⁰. It emphasizes the importance of global cooperation, transparency, and accountability in addressing climate change.

4. Kyoto Protocol

Rwanda ratified the Kyoto Protocol on July 23, 2004. The Kyoto Protocol is an international treaty linked to the UNFCCC, adopted in 1997 and entered into force in 2005. It commits its parties, primarily developed countries; to reduce greenhouse gas emissions based on the scientific consensus that global warming is occurring and human-made CO₂ emissions are driving it. The protocol set binding emission reduction targets for participating developed countries, with the aim of reducing overall emissions to combat climate change¹⁵¹.

It also established mechanisms like emissions trading and the Clean Development Mechanism (CDM) to help countries meet their targets.

By embedding these international principles into national laws, Rwanda demonstrates its commitment to aligning its environmental policies with global standards and promoting sustainable development.

Despite the growing acknowledgment of the crucial need to tackle numerous pressing environmental concerns and the evident determination from political quarters Rwanda faces obstacles rooted in cultural, economic, political, legal, and geographic factors, compounded by limited resources and technical expertise, hindering its ability to effectively address these issues.¹⁵²

¹⁵⁰ REMA. (2023). *National Carbon Market Framework, Kigali, Rwanda. September, 1–56.*

¹⁵¹ Rwanda 's First Biennial Update Report Under the United Framework Convention Climate Change (UNFCCC) Rwanda 's First Biennial Update Report. (2021).

¹⁵² *Ibid*

Future strategies aimed at enhancing the enforcement of environmental laws in Rwanda might entail refining the legal and regulatory framework concerning the environment, and fostering greater public awareness and involvement¹⁵³.

In essence, these stringent penalties and sanctions, along with comprehensive enacted laws and treaties, reflect Rwanda's commitment to enforcing environmental laws and protecting its natural heritage. However, in practice, Rwandan judicial decisions seldom invoke these laws, either due to a lack of awareness among lawyers and judges or the public at large, or limited resources.¹⁵⁴

III.1.3 Environmental Policies

Throughout its development journey, Rwanda has recognized the critical role of the environment and climate change in achieving sustainable development. In 2003, the Government of Rwanda adopted its first environment policy to guide the management of its environment and natural resources.¹⁵⁵

This was followed by the Organic Law N° 04/2005 in April 2005, which established the framework for environmental protection, conservation, and promotion. In April 2006, law N° 16/2006 was enacted to define the organization, functioning, and responsibilities of the Rwanda Environment Management Authority (REMA).

Additionally, in December 2011, law N°54/2011 established the Rwanda Meteorology Agency (Meteo Rwanda) and outlined its mission, organization, and functioning. The National Fund for Environment (FONERWA/Rwanda Green Fund) was created by law N°16/2012 in May 2012, significantly advancing environmental initiatives in the country.¹⁵⁶

Several policies have been implemented to manage various environmental and natural resource aspects, including land policy, forestry policy, mining and geology policy, biodiversity policy, wildlife policy, and national meteorology policy.¹⁵⁷

¹⁵³ *Idem*, P15

¹⁵⁴ *Idem*, p11

¹⁵⁵ *rema*. (2003). Republic of rwanda ministry of lands, resettlement and environment " rwanda environmental policy "[.https://rema.gov.rw/fileadmin/templates/documents/rema_doc/policies/rwanda%20environmental%20policy_english.pdf](https://rema.gov.rw/fileadmin/templates/documents/rema_doc/policies/rwanda%20environmental%20policy_english.pdf). Accessed on 14/05/2024

¹⁵⁶ *Idem*, p16

¹⁵⁷ *Idem*, p17

Laws have also been enacted to promote sustainable and low-carbon development across economic sectors¹⁵⁸. These include the land law, forestry law, mining law, water law, biodiversity law, legislation governing Environmental Impact Assessments (EIA), guidelines for Strategic Environmental Assessments (SEA), the air quality preservation law, and the prohibition of polythene bags.¹⁵⁹

Rwanda has ratified multiple Multilateral Environmental Agreements (MEAs), such as the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Basel Convention, the Montreal Protocol, and the Rotterdam Convention¹⁶⁰. As previously discussed, them.

Consequently, Implementation of these laws, policies, and agreements has yielded tangible results, including the piloting of green village programs, afforestation initiatives, and the rehabilitation of degraded areas like Nyungwe, Gishwati, and Mukura national parks, increasing forest coverage to 29.8% by 2017. Biodiversity conservation efforts have expanded eco-tourism and rehabilitated critical wetlands, boosting agricultural productivity. Rwanda has also banned and controlled the use of non-biodegradable plastic bags since 2008 to maintain a clean environment.¹⁶¹

In Rwanda, ‘green’ and ‘growth’ are now inseparable. National strategic documents, including the revised 2015 Constitution, Vision 2020, NST1, and GGCRS, prioritize the environment and climate change. The country acknowledges the increasing threats of climate variability and change, which challenge sustainable development¹⁶².

Recognizing the pressures from major production sectors on the environment and natural resources, Rwanda has made significant progress in integrating environmental and climate change considerations into these sectors and the District Development Strategies (DDS) to promote sustainable economic growth¹⁶³.

¹⁵⁸ Ministry of Environment Rwanda. (2019). *National Environment and Climate Change Policy*. Ministry of Environment, Rwanda, June, 18–19. http://www.fonerwa.org/sites/default/files/2021-06/Rwanda_National_Environment_and_Climate_Change_Policy_2019

¹⁵⁹ *Ibid*,

¹⁶⁰ *Idem*, p12

¹⁶¹ *Idem*, p19

¹⁶² *Ibid*

¹⁶³ *Ibid*

This integration has been facilitated by tools like Budget Call Circular statements, checklists, assessments, and the establishment of the Department of Environment Education and Mainstreaming (DEEM) under REMA. A draft National Environment and Climate Change Mainstreaming Strategy has been developed to further enhance this integration during the NST1 period¹⁶⁴.

Looking ahead, sustaining achievements and addressing ongoing environmental and climate change challenges remain critical. Key issues include land degradation, deforestation, reliance on biomass for fuel, pollution, lack of eco-friendly transport systems, vulnerability of natural ecosystems, shortage of low-carbon materials for housing and green infrastructure, inadequate waste treatment, increasing electronic, industrial, and radioactive waste, and limited environmental governance coordination¹⁶⁵.

More efforts are needed to develop comprehensive tools for implementation, mainstreaming, and sectoral ownership, as well as infrastructure development, such as waste resource management, and positioning Rwanda to leverage international climate finance opportunities.

III.1.4 Investigation and Prosecution of Environmental crimes

Despite having those above-mentioned laws, Regulations, policies and started training of judges in other tackle on environmental issues, Rwanda lacks specialized environmental law courts, with environmental cases typically heard by general and administrative courts, as well as the Supreme Court on appeal. And only limited number of environmental cases make it to court, and plaintiffs often contend with formidable business interests as indicated by the report made by RPPA.¹⁶⁶

Regardless of the thoroughness and efficacy of the training provided to Rwandan judges in environmental law, its impact remains limited if suitable cases fail to reach the courtrooms. The lack of environmental law violations prosecuted or pursued through legal channels can be attributed to a multitude of factors, including resource constraints and lack of victimization in environmental crimes¹⁶⁷..

¹⁶⁴ *Idem*, p 18

¹⁶⁵ *Idem*, p10

¹⁶⁶ *Idem*, p 11

¹⁶⁷ Ministry of Environment Rwanda. (2019). *National Environment and Climate Change Policy*. Ministry of Environment, Rwanda, June, 18–19. http://www.fonerwa.org/sites/default/files/2021-06/Rwanda_National_Environment_and_Climate_Change_Policy_2019.pdf

Additionally, challenges stemming from geographic isolation, particularly in rural areas, further impede the implementation of legal mechanisms and hinder access to requisite technical and legal expertise necessary for gathering circumstantial and expert evidence¹⁶⁸.

Essential to addressing severe breaches of environmental legislation are technical skills in investigation and prosecution. Success within the Rwandan legal system hinges on the collection of technically and forensically valid evidence, necessitating the involvement of environmental experts and adherence to internationally recognized protocols¹⁶⁹. This becomes especially crucial when grappling with complex scientific disputes regarding causation and the long-term environmental repercussions of alleged activities.

Leveraging scientific tools such as satellite imagery can serve as a potent means for investigating and prosecuting illegal clearing and forest fires. However, it is worth noting that under Rwandan environmental legislation, government officials, including those from environmental agencies or the Ministries of Forestry and Fisheries, lack the authority to independently investigate or prosecute environmental violations. Instead, such cases must first be investigated by the police before being presented to the courts by a prosecutor¹⁷⁰.

Furthermore, Rwanda has implemented a toolkit to help judicial authorities manage wildlife and other environmental crimes, tackling issues such as insufficient evidence. The Rwanda Investigation Bureau (RIB) and the Ministry of Environment have also introduced the use of drones to fight environmental crimes, though their effectiveness in overcoming this challenge has yet to be determined¹⁷¹.

¹⁶⁸ *Ibid*

¹⁶⁹ *Ibid*,

¹⁷⁰ Kipāne, A., & Vilks, A. (2022). *Legal Framework for Environmental Protection in the Context of Sustainable Development*. *European Journal of Sustainable Development*, 11(4), 169. <https://doi.org/10.14207/ejsd.2022.v11n4p169>

¹⁷¹ *Ibid*,

Given this framework, comprehensive training in environmental law for both police officers and prosecutors is imperative to bolster enforcement efforts. The development of national environmental investigation guidelines or standards would greatly aid in enhancing investigation skills.¹⁷²

Similarly, the establishment of environmental prosecution guidelines would prove invaluable in navigating the complexities of prosecuting environmental cases. These measures collectively contribute to strengthening the enforcement of environmental laws in Rwanda, thereby safeguarding its natural resources and promoting sustainable development.¹⁷³

III.2 INSTITUTIONAL MECHANISMS

The enforcement of environmental regulations in Rwanda faces significant challenges due to the complexity of its legal and regulatory system, intricate prosecution and civil enforcement procedures, and a lack of institutional capacity and resources in environmental law.

While Rwanda has a well-structured framework for addressing environmental crimes, supported by key institutions with distinct mandates defined by specific laws, the effectiveness of these measures is hindered by the above-mentioned challenges. The judicial system, established under the Rwandan Constitution and governed by laws such as Law N° 30/2018, plays a critical role in adjudicating environmental crime cases. The institution mechanisms involved in combating environmental crimes and promotion of environmental protection system includes the following Organizations;

III.2.1 Ministry of Environment (MoE)

The Ministry of Environment (MoE), established by Presidential Order N° 079/01 of 16/08/2003, plays a crucial role in formulating and implementing environmental policies and laws. It oversees compliance with environmental regulations, conducts research, and leads public awareness campaigns.

¹⁷²<https://issafrica.org/research/handbooks-and-training-manuals/enforcement-of-environmental-crime-laws-a-framework-training-manual-for-law-enforcement-agencies> accessed on 8/6/2024

¹⁷³ *Ibid*

Within the MoE, the Directorate of Environmental Regulations and Pollution Control ensures regulatory compliance, the Directorate of Climate Change and International Obligations manages climate policies and international agreements, and the Directorate of Natural Resources Management focuses on the sustainable use of resources.¹⁷⁴

Under supervision of the Ministry in charge of environment, Presidential Order N° 033/01 Of 06/05/2022 Governing Rwanda Environment Management Authority, REMA holds the legal mandate for national environmental protection, conservation, promotion and overall management, including advisory to the government on all matters pertinent to the environment and climate change.¹⁷⁵

III.2.2 Ministry of Justice (MINIJUST)

The Ministry of Justice (MINIJUST), operating under Law N° 19/2013 of 25/03/2013, ensures the proper enforcement of environmental laws. This ministry develops and reviews environmental legislation, supports prosecution efforts, and provides judicial training. Key components include the Directorate of Legal Drafting and Advisory Services, which develops environmental laws, the Directorate of Criminal Affairs, supporting environmental crime prosecution, and the Institute of Legal Practice and Development (ILPD), which trains legal professionals on environmental issues and legal professionals.¹⁷⁶

III.2.3 National Public Prosecution Authority (NPPA)

The National Public Prosecution Authority (NPPA), established by Law N° 42/2013 of 16/06/2013, is tasked with prosecuting criminal cases, including environmental crimes. The Directorate of Criminal Prosecutions prepares cases, while a specialized Unit for Environmental Crimes focuses specifically on these offenses.¹⁷⁷

¹⁷⁴ Presidential Order N° 079/01 of 16/08/2003,

¹⁷⁵ Presidential Order N° 033/01 Of 06/05/2022

¹⁷⁶ operating under Law N° 19/2013 of 25/03/2013

¹⁷⁷ Law N° 42/2013 of 16/06/2013 determining management of land

III.2.4 Rwanda Environment Management Authority (REMA)

The Rwanda Environment Management Authority (REMA), founded under Law N° 16/2006 of 03/04/2006, oversees the implementation of environmental policies and regulations. REMA monitors environmental compliance, conducts research, and promotes public education on environmental issues.

Its key departments include the Department of Environmental Regulation and Pollution Control, which enforces compliance, the Department of Research and Environmental Planning, which handles research and planning, and the Department of Environmental Education and Mainstreaming, which promotes environmental awareness and integrates environmental considerations across sectors.¹⁷⁸

III.2.5 Rwanda Investigation Bureau (RIB)

The Rwanda Investigation Bureau (RIB), established by Law N° 12/2017 of 07/04/2017, is responsible for investigating criminal activities, including environmental crimes. The Directorate of Criminal Investigations handles serious crimes, while a specialized Unit for Environmental Crimes focuses on investigating environmental offenses.¹⁷⁹

III.2.6 Rwanda National Police (RNP)

The Rwanda National Police (RNP), established by Law N° 46/2010 of 14/12/2010, enforces laws and maintains public order, including environmental regulations. The RNP has an Environmental Protection Unit dedicated to enforcing environmental laws that collaborates with other agencies in investigating environmental crimes.¹⁸⁰

To enhance environmental law enforcement and promote environmental protection, thirty police officers have been trained in environmental conservation as part of the Rwanda National Police (RNP). This training aimed to supplement and enforce national environmental protection programs.

¹⁷⁸Law n°16/2006 of 03/04/2006 determining the organization, functioning and responsibilities of Rwanda Environment Management Authority

¹⁷⁹ Law n°12/2017 of 07/04/2017 establishing the Rwanda investigation bureau and determining its mission, powers, organisation and functioning

¹⁸⁰ Law n° 09/2017 of 20/03/2017 modifying and complementing law n° 46/2010 of 14/12/2010 determining the powers, responsibilities, organization and functioning of the Rwanda national police

The two-day training, which concluded on Friday, October 29th 2021, at the National Police College (NPC) in Musanze District, was conducted by the RNP in partnership with the Rwanda Environment Management Authority (REMA). All the trainees are District Police Civic Education Officers (DPCEO).

The training focused on environmental protection in accordance with international standards on hazardous substances and wastes, according to Patrick Umuhoza, a Multilateral Environmental Agreement Officer at REMA¹⁸¹.

In essence, through the coordinated efforts of these institutions, Rwanda ensures that environmental laws are effectively implemented, violations are thoroughly investigated, and offenders are prosecuted, supporting the country's commitment to sustainable development and environmental protection.

¹⁸¹ *Rwanyiziri, G., & Nsengimana, H. (2011). Rwanda Environment Management Authority (REMA) Rwanda Environmental Research Strategy. June, 1–66.*

GENERAL CONCLUSION AND RECOMMENDATIONS

In this concluding section, I synthesize my findings on the challenges of environmental law enforcement in Rwanda and propose actionable recommendations. Our aim is to strengthen legal frameworks, enhance enforcement mechanisms, and promote sustainable development practices. These recommendations are pivotal for safeguarding Rwanda's natural resources and ensuring environmental justice for all.

IV.1 GENERAL CONCLUSION

In conclusion, this study sheds light on the multifaceted challenges facing the effective investigation and prosecution of environmental crimes under Rwandan law and offers pragmatic recommendations to address them. The findings underscore the critical importance of collaborative efforts among governmental agencies, civil society organizations, the private sector, and international partners to overcome these obstacles and advance environmental justice.

Key challenges identified include the lack of victimization mechanisms, resource constraints, and insufficient awareness of environmental laws and rights. These challenges impede the timely adjudication of environmental cases, hinder regulatory compliance, and perpetuate environmental degradation.

To address these challenges, targeted interventions are proposed across three main areas:

- 1. Legal and Institutional Reforms:** Strengthening legal frameworks, enhancing institutional capacities, and establishing specialized environmental courts or chambers to expedite legal proceedings and ensure consistent enforcement of environmental laws.
- 2. Capacity Building and Awareness:** Providing specialized training and professional development opportunities for judges, prosecutors, law enforcement officers, and environmental regulators to enhance technical expertise in environmental law and enforcement. Launching comprehensive awareness campaigns to educate the public, businesses, and government officials about environmental rights, responsibilities, and the importance of compliance with environmental laws.

3. **Stakeholder Engagement and Collaboration:** Promoting multi-stakeholder dialogue, transparency, and cooperation in environmental governance processes. Fostering partnerships between governmental agencies, civil society organizations, academia, and the private sector to leverage resources, share best practices, and implement collaborative solutions.

By implementing these recommendations, Rwanda can strengthen its legal and institutional frameworks, enhance enforcement mechanisms, and foster a culture of environmental stewardship and compliance. These efforts are crucial for safeguarding Rwanda's natural resources, promoting sustainable development, and ensuring environmental justice for all citizens.

However, achieving these objectives will require sustained political commitment, adequate funding, and collective action from all stakeholders. It is imperative that governmental agencies, policymakers, and civil society organizations work collaboratively to translate these recommendations into concrete actions and tangible outcomes.

IV.2 RECOMMENDATIONS

Given the challenges discussed, I can suggest several recommendations to improve the investigation and prosecution of environmental crimes in Rwanda and promote sustainable progress:

To Ministry of Environment

- **Victim Advocacy:** Establish mechanisms to empower environmental victims and provide them with avenues to seek legal recourse and obtain compensation for damages. Enhance victim support services and facilitate access to justice for those impacted by environmental harm.
- **Resource Allocation:** Allocate adequate financial and human resources to environmental enforcement agencies within the Ministry of Environment. Prioritize investments in training, equipment, and infrastructure to enhance enforcement capabilities.

- **Awareness Campaigns:** Launch comprehensive awareness campaigns to educate the public, businesses, and government officials about environmental laws, rights, and responsibilities. Utilize diverse communication channels and outreach initiatives to foster a culture of environmental stewardship.

To Ministry of Justice

- **Specialized Training:** Develop specialized training programs and continuing education opportunities for judges, prosecutors, and legal practitioners in environmental law and judicial procedures. Collaborate with academic institutions, legal experts, and international partners to enhance professional development initiatives.
- **Legal Aid Services:** Expand access to legal aid services for vulnerable populations affected by environmental harm. Provide pro bono legal assistance, legal clinics, and outreach programs to empower environmental victims and promote equal access to justice.
- **Case Management:** Implement streamlined case management processes and court procedures for handling environmental cases. Establish dedicated environmental law courts or specialized chambers within existing courts to expedite legal proceedings and improve judicial efficiency.

To REMA

- **Regulatory Reform:** Review and strengthen regulatory frameworks for environmental management and enforcement. Enhance compliance monitoring, inspection, and enforcement mechanisms to ensure adherence to environmental laws and regulations.
- **Capacity Building:** Invest in capacity-building initiatives for REMA staff, including training programs, technical assistance, and professional development opportunities. Build internal expertise in environmental monitoring, enforcement, and compliance assessment.
- **Stakeholder Engagement:** Foster meaningful engagement with civil society organizations, local communities, industry stakeholders, and other relevant actors in environmental governance processes. Promote transparency, dialogue, and collaboration to address environmental challenges collectively.

To Researchers

- To conduct interdisciplinary studies combining environmental science, law, economics, and social sciences to understand the dynamics of environmental crimes and their impacts.
- To assess the effectiveness of current environmental policies in Rwanda, identify gaps, and propose improvements. Conduct comparative studies with other countries to derive best practices and policy recommendations.

REFERENCES

BIBLIOGRAPHY

I. LEGAL INSTRUMENTS

I.1 National Legislations

1. The Constitution of the Republic of Rwanda.
2. Organic Law No. 04/2008 of 16/02/2008 Determining the Competences of the Rwanda Environment Management Authority (REMA), Official Gazette No. Special Issue of 16/02/2008,
3. Presidential Order No. 079/01 of 16/08/2003 Establishing the Rwanda Environment Management Authority, Official Gazette No. Special Issue of 16/08/2003.
4. Law No. 004/2003 of 11/02/2003 on Establishment, Organization, and Functioning of Rwanda Environment Management Authority (REMA), Official Gazette No. 6 of 11/02/2003.
5. Law No. 42/2013 of 16/06/2013 Determining Management of Land, Official Gazette No. 22 of 16/06/2013.
6. Law No. 16/2006 of 03/04/2006 Determining the Organization, Functioning, and Responsibilities of Rwanda Environment Management Authority, Official Gazette No. 17 of 03/04/2006.
7. Law No. 12/2017 of 07/04/2017 Establishing the Rwanda Investigation Bureau and Determining its Mission, Powers, Organisation, and Functioning, Official Gazette No. 20 of 07/04/2017.
8. Law No. 48/2018 of 13/08/2018 on Environment, Official Gazette No. 43 of 13/08/2018.
9. Ministerial Order No. 002/MINIREN/2017 of 02/02/2017 Determining the Procedures for Environmental Impact Assessment, Official Gazette No. 8 of 02/02/2017

10. National strategy for sustainable development (vision 2050)
https://www.minecofin.gov.rw/fileadmin/user_upload/minecofin/publications/reports/national_development_planning_and_research/vision_2050/english-vision_2050_abridged_version_web_final.pdf
11. Law No. 09/2017 of 20/03/2017 Modifying and Complementing Law No. 46/2010 of 14/12/2010 Determining the Powers, Responsibilities, Organization, and Functioning of the Rwanda National Police, Official Gazette No. Special Issue of 20/03/2017.

I.2 International Legislations

1. African Charter on Human and Peoples' Rights, adopted in Algiers on September 15, 1968, and entered into force on June 16, 1979.
2. French, D. (1998). Kyoto Protocol to the United Nations Framework Convention on Climate Change. *Journal of Environmental Law*, 10(1), 215–224.
<https://doi.org/10.1093/jel/10.1.215> Accessed on 17/04/2024
3. Cartagena Protocol on Biosafety, ratified by Rwanda in July 2003 by Presidential Order No. 14/01 of 24/04/2004, Official Gazette No. Special Issue of 24/04/2004.
4. Montreal Protocol on Substances that Deplete the Ozone Layer, entered into force on September 18, 2001.
5. African Convention on the Conservation of Nature and Natural Resources, adopted by the Organization of African Unity.
6. East African Community (EAC) Environmental Law framework.

I.6 Books

1. Adler, m. D. (2010). Regulatory theory. In a companion to philosophy of law and legal theory: second edition. <https://doi.org/10.1002/9781444320114.ch42> Accessed on 29/05/2024
2. White, rob (2017). Environmental harm: an eco-justice perspective. Policy press.
3. Situ, yingyi, and david emmons (2000). Environmental crime: the criminal justice system's role in protecting the environment. Sage publications.

4. Faure, michael, and günter heine (2005). Criminal enforcement of environmental law in the european union. Kluwer law international.

I.3 Case Laws

1. M.c. mehta vs kamal nath available online at https://www.informea.org/en/search?f%5b0%5d=type%3alegislation&f%5b1%5d=type%3acourt_decision Accessed on 17/05/2024
2. Rwanda court of appeal- rpa 00074/2018/ca (muhumuza. P.j., kaliwabo and tugireyezu. J.) 12 July 2019 accessed online at <https://www.amategeko.gov.rw/> Accessed on 4th June 2024
3. Massachusetts v. Environmental protection agency (2007)
4. Lujan v. Defenders of wildlife (1992) available online at <https://supreme.justia.com/cases/federal/us/504/555/> Accessed on 19/06/2024
5. United states v. Imperial irrigation district (1988) available online at <https://nysba.org/workarea/downloadasset.aspx?id=33830> 19/06/2024 Accessed on 19/06/2024
6. Friends of the earth v. Laidlaw environmental services (2000)

I.4 Law Reports

1. Environmental law presentation chimukoko. (2019).
2. Rema. (2003). Republic of Rwanda ministry of lands, resettlement and environment " Rwanda environmental policy "["https://rema.gov.rw/fileadmin/templates/documents/rema_doc/policies/rwanda%20environmental%20policy_english.pdf](https://rema.gov.rw/fileadmin/templates/documents/rema_doc/policies/rwanda%20environmental%20policy_english.pdf) Accessed on 11/06/2024
3. Rwanda environment management authority (rema) annual reports 2023 accessible at <https://www.rema.gov.rw/reports-1-1> Accessed on 9/06/2024

I.5 Law Review

1. Harrison, j. (2018). Significant international environmental law cases: 2017-18. Journal of environmental law, 30(3), 527–541. <https://doi.org/10.1093/jel/eqy021>

2. Birungi, munyaruguru, and nkubanyoye. "environmental law and policy in rwanda: a critical analysis." *rwanda law journal* (2010): 1-25.
3. Mugabe, faustin. "the challenges of implementing environmental law in rwanda: a case study of the nyamuragiro peatlands." *journal of african law* 53.2 (2009): 291-312.
4. Nibagwire, bernadette. "Access to justice in environmental matters in rwanda." *journal for environmental law* 23.2 (2011): 295-314.

I.7 Publications

1. Wilson, j. W., & primack, r. B. (2012). *Conservation biology in sub-saharan africa*.
2. National survey on chemicals and hazardous wastes and undertaking an institutional capacity assessment. (2023). September.
3. Drumbl, m. A. (2009). Accountability for property crimes and environmental war crimes: prosecution, litigation, and development. November, 1–33. <https://www.ictj.org/sites/default/files/ictj-development-propertycrimes-fullpaper-2009-english.pdf> Accessed on 19/06/2024
4. Nppa and rnp. (2019). Rwanda national police criminal investigation department analysis of causes of crimes, challenges and prevention strategies in rwanda joint research done by the national public prosecution authority (nppa) and rwanda national police (rnp).

I.8 Electronic Sources

1. World bank. Rwanda - environment, natural resources, and the green growth strategy (2022). Available online at <https://www.worldbank.org/en/country/rwanda> Accessed on 19/06/2024
2. Un environment programme. Rwanda: environment profile. Accessible at <https://www.unep.org/topics/disasters-and-conflicts/country-presence/rwanda> Accessed on 29/06/2024
3. Ayoub, s. (2023). (s) f or n = 1 φ 2 = φ. 1(1), 9.
4. Office of the prosecutor of the international criminal court. (2024). Policy on complementarity and cooperation. April.

5. Brantingham, p., & brantingham, p. (2017). Environment, routine, and situation: toward a pattern theory of crime: advances in criminological theory (pp. 259–294). <https://doi.org/10.4324/9781315128788-12> Accessed on 20/05/2024
6. Li, p., li, d., sun, x., chu, z., xia, t., & zheng, b. (2022). Application of ecological restoration technologies for the improvement of biodiversity and ecosystem in the river. Water (switzerland), 14(9). <https://doi.org/10.3390/w14091402> Accessed on 19/06/2024
7. Van der heijden, j. (2020). Responsive regulation in practice: a review of the international academic literature. Ssrn electronic journal, january. <https://doi.org/10.2139/ssrn.3651924> Accessed on 19/06/2024
8. Rwanyiziri, g., & nsengimana, h. (2011). Rwanda environment management authority (rema) rwanda environmental research strategy. June, 1–66.
9. Williams, c., certoma, c., greco, l., ogbara, n., & ohwojeheri, a. (2013). Digging deep corporate liability environmental justice strategies in the world of oil. September. <https://doi.org/10.13140/rg.2.2.26427.00807> Accessed on 11/07/2024