



SCHOOL OF LAW

**INCORPORATING CLIMATE CHANGE MITIGATION OBLIGATIONS FROM
THE PARIS AGREEMENT INTO ZAMBIA'S ENVIRONMENTAL MANAGEMENT
ACT NO. 12 OF 2011: A CRITICAL LEGAL ANALYSIS.**

BY

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I, **BANDA KAPUNGWE NATASHA**, do hereby declare that the dissertation entitled” *Incorporating climate change obligations from the Paris Agreement into Zambia’s Environmental Management Act No. 12 of 2011: a critical legal analysis*”.

Which is hereby submitted for the award of Masters (LLM) degree at the school of law, Zcas University, represents my own work and that due acknowledgement has been made where another people’s work has been used. I verily believe that this dissertation has not been previously presented for a degree at Zcas University or any other University.

I, therefore bear the full responsibility for the contents, errors, defects and any omissions therein.

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SUPERVISOR'S RECOMMENDATION

I, **DR FATIMA MANDHU**, recommends that the dissertation entitled,” *Incorporating climate change obligations from the Paris Agreement into Zambia’s Environmental Management Act No. 12 of 2011: a critical legal analysis*”. Done under my supervision be admitted by the University. I have checked it carefully and I am satisfied that it meets the requirements pertaining to format as laid down by the University regulations.

.....

DR. MANDHU

.....

DATE

DEDICATION

This research is dedicated to my beloved father, Mr. Ziko Banda and my mother Memory M Banda and my grandmother Margaret M Lombe for their belief in me, for everything they have imparted in me, for making it possible for me to reach this far and remaining patient with me. Above all, for their unconditional love.

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ABBREVIATIONS

EIA	ENVIRONMENTAL IMPACT ASSESSMENT
EMA	ENVIRONMENTAL MANAGEMENT ACT
GECCA	GREEN ECONOMY AND CLIMATE CHANGE ACT
GHG	GREEN HOUSE GAS
IPCC	INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)
NDC	NATIONAL DETERMINED CONTRIBUTIONS
SI	STATUTORY INSTRUMENT
UNFCCC	UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE
UNEP	UNITED NATIONS ENVIRONMENT PROGRAM
ZEMA	ZAMBIA ENVIRONMENTAL MANAGEMENT AGENCY

ABSTRACT

This dissertation examines the extent to which Zambia's Environmental Management Act No. 12 of 2011 incorporates climate change mitigation obligations arising from the Paris Agreement. Zambia ratified the Paris Agreement in 2016 and is thereby obligated to undertake domestic measures aimed at reducing greenhouse gas emissions and limiting global temperature increases. However, the Environmental Management Act No 12 of 2011, which serves as Zambia's principal environmental statute, was enacted prior to the adoption of the Paris Agreement and does not expressly address climate change mitigation obligations. This raises a fundamental question as to whether the Act adequately implements Zambia's international climate commitments. The research employs a doctrinal legal methodology through desktop analysis of primary and secondary legal materials, including the Environmental Management Act, the Paris Agreement, the Green Economy and Climate Change Act No. 18 of 2024, and relevant academic literature on international climate law and domestic environmental regulation. The study analyses provisions of the Environmental Management Act relating to pollution control, environmental impact assessment, institutional regulation and environmental standards, and evaluates their adequacy in implementing mitigation obligations under the Paris Agreement. The study finds that while the Environmental Management Act contains provisions that indirectly support climate mitigation through environmental protection, pollution control and environmental impact assessment mechanisms, it lacks express provisions addressing greenhouse gas emissions, carbon reduction obligations, and implementation of Nationally Determined Contributions. Consequently, the Act does not constitute a comprehensive legal framework for implementing Zambia's mitigation obligations under the Paris Agreement. The study further finds that institutional fragmentation, limited financial resources and inadequate technical capacity continue to weaken effective implementation of climate mitigation obligations in Zambia. The enactment of the Green Economy and Climate Change Act No. 18 of 2024 represents a significant legislative development that addresses many of the gaps identified within the Environmental Management Act by expressly domesticating obligations under the Paris Agreement. Notwithstanding this development, this dissertation concludes that Zambia requires comprehensive legal reforms, institutional strengthening, financing mechanisms and dedicated climate legislation that explicitly integrates mitigation targets, monitoring mechanisms and enforceable compliance standards in order to fully implement its obligations under the Paris Agreement.

Key words: Paris Agreement, Environmental Management Act, climate change mitigation obligations, Nationally Determined Contributions, Zambia, domestic implementation, greenhouse gas emissions, environmental law.

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CHAPTER ONE

1.1.INTRODUCTION

Climate Change is defined as change in the earth's climate over time. It is attributed directly or indirectly to human activities that alter the composition of the global atmosphere, adds to natural variability, and observed over comparable periods of time. Climate change is disrupting global economies and affecting lives, costing people, communities and countries. Weather patterns are changing, sea levels are rising, weather events are becoming more extreme and greenhouse gas emissions are now at their highest levels in history. Without action, the world's average surface temperature is likely to surpass 3 degrees Celsius this century.¹

Climate change mitigation refers to human interventions aimed at reducing greenhouse gas emissions or enhancing sinks that absorb such gases from the atmosphere.² Mitigation measures include the transition from fossil fuels to renewable energy sources, afforestation and reforestation programs, energy efficiency initiatives, sustainable agricultural practices and carbon capture technologies. Within international climate law, mitigation constitutes the primary mechanism through which States attempt to prevent dangerous anthropogenic interference with the climate system.

The importance of mitigation obligations derives from scientific consensus established by the Intergovernmental Panel on Climate Change (IPCC) that limiting global warming requires immediate and substantial reductions in greenhouse gas emissions. The IPCC has consistently warned that failure to implement ambitious mitigation measures will result in irreversible environmental damage, including sea-level rise, biodiversity loss, food insecurity and increased frequency of extreme weather events.³ Consequently, mitigation obligations have become central to the architecture of international climate change.

Prior to the Paris Agreement, International climate change mitigation efforts were largely governed by the Kyoto Protocol of 1997, which imposed binding emission reduction targets exclusively upon developed countries listed in Annex I of the UNFCCC. However, the Kyoto regime faced significant limitations because major emitters either withdrew from the Protocol or were not subjected to binding targets.⁴ The Paris Agreement therefore sought to establish a

¹ National Climate change learning strategy. (2020), Zambia Building A Resilient Future: Transformational Change Case Study. Climate Investment.

² Paris Agreement adopted 12 December 2015, entered into force 4 November 2016.

³ *ibid*

⁴ Intergovernmental Panel on Climate Change, Climate Change 2022: Mitigation of Climate Change

more inclusive and flexible framework capable of securing broader participation while promoting progressive climate ambition.

The Paris Agreement fundamentally altered the structure of climate mitigation obligations by introducing a bottom-up governance model centered upon nationally determined contributions (NDCs). Under this approach, States determine their own mitigation commitments according to national circumstances rather than receiving internationally imposed targets.⁵ Although this flexibility facilitated widespread participation, it simultaneously weakened the binding character of substantive mitigation obligations.

The Environmental Management Act No. 12 of 2011 of the laws of Zambia, (EMA) is Zambia's principal environmental statute. The extent to which it reflects obligations from the Paris Agreement is therefore critical in assessing domestic implementation of international climate commitments.

The Environmental Management Act requires that major developments likely to impact the environment undergo an Environmental Impact Assessment and obtain approval from the Zambia Environmental Management Agency (ZEMA).⁶ However, neither the Act nor its regulations explicitly address climate change, leaving its consideration in EIAs to practitioners' discretion.

Despite Zambia having ratified climate obligations under the Paris Agreement, its main environmental law legal framework does not explicitly spell out how climate change should be handled, which in turn creates a gap in implementation.

1.2.BACKGROUND OF THE STUDY

Climate change has increasingly become one of the most significant environmental challenges confronting both developed and developing countries. The continued increase in greenhouse gas emissions has contributed to rising global temperatures, environmental degradation, and extreme weather conditions such as floods, droughts, and heat waves. These effects threaten ecosystems, economic development, and human livelihoods, particularly in developing countries whose economies largely depend on climate-sensitive sectors such as agriculture, forestry, and energy production.

(Cambridge University Press 2022) 4

⁵ ibid

⁶ Environmental Management Act No. 11 of 2012 of the Laws of Zambia

In Zambia, climate change has negatively affected several sectors of the economy. The country has experienced prolonged droughts, unpredictable rainfall patterns, floods, and declining agricultural productivity. These environmental changes have adversely affected food security, water resources, hydroelectric power generation, and sustainable development. Recent studies indicate that climate change continues to increase environmental vulnerability in Zambia despite the existence of environmental protection measures and climate-related policies.⁷

The international community adopted the Paris Agreement in 2015 under the United Nations Framework Convention on Climate Change (UNFCCC) in order to strengthen global responses to climate change. The Agreement requires State Parties to undertake climate change mitigation measures aimed at reducing greenhouse gas emissions and limiting global temperature increase.⁸ Under the Paris Agreement, State Parties are required to prepare, communicate, maintain, and implement mitigation measures through domestic legal and policy frameworks.⁹

The Paris Agreement applies to Zambia following its ratification on 9 December 2016, through which the country assumed international obligations to mitigate climate change, strengthen climate resilience and submit and periodically update its Nationally Determined Contributions (NDCs). However, as Zambia follows a dualist legal system, these obligations are not directly enforceable in domestic law and require incorporation through an Act of Parliament before they can have legal effect within the country.¹⁰

The Paris Agreement benefits Zambia by facilitating access to climate finance, technology transfer and capacity-building support to advance climate action. It also promotes sustainable development by strengthening climate resilience, improving environmental governance and reducing vulnerability to the adverse effects of climate change. Additionally, the Agreement enhances international cooperation and transparency by requiring Parties to monitor and report progress towards achieving their climate commitments.¹¹

⁷ Mikkel Funder and Carol Mweemba, 'Interface Bureaucrats and the Everyday Remaking of Climate Interventions: Evidence from Climate Change Adaptation in Zambia' (2020) 55 *Global Environmental Change* 130.

⁸ Paris Agreement adopted 12 December 2015, entered into force 4 November 2016.

⁹ *ibid*

¹⁰ *ibid*

¹¹ *ibid*

Zambia's principal environmental legislation, the Environmental Management Act No. 12 of 2011, was enacted prior to the adoption of the Paris Agreement. Among others, the Act primarily provides for environmental protection, pollution prevention, environmental impact assessment, environmental planning, and sustainable management of natural resources.¹²

Additionally, the Act establishes the Zambia Environmental Management Agency (ZEMA) as the institution responsible for environmental regulation and enforcement in Zambia.¹³ This environmental institution regulates activities that may negatively affect the environment and contribute to greenhouse gas emissions.

1.3.STATEMENT OF THE PROBLEM

The Paris Agreement requires State Parties to implement climate change obligations through appropriate domestic legal and institutional measures, including obligations relating to climate change mitigation, greenhouse gas emission reduction, Nationally determined contributions and transparency in climate action. Zambia ratified the Paris Agreement, thereby undertaking to give effect to these obligations within its domestic legal framework. However, the Environmental Management Act No. 12 of 2011 was enacted prior to the adoption of the Paris Agreement and does not expressly provide for these climate change obligations. This creates uncertainty as to whether the Act provides a sufficient legal framework for implementing Zambia's obligations under the Paris Agreement. The absence of express statutory provisions incorporating these obligations presents a legal gap that may affect their effective implementation. Furthermore, the incorporation of these obligations into the Environmental Management Act No. 12 of 2011 may be constrained by legal, institutional, financial and technical challenges. It is against this background that this research examines how the climate change obligations under the Paris Agreement may be incorporated into the Environmental Management Act No. 12 of 2011 and the challenges that may arise in the process.

1.4.RESEARCH OBJECTIVES

The objectives of this research are to;

1. Examine climate change mitigation obligations under the Paris Agreement.

¹² Environmental Management Act No. 12 of 2011 of the Laws of Zambia

¹³ *ibid*

2. Analyze the extent to which the Environmental Management Act No. 12 of 2011 provides for the incorporation of climate change obligations from the Paris Agreement.
3. Evaluate the incorporation of the Paris Agreement climate obligation into Zambia's Environmental Management Act No. 12 of 2011.
4. Propose recommendations for strengthening the incorporation of climate change obligations into the Environmental Management Act No. 12 of 2011.

1.5.RESEARCH QUESTIONS

The questions of this research are;

1. What are the climate change mitigation obligations under the Paris Agreement?
2. What extent does the Environmental Management Act No. 12 of 2011 provides for the incorporation of climate change obligations from the Paris Agreement.
3. What steps can be put in place for climate change to be incorporated into the Environmental management Act No. 12 of 2011 from the Paris Agreement?
4. What measures can be adopted to strengthen the implementation and effectiveness of climate change mitigation under the Paris Agreement.

1.6.LITERATURE REVIEW

Mweemba notes that climate-related programmes in Zambia frequently struggle at the point of delivery, since what happens on the ground at community level does not always match what policy documents intend. This gap between design and delivery undermines the ability of adaptation measures to meaningfully reduce vulnerability to climate change.¹⁴

In relation to the legal framework, it has been established that the Environmental Management Act No. 12 of 2011 provides the main statutory basis for environmental protection in Zambia. However, it does not expressly set out detailed provisions on climate change adaptation. Thereby making it hard to interpret the Act in relation to climate change obligations.

¹⁴ Mikkel Funder and Carol Mweemba, 'Interface Bureaucrats and the Everyday Remaking of Climate Interventions: Evidence from Climate Change Adaptation in Zambia' (2020) 55 *Global Environmental Change* 130.

This view is broadly accepted, in the sense that, although the Environmental Management Act sets a general threshold for how environmental protection law should operate, it does not include express provisions regulating climate change obligations, leaving a legal gap that makes it difficult to interpret the Act in relation to such obligations.

Sakala and others contend that the way environmental assessments are carried out under current laws fails to properly factor in climate adaptation concerns, narrowing the Act's capacity to respond to climate-related risk and leaving a gap within the legislation.¹⁵

In a similar vein, Zulu and others point out that, even where environmental legislation exists, weak implementation structures and a shortage of technical capacity within the relevant institutions restrict how effectively it can respond to climate-related problems in practice.¹⁶ This in turn affects how adaptation-related provisions are applied in practice.

Preston goes on to argue that, even where domestic environmental statutes set out broad environmental protection principles, many States, Zambia included, continue to struggle to bring their domestic legal systems into line with the mitigation obligations contained in the Paris Agreement.¹⁷ In the same way, Roelfsema and others note that whether the Paris Agreement is implemented effectively turns largely on how adequate a country's domestic laws, institutions and enforcement mechanisms are in supporting its mitigation commitments.¹⁸

Peterson further contends that the disconnect between international climate commitments under the Paris Agreement and domestic environmental statutes continues to be a significant obstacle to climate mitigation in many developing States, Zambia among them.¹⁹

In addition, Rajamani and others maintain that, notwithstanding the Paris Agreement's heavy reliance on domestic implementation, Zambia has yet to put in place clear legislation specifically directed at reducing greenhouse gas emissions.²⁰ This position is similarly to that

¹⁵ Enock Nixon Sakala and others, 'Integration of Climate Change Adaptation in Environmental Assessment Processes in Zambia' (2023) *Journal of Natural and Applied Sciences*.

¹⁶ Kangacepe Zulu and others, 'Determinants of Effective Environmental Decision-Making in Zambia' (2025) 167 *Environmental Science and Policy* 104040.

¹⁷ Brian J Preston, 'The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part I)' (2021) 33 *Journal of Environmental Law* 1.

¹⁸ Mark Roelfsema and others, 'Taking Stock of National Climate Policies to Evaluate Implementation of the Paris Agreement' (2020) 11 *Nature Communications* 2096.

¹⁹ Lauri Peterson, 'Domestic and International Climate Policies: Complementarity or Disparity?' (2022) 22 *International Environmental Agreements: Politics, Law and Economics* 97.

²⁰ Javanya Rajamani and Carl Bruch, 'The 2021 Climate Change Regime and Domestic Implementation Challenges' (2021) 15 *Carbon and Climate Law Review* 220.

of Peel and others, who point out that domestic environmental statutes commonly omit the express climate mitigation provisions needed to give proper effect to international climate obligations.²¹

Skjærseth and others, in their study of domestic climate policy frameworks under the Paris Agreement, found that successfully carrying out mitigation obligations rests heavily on how States such as Zambia weave climate commitments into their national legislation and policy systems, and that fragmented domestic climate policies, in turn, weaken the implementation of international mitigation obligations.²²

Wegener maintains that the Paris Agreement is heavily reliant on domestic legal systems for its implementation, since mitigation obligations can only be put into practice through national legislation and institutions, adding that domestic environmental law is central to converting international climate obligations into measures that are enforceable at the national level.²³

In my view, Wegener's argument is largely convincing because domestic legal systems provide the practical means through which international climate obligations are implemented and enforced. In the Zambian context, the Environmental Management Act No.12 of 2011 does not provide the legal foundation upon which climate related obligations can be implemented. Thus, making the Paris Agreement obligations not fully effective through the Environmental Management Act of Zambia. However, domestic legislation should not be regarded as the sole determinant of compliance because the Paris Agreement also relies on other international reporting, monitoring and cooperation mechanisms to promote accountability

Saiger likewise notes the growing importance of domestic legal systems and courts in enforcing and giving effect to climate obligations under the Paris Agreement, arguing that domestic environmental legislation is the foundation upon which implementation of international climate obligations because international climate agreements largely depend on national legal systems for enforcement and practical application.²⁴

²¹ acqueline Peel and Hari Osofsky, 'Climate Change Litigation and Domestic Legal Frameworks' (2020) 32 *Journal of Environmental Law* 1.

²² on Birger Skjærseth and others, 'The Paris Agreement and Key Actors' Domestic Climate Policy Mixes: Comparative Patterns' (2021) 21 *International Environmental Agreements: Politics, Law and Economics* 59.

²³ Lennart Wegener, 'Can the Paris Agreement Help Climate Change Litigation and Vice Versa?' (2020) 9 *Transnational Environmental Law* 17.

²⁴ Anna-Julia Saiger, 'Domestic Courts and the Paris Agreement's Climate Goals: The Need for a Comparative Approach' (2020) 9 *Transnational Environmental Law* 37.

I concur with Saiger, save to put across that without domestic environmental legal frameworks the incorporation of the Paris Agreement would prove futile as it will not be implemented thereby rendering it inoperable in the execution of climate change obligations under it.

Trotter and others make a related point, arguing that simply adopting climate policies does not, on its own, guarantee that mitigation will actually be implemented effectively. They note that many low-income and developing countries still struggle with enforcement, weak institutional implementation and difficulties applying climate mitigation measures in practice, notwithstanding the climate policies and commitments they have adopted under the Paris Agreement.²⁵

Mayer further contends that the Paris Agreement places State Parties under an obligation to pursue the highest possible ambition in their climate mitigation efforts, and suggests that giving real effect to mitigation obligations calls for unambiguous domestic legal frameworks able to underpin climate action and emission-reduction measures.²⁶

I concur with Mayer et al arguments that effective implementation of mitigation obligations requires clear domestic legal framework. However, I further contend that the existence of domestic legislation alone is insufficient unless such legislation expressly incorporates climate change obligations and provides specific enforcement mechanisms. In Zambia, the Environmental Management Act contains broad environmental protection provisions but does not comprehensively regulate climate change mitigation. As a result, the country's ability to fully implement its obligations under the Paris Agreement remains constrained. It is therefore my position that Zambia requires a dedicated climate change legal framework that explicitly integrates mitigation targets, monitoring mechanisms, and enforcement measures to effectively fulfil its international commitments

In addition to the above, the reviewed literature demonstrates that while considerable framework exists on climate change mitigation and implementation of the Paris Agreement generally, limited attention has been paid to the adequacy and effectiveness of Zambia's Environmental Management Act No. 12 of 2011 in implementing and enforcing climate change

²⁵ Philipp A Trotter and others, 'How Climate Policies Can Translate to Tangible Change: Evidence from Eleven Low- and Lower-Middle Income Countries' (2022) 346 *Journal of Cleaner Production* 131014.

²⁶ Benoit Mayer, 'The "Highest Possible Ambition" on Climate Change Mitigation as a Legal Standard' (2024) 73 *International and Comparative Law Quarterly* 1.

mitigation obligations under the Paris Agreement. Most existing studies focus on environmental governance and policy implementation without critically examining whether the Act itself sufficiently incorporates climate mitigation obligations and enforcement mechanisms. This literature review therefore has laid a fundamental analysis on the assessment of the effectiveness of Zambia's Environmental Management Act No. 12 of 2011 in implementing climate change mitigation obligations under the Paris Agreement.

1.7.SIGNIFICANCE OF THE STUDY

This study is significant because it contributes to the legal framework on climate change mitigation and environmental law in Zambia. The research will assist policymakers, legal practitioners, environmental institutions, and researchers in understanding whether the Environmental Management Act No. 12 of 2011 adequately implements climate change mitigation obligations under the Paris Agreement. Further, the study contributes to academic literature by specifically examining the relationship between Zambia's Environmental Management Act and climate mitigation obligations under the Paris Agreement.

1.8.RESEARCH METHODOLOGY

The study will employ a doctrinal legal research method through a desktop study of all relevant primary and secondary legal materials. Primary sources will include: the Environmental Management Act No. 12 of 2011, the Paris Agreement, and other relevant legal instruments relating to climate change mitigation. Secondary sources will include; journal articles; textbooks; reports; and scholarly publications on climate change mitigation and environmental law the doctrinal approach is appropriate because the research seeks to identify legal gaps, interpret statutory provisions, and propose legal amendments.

1.9.SCOPE OF THE STUDY

The study focuses on the Incorporation of Zambia's Environmental Management Act No. 12 of 2011 in implementing climate change mitigation obligations from the Paris Agreement. The research specifically examines legal provisions relating to pollution control, environmental protection, environmental impact assessment, emissions reduction, and implementation of international environmental climate change obligations within Zambia.

1.9. CHAPTER OUTLINE

Chapter one introduces the study and essentially incorporates the research proposal. It sets out the background to the study, the problem statement, the objectives of the study, the research questions, the methodology and the literature review.

In chapter two, this study Examines climate change mitigation obligations under the Paris Agreement.

In chapter three, Analyze the extent to which the Environmental Management Act No. 12 of 2011 provides for the incorporation of climate change obligations from the Paris Agreement.

In chapter four, this study evaluates the incorporation of the Paris Agreement climate obligation into Zambia's Environmental Management Act No. 12 of 2011.

In chapter five, the final chapter, outlines the findings, conclusions, recommendations and proposed amendments of the laws.

CHAPTER TWO

THE EXAMINATION OF CLIMATE CHANGE MITIGATION OBLIGATIONS UNDER THE PARIS AGREEMENT.

2.0 INTRODUCTION

This chapter will examine the legal obligations that the Paris Agreement creates for party members in its goal of achieving the reduction of greenhouse gas emissions. Like all legal provisions, the Paris Agreement does bring consequences when member parties do not follow the Paris Agreement. This chapter will look at the main important elements of the Paris Agreement. What do the obligations intend to realize while providing them to the member state parties? Further it will go in-depth in discussing different elements of the obligations that have been noted in the Paris Agreement. While knowing that the Paris Agreement gives its member state parties the freedom to realize their obligations it is indeed important to see how the Paris Agreement gives this to its member state parties.

2.1.ZAMBIA'S DUALIST LEGAL SYSTEM IN INCORPORATING CLIMATE CHANGE OBLIGATIONS.

Zambia operates under a dualist legal system, under which ratification of an international treaty does not by itself make that treaty part of domestic law; rather, its provisions must first be incorporated through an Act of Parliament before domestic courts can enforce them.²⁷ Although Zambia ratified the Paris Agreement and assumed international obligations relating to climate change mitigation, greenhouse gas (GHG) emission reduction and transparency, these obligations are not directly enforceable within Zambia unless they are incorporated into national legislation.²⁸ Consequently, the implementation of the Paris Agreement depends on the existence of an appropriate domestic legal framework. This makes the incorporation of the Agreement's climate change obligations into the Environmental Management Act No. 12 of 2011 a significant legal issue, as the Act was enacted before the adoption of the Paris Agreement and does not expressly provide for several of its obligations.²⁹ The Paris Agreement nevertheless recognises that Parties should implement their obligations in light of their national circumstances and respective capabilities, while pursuing progressive efforts to address climate change.³⁰ However, this flexibility does not dispense with the obligation on States, particularly dualist States such as Zambia, to establish a domestic legal framework capable of giving effect to those obligations.³¹

²⁷ M Dixon, Textbook on International Law (8th edn, Oxford University Press 2021) 48–52;

²⁸ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016)

²⁹ Environmental Management Act No 12 of 2011 of the Laws of Zambia

³⁰ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016)

³¹ Marie-Claire Cordonier Segger, *Crafting Trade and Investment Accords for Sustainable Development*

2.2.MITIGATION MEASURES UNDER THE PARIS AGREEMENT

Article 4 of the Paris Agreement, creates binding commitments by all parties. As earlier espoused, it is there to communicate and maintain a nationally determined contribution also called the NDCs. The NDCs are there to pursue and achieve these measures. Furthermore, after every 5 years, the NDCs should be analysed, and the results of the last 5 years should be presented. In that order, it will be clear to look at the achievements. This helps in clarity and transparency.³² Every NDCs should be improved every 5 years.³³ The goals should always be to aim at a higher goal achievement than before. In this case, it is also important to mention that the countries that are more developed and have a higher economic status should also try to help smaller poorer countries, in taking the lead and help mitigate climate change.

The smaller countries like Zambia should try to enhance their mitigation efforts and slowly try to achieve also higher goals in their NDCs.³⁴ The Paris Agreement established in Article 2.1A two goals, firstly, to hold temperature increase to well below 2°C above pre-industrial levels. Secondly, to pursue efforts to limit the temperature increase to 1.5°C. Furthermore, article 4.1 of the same Agreement mentions two emissions goals; first and foremost, to reach global peaking of emissions as soon as possible and to undertake rapid reductions thereafter, and secondly to achieve net zero emissions in the second half of the century.³⁵

Climate change mitigation obligations under the Paris Agreement have created a substantial academic and legal debate, particularly concerning their legal nature, enforceability and effectiveness. While the Agreement has been celebrated for achieving near-universal participation, scholars continue to question whether it creates sufficiently binding obligations capable of compelling States to undertake meaningful emission reductions.³⁶ Central to this debate is the distinction between procedural obligations, which are legally binding, and

(Cambridge University Press 2021) 284–289.

³² Jeff Fiedler, Lisa Schindler Murray, John Verdieck, Erin Beasley and Maggie Comstock, ‘Practical implications of the Katowice climate package for developing country parties and land sector reporting, The Nature Conservancy, < NDC Transparency Guidance (nature.org) > P. 4 accessed on 1 May 2026

³³ See United Nation, ‘ Climate Action – All about the NDCs’ <All About the NDCs | United Nations> accessed on 2 May 2026

³⁴ See United Nations Climate Change, ‘ Key Aspects of the Paris Agreement’ < Key aspects of the Paris Agreement | UNFCCC > accessed on 2 May 2023

³⁵ Daniel Bodansky, ‘Paris Agreement, Audio-visual library of international’ [2021] United Nations < Paris Agreement (un.org) > accessed on 25 April 2026

³⁶ Paris Agreement adopted 12 December 2015, entered into force 4 November 2016.

substantive emission reduction commitments, which remain largely nationally determined and non-punitive.³⁷

2.3.LEGAL FRAMEWORK GOVERNING MITIGATION OBLIGATIONS UNDER THE PARIS AGREEMENT

Articles 2, 3, and 4 of the Paris Agreement provide the primary legal foundation for climate change mitigation. However, the relevance of these rules is not only in the obligations they impose on State Parties, but also in the extent to which domestic legal systems can effectively enforce them. For Zambia, this presents a significant question: whether the Environmental Management Act No. 12 of 2011 provides a suitable legal framework for achieving the mitigation commitments specified in the Paris Agreement.

Article 2(1)(a) outlines the overarching goal of keeping global temperature increases to well below 2°C above pre-industrial levels while working to limit warming to 1.5°C.³⁸ Although this provision does not set particular emission reduction objectives for individual states, it does establish a global baseline against which national climate policies can be evaluated. Mayer contends that Article 2 serves primarily as an interpretive framework, rather than a direct source of enforceable requirements. Nonetheless, its significance rests in requiring states to link domestic environmental policy with internationally agreed-upon climate goals. From a Zambian viewpoint, the Environmental Management Act No. 12 of 2011 was enacted before to the passage of the Paris Agreement, and so has no explicit provisions aimed at meeting the temperature goals outlined in Article 2.³⁹

While the Act establishes systems for pollution control, environmental impact assessment, and environmental protection, it does not include climate-specific mitigation duties, greenhouse gas reduction objectives, or carbon management methods.⁴⁰ This results in a legislative vacuum between Zambia's international climate commitments and its domestic legal framework. Article 3 requires Parties to undertake and communicate ambitious efforts to achieve the Agreement's objectives. Unlike the Kyoto Protocol, which put duties primarily on industrialized countries, Article 3 takes a universal approach, mandating participation from all

³⁷ Benoit Mayer, 'Climate Change Mitigation as an Obligation under Human Rights Treaties?' (2021) 115(3) American Journal of International Law 409, 412.

³⁸ Benoit Mayer, 'Climate Change Mitigation as an Obligation under Human Rights Treaties?' (2021) 115(3) American Journal of International Law 409, 412.

³⁹ Ibid

⁴⁰ Paris Agreement adopted 12 December 2015, entered into force 4 November 2016

states. However, the clause gives individual states a wide range of options for the kind and breadth of mitigating measures.⁴¹

This adaptability has drawn both praise and criticism. Bodansky maintains that the success of the Paris Agreement lies in its capacity to secure near-universal participation through flexible requirements, whereas Voigt cautions that such flexibility may weaken accountability by leaving States free to set their own level of ambition. This debate matters for Zambia because the efficiency of its climate mitigation efforts depends heavily on the strength of its domestic implementation mechanisms, the central mitigating provision being Article 4.⁴²

Article 4(2) of the Paris Agreement requires parties to create, communicate, and maintain consecutive Nationally Determined Contributions (NDCs). The inclusion of the phrase "shall" provide a legally binding procedural duty for States to continue participating in the Paris Agreement's mitigation framework. However, the provision does not oblige states to meet particular emission reduction targets.⁴³ Article 4(2) is relevant to this study since Zambia satisfied its procedural duties by submitting Nationally Determined Contributions.

The more important question is whether the Environmental Management Act establishes an adequate legal framework for carrying out the said objectives. An analysis of the Environmental management Act finds that it does not clearly include NDC duties, establish institutional responsibility for meeting mitigation targets, or establish methods for tracking progress toward greenhouse gas reductions. As a result, while Zambia complies procedurally with Article 4(2) of the Paris Agreement,⁴⁴ substantive implementation is still dependent on policy initiatives rather than legally binding statutory responsibilities. Article 4(3) mandates that each subsequent NDC constitute a step forward from earlier commitments and reflect the State's highest potential aspiration. This provision is particularly relevant for the current study because it generates the expectation of continuing improvement in national climate change.

The concept of "highest possible ambition" raises serious concerns about the effectiveness of Zambia's Environmental Management Act No. 12 of 2011.⁴⁵ Although the Act establishes a broad framework for environmental protection, it lacks mechanisms to drive progressively ambitious mitigation achievements, as required by Article 4(3) of the Paris Agreement. There

⁴¹ Christina Voigt and Felipe Ferreira, 'The Legal Power of Highest Possible Ambition under Article 4(3) of the Paris Agreement' (2025) *Climate Law*.

⁴² *Ibid*

⁴³ Paris Agreement adopted 12 December 2015, entered into force 4 November 2016

⁴⁴ *Ibid*

⁴⁵ Benoit Mayer, 'Temperature Targets and State Obligations on the Mitigation of Climate Change' (2021) 33(3) *Journal of Environmental Law* 585.

are no regulatory requirements for periodic reviews of climate mitigation measures, no legally binding emission reduction paths, and no required reporting duties directly related to climate mitigation performance. As a result, the Act falls short of establishing the progressive legal framework envisioned by Article 4(3) of the Paris Agreement.⁴⁶

As a result, although the Paris Agreement creates a growing system of climate ambition, the Environmental Management Act remains primarily concerned with traditional environmental management. This disparity illustrates that Zambia's primary environmental legislation has not fully responded to the current climate change duties required by the Paris Agreement.

2.4.CLIMATE CHANGE LITIGATION AND TS IMPLICATIONS FOR THE IMPLEMENTATION OF MITIGATION OBLIGATIONS IN ZAMBIA.

Climate change litigation has grown into an important tool for reinforcing mitigation obligations under the Paris Agreement, with courts in different jurisdictions being called upon more often to assess whether governments and corporations have taken sufficient climate mitigation action to meet their international obligations.

The Paris Agreement has significantly influenced climate litigation because it establishes internationally recognized temperature goals and mitigation standards.⁴⁷

This is in relation to the harm that climate change poses on the environment when left unattended, for example when there is no adequate threshold for controlling toxic substance that are released like air pollution on the environment it may cause harm to humans thereby resulting in chronic diseases which in turn poses a danger to society.

The growing importance of climate change litigation reflects the courts' increasing acknowledgment that failing to mitigate climate change can endanger basic rights, among them the rights to life, health, dignity and a healthy environment.⁴⁸ This jurisprudence reinforces arguments that climate mitigation obligations extend beyond political commitments and possess legal significance under both domestic and international law.

This trend is reinforced by recent developments at the international level, where advisory proceedings before international tribunals, the International Court of Justice among them, have given growing attention to the question of State obligations relating to climate change

⁴⁶ Christina Voigt and Felipe Ferreira, 'The Legal Power of Highest Possible Ambition under Article 4(3) of the Paris Agreement' (2025) *Climate Law*.

⁴⁷ Jon Birger Skjærseth and others, 'The Paris Agreement and Key Actors' Domestic Climate Policy Mixes' (2021) 21 *International Environmental Agreements* 59.

⁴⁸ Lavanya Rajamani and Jacqueline Peel, *The Oxford Handbook of International Environmental Law* (OUP 2021).

mitigation.⁴⁹ These developments suggest growing recognition that States may possess due diligence obligations requiring them to prevent significant environmental harm arising from greenhouse gas emissions.

Zambia possesses environmental liability mechanisms, but domestic courts have not yet transformed these principles into enforceable climate obligations under the Paris Agreement. Climate change litigation therefore contributes to transforming broad mitigation commitments into enforceable legal standards capable of influencing domestic climate change and international accountability.

This demonstrates weak domestication of international climate obligations within Zambia's judicial system.⁵⁰

In addition to the above, *the Lower Zambezi / Kangaluwi Mine Dispute (2019–2020)* (Lower Zambezi National Park)

The Lower Zambezi mining dispute, which centred on Mwembeshi Resources Limited, illustrated the tension between environmental conservation and economic development, arising from the approval of mining activities within an ecologically sensitive section of the Lower Zambezi National Park.⁵¹ Environmental organizations appealed the ruling, claiming that mining activities jeopardized biodiversity, ecological integrity, and environmental sustainability. The controversy is relevant to the Paris Agreement because Article 5 emphasizes the need of protecting and improving natural carbon sinks. Protected ecosystems, such as the Lower Zambezi, help to considerably reduce carbon emissions and improve climate resilience.⁵²

The Lower Zambezi mining dispute became one of Zambia's most significant environmental controversies between 2019 and 2020. The dispute concerned proposed mining activities by Mwembeshi Resources Limited within the Lower Zambezi National Park.⁵³ Environmental organizations and conservation groups strongly opposed the project due to fears of ecosystem destruction, biodiversity loss, and environmental degradation.⁵⁴

As a result, actions affecting such ecosystems have clear implications for climate mitigation. However, the controversy was finally addressed through environmental licensing and

⁴⁹ Md Jahid Al Mamun, 'The Paris Agreement on Climate Change: Efficiency of Mitigation Obligation' (2022) 33(1) Dhaka University Law Journal 97.

⁵⁰ *ibid*

⁵¹ Cancel Kangaluwi Mine Licence, insists WWF Zambia' Lusaka Times (12 November 2019). Accessed on 17th April, 2026

⁵² *Ibid*

⁵³ Cancel Kangaluwi Mine Licence, insists WWF Zambia' Lusaka Times (12 November 2019). Accessed on 17th April, 2026

⁵⁴ *Ibid*

administrative review procedures under the Environmental Management Act, rather than by explicitly using Zambia's climate obligations under the Paris Agreement. This highlights a reoccurring flaw in Zambia's legal framework: environmental conflicts with substantial climate consequences are rarely examined via a climate-governance perspective. Taken together, these examples demonstrate that, while Zambia has environmental enforcement tools, climate mitigation responsibilities are generally absent from domestic litigation.⁵⁵ As a result, the examples reinforce the claim that Zambia's Environmental Management Act No. 12 of 2011 has not completely grown into a viable instrument for achieving its Paris Agreement mitigation commitments.⁵⁶

This illustrates another major gap in Zambia's climate change framework, Environmental disputes with clear climate implications are still resolved through ordinary environmental law rather than explicit climate mitigation obligations under the Paris Agreement.

2.5. CHALLENGES AFFECTING THE INCORPORATION AND IMPLEMENTATION OF CLIMATE CHANGE OBLIGATION FROM OF THE PARIS AGREEMENT.

Despite its significance, the Paris Agreement faces substantial challenges affecting the effectiveness of mitigation obligations in incorporating it in the Environmental Management Act No.12 of 2011.

Financial constraints constitute a significant challenge to the incorporation of the Paris Agreement's climate change obligations into Zambia's Environmental Management Act. Although Zambia has ratified the Paris Agreement, its obligations cannot be automatically applied under domestic law but require incorporation through legislation enacted by Parliament.⁵⁷ Incorporating these obligations requires the Government to undertake legislative reviews, policy development, stakeholder consultations and institutional reforms to ensure that the law can effectively support and enforce climate mitigation measures. These processes require considerable financial resources.⁵⁸ As a developing country, Zambia faces competing socio-economic priorities and limited fiscal capacity, which constrain its ability to undertake

⁵⁵ PACJA, 'An Analysis of the Progress of the Implementation of the Paris Agreement and Sustainable Development Goals in Zambia' (2020).

⁵⁶ Chirwa D, 'Environmental Regulation and Climate Governance in Zambia' (2020) 9 Southern African Environmental Law Journal 91.

⁵⁷ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016)

⁵⁸ United Nations Environment Programme Copenhagen Climate Centre, *Enhancing NDC Implementation in Zambia* (2025) (explaining that effective implementation of Zambia's climate commitments requires institutional strengthening, investment planning and resource mobilisation).

comprehensive legal reforms.⁵⁹ Furthermore, Zambia's Revised and Updated Nationally Determined Contribution (NDC) which acknowledges that the implementation of its climate commitments depends on adequate financial, technological and capacity-building support.⁶⁰ Consequently, financial constraints influence the pace and extent to which the Paris Agreement's obligations can be incorporated into the Environmental Management Act. The absence of binding substantive emission reduction obligations weakens enforceability. Although States are legally required to submit NDCs, they are not legally compelled to achieve specific mitigation outcomes.⁶¹ Consequently, compliance largely depends upon political will rather than legal coercion.

Existing mitigation efforts are insufficient to meet the Paris Agreement's long-term temperature goals. According to scientific assessments conducted by the United Nations Environment Program (UNEP), even if existing nationally determined contributions (NDCs) are completely implemented, global temperature increases are anticipated to exceed the 1.5°C threshold set by Article 2 of the Paris Agreement. Scholars argue that the persistent gap between pledged emissions reductions and the level of reductions required by climate science reveals a structural flaw in the Agreement's mitigation framework, especially since compliance is largely dependent on domestic implementation rather than legally enforceable international sanctions.⁶²

Effective international climate cooperation also continues to be undermined by geopolitical tension, energy security concerns and economic rivalry. As Bodansky points out, although the Paris Agreement offers a new structure for collective action, States remain primarily driven by national economic interests and energy demands.⁶³ As a result, many developing and industrialized nations continue to rely significantly on fossil fuels to drive economic growth and industrial development, complicating the transition to low-carbon economies. The conflict

⁵⁹ International Monetary Fund, Zambia: Building Resilience to Climate Shocks (IMF Country Report No 25/242, 2025) 18–25.

⁶⁰ Government of the Republic of Zambia, Revised and Updated Nationally Determined Contribution (NDC 3.0) (2025) 26–28.

⁶¹ Tatjana Stankovic, Jon Hovi and Tora Skodvin, 'The Paris Agreement's Inherent Tension Between Ambition And Compliance' (2023) 10 Humanities and Social Sciences Communications 550.

⁶² United Nations Environment Programme, Emissions Gap Report 2024 (UNEP 2024)

⁶³ Daniel Bodansky, *the Art and Craft of International Environmental law* (2nd edn, Harvard University press 2024) 287

between economic development and climate protection remains a major barrier to meeting mitigation targets under the Paris Agreement.⁶⁴

Insufficient climate financing continues to impede the implementation of mitigation measures, particularly in developing nations. Rajamani and Brunnée argue that financial support is an essential component of the Paris Agreement's design since developing nations frequently lack the resources required to carry out ambitious mitigation activities.⁶⁵ The failure of affluent countries to consistently implement their climate-finance promises has raised issues about equity, trust, and the notion of common but differentiated duties and capabilities. As a result, many poor countries complain that insufficient financial support weakens their ability to properly carry out mitigation pledges.⁶⁶

inadequate climate change finance continues to hinder mitigation efforts within developing countries. Failure by developed countries to fully deliver promised financial support has weakened trust and cooperation within international climate change negotiations.

Finally, the Paris Agreement's reliance upon voluntary cooperation creates uncertainty regarding long-term effectiveness. It is frequently argued that without stronger enforcement mechanisms, mitigation obligations risk remaining politically symbolic rather than legally transformative.

The result in *Konkola Copper Mines Plc v Nyasulu and Others* demonstrates the judiciary's readiness to enforce environmental duties where environmental harm is established.⁶⁷ The case did not, however, directly address climate change mitigation duties or the Paris Agreement's implementation. This highlights a major gap between Zambia's international climate commitments and the development of domestic legal instruments to enforce mitigation requirements. As a result, legislative reforms, administrative action, and policy implementation, rather than judicial enforcement, remain the primary means of achieving Zambia's climate objectives.

2.6.FURTHER OBSERVATION FROM THE LITERATURE REVIEW

The literature largely accepts that the Paris Agreement is a watershed moment in international climate governance since it established a universal framework requiring all Parties to

⁶⁴ Lavanya Rajamani and Jacqueline Peel, *International Climate Change law* (2nd edn OUP 2021)241-245

⁶⁵ Jutta Brunnée and Lavanya Rajamani, 'The Paris Agreement and the Future of Climate Governance' (2023) 34 *Yearbook of International Environmental Law* 18.

⁶⁶ Lavanya Rajamani and Jacqueline Peel, *International Climate Change law* (2nd edn OUP 2021)241-245

⁶⁷ *Konkola Copper Mines Plc v Nyasulu and Others* (Appeal No 1 of 2012) [2015] ZMSC 33.

participate to global climate mitigation efforts. Bodansky characterizes the Agreement as a realistic compromise between legally bound requirements and political realities, allowing nearly universal participation in climate policy. Rajamani contends that the Agreement's transparency structure and progressive ambition mechanism achieve a balance between flexibility and accountability.⁶⁸

The Paris Agreement represents a landmark development in international climate law and global environmental supremacy. The Agreement establishes a universal framework requiring all Parties to undertake climate mitigation efforts aimed at limiting global temperature increase and preventing dangerous climate change.

However, the legal substance of the Agreement's mitigation commitments remains complex. While procedural requirements for the formulation, communication, and maintenance of nationally determined contributions are legally binding, substantive emission reduction promises are primarily voluntary and non-punitive. This adaptable structure has encouraged widespread participation while weakening enforceability and accountability.

The Agreement's emphasis on progressive ambition, transparency, and global cooperation represents a significant shift in international climate change obligations. Mechanisms like the Enhanced Transparency Framework and Global Stocktake help to increase accountability and promote higher climate ambition over time.

Despite these advancements, substantial challenges remain. Existing mitigation commitments are insufficient to meet the Agreement's temperature targets, and inadequate climate finance, fossil fuel dependence, and geopolitical tensions continue to impede successful implementation.

Finally, the effectiveness of climate change mitigation requirements under the Paris Agreement will be determined by stronger political commitment, more international cooperation, and States' readiness to translate international climate promises into significant domestic action.

2.7. CONCLUSION

This chapter has critically examined climate change mitigation obligations under the Paris Agreement. It has analyzed the legal framework governing mitigation obligations, the interpretation of relevant treaty provisions, the role of nationally determined contributions, the

⁶⁸ Lavanya Rajamani, *Innovation and Experimentation in the International Climate Change Regime* (OUP 2022) 164.

principle of common but differentiated responsibilities and respective capabilities, and the mechanisms intended to ensure transparency and accountability. The chapter further evaluates the effectiveness of the Agreement in promoting meaningful climate mitigation and examines emerging jurisprudence relating to climate obligations under international law.

CHAPTER THREE

ANALYSE THE EXTENT TO WHICH THE ENVIRONMENTAL MANAGEMENT ACT NO. 12 OF 2011 PROVIDES FOR THE INCORPORATION OF CLIMATE CHANGE OBLIGATIONS FROM THE PARIS AGREEMENT.

3.1.INTRODUCTION

This chapter analyses the extent to which the Environmental Management Act No. 12 of 2011(hereinafter referred to as “the Act”) provides for the incorporation of climate change obligation from the Paris Agreement. Although the Act was enacted prior to the adoption of the Paris Agreement, several of its provisions indirectly contribute to climate mitigation through environmental protection, pollution control, environmental standards, and institutional environmental regulation. The chapter examines the extent to which these provisions support climate mitigation objectives and the gaps in the Environmental Management Act of 2011 in providing adequate legal framework capable of responding to modern climate mitigation obligations.

3.2.ENVIRONMENTAL RIGHTS AND CLIMATE CHANGE MITIGATION

Section 4 of the Environmental Management Act identifies the right of every person to a clean, safe, and healthy environment.⁶⁹In as much as this provision does not expressly mention climate change mitigation, it establishes an important legal foundation for environmental protection in Zambia. Climate change strikes grave threats to environmental quality, such as; droughts, floods and among other things load shedding ecological sustainability, public health, and socio-economic wellbeing. Consequently, environmental rights increasingly make the availability of a legal basis upon which climate-related environmental protection measures may be justified.⁷⁰

The implication of Section 4 of the above stated Act lies in its recognition that environmental protection is not merely a legislative objective but a legal privilege capable of imposing obligations upon both the State and private sectors. In relation to climate mitigation, activities contributing to excessive pollution, environmental degradation, and atmospheric contamination may potentially pose a threat to the enjoyment of the right to a healthy environment. The provision therefore creates a legal basis for regulating environmentally harmful activities associated with greenhouse gas emissions.⁷¹

⁶⁹ Environmental Management Act No. 12 of 2011 of the Laws of Zambia

⁷⁰ *ibid*

⁷¹

However, regardless of its significance. Section 4 of the Act remains broad and largely declaratory in nature. The provision does not expressly recognize climate change as a threat to environmental rights, nor does it establish enforceable obligations relating to greenhouse gas emissions reduction. This legislative omission reflects the broader limitation of the Act, such that it was enacted before climate mitigation obligations became central within domestic environmental systems.

The above statement means that, in as much as the law under the Environmental Management Act exists and sounds perfect, it does not directly deal with climate change in its strict sense thereby not adequately addressing modern climate change responsibilities, especially those that are expected under instruments like the Paris Agreement.

Preston contends that domestic environmental rights are exerting growing influence over climate-related legal obligations, and further argues that environmental rights and environmental-protection principles embedded in domestic legislation are increasingly shaping climate-related accountability and litigation.⁷² Peel and Osofsky similarly note that environmental rights provisions have emerged as significant channels through which domestic legal systems address climate-related environmental harm.⁷³

The argument above argument is disagreed with to an extent that the absence of any express provisions under the Environmental Management Act that specifically, or by necessary implication, curtail or limit domestic environmental rights and duties under the Act, together with the Act's silence on climate related obligations, renders the Act ineffective in advancing or implementing climate change obligations.

Nevertheless, the absence of express climate mitigation obligations under section 4 of the Act limits the extent to which the provision can effectively support comprehensive climate change mitigation measures within Zambia's environmental legal framework.

Section 5 of the Environmental Management Act enforces a duty upon every person to safeguard and heighten the environment and to desist from activities likely to endanger the

⁷² Brian J Preston, 'The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part I)' (2021) 33 *Journal of Environmental Law* 1.

⁷³ Jacqueline Peel and Hari Osofsky, 'Climate Change Litigation and Domestic Legal Frameworks' (2020) 32 *Journal of Environmental Law* 1

environment.⁷⁴ The provision further requires persons to inform the Agency, Zambia Environmental Management Agency. (ZEMA) of activities capable of adversely affecting the environment.

Regardless of this provision not reflecting climate change obligations, it mirrors the ability to protect the environment by placing a duty on every person to look after the environment, thereby ensuring that any harm that may be caused and/ or endanger the environment is reported to ZEMA, this in itself indirectly mitigates climate change obligations.

Climate obligations may be inferred from Section 5 of the Act.⁷⁵ Only through a purposive interpretation of the phrase “safeguard and enhance the environment” since climate change is widely recognized as a major environmental threat, measures aimed at reducing environmental degradation may indirectly contribute to climate change mitigation. However, such interpretation is not expressly supported by the wording of section 5 itself. Accordingly, any climate obligations arising from this section remain interpretative rather than textual and cannot be regarded as explicit statutory obligations.

Therefore, the provision remains limited by its broad and general wording. Section 5 of the Act does not expressly refer to climate change, greenhouse gas emissions, of carbon-intensive activities or climate mitigation measures.⁷⁶ Consequently, it cannot be said to establish direct climate change obligations. Although the duty to safeguard and enhance the environment may be interpreted broadly to encompass activities that contribute to climate change, such an interpretation derives from the general objectives of environmental protection rather than from the explicit language of the provision and as a result, the relationship between section 5 and climate change remains indirect and legally uncertain.

3.3.INSTITUTIONAL REGULATION AND THE ROLE OF ZAMBIA ENVIRONMENTAL MANAGEMENT AGENCY

⁷⁴ Environmental Management Act No. 12 of 2011 of the Laws of Zambia

⁷⁵ *ibid*

⁷⁶ Environmental Management Act No. 12 of 2011 of the Laws of Zambia

The Environmental Management Act establishes the Zambia Environmental Management Agency (ZEMA) as the principal institution responsible for environmental regulation and enforcement as per Section 9 which outlines the functions of the Agency, including environmental monitoring, pollution control, environmental planning, enforcement of environmental standards, and implementation of environmental legislation.⁷⁷

A number of Statutory Instruments (SIs) have been enacted under the Environmental Management Act such as, the Environmental Management (Licensing) Regulations, SI No. 112 of 2013, Environmental Management (Environmental Impact Assessment) Regulations, SI No. 3 of 2026, these have been enacted for purposes of operationalizing environmental Protection, pollution control, licensing, and environmental assessment requirements. They do not address or incorporate climate change mitigation obligations from the Paris Agreement.

ZEMA is cardinal to climate change mitigation because effective implementation of environmental obligations depends upon the existence of competent regulatory institutions capable of monitoring compliance and enforcing environmental standards. Through its pollution control and environmental management functions, ZEMA indirectly contributes to mitigation efforts by regulating environmentally harmful activities.

In addition to the above, the Environmental Management Act of 2011 recognize climate change. Section 9 of the Act mandates ZEMA to conduct and sponsor research on the effects of climate change and facilitate implementation of international environmental agreements (the Paris Agreement).⁷⁸

The Environmental Management Act and its subsidiary legislation provide an adequate framework for environmental protection but an inadequate framework for climate change. While the licensing Regulations and EIA Regulations contribute indirectly to climate mitigation through pollution control and environmental assessment, they fail to establish legally binding mechanisms for greenhouse gas reduction, climate adaption and implementation of Zambia's Paris Agreement commitments. Consequently, Zambia's climate change obligations remain insufficiently domesticated within the Environmental Management

⁷⁷ Environmental Management Act No. 12 of 2011 of the Laws of Zambia

⁷⁸ Ibid

Act regulatory framework, creating a gap between international (Paris Agreement) commitments and domestic environmental regulations.

Skjærseth and others suggest that domestic environmental institutions need clear legislative mandates if they are to give effective practical effect to climate mitigation obligations, and contend further that how well such institutions perform largely turns on the extent to which climate change obligations have been clearly built into domestic legal frameworks.⁷⁹ In the absence of express statutory climate mandates, environmental institutions often struggle to operationalize climate mitigation objectives effectively.

Therefore, the principal SIs under the Environmental Management Act, particularly the Environmental Management (Licensing) Regulations, SI No 112 of 2013 and the Environmental Management (Environmental Impact Assessment) Regulations SI No. 3 of 2026 address climate change only indirectly. They are effective in pollution control and environmental management, but they are not sufficiently effective or efficient in implementing Zambia's climate change provisions, greenhouse gas regulation mechanisms, and climate adaptation requirements.

3.4.POLLUTION CONTROL AND ATMOSPHERIC PROTECTION IN RELATION TO CLIMATE CHANGE

Part IV (4) of the Environmental Management Act contains provisions relating to environmental protection and pollution control. The Act empowers the Agency to regulate environmental contaminants, prescribe environmental quality standards, and prevent activities likely to cause environmental pollution.⁸⁰

Pollution control forms an important component of climate mitigation because greenhouse gas emissions frequently arise from industrial pollution, mining operations, transportation, and unsustainable energy production. The pollution control provisions under the Act therefore indirectly contribute towards mitigation by regulating environmentally harmful activities.

⁷⁹ Birger Skjærseth and others, 'The Paris Agreement and Key Actors' Domestic Climate Policy Mixes' (2021) 21 *International Environmental Agreements: Politics, Law and Economics* 59.

⁸⁰ Environmental Management Act No. 12 of 2011 of the laws of Zambia

Section 31 of the Act specifically addresses protection of the atmosphere and regulation of substances capable of damaging the ozone layer.⁸¹ The provision prohibits unauthorized activities involving ozone-depleting substances and empowers the Minister to develop regulations relating to atmospheric protection.

While section 31 of the same Act represents one of the clearest climate-related provisions under the Act, its scope remains limited. The section primarily focuses on ozone-depleting substances rather than comprehensive greenhouse gas regulation. This distinction is legally significant because climate mitigation under modern international climate frameworks primarily concerns reduction of carbon emissions and greenhouse gases contributing to global warming.

This limitation becomes particularly significant when assessed against Zambia's international obligations under the Paris Agreement. Article 4 of the Paris Agreement requires parties to undertake and communicate measures aimed at reducing greenhouse gas emissions and achieving progressively more ambitious mitigation outcomes. Although the Environmental Management Act contributes to environmental protection generally, it does not create a comprehensive domestic framework for implementing and incorporating these mitigation commitments. The absence of climate-specific regulatory obligations therefore limits the Act's effectiveness as a legal tool for advancing Zambia's climate change mitigation objectives.⁸²

Peel and Osofsky (2020) observe, domestic environmental legislation centered solely on pollution control often proves inadequate in addressing contemporary climate change mitigation obligations.⁸³

The above statement is totally agreed with, this is because the Environmental Management Act together with the above stated SIs pertaining thereto are insufficient in fully addressing climate change obligations, thereby limiting the Act in its incorporation and implementation to climate change obligations.

Moreover, the Act does not establish carbon emissions standards, greenhouse gas reporting obligations, or sector-specific emissions reduction mechanisms. The absence of these measures

⁸¹ *ibid*

⁸² Paris Agreement adopted 12 December 2015, entered into force 4 November 2016.

⁸³ Jacqueline Peel and Hari Osofsky, 'Climate Change Litigation and Domestic Legal Frameworks' (2020) 32 *Journal of Environmental Law* 1.

significantly weakens the effectiveness of the Act in addressing climate mitigation objectives within the current international climate regime

3.5. ENVIRONMENTAL STANDARDS AND REGULATORY LIMITATIONS

The Act empowers ZEMA to establish environmental standards relating to pollution control and environmental protection.⁸⁴ Environmental standards are important because they provide regulatory benchmarks through which environmentally harmful activities may be monitored and controlled.

Roelfsema et al. states that effective implementation of climate mitigation obligations requires domestic legal frameworks capable of establishing measurable emissions reduction mechanisms and enforceable climate standards.⁸⁵ The Environmental Management Act which is a party to Paris Agreement does not mitigation climate change obligations in curbing measures that are set by the Paris Agreement. As a result, the Act remains limited in its ability to effectively support climate mitigation obligations beyond general environmental regulation and pollution control.

3.6. CONCLUSION

The Environmental Management Act No. 12 of 2011 contains several provisions which do not speak to climate change mitigation, rather support pollution control, atmospheric regulation, and institutional environmental management. Provisions relating to environmental duties, environmental rights, and pollution prevention establish a broad legal framework supporting environmental sustainability in Zambia.

The analysis demonstrates that the Act remains largely rooted in traditional environmental protection rather than modern climate mitigation. The legislation does not expressly regulate greenhouse gas emissions, establish carbon reduction obligations, or create comprehensive climate mitigation mechanisms consistent with contemporary international (Paris Agreement) climate change obligations. The chapter further demonstrates that absence of clear statutory climate mitigation mandates significantly limits effectiveness incorporation and

⁸⁴ Environmental Management Act No. 12 of 2011 of the Laws of Zambia

⁸⁵ Mark Roelfsema and others, 'Taking Stock of National Climate Policies to Evaluate Implementation of the Paris Agreement' (2020) 11 Nature Communications 209

implementation of climate-related obligations. Consequently, while the Act indirectly contributes to climate change mitigation, substantial legal and regulatory gaps continue to undermine its effectiveness as a climate mitigation framework.

CHAPTER FOUR

AN EVALUATION OF THE INCORPORATION OF THE PARIS AGREEMENT CLIMATE OBLIGATION INTO ZAMBIA'S ENVIRONMENTAL MANAGEMENT ACT NO. 12 OF 2011.

4.1.INTRODUCTION

The adoption of the Paris Agreement marked a significant development in international climate law by requiring State Parties to undertake domestic measures aimed at mitigating climate change and promoting sustainable environmental management. Unlike earlier climate instruments that focused primarily on internationally negotiated targets, the Paris Agreement places substantial responsibility upon domestic legal systems to implement mitigation obligations through national legislation, institutional frameworks and environmental regulation.⁸⁶ Consequently, the effectiveness of the Agreement largely depends upon the extent to which State Parties incorporate climate obligations into domestic legal frameworks.

Zambia ratified the Paris Agreement in 2016 thereby assuming all obligations to pursue mitigation measures intended to reduce greenhouse gas emissions and promote sustainable environmental protection.⁸⁷ However, the implementation of these obligations within domestic law remains an evolving process. Although the Environmental Management Act No. 12 of 2011 (EMA) preexists the Paris Agreement, several provisions within the Act indirectly support climate mitigation objectives through environmental regulation, pollution control and environmental protection mechanisms.

This chapter will critically evaluate the incorporation of the Paris Agreement mitigation obligations into Zambia's Environmental Management Act No. 12 of 2011. The chapter examines the extent to which the EMA reflects mitigation obligations under the Paris Agreement and whether the Act provides an effective legal framework for implementation of climate mitigation measures. The chapter further analyses enforcement mechanisms under the EMA, identifies legal and institutional gaps affecting implementation and evaluates the

⁸⁶ Lavanya Rajamani and Jacqueline Peel, *The Oxford Handbook of International Environmental Law* (Oxford University Press 2021) 604.

⁸⁷ United Nations Framework Convention on Climate Change, 'Paris Agreement – Status of Ratification' (UNFCCC 2024).

significance of the Green Economy and Climate Change Act No. 18 of 2024 as a legislative response to limitations within the EMA.

Unlike the previous chapter which discussed the broader framework of climate mitigation obligations under international law (Paris Agreement), this chapter specifically focuses on domestic implementation and statutory incorporation within Zambia's environmental legal framework.

4.2.THE EXTENT TO WHICH THE ENVIRONMENTAL MANAGEMENT ACT SUPPORTS ZAMBIA'S MITIGATION OBLIGATIONS UNDER THE PARIS AGREEMENT.

Although the Environmental Management Act No. 12 of 2011 predates the Paris Agreement, numerous aspects of the Act establish environmental management procedures that may help Zambia meet its climate mitigation obligations. The Act's relevance is not in its direct inclusion of the Paris Agreement, but in its potential to provide a legal framework capable of supporting mitigation measures outlined in the cited Articles of the Paris Agreement. Section 4 of the Act defines the notion of sustainable environmental management, requiring natural resources to be used in a way that protects ecological integrity and supports sustainability.⁸⁸

According to Bodansky, the Paris Agreement intentionally shifted climate regulation toward domestic implementation mechanisms by allowing States flexibility in determining national mitigation pathways. Bodansky argues that the effectiveness of the Agreement therefore depends upon the adequacy of national legal frameworks and enforcement institutions.⁸⁹

Although the Environmental Management Act No. 12 of 2011 only provides a partial foundation for climate mitigation because its primary focus remains environmental protection and pollution control rather than climate change mitigation.

As a result, it cannot be claimed that the Environmental Management Act fully incorporates Paris Agreement mitigation duties in a strict legal sense. Rather, the Act establishes a broad environmental framework within which specific climate-related policies can be implemented. This creates a legislative gap between Zambia's international climate mitigation commitments

⁸⁸ Paris Agreement adopted 12 December 2015, entered into force 4 November 2016.

⁸⁹ Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani, *International Climate Change Law* (2nd edn, Oxford University Press 2021) 287.

under the Paris Agreement and the domestic legal instruments available for implementation and enforcement. The absence of clear climate mitigation laws hinders Zambia's ability to directly implement its Paris Agreement responsibilities under the current environmental management system.

Section 4 of the Environmental Management Act recognizes the principle of sustainable environmental management and requires that development activities be undertaken in a manner that protects ecological systems and environmental resources.⁹⁰

Sustainable environmental management is an essential component of climate mitigation because environmental degradation, deforestation, and unsustainable resource extraction all contribute considerably to greenhouse gas emissions.

Philippe and others suggest that modern environmental rules increasingly function as tools for climate mitigation, even in instances where the legislation itself makes no explicit reference to climate change.⁹¹ They add that environmental protection duties concerning pollution control, conservation and sustainable development have come to serve as the principal vehicles through which domestic legal systems implement climate obligations.

Similarly, Rajamani says that the Paris Agreement is typically implemented through reinterpretation and expansion of existing environmental legislation rather than the creation of wholly new climate laws. This insight is especially pertinent to Zambia because climate mitigation commitments under the Paris Agreement have been largely incorporated into existing environmental regulatory systems established by the Environmental Management Act.

The Environmental Management Act also includes provisions for pollution prevention and environmental protection measures that try to regulate environmentally hazardous activity. Sections 29–31.⁹² ban environmental contamination and empower regulatory agencies to set environmental standards and compliance procedures. Although these regulations do not directly restrict greenhouse gas emissions, they do indirectly assist with mitigation goals by limiting environmentally detrimental activities.

⁹⁰ Environmental Management Act No. 12 of 2011 of the Law of Zambia

⁹¹ Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2023) 198.

⁹² Environmental Management Act No. 12 of 2011 of the Law of Zambia

Mayer, however, contends that merely including climate change duties indirectly is not enough to give proper effect to the Paris Agreement, and maintains that giving domestic effect to climate obligations calls for clear legislative measures that establish enforceable mitigation requirements, emissions-regulating mechanisms and dedicated climate accountability institutions.⁹³ Mayer criticizes environmental statutes that rely solely upon general environmental protection principles without expressly addressing climate mitigation obligations.

This critique is particularly applicable to the Environmental Management Act because it does not clearly control greenhouse gas emissions, establish carbon budgeting procedures, or enforce legally binding emission reduction responsibilities. As a result, Zambia's execution of mitigation responsibilities under the Paris Agreement is still partially based on administrative interpretation and environmental policy, rather than clear statutory regulation.

In addition, the Environmental Management Act does not refer expressly to the Paris Agreement, to climate mitigation targets, or to Zambia's Nationally Determined Contributions (NDCs), which leaves uncertainty as to the legal status and enforceability of mitigation responsibilities under domestic law. Joana and others observe that domestic climate legislation plays an essential role in converting international climate promises into duties that are legally enforceable.⁹⁴ Without explicit legislative incorporation, climate duties are typically aspirational rather than legally enforceable.

The inclusion of Paris Agreement commitments within the Environmental Management Act is thus indirect and incomplete. While the Act includes environmental protection procedures that are related to mitigation goals, it lacks the explicit climate mitigation provisions required for full implementation of the Paris Agreement.

4.3. ENVIRONMENTAL IMPACT ASSESSMENT AS A MECHANISM FOR CLIMATE MITIGATION UNDER THE ENVIRONMENTAL MANAGEMENT ACT

Environmental Impact Assessments (EIAs) constitute one of the most important mechanisms through which climate mitigation objectives have been integrated into environmental

⁹³ Benoit Mayer, 'International Law Obligations Arising in Relation to Nationally Determined Contributions' (2022) 65 German Yearbook of International Law 251.

⁹⁴ Joana Setzer and Lisa Vanhala, 'Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance' (2021) 10 WIREs Climate Change e580.

regulation under the EMA. The EIA framework requires developers of projects likely to affect the environment to conduct environmental assessments before projects may be approved.⁹⁵

Environmental Impact Assessments increasingly serve as important tools for implementation of climate mitigation obligations because they enable regulatory authorities to evaluate environmental consequences associated with industrial development, infrastructure projects and resource exploitation activities.

Christina Voigt contends that Environmental Impact Assessments have moved beyond their traditional role as environmental management tools to become mechanisms capable of engaging with climate mitigation and sustainability concerns.⁹⁶ According to Voigt, effective implementation of the Paris Agreement requires integration of climate-related considerations into domestic environmental approval processes.

The EIA framework under the Environmental Management Act indirectly contributes toward mitigation objectives by regulating activities associated with environmental degradation and pollution. Mining operations, infrastructure projects, industrial facilities and land development projects are subjected to environmental review procedures intended to reduce harmful environmental impacts.⁹⁷

In Zambia, Environmental and Social Impact Assessment reports increasingly include climate-related considerations such as environmental sustainability, emissions reduction and ecosystem protection.⁹⁸ This demonstrates gradual incorporation of mitigation concerns into environmental regulatory processes.

However, overly criticisms have been observed that there is limited scope of Environmental Impact Assessments within Zambia's climate mitigation framework. Kangacepe et al, argue that environmental implementation mechanisms within Zambia remain fragmented and inadequately coordinated despite increasing environmental regulation.⁹⁹ The authors observe that climate considerations within environmental assessments remain inconsistent and insufficiently institutionalized.

⁹⁵ *ibid*

⁹⁶ Christina Voigt and Felipe Ferreira, 'The Legal Power of Highest Possible Ambition under Article 4(3) of the Paris Agreement' (2025) *Climate Law*.

⁹⁷ Christina Voigt, *International Judicial Practice on the Environment* (Cambridge University Press 2024) 173.

⁹⁸ Environmental Management (Environmental Impact Assessment) Regulations SI No. 28 of 1997.

⁹⁹ Zambia Environmental Management Agency, 'Environmental and Social Impact Assessment Reports' (2025). (zema.org.zm)

One of the major weaknesses of the EIA framework under the EMA is the absence of mandatory greenhouse gas assessments for major development projects. The Act does not expressly require carbon emissions analysis, climate vulnerability assessments or evaluation of long-term mitigation impacts.

Carlarne argues that for States to give proper domestic effect to climate obligations, their environmental legislation must be capable of weaving climate change into environmental regulation and the project-approval process.¹⁰⁰ According to Carlarne, environmental assessment procedures that fail to address greenhouse gas emissions undermine implementation of climate mitigation objectives.

This criticism is particularly relevant in Zambia where Environmental Impact Assessments primarily focus upon traditional environmental concerns such as pollution control, waste management and ecosystem protection rather than direct climate mitigation obligations.

Furthermore, enforcement of EIA conditions frequently remains weak due to limited institutional capacity and inadequate compliance monitoring. ZEMA continues to face resource constraints affecting inspection, monitoring and enforcement activities.¹⁰¹ Consequently, compliance with mitigation-related environmental conditions remains inconsistent.

Despite these limitations, the EIA framework under the EMA remains one of the most significant mechanisms through which mitigation obligations under the Paris Agreement have been indirectly incorporated into Zambia's domestic legal framework.

4.4. THE EFFECTIVENESS OF THE ENVIRONMENTAL MANAGEMENT ACT IN INCORPORATING CLIMATE CHANGE FROM THE PARIS AGREEMENT COMMITMENTS

The Environmental Management Act includes various environmental management techniques that may indirectly contribute to climate mitigation. Environmental impact assessments, pollution control methods, and environmental licensing all help to promote environmental sustainability. However, the Act fails to adequately meet Zambia's mitigation commitments

¹⁰⁰ Kangacepe Zulu and others, 'Determinants of Effective Participatory Multi-Actor Climate Change Governance: Insights from Zambia's Environment and Climate Change Actors' (2025) 167 *Environmental Science and Policy* 104040. (researchgate.net)

¹⁰¹ Cinnamon Carlarne, *Climate Change Law and Policy: EU and US Approaches* (Oxford University Press 2021) 222.

under Article 4 of the Paris Agreement. The Paris Agreement compels states to not only implement mitigation measures, but also to gradually increase climate ambition through consecutive Nationally Determined Contributions.¹⁰²

There are no provisions in the Environmental Management Act that require periodic climate reviews, emissions reduction plans, or NDC implementation. Similarly, the Act has no legal duty for public or private institutions to monitor or report greenhouse gas emissions. As a result, the Act cannot be considered a comprehensive climate mitigation strategy. Rather, it serves primarily as a general environmental management act whose connection to climate mitigation is incidental.

Effective implementation of climate mitigation obligations depends not only upon legislative incorporation but also upon enforcement mechanisms capable of ensuring compliance with environmental standards. The Environmental Management Act establishes the Zambia Environmental Management Agency (ZEMA) as the principal regulatory institution responsible for environmental enforcement and compliance monitoring.¹⁰³

ZEMA possesses powers to regulate pollution, issue environmental licenses, monitor compliance and enforce environmental standards. These powers indirectly support climate mitigation objectives by regulating environmentally harmful activities.

According to Jacqueline Peel, domestic environmental enforcement institutions play a critical role in implementation of international climate obligations because environmental compliance mechanisms determine whether mitigation objectives are effectively operationalized.¹⁰⁴ Peel argues that weak enforcement structures undermine the effectiveness of domestic climate implementation frameworks.

The Environmental Management Act empowers ZEMA to impose sanctions for environmental violations including fines, license suspensions and prosecution for non-compliance.¹⁰⁵ These enforcement mechanisms are intended to ensure compliance with environmental protection obligations.

¹⁰² Paris Agreement adopted 12 December 2015, entered into force 4 November 2016.

¹⁰³ Zambia Environmental Management Agency Annual Report 2024.

¹⁰⁴ Environmental Management Act No. 12 of 2011 of the laws of Zambia

¹⁰⁵ Jacqueline Peel and Hari Osofsky, *Climate Change Litigation* (Cambridge University Press 2020) 94.

However, practical enforcement challenges significantly undermine implementation effectiveness. Zambia's environmental enforcement framework continues to face institutional and financial limitations affecting compliance monitoring and regulatory effectiveness.

Environmental enforcement institutions in Zambia frequently experience inadequate technical capacity, insufficient staffing and limited financial resources.¹⁰⁶ These challenges weaken regulatory monitoring and enforcement of environmental standards.

Furthermore, the Environmental Management Act does not establish specific enforcement mechanisms relating to greenhouse gas emissions or climate mitigation obligations. Enforcement under the Act primarily focuses upon traditional environmental pollution rather than climate-specific regulation.

Rajamani argues that effective implementation of the Paris Agreement requires domestic legal systems capable of establishing measurable mitigation obligations and enforceable compliance standards.¹⁰⁷ Without enforceable statutory obligations, climate mitigation frequently remains dependent upon voluntary compliance and policy commitments.

This weakness is evident within Zambia's environmental legal framework because climate mitigation implementation largely depends upon policy initiatives and international cooperation mechanisms rather than legally binding domestic standards.

Additionally, enforcement challenges are exacerbated by Zambia's economic dependence upon extractive industries such as mining. Environmental regulation of mining activities frequently involves balancing economic development objectives against environmental protection concerns. This creates political and regulatory challenges affecting strict enforcement of environmental standards.

According to Benoit Mayer, developing countries like Zambia frequently encounter difficulties implementing climate mitigation obligations where environmental regulation conflicts with economic development priorities.¹⁰⁸ Consequently, climate mitigation enforcement within developing economies often remains inconsistent and politically sensitive.

¹⁰⁶ Lavanya Rajamani, 'The Increasing National Determination of International Climate Change Law' (2021) 15 *International Environmental Agreements* 1.

¹⁰⁷ Benoit Mayer, *The International Law on Climate Change* (Cambridge University Press 2022) 301.

¹⁰⁸ Joana Setzer and Lisa Vanhala, 'Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance' (2021) 10 *WIREs Climate Change* e580.

Although the Environmental Management Act establishes important environmental enforcement structures, implementation of mitigation obligations under the Paris Agreement remains weakened by limited climate-specific enforcement mechanisms and institutional capacity constraints.

4.5. LEGAL GAPS WITHIN THE ENVIRONMENTAL MANAGEMENT ACT

Several legal gaps undermine the ability of the Act to effectively support climate mitigation obligations. Absence of Climate-Specific Provisions, the Act contains no definition of climate change, climate mitigation, greenhouse gases or carbon emissions. Absence of Emissions Regulation. The Act does not establish greenhouse gas emission standards or legally binding emissions reduction obligations. Absence of NDC Implementation Mechanisms, the Act does not create legal obligations for implementation of Zambia's Nationally Determined Contributions. These deficiencies demonstrate that the Act was designed primarily for environmental protection rather than climate change mechanism.

This creates significant limitations in implementation of mitigation obligations under Article 4 of the Paris Agreement.

4.6. INSTITUTIONAL GAPS AFFECTING CLIMATE MITIGATION IMPLEMENTATION

Beyond these legal shortcomings, institutional weaknesses also hamper the implementation of climate mitigation obligations. Institutional fragmentation is one such weakness: responsibility for climate governance is spread across multiple bodies, including ZEMA, the Ministry of Green Economy and Environment, the Forestry Department and local authorities, and this dispersal of mandates often produces overlap and poor coordination. Capacity constraints present a further difficulty, since effective climate mitigation demands technical expertise in climate science, emissions monitoring and environmental regulation, an area in which Zambia continues to face a shortage of specialised personnel. Financial limitations compound these problems; Rajamani observes that developing countries often struggle to implement obligations because of inadequate climate finance, a difficulty borne out in Zambia, where environmental monitoring and climate programmes remain heavily reliant on donor support. Finally,

enforcement remains weak, with limited inspections, inadequate monitoring systems and resource constraints continuing to undermine regulatory enforcement.¹⁰⁹

4.7.THE GREEN ECONOMY AND CLIMATE CHANGE ACT NO. 18 OF 2024 AS A LEGISLATIVE RESPONSE TO LIMITATIONS WITHIN THE ENVIRONMENTAL MANAGEMENT ACT.

The enactment of the Green Economy and Climate Change Act No. 18 of 2024 demonstrates legislative recognition that the Environmental Management Act alone was insufficient for implementing contemporary climate obligations. Unlike the Environmental Management Act, the 2024 Act expressly addresses climate change, implementation of Nationally Determined Contributions, climate finance, carbon markets and low-carbon development. The Act therefore fills many of the gaps previously identified within the Environmental Management Act. Its enactment provides strong evidence that Parliament recognized the need for climate-specific legislation capable of supporting Zambia's obligations under the Paris Agreement.¹¹⁰

The enactment of the Green Economy and Climate Change Act No. 18 of 2024 represents a significant development within Zambia's climate legal framework. Importantly, the Act expressly domesticates obligations arising under the United Nations Framework Convention on Climate Change and the Paris Agreement.¹¹¹ The Act introduces climate-specific regulatory mechanisms including: climate adaptation planning; low-carbon development strategies; climate finance frameworks; carbon market regulation; implementation of Nationally Determined Contributions; and Environmental and social safeguards.¹¹²

The enactment of the 2024 Act demonstrates legislative recognition that the EMA alone was insufficient for comprehensive implementation of climate mitigation obligations.

Halwiindi argues that the 2024 Act represents Zambia's clearest attempt yet to convert its international climate obligations into legally enforceable domestic duties.¹¹³ According to Halwiindi, the legislation represents a transition from indirect environmental regulation toward specialized climate legislation.

¹⁰⁹ Zambia Revised Nationally Determined Contribution (2025). (unfccc.int)

¹¹⁰ Green Economy and Climate Change Act No. 18 of 2024

¹¹¹ *ibid*

¹¹² *ibid*.

¹¹³ Hleziye Alexis Halwiindi, 'Zambia's Green Economy & Climate Change Bill 2024 Domesticates UNFCCC & Paris Agreement Provisions' (2025) Chambers and Partners. (chambers.com)

Christina Voigt makes a comparable point, arguing that contemporary climate obligations increasingly call for dedicated legal frameworks able to regulate emissions, climate finance and mitigation accountability.¹¹⁴ General environmental statutes alone are often inadequate for implementation of contemporary climate obligations.

The relationship between the Environmental Management Act and the Green Economy and Climate Change Act therefore demonstrates the evolution of Zambia's environmental legal framework from traditional environmental management toward specialized climate regulation.

Importantly, the enactment of the 2024 Act does not render the Environmental Management Act irrelevant. Rather, the Environmental Management Act continues to provide foundational environmental protection mechanisms supporting implementation of climate obligations. However, the 2024 Act supplements the Environmental Management Act by introducing climate-specific legal obligations previously absent within Zambia's environmental legal system.

A question may arise as to whether the research is still relevant given that Zambia has already enacted the Green Economy & Climate Change Act No. 18 of 2024?

The answer is yes, my research is still relevant despite the enactment of the GECC Act. This is because my study is not an evaluation of the GECC, rather it specifically examines whether the environmental Management Act adequately incorporates climate change mitigation obligations from the Paris Agreement.

4.8.CONCLUSION

It revealed the Environmental impact Assessments are the main mechanisms for integrating climate considerations under the Act, but they remain inadequate due to the absence of mandatory greenhouse gas and carbon emission assessment.

¹¹⁴ Christina Voigt and Felipe Ferreira, 'The Legal Power of Highest Possible Ambition under Article 4(3) of the Paris Agreement' (2025) Climate Law.

The Green Economy and Climate Change Act No. 18 of 2024 addresses many gaps by introducing climate-specific obligations and implementation mechanisms, but enforcement challenges still remain, among other things concerns regarding the absence of binding national emission reduction targets & reliance on future regulations still remain poor. Its adequacy largely depends on the effectiveness incorporation of its implementation & enforcement measures.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

This chapter presents the conclusion and recommendations of the study arising from the preceding analysis. The research set out the Incorporation of climate change mitigation obligations from the Paris Agreement into the Environmental Management Act No. 12 of 2011. This chapter consolidates the major findings discussed throughout the preceding chapters and evaluates the extent to which the current environmental legal framework effectively addresses climate change mitigation obligations.

5.2.FINDINGS

Chapter Two of the research showed that The Paris Agreement establishes a global framework for climate change mitigation by requiring all state parties to progressively strengthen their efforts to reduce greenhouse gas emissions and contribute towards achieving the global temperature goals. The Paris Agreement provides a framework for countries like Zambia to combat climate change mitigation, but it does not obligate them to achieve specific emission reductions. Zambia has met some procedural requirements, such as submitting NDCs, but its primary environmental law (the Environmental Management Act No. 12 of 2011) does not adequately translate international obligations into enforceable domestic law. Furthermore, the effectiveness of climate change mitigation obligations under the Paris Agreement largely depends on the extent to which Zambia incorporates and implement these obligations through domestic laws. It also established that, Zambia being a dualist country domestication of these obligations from the Paris Agreement relating to climate change mitigation are not automatically enforced and implemented into the Environmental Management Act.

Chapter Three of the study found that the Environmental Management Act does not expressly regulate greenhouse gas emissions, establish carbon reduction obligations, or create comprehensive climate mitigation mechanisms consistent with international (Paris Agreement) climate change obligations. The chapter further demonstrates that the absence of clear statutory climate mitigation mandate, significantly limits the effectiveness in implementing climate-related obligations. Consequently, while the Act indirectly contributes to climate change mitigation, substantial legal and regulatory gaps continue to undermine its effectiveness as a climate mitigation framework.

Chapter four of the study established that, the Environmental impact Assessments are the main mechanisms for integrating climate considerations under the Act, but they remain inadequate due to the absence of mandatory greenhouse gas and carbon emission assessment. the Environmental Management Act No. 12 of 201 only indirectly incorporates climate change mitigation obligations under the Paris Agreement through provisions relating to environmental protection, pollution control, and environmental impact assessment. However, the Act contains no explicit provisions for greenhouse regulation, carbon reduction measures, or the implementation of Nationally Determined Contributions. As a result, it does not provide an adequate legal framework for Zambia to fully implement its climate mitigation commitments. The study also discovered that the Green Economy and Climate Change Act No. 18 of 2024 was required to close these gaps and strengthen the Paris Agreement's domestication within Zambia's legal framework.

5.3.SUMMARY OF FINDINGS

The study established that the Paris Agreement represents a major development in international climate change law because it creates a universal framework obligating State Parties to undertake measures aimed at reducing greenhouse gas emissions and limiting global temperature increases.¹¹⁵ Unlike previous climate instruments, the Paris Agreement adopts a flexible and participatory approach which requires States to progressively implement mitigation measures through domestic legal and policy frameworks.¹¹⁶

The study further established that Zambia has demonstrated commitment towards international environmental and climate obligations through ratification of the Paris Agreement.¹¹⁷ Zambia has also enacted various laws and policies intended to promote environmental protection. Among these laws, the Environmental Management Act No. 12 of 2011 serves as the principal legislation governing environmental management in the country.

Notwithstanding these provisions, the study established that the Environmental Management Act does not specifically and comprehensively incorporate and regulate climate change mitigation obligations. The Act lacks express provisions dealing with climate change,

¹¹⁵ Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani, *International Climate Change Law* (Oxford University Press 2017) 208–215.

¹¹⁶ Jacqueline Peel and Hari M Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press 2015) 44.

¹¹⁷ United Nations Treaty Collection, 'Paris Agreement Status of Ratification

greenhouse gas emission reductions, carbon budgeting, climate accountability mechanisms and enforceable mitigation targets.¹¹⁸ Consequently, climate change mitigation under the Act remains largely incidental rather than directly regulated.

Although the Environmental Management Act promotes public participation in environmental decision-making, many communities still lack adequate knowledge regarding climate change mitigation obligations and environmental protection measures.¹¹⁹ As a result, implementation of mitigation measures at local level remains relatively weak.

In summary, the study found that Zambia's dualist legal system requires express legislative incorporation of international agreements such as the Paris Agreement before they can be enforced domestically. The Environmental Management Act No. 12 of 2011, being pre-Paris Agreement legislation, does not expressly incorporate climate change mitigation obligations and therefore does not fully operationalise Zambia's commitments under the Agreement.

Although recent legislative developments, particularly the Green Economy and Climate Change Act No. 18 of 2024, have improved Zambia's climate governance framework, gaps and uncertainties remain within the Environmental Management Act, particularly regarding its alignment with mitigation obligations under the Paris Agreement. These gaps are further compounded by financial, institutional and technical constraints that limit comprehensive legal reform and implementation.

5.4. RECOMMENDATIONS

In light of the findings and conclusions of this study, the following recommendations are proposed:

In response to the finding that the Environmental Management Act No. 12 of 2011 does not directly embrace the Paris Agreement's mitigation commitments, it is suggested that the Act be revised to specifically include climate change mitigation requirements. These should include the legal acknowledgment of greenhouse gas reduction goals, compliance with Nationally Determined Contributions (NDCs), and the establishment of enforceable mitigation planning duties. This would close the acknowledged legal gap created by the Act prior to the Paris Agreement.

It is recommended that the Zambian government should conduct a targeted review of the Environmental Management Act No. 12 of 2011 and, if necessary, amend its provisions to

¹¹⁸ Louis J Kotzé and Duncan French, 'The Anthropocentric Ontology of International Environmental Law and The Sustainable Development Goals' (2018) 7 Global Journal of Comparative Law 5–6.

¹¹⁹ Environmental Management Act No. 12 of 2011 of the laws Zambia

expressly incorporate climate change mitigation obligations under the Paris Agreement, including alignment with Nationally Determined Contributions.

It is recommended that the Environmental Management Act must be harmonized with the Green Economy and Climate Change Act No. 18 of 2024 to guarantee coherence in Zambia's climate change framework and minimize fragmentation in the regulation of mitigation requirements. the enactment of comprehensive climate change legislation be implemented in the Environmental Management Act, it being Zambia's principal legislation on environmental protection.

The Government of Zambia should enact comprehensive climate change legislation specifically addressing climate mitigation obligations from the Paris Agreement. Such legislation should establish binding greenhouse gas emission reduction targets, carbon regulation mechanisms and climate accountability measures. There should be a clear statutory definition of climate change, mitigation, and greenhouse gases, legally binding emission reduction targets and enforcement provisions linked directly to climate obligations this would close the current regulatory gap and strengthen enforceability. The legislation should also clearly define institutional responsibilities and provide enforcement mechanisms to ensure compliance with mitigation obligations.

It is also recommended that in response to the discovery that institutional capacity constraints impede incorporation and implementation, it is suggested that the Zambia Environmental Management Agency (ZEMA) and the Ministry of Green Economy be strengthened through technical training, improved coordination structures, and clear allocation of mandates relating to climate change mitigation enforcement under the Environmental Management Act No. 12 of 2011

In response to the financial restrictions identified as limiting incorporation, it is recommended that the government should increase climate funding mobilization efforts, particularly involvement with international climate funds. These funds should be devoted specifically to legislative reform, institutional capacity building, and the construction of regulatory frameworks for mitigation under the Environmental Management Act No. 12 of 2011.

To address the finding that mitigation obligations are not fully mainstreamed in existing environmental legislation, it is recommended that all environmental statutes be reviewed to ensure consistent incorporation of climate change mitigation principles. This would ensure that the Environmental Management Act No. 12 of 2011 operates as part of a coherent national mitigation framework aligned with the Paris Agreement.

It is also recommended that Zambia should fully align domestic law with the Paris Agreement by, Integrating progressive ambition mechanism (5-year review cycles) into national law Linking NDC targets to enforceable domestic obligations, strengthening climate transparency and reporting systems, also ensuring that development planning is climate-proofed.

5.5. FINAL CONCLUSION

The study concludes that, while Zambia has demonstrated commitment to climate change mitigation by ratifying the Paris Agreement and enacting the Environmental Management Act No. 12 of 2011 which does not explicitly incorporate the climate change agreement's mitigation obligations. In a dualist legal system like Zambia's, successful fulfillment of international climate commitments requires unambiguous legislative incorporation. As a result, legal reform and harmonization of Zambia's environmental regulations are required to enable full compliance with the Paris Agreement's climate change mitigation framework.

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