ASSESSING THE LEGAL FRAMEWORK FOR AIR POLLUTION CONTROL IN NIGERIA: AN APPRAISAL OF THE CHALLENGES AND STRATEGIES FOR REDRESS

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BEING A LONG ESSAY WRITTEN AND SUBMITTED TO THE FACULTY OF LAW, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF LAW DEGREE (LL.B) OF THE UNIVERSITY OF BENIN, BENIN CITY, EDO STATE

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CERTIFICATION

I, ISIBOR BENJAMIN ISIOMA, with Matriculation Number LAW1906197, hereby certify that apart from references to other persons` works which have been duly acknowledged, the entire work is a product of my research, and this project has neither in whole nor in part been presented for another degree elsewhere.

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APPROVAL

We certify that this project was written and completed by ISIBOR BENJAMIN ISIOMA, with Matriculation Number LAW1906197, in partial fulfillment of the requirements for the award of a Bachelor of Laws (LL.B) degree.

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DEDICATION

I dedicate this work to God Almighty, whose infinite wisdom, grace, and strength have been my guiding light throughout this journey. His unwavering presence has been my source of inspiration, perseverance, and success.

To Him be all the glory.

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The 1999 Constitution of the Federal Republic of Nigeria (as Amended)

The Petroleum (Drilling and Production) Regulation

LIST OF ABBREVIATIONS

DPR - Department of Petroleum Resources

EIA - Environmental Impact Assessment

EM - Environmental Management

EPA - Environmental Protection Agency

EU - European Union

EU - European Union

FME - Federal Ministry of Environment

FRSC - Federal Road Safety Commission

GHGs - Greenhouse Gases

MDGIF - Midstream and Downstream Gas Infrastructure Fund

MNDAs - Ministry of Niger Delta Affairs

MOCs - multinational oil companies

NADDC - National Automotive Design and Development Council

NCS - Nigeria Customs Services

NDDC - Niger Delta Development Commission

NEPMs - National Environment Protection Measures

NESREA - National Environmental Standards and Regulations Enforcement Agency

NOSCP - National Oil Spill Contingency Plan

NOSDRA - National Oil Spill Detection and Response Agency

NURC - Nigerian Upstream Regulatory Commission

NURC - Nigerian Upstream Regulatory Commission (NURC)

UNFCCC - United Nations Framework Convention on Climate Change

VIO - Vehicle Inspection Officer

WHO - World Health Organisation

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ABSTRACT

Air pollution is a critical environmental and public health issue in Nigeria, exacerbated by rapid industrialisation, urbanisation, and inadequate enforcement of regulations. This study evaluates the legal framework for air pollution control in Nigeria, examining challenges that hinder effective regulation and proposing strategies for redress. Key statutes, such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act and the Environmental Impact Assessment (EIA) Act, are analysed to assess their effectiveness in addressing air pollution. The research identifies significant challenges within the legal framework, including insufficient statutory provisions, limited enforcement powers, inadequate inter-agency coordination, and weak penalties for violations. Additionally, socio-economic factors, including poverty, population growth, and political interference, further undermine the effective implementation of air quality regulations. These challenges limit the capacity of Nigerian laws to curb pollution and protect public health effectively. A comparative approach is adopted to examine international best practices in air pollution control, focusing on jurisdictions with established air quality management systems. Lessons are drawn from these systems to highlight practical measures that could enhance Nigeria's regulatory framework. The study proposes legal and policy reforms, such as expanding the mandate and resources of environmental regulatory bodies, updating outdated legislation to incorporate contemporary pollution control technologies, enhancing public awareness, and fostering partnerships with international organisations for technical support. By addressing these legal and policy challenges, Nigeria can reduce the adverse impacts of air pollution on public health and environmental sustainability while improving compliance with global environmental standards. This research contributes to the discourse on environmental law reform in Nigeria, offering recommendations to strengthen the air pollution control framework and providing a pathway toward a cleaner and healthier environment.

CHAPTER ONE

GENERAL INTRODUCTION

1.1.BACKGROUND OF STUDY

Pollution is experienced in Nigeria on daily basis, it can be safely concluded that the problem has become part of us as we live with it without any form of concrete intervention from the government and the relevant stakeholders in the industry. Air pollution arises whenever there is a release of hazardous substances into the environment. Some air pollutants include nitrogen oxide, sulfur dioxide, carbon monoxide and Chlorofluorocarbons. Primary pollutants are referred to as the harmful substances that directly affect the air we breathe in. Examples of such contaminants include carbon monoxide and sulfur dioxide. Likewise, secondary pollutants arise if primary pollutants in the atmosphere undergo chemical reactions, example of this is photochemical smog[1]. Air pollution arising from natural and human-made sources, is increasing. All these have implications on people's health, crop productivity and so on; for instance, air pollution is a leading cause of respiratory diseases.[2]

One of the most significant elements in the environment for humans is air. A typical human needs about 12 kg of air per day, which is roughly 12 to 15 times more than they do for food.[3] Clean and pure air is very essential for human health and survival, thus, any change in the natural and normal composition of air that may adversely affect the living system, particularly the human life invariably causes air pollution.

The presence of compounds in the air that are damaging to the health of people and other living things, or that impair the climate or materials is referred to as air pollution[4]. Air

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[1] Ibid.

[2] KEHINDE, A. O., '*Legal Control of improper and effect of improper solid waste management in Nigeria.'* Novena Law Journal. (2019) (6) (2).

[3] SULEIMAN, I. L.,*'Examining Air pollution and control measures in urban centres of Nigeria'*. International Journal of Environmental Engineering and Management. *(*2013) (4) (6) 621–628.

[4] Air Pollution, <https://www.who.int/health-topics/air-pollution > accessed 21 February 2025.

pollution, especially in cities, has long been an issue because of inefficient energy combustion in the transportation system, which led to high localized air pollution levels. The general level of air pollution has increased due to the recent rise in the importation of used automobiles and the widespread use of single-engine motorbikes for passenger transportation throughout most Nigerian cities.[5]

Additionally, the term "air pollution" refers to the contamination of air by the release of dangerous compounds, which can result in health issues like burning eyes and noses, itching throats, and breathing difficulties.[6] Additionally, several chemicals present in contaminated air have been linked to cancer, birth defects, brain damage, and long-term damage to the lungs and breathing passages. Natural air pollution, which includes wind-borne dust, volcanic ash and gases, smoke and trace gases from forest fires, and anthropogenic air pollution, which includes combustion by-products like nitrogen oxides, carbon oxides, and sulphur dioxide, are two categories of air pollution.[7]

One of the main environmental issues facing the Niger Delta region is air pollution. The region is one of the most industrialized after Lagos in Nigeria and has the highest concentration of oil mineral resources. Some of the causes of air pollution in the region ranges from gas flaring, oil spillage and refining activities, industrial emissions, vehicular emissions, deforestation, waste burning, marine and river transport pollution, mining and quarrying activities, household and biomass fuel use, climate change, etc.

The sources of air pollution can be either natural or man-made, and its effects can either be detrimental to human health or the environment. According to the most recent Air Quality Life Index report, residents of the Niger Delta Region could lose roughly six years of life

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[5] Ibid, note 1.
[6] U.S. Environmental Protection Agency (EPA), *National Air Quality and Emissions Trends Report*. Washington, D.C.: United States Environmental Protection Agency, 1994.
[7]<http://nou.edu.ng/sites /default/files/2017-03/ESM%20311.pdf > accessed 21 February 2025.

expectancy on average if the local air pollution situation is not under control.[8] Cities like Lagos, Abuja, Port-Harcourt, Kano, and in especially Onitsha, a port city on the bank of the Niger River in Southern Nigeria, still have health-damaging air pollution levels. Both Nigerians' quality of life and the country's environment have suffered as a result of air pollution. It also has an impact on weather, climate, and atmospheric processes, and it is to blame for two major worldwide issues: contamination of the upper atmosphere and changes in weather and climate.[9] This study assesses the legal framework for air pollution control in Nigeria, examining its current effectiveness, the challenges it faces, and strategies for improvement. Air pollution poses a severe threat to public health and the environment in Nigeria, driven by industrial activities, urbanisation, and insufficient regulatory oversight. Although Nigeria has established several laws and policies, such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act (as amended), and the Environmental Impact Assessment (EIA) Act, enforcement remains weak, limiting their impact in addressing air pollution.

This research identifies and analyses key challenges within Nigeria's legal framework, including inadequate statutory provisions, limited enforcement capacity, lack of inter-agency coordination, and low penalties for offenders. These obstacles, coupled with socio-economic factors like rapid population growth, poverty, and limited political commitment, have hindered the effectiveness of Nigeria's air quality regulations.

To provide a more comprehensive perspective, this study draws on successful air pollution control measures from the European Union (EU), where stringent legislation, well-coordinated regulatory bodies, and strict emissions standards have led to notable

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[8] Reports. In: *AQLI: Air Quality Life Index* [online]. 2021 [cit. 2022-09-19]. Available at: https://aqli.epic .uchicago.edu. > accessed 14 November 2024.

[9] UKEMENAM, O. S., '*Causes and Consequences of Air Pollution in Nigeria*.' South American Journal Public Health. (2014) . (2) (2) 293–307.

improvements in air quality. By evaluating the EU's approach, this study proposes strategies for Nigeria, such as strengthening the mandates and resources of environmental agencies, updating outdated laws to incorporate modern pollution control standards, enhancing public education on the importance of air quality, and fostering partnerships with international bodies for technical and financial support.

Ultimately, this research contributes to the discourse on environmental law reform in Nigeria, arguing for a more robust, proactive approach to air pollution control. By addressing these challenges and adopting targeted reforms, Nigeria can better safeguard public health, protect environmental resources, and meet international environmental standards, creating a healthier, more sustainable future.

1.2. STATEMENT OF RESEARCH PROBLEM

Air pollution is a growing concern in Nigeria, posing severe risks to public health, environmental sustainability, and economic well-being. Major urban centres and industrial zones across Nigeria are heavily affected by air pollutants from vehicle emissions, industrial discharges, power generation, and open burning of waste. Studies have linked air pollution in Nigeria to respiratory illnesses, cardiovascular diseases, and premature mortality, highlighting an urgent need for effective regulatory action. Despite recognising these risks, Nigeria's existing legal framework for air pollution control has proven insufficient in addressing the scale and complexity of the problem.

While Nigeria has established several laws and regulations to address environmental pollution—most notably the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act and the Environmental Impact Assessment (EIA) Act—the effectiveness of these regulations has been hampered by numerous challenges. First, outdated and fragmented legislation fails to incorporate recent scientific advancements and best

practices in pollution control, resulting in regulatory gaps. Second, enforcement of existing laws is weak due to limited resources, insufficient funding, and inadequate personnel within regulatory bodies. Additionally, lack of coordination among federal, state, and local agencies creates overlapping jurisdictions and hinders cohesive action on air quality management.

The challenges are further exacerbated by socio-economic factors, including rapid population growth, widespread poverty, and lack of public awareness about the impacts of air pollution. Nigeria's enforcement strategies are undermined by low penalties that do not deter non-compliance, along with political and economic pressures that prioritise industrial development over environmental protection. Moreover, inadequate infrastructure, limited monitoring technology, and poor data on pollution levels make it difficult to enforce standards and measure the effectiveness of current regulations.

The objective of this long essay is to proffer recommendations that will address these issues, to critically evaluate Nigeria's legal framework for air pollution control, identifying its strengths, weaknesses, and opportunities for reform to enhance air quality and safeguard public health and the environment.

1.3. RESEARCH QUESTIONS

This study therefore seeks to address these core issues:

1. Why has Nigeria's current legal framework failed to mitigate the impact of air pollution effectively?
2. What specific challenges impede enforcement, compliance, and collaboration among regulatory bodies; and,
3. What strategic measures, drawn from both domestic resources and international best practices, can be implemented to strengthen Nigeria's air pollution control framework?

By exploring these questions, this study aims to identify the critical gaps within Nigeria's air quality laws and regulations and offer concrete recommendations for reform. It will examine successful air pollution control models from countries with similar environmental challenges, such as those in the European Union, to identify strategies that could be adapted to the Nigerian context. In respect to this, a comparative study will be done to access the level of environmental pollution and control in United Kingdom, Australia, and South Africa.

1.4. AIMS AND OBJECTIVES OF THE STUDY

The aim of this study is to critically assess the legal framework for air pollution in Nigeria, challenges and strategies for redress.

Drawing from this aim, the objectives are:

1. To analyse the primary laws and regulations governing air pollution control in Nigeria, such as the NESREA guidelines, the Environmental Impact Assessment Act, and the Constitution.
2. To explore the challenges faced by regulatory agencies, including funding constraints, political interference, and enforcement deficiencies, in implementing air pollution laws.
3. To assess the socio-economic and health impacts of air pollution in Nigeria, particularly on vulnerable groups, to justify the need for robust legal responses.
4. To propose strategies for improving Nigeria's legal framework on air pollution control, incorporating lessons from other jurisdictions like United Kingdom, Australia, and South Africa; and international environmental agreements

1.5. SIGNIFICANCE OF STUDY

First, this study is vital for strengthening environmental governance in Nigeria. By analysing the existing legal framework for air pollution control, the research will provide a clearer

understanding of the current regulations and highlight critical gaps that may hinder effective enforcement. This insight will assist policymakers, legal practitioners, and regulatory agencies in identifying specific areas for improvement, ultimately leading to a more robust regulatory system that addresses the pressing issue of air pollution. Furthermore, the study has direct implications for public health and welfare. With air pollution posing significant health risks to Nigerians, particularly in densely populated urban centres, there is an urgent need for laws that effectively control pollutants and protect the public from harm. This research advocates for legal reforms aimed at promoting cleaner air and reducing exposure to hazardous pollutants. By prioritising health in environmental legislation, the study underscores the importance of improving the quality of life for all Nigerians and potentially alleviating the burden on the healthcare system. In addition, the study supports Nigeria's environmental commitments on the global stage. As a signatory to various international environmental agreements, including the Paris Agreement, Nigeria has a responsibility to uphold global standards in pollution control. This research will provide insights and recommendations that align with these commitments, aiding Nigeria in fulfilling its obligations under international treaties and enhancing its standing in the global community. Economically, this study demonstrates the potential benefits of a well-enforced air pollution framework. Effective environmental regulations can lead to a healthier workforce, which in turn contributes to increased productivity and reduced healthcare costs. By fostering sustainable development, air quality laws have the potential to create conditions for economic growth, making the country more attractive to investment while ensuring long-term prosperity. Lastly, the study contributes to academic literature on environmental law in Nigeria and raises public awareness on the issue of air pollution. Through its critical examination of legal frameworks and enforcement strategies, the research offers a valuable resource for students, scholars, and the general public interested in environmental issues. The

study not only adds to ongoing academic discussions but also encourages a broader understanding of air pollution's impacts and the urgent need for reform in Nigeria. In summary, this study is significant for its contributions to environmental governance, public health, Nigeria's international obligations, economic welfare, and academic discourse, making it a valuable resource with the potential for wide-reaching impact.

1.6. SCOPE AND LIMITATION OF STUDY

This study encompasses a comprehensive evaluation of Nigeria's legal and regulatory systems aimed at managing air pollution. It includes a detailed analysis of primary legislation, policies, and standards governing air quality in Nigeria, specifically examining instruments such as the Environmental Impact Assessment Act, the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act, and relevant provisions within the Nigerian Constitution. By investigating these frameworks, the study will provide insight into how Nigeria's existing laws address air pollution control.

Additionally, this research will assess the mechanisms in place for enforcing air pollution laws. This involves a close examination of the roles and effectiveness of regulatory agencies like NESREA in implementing these laws across Nigeria's diverse regions. The study will evaluate the agencies' enforcement capacity, resource allocation, and effectiveness in achieving compliance with air quality standards. This focus on enforcement provides a practical understanding of how well the laws translate into tangible outcomes in pollution control.

Another core aspect of the study is the identification and analysis of key challenges hindering air pollution control in Nigeria. These may include institutional limitations, funding shortages, political interference, and infrastructural deficiencies. By pinpointing specific obstacles

within the legal and regulatory frameworks, the research aims to reveal why current approaches may fall short in ensuring clean air for all Nigerians.

Despite its comprehensive focus, the study has some limitations. It will primarily be confined to a review of existing legislation and policy documents and rely on secondary sources of data. This reliance on available data might limit the ability to assess real-time air quality or the immediate impact of specific regulations. Additionally, the study will concentrate on national-level legislation and may not fully capture local variations or specific state policies on air pollution. Finally, while the study draws comparisons with international best practices, these comparisons will be selective and focused on similar developing nations, as Nigeria's socio-economic and regulatory context differs significantly from that of many developed countries.

In summary, the study offers a robust examination of Nigeria's air pollution legal framework, though it is bound by limitations in data availability and scope, particularly in terms of regional nuances and real-time enforcement evaluation.

1.7. RESEARCH METHODOLOGY

The study relies on the doctrinal research methodology. It is a library based research which includes primary and secondary sources. The primary sources are Statutes, Constitution, Acts and Laws while secondary sources are books, journals, bulletins and so on. Some of the primary sources explored here are: The 1999 Constitution of the Federal Republic of Nigeria (as amended), National Environmental Standard Regulatory and Enforcement Agency Act (NESREA Act), Petroleum Regulation, Environmental Impact Assessment Act (EIA Act) among others. The secondary sources include books, articles and journals related to the subject matter of this research. The internet has turned the whole world not only into a global village but also a global room. It helps a lot in various researches of various natures. There is

no information needed that cannot be obtained from the internet. Thus, the internet is of tremendous help in putting this study together.

1.8. SYNOPSIS OF CHAPTERS

Chapter One is the general introduction, it provides an overview of the study, introducing the topic of air pollution control in Nigeria and legal framework. It outlines the aim of the study, which is to assess Nigeria's legal and regulatory structures on air pollution, identify challenges in enforcement, and propose strategies for improvement. The chapter also includes the study's significance, emphasizing how it will contribute to environmental governance, public health, Nigeria's international commitments, economic welfare, and academic literature. The scope and limitations of the research are also presented, clarifying the study's focus on national legislation and regulatory mechanisms, as well as its reliance on existing data and secondary sources.

Chapter Two reviews relevant literature on the subject matter. It establishes a foundation by defining and explaining key concepts related to air pollution. It provides a theoretical understanding of air pollution, including types and sources of pollutants, such as industrial emissions, vehicle exhaust, and household activities. The chapter will discuss the environmental, health, and economic impacts of air pollution in Nigeria, setting the context for why strong legal measures are essential. Additionally, it introduces relevant theoretical frameworks, possibly including environmental justice and sustainable development theories, to underpin the study's approach to pollution control.

Chapter Three delves into Nigeria's specific legal and institutional framework for managing air pollution. This includes a detailed examination of primary laws, such as the Environmental Impact Assessment Act, the NESREA Act, and air quality standards established by NESREA. The chapter will assess the structure, roles, and responsibilities of

relevant regulatory agencies, focusing on their enforcement capabilities and limitations. Key challenges, such as regulatory gaps, resource constraints, and political interference, will also be highlighted, providing a critical perspective on the existing framework's effectiveness in controlling air pollution.

Chapter Four undertakes a comparative analysis, examining air pollution control frameworks in United Kingdom, Australia, and South Africa. It may focus on countries that have made progress in air quality regulation, such as South Africa and United Kingdom. By comparing Nigeria's framework with those of these countries, the chapter aims to highlight effective strategies and practices that could be adapted to strengthen Nigeria's approach to air pollution control. It will also discuss any international environmental treaties or standards these countries follow and their relevance to Nigeria.

Chapter Five summarizes the work, key findings of the study, contribution to knowledge and conclusion. The chapter draws conclusions on the adequacy of Nigeria's air pollution regulations and identifies the most pressing challenges needing reform. Finally, it provides recommendations for strengthening the legal and institutional structures for air pollution control in Nigeria, focusing on policy reforms, enhanced enforcement mechanisms, and strategies to address identified challenges. These recommendations aim to guide policymakers and regulators in developing more effective air pollution control measures.

CHAPTER TWO

LITERATURE REVIEW

2.1. DEFINITION OF TERMS

In the context of air pollution, the term refers to the presence of harmful or toxic particles, gases, or biological molecules in the atmosphere. Air pollution can arise from natural processes, such as volcanic eruptions and dust storms, but more significantly from human activities. Key contributors include industrial emissions, vehicle exhaust, and specific agricultural practices, leading to various pollutants such as particulate matter, nitrogen oxides, sulfur dioxide, carbon monoxide, and volatile organic compounds. These pollutants can severely impair air quality, making air pollution one of the most visible and urgent environmental issues to address.

In Nigeria, air pollution has increasingly become a public health crisis, particularly affecting urban populations exposed to vehicular and industrial emissions. Informal activities, such as the open burning of waste and unregulated small-scale industries, also significantly contribute to atmospheric pollution. The health impacts include respiratory diseases, cardiovascular problems, and even premature death, particularly among vulnerable groups like children and the elderly. Economically, the costs associated with treating pollution-related illnesses and the loss of productivity represent substantial burdens on Nigeria's development.

2.1.1. Environment

Environment: the term Environment has been defined by so many writers. J. Barry[10], for example, defined it as including water, air, land and all plants and human beings or animals living therein and the inter-relationships which exist among these or any of them.

Black's law dictionary also defines environment as the totality of physical, economic, cultural, aesthetic and social circumstances and factors which surround and affect the desirability and

[10] Environment and Social Theory 2nd edition.

value of property and which also affect the quality of people's lives[11]. The above definition regards the environment as a state of affairs of nature viewed holistically and based upon the milieu of man in his natural habitat.

This expression may find some support in another definition which states that the environment is "the conditions and influences of the place in which an organism lives"[12]. In this definition, organisms will include man, animals, plants and every living and non-living things that exist in the atmosphere, water and earth. Fact Monster on his part, defined environment as something you are very familiar with. It's everything that makes up our surroundings and affects our ability to live on the earth. The air we breathe, the water that covers most of the earth's surface, the plants and animals around us and much more.

In its most general sense, 'environment' refers to our surroundings. It is often understood to include not only land, air and water but also the built environment and the condition of the local neighbourhood. It is the whole sum of the surrounding external conditions within which an organism, a community or an object exists.

Section 37 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act[13] defines "environment as including 'water', 'air', 'land' and all plants and human beings or animals living therein and the inter-relationships which exists among these or any of them ".

From all the definitions given by various authors above, it is obvious that they are all in agreement that the environment is something we feel, touch, and see being the water, air, land and all plants, and animals living therein.

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[11]Black, Henry, 6th ed. 1891 -1991. P. 11
[12] David Crystal, Cambridge Encyclopedia, 3rd ed. 2018. P. 23.
[13] Cap. N164, LFN 2004.

The word environment of which environmental is the adjective has been defined in many ways by various authorities: Chambers Concise Dictionary,[14] defined environment as "surroundings, external conditions influencing development or growth of people, animals or plants; living or working conditions."

Similar definitions given by other authorities are as follows,

1. "External surroundings, environmental factors are conditions influencing an individual from without."[15] This definition is from the point of view of man, the individual and the medical sciences and therefore parochial.

2. External conditions and surroundings, especially those that affect the quality of life of plants, animals and human beings."[16]

3. Environment refers to the components of the Earth and includes: lands, water and air, including all layers of the atmosphere; all organic and inorganic matter and living organisms; the social, economic, recreational, cultural, spiritual, and aesthetic conditions and factors that influence the life of human and communities; and a part or combination of these things referred to above and the interrelationships between two or more of them.[17]

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[14] Catherine Schwarz et al (ed), Chambers Concise Dictionary, 1999 Chambers Harrap Publishers Ltd, Edinburgh, at pg. 344

[15] Nancy Roper, Churchill Livingstone's Pocket Medical Dictionary, 13th Edition, 1978 Longman Group Limited, Edinburgh, pg 108

[16] Queen's English, Dictionary & Thesaurus of the English Language, 2002 Geddes & Grosset, New Lanark, ML II 9DJ, at pg 111

[17] M.S. Aibor & J.O. Olorunda, *A Technical Handbook of Environmental Health in the 21st Century,* 2006 His Mercy Publishers, Akure, Nigeria, at pg 357

4. "All the external factors affecting an organism. These factors may be other living organisms (biotic factors) or non-living variables (abiotic factors), such as temperature, rainfall, day length, wind, and ocean Currents.[18]

5. The NESREA Act in its interpretation section[19] defined Environment to include water, air, land and all plants and human beings or animals living therein and the interrelationships which exist among these or any of them.

A more detailed and extensive definition which may serve our purpose in this presentation very well and make for its better understanding is the one given in Rau and Wooten (eds)[20] that Environment is the whole complex of physical, social, cultural, economic and aesthetic factors which affect individuals and communities and ultimately determine their form, character, relationship and survival. Most importantly they went further to categorize and detail the dimensions of the environment into four namely:

(a) The physical environment (natural and constructed) includes land and climate, vegetation, wildlife, the surrounding land uses and the physical character of an area, infrastructure/public services, air, noise and water pollution.

(b) The social environment includes community facilities and services and the character of community facilities and services and the character of communities.

(c) The aesthetic environment – scenic areas, vistas, and views including the architectural character of the building.

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[18] Zimmerman, Michael, "*Environment*". Microsoft ® Encarta ® 2009 (DVD). Redmond, WA: Microsoft Corporation 2008.

[19] Section 37, National Environmental Standards and Regulations Enforcement Agency (Establishment) Act CAP 164, LFN 2007 (hereinafter referred to as the Act or NESREA Act).

[20] John G. Rau & David C. Wooten (eds), 1980, "*Environmental Impact Analysis Handbook*", cited by Olomola O.A. in "*Nigeria's Environmental Laws – A critical Review of Main Principles, Policy and Practice*" in O.A. Osunbor et al (ed) Environmental Law and Policy, 1998 Law Centre, Faculty of Law, Lagos State University Publication, at pg 11.

(d) The economic environment includes employment, land ownership patterns and land values.

Thus bringing out and laying down the macrocosm of the meaning of environment and by extension environmental. And we can see that what is lacking in one definition may be available in another.

2.1.2. Pollution

This is referred to as a breach of Man's right to live in a clean and healthy environment.[21] Pollution occurs in many uses and activities of man including the mining, exploration and use of Petroleum and its by-products. Physically, pollution occurs because it is virtually impossible to have a productive process that involves no waste; economically, pollution occurs because polluting the environment is less expensive than operating cleanly.

The point at which a particular activity alters the environment and radically affects the way of life and economic well-being of those who live within its vicinity, or pose danger to their health and life, is the threshold at which the right to a clean environment is breached.

In Nigeria, one of the major causes of environmental pollution is the prospecting activities of oil/mining companies and other industries. The effects and problems of pollution are now well known[22] the need of protecting the environment from hazards of oil pollution has been recognized only within the past decade, particularly in the oil-producing communities of the Niger Delta. Apart from the problems suffered from blow-outs and oil spills and the

[21] Ibid.
[22]Omoragbe, Yinka "*Regulation of oil industry in Nigeria in new frontiers in Law,* Azingeed, Benin: Oliz Publishers, 1993 p. 147

devastation caused by constant gas flaring. They suffer from the ravages of day-to-day production activities.[23]

For this research, some types of environmental pollution include Air pollution, land pollution and water pollution. All the above pollution touches virtually every aspect of human life and poses many health problems. A good example is soot, a black substance witnessed in River State, mostly in the morning and evening, on roofs, clouds and water surfaces, in fact virtually everything is affected by the said soot. Residents wake up in the morning and see the weather cloudy as if it will rain, and when it was first noticed, nobody took it seriously until it became unbearable. Soot has been attributed to oil vandalization otherwise known as *Kpo fire* by the locals.[24]

From the above, it is obvious that In Nigeria, companies' operations have resulted in adverse pollution and severe environmental degradation most especially in the oil and mining areas. This affects the human body as the toxic substance is been absorbed into the bloodstream and distributed throughout the body and disturbs several parts of the body such as the blood pressure, nervous system, kidney, liver and skin. Also, private properties such as farm crops and buildings, as well as damage to the physical state of the environment such as the falling of water and damage to the fertility of farmlands or soil degradation by oil spillage, particularly as a result of hazardous human activities of the companies. Yet, these companies find it difficult to pay compensation and restore the environment despite express provisions of laws on environmental pollution making it mandatory to pay compensation.

[23] Ibid.
[24] Sunday Sun, published on 26th February, 2017.

2.1.3. Air Pollution

Section 37 of the NESREA Act of 2007 defines pollution as 'the man-made or man-aided alteration of the chemical, physical or biological quality of the environment beyond acceptable limits.' According to the World Health Organisation (WHO), air pollution is the alteration of the natural condition of the atmosphere either indoors or outdoors by any chemical, biological or physical agent.[25] Indoor air pollution refers to the presence of pollutants in the air inside buildings or other enclosed spaces such as homes, offices, schools and hospitals. Common sources of indoor air pollution include household combustion devices such as stoves and fireplaces, tobacco smoke building materials, chemical substances and cleaning products. Outdoor air pollution, on the other hand, refers to the presence of pollutants in the air outdoors which can be caused by various human activities such as transportation, industrial activities, bush burning, construction activities and other activities that emit greenhouse gases outdoors.

Air pollution refers to the presence in the outdoor or indoor atmosphere of one or more gaseous or particulate contaminants in quantities, characteristics and duration such as; to be injurious to human, plant or animal life or property, or which unreasonably interferes with the comfort enjoyment of life and property.[26]

Admassu and Wubeshet[27] affirmed that the concept of 'Air pollution' may also be seen as an atmospheric condition in which certain substances are present in such concentrations that they can produce undesirable effects on man and his environment.

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[25] World Health Oranisation, *'Air Pollution'* <https://www.who.int/health-topics/air-pollution#tab=tab_1 > accessed 16 November 2024.

[26] Odigure, J.O., *Safety Loss and Pollution Control in Chemical Process Industries*. (Jodigs and Associates, Minna, Nigeria, 1998) 89-93.

[27] Admassu, M. and Wubeshet, *Air Pollution: Lecture Notes for Environmental Health Science Students. (*University of Gondar Publications, Ethiopia, 2006) 5-6.

Air pollution can also be the introduction of chemicals particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment.

Ladan observed that it has been difficult to achieve cooperation for air pollution control in developing countries like Nigeria, whose chief concern is to provide such basic needs as food, shelter and employment for her populace.[28]

Kumar and Katoria[29] argued that air pollution is foreign material present in the air which can be manmade or occur naturally, and are concentrated where people are concentrated. The author noted that this pollution is injurious to health and its prevention places an economic burden on the citizen. Air pollution is one of the most serious environmental problems in societies at all levels of economic development. Godish[30] noted that air pollution can also affect the properties of materials, visibility and the quality of life in general. Industrial development has been associated with the emission to air of large quantities of gaseous and particulate emissions from both industrial production and from burning fossil fuels for energy and transportation.

Anjaneyulu[31] opted that air pollution is generally perceived as the presence in the outdoor atmosphere of one or more contaminants such as fumes, dust, gases, mist, odour, smoke, smog or vapours in considerable quantities and duration of which is injurious to humans, animal and plant life or which unreasonably interferes with the comfortable enjoyment of life and property. Air pollution is an environmental problem that is directly related to the number of individuals living in an area and the kinds of activities they engage in. In a place where the

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[28] Ladan, S.I., *Environmental Resource Management for self Reliance in Nigeria*. (Dan Masani Multi-disciplinary Journal, 2013) 80-89.
[29]Kumar, S. and Katoria, D., *Air Pollution and its Control Measures*, (International Journal of Environmental Engineering and Management, 2013) (4) (5)445-450.
[30] Godish, T., *Air Quality*, 4th Edition, CRC Press, London, 2004.
[31] Anjaneyulu, *Introduction to Environmental Science*, BS Publications Hyderabad India, 2005.

population is low and their energy usage is also low, the impact of people creating pollution is minimal. However, where the population is high, the area is urbanized and industrialized with high energy usage large quantities of pollutants are released into the environment.

Makinde[32] contended that air pollution is harmful solid, liquid or gaseous substances that are present in such concentrations in the environment which tend to be injurious to living organisms. They are also known as substances in the air that can cause harm to humans and the environment. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may also be natural or manmade.

Odilora[33] asserted that air pollution is a major problem arising mainly from industrialization. It has also been reported that when exposed to air pollutants, most plants experience physiological changes before exhibiting visible damage to leaves.[34] Urban air pollution has a significant impact on the chemistry of the atmosphere and thus potentially on regional and global climate. Already, air pollution is a major issue in an increasing number of megacities around the world, and new policies to address urban air pollution are likely to be enacted in many developing countries irrespective of the participation of these countries in any explicit future climate policies.[35]

According to Kehinde, A. O.[36], the effects of air pollution on all people across the globe cannot be overemphasized. It is a phenomenon that needs urgent attention from all countries

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[32] Makinde, R., '*How to Make Nigerian Cities Liveable*', The Guardian, (2000) (17) (7953), Guardian Newspapers Limited, Isolo, Lagos.
[33] Odilara, C.A., Egwaikhide, P.A., Esekheigbe, A. & Emua, S.A, *Air pollution Tolerance Indices (APTI) of some plant species around Ilupeju Industrial Area, Lagos,* Journal of Engineering Science and Applications, (2006) (4) (2) 97-101.
[34] Dohmen, G.P., Loppers, A. & Langebartels, C., *Biochemical Response of Norway Spruce (Picea Abies (L) Karst). Towards 14-Month Exposure to Ozone and Acid mist, effect on amino acid, Glutathione and Polyamine Titers. Environmental Pollution*, (1990) (64) 375-383.
[35] Prinn, R.G., *The Cleansing Capacity of the Atmosphere.* Annual Reviews Environment and Resources (2003), (28)29-57.
[36] Adeola Olufunke Kehinde, Ifedapo Oluwakemisola Osadola, Adebusola Awonuga, *Reflection on Nigeria's Air Pollution Regulations With A View To Learning From the European Union,* ACTA UNIVERSITATIS CAROLINAE – IURIDICA (2023) (1) 105–118.

of the world. Serious efforts must be made to cut down greenhouse gas emissions in all nations to reduce the menace of air pollution. Various countries including developed, developing and underdeveloped are making efforts to tighten the control of pollution to ensure that the rate at which people are exposed to pollutants across their cities is reduced, but despite all these efforts, the level of pollution all over the world seems to be going higher, Nigeria inclusive. The level of pollution in Nigeria is still very high and there seems to be no solution around the corner. The World Health Organization (WHO) has noted that each year, air pollution is responsible for nearly seven million deaths around the globe. This shows the extent to which air pollution has wrecked and is wreaking havoc on the entire world.

According to Fagorite,[37] More recently, air pollution has been a prevailing issue for discussion due to its adverse health and environmental effects in major cities and more importantly the Niger Delta region as a whole. Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere. The causes of air pollution are either natural or anthropogenic. While its effects could be health or environmental. In terms of remediation, there are now practical alternatives to the principal causes of air pollution. For instance, the combustion of fossil fuels for space heating can be replaced by using ground-source heat pumps and seasonal thermal energy storage. Commonly used as pollution control devices by industry or transportation devices which can either destroy contaminants or remove them from an exhaust stream before it is emitted into the atmosphere have been listed. Also, motor vehicles driven by fossil fuels, a key factor in urban air pollution can be replaced by electric vehicles.

2.2. Sources and Causes of Air Pollution in Nigeria

[37] Fagorite, Victor Inumidun, Anifowose, Feyisayo Aderemi, and Chiokwe, Victor Nnamdi, *Air Pollution; Causes, Effects and Remediation in Nigeria,* International Journal of Advanced Academic Research (Sciences, Technology and Engineering) (2021) (7) (1) 1. < www.ijaar.org > accessed 14 November 2024.

A. Industrial Activities

Industrialization is seen as a potential solution to Nigeria's economic challenges primary among which are the high unemployment rates and over-reliance on oil exports. Industrialization has the potential to diversify the Nigerian economy, create employment opportunities and lift people out of poverty. However, industrialization also has its side effects if not adequately regulated and controlled. These side effects arise particularly in terms of air pollution and its adverse effects on human health and the environment.

Industrial activities in Nigeria such as petroleum operations, manufacturing operations and power generation operations contribute substantially to air pollution. Nigeria is Africa's largest oil producer and the petroleum operations at different levels including the upstream, midstream and downstream sectors emit various pollutants that are dangerous to the environment. When fossil fuels such as diesel and natural gas are burned for energy in industrial processes, they release greenhouse gases (GHGs) that contribute to global warming. Gas flaring is a prevalent and significant source of air pollution in Nigeria's oil and gas industry. During oil production, associated gases are often flared or burned off, releasing large quantities of pollutants into the air. Pipeline vandalism and illegal refineries also contribute to air pollution. With the increasing cost of fuel and other petroleum by-products, people may be motivated to vandalise oil pipelines and refine oil through illegal means. Due to poor infrastructure, expertise and safety measures, these illegal refining activities are more likely to cause fire outbreaks and release large amounts of GHGs into the atmosphere. The emissions of sulfur and nitrogen oxides from burning fossil fuels are particularly harmful as they can lead to the formation of acid rain and depletion of the flora and fauna.

Manufacturing plants in Nigeria, such as those producing cement and chemicals also contribute to air pollution. These plants emit large amounts of dust and particulate matter during the production process.

The dust consists of various pollutants which can have severe health effects when inhaled. The release of particulate matter, along with other industrial pollutants, contributes to diminished air quality in the area. Also, power generation in Nigeria primarily relies majorly on fossil fuels, particularly coal and petroleum products. The Egbin Power Station in Lagos State is one of the largest thermal power plants in Nigeria and contributes to air pollution in the region. The emissions from this coal-fired power station contribute to high levels of particulate matter and sulfur dioxide, further exacerbating air pollution and its associated health risks

B. Vehicular Emissions

In Nigeria, concerns about pollution have primarily focused on general industrial pollution and pollution caused by oil industries. However, no significant attention has been given to the damage caused by mobile transportation as a source of air pollution. However, the pollution from the road transport industry is increasing due to the rise in per capita vehicle ownership and high congestion of vehicles on city roads. The rapid increase in the number of vehicles on Nigerian roads has exacerbated air pollution issues. The emissions from cars, trucks and motorcycles contribute substantial amounts of pollutants.

NESREA holds the legal mandate to enforce all environmental laws, standards and regulations in the country while the Vehicle Inspection Officer (VIO) is responsible for checking the roadworthiness of vehicles. Other related agencies involved in this effort include the Federal Road Safety Commission (FRSC), the National Automotive Design and Development Council (NADDC) and the Nigeria Customs Services (NCS). However, there is

an apparent lack of action by regulatory agencies responsible for implementing and enforcing measures to reduce emissions.[38] The concern of Nigerians towards vehicular emission as a major source of air pollution in Nigeria arises particularly in light of the recent identification by the World Health Organization (WHO) of four cities in Nigeria as the world's worst for air pollution, with vehicular pollution being highlighted as a significant contributing factor.[4]

C. Agricultural Practices

Agricultural activities in Nigeria contribute significantly to air pollution through practices such as bush burning and the use of chemicals and pesticides. Bush burning is a common agricultural practice in Nigeria, particularly during the dry season. Farmers often burn vegetation and crop residues in order to clear land for cultivation or to manage pests and diseases. However, the smoke and pollutants released from these fires contain harmful substances such as carbon monoxide. The use of chemicals and pesticides in agriculture also leads to air pollution in Nigeria. Farmers use pesticides to control pests and increase crop yields. However, improper handling, storage and application of these chemicals can result in their volatilization into the air, causing air pollution. Pesticides contain toxic compounds that when released into the atmosphere, can contaminate the air and pose risks to human health.

[38] K Jeremiah, 'Vehicle emission: Failure of roadworthiness scheme?' <https://guardian.ng/features/executivemotoring/vehicle-emission-failure-of-roadworthiness-scheme/ >accessed 15 November 2024.

D. Poor Waste Management Practices

Nigeria produces an estimation of 32 million tons of solid waste annually. However, only about 2030% of this waste is properly collected and managed. The remaining waste either ends up being dumped in unauthorized places or burned. The improper disposal of waste poses a detrimental impact on the environment and public health in Nigeria. Thus, it is crucial to develop effective strategies to address this issue and ensure sustainable solid waste management practices. One of the critical sources of air pollution in Nigeria is poor waste management practices. As previously mentioned, a significant percentage of solid waste in the country is not collected and managed correctly.

This leads to the accumulation of waste in unauthorized places such as open dumps, water bodies and drainage channels. In these areas, decomposition of organic waste takes place, releasing a variety of gases into the atmosphere. Methane is produced during the anaerobic decomposition process of organic waste. Methane is known to contribute to the greenhouse effect and climate change. In addition, the burning of waste, either intentionally or unintentionally, leads to the emission of toxic gases and hazardous chemicals into the air. These emissions not only contribute to air pollution but also pose severe health risks to the population.

E. Inadequate Sanitation Exercises

Inadequate sanitation exercises are another critical source and cause of air pollution in Nigeria. In many areas, especially in densely populated urban centres and informal settlements, there is a lack of proper sanitation facilities and infrastructure. As a result, open defecation and urination are prevalent. These human excreta produce unpleasant smell and often ends up in open spaces, water bodies or near residential areas. The decomposition of fecal matter releases foul odours and various gases, including ammonia, hydrogen sulfide and

volatile organic compounds into the air which create a pungent and unpleasant environment for nearby communities and organisms.

2.3. Impacts of Air Pollution in Nigeria

There are several impacts or effects of air pollution in Nigeria. Ambient air pollution in Nigeria has led to emissions of carbon monoxide, carbon dioxide, nitrogen oxides, sulphur dioxide and particulate matter in the atmosphere, which increase air pollution and lower air quality. Air pollution in Nigeria has resulted in the occurrence of acid rain. Acid rain arises when pollutants emitted into the air combine with moisture in the atmosphere, forming sulfuric acid and nitric acid. These acids are then deposited onto the Earth's surface through precipitation, damaging crops, forests and aquatic ecosystems. Acid rain can directly impact agricultural productivity by affecting the nutrient availability in soils and disrupting the growth and development of crops. It can also lead to the acidification of lakes, rivers and streams which inevitably endanger fish and other aquatic organisms.

Air pollution in Nigeria also contributes to the depletion of the ozone layer. Greenhouse gases and ozone-depleting substances released into the atmosphere through human activities, interact with ozone molecules in the stratosphere, resulting in their breakdown. The depletion of the ozone layer increases the levels of ultraviolet radiation reaching the Earth's surface. This radiation has harmful effects on human health. Furthermore, the radiation can also have ecological implications, such as damage to phytoplankton and other marine organisms which form the foundation of aquatic food webs.

Furthermore, air pollution is a significant contributor to climate change. The release of greenhouse gases into the atmosphere contributes to the greenhouse effect. These gases trap heat from the sun which results in global warming. Climate change has various environmental impacts, including rising sea levels, changes in precipitation patterns,

increased frequency and intensity of extreme weather events like hurricanes and floods and shifts in ecosystems. These changes disrupt habitats and have harmful consequences for biodiversity including species loss and population declines.

Air pollution in Nigeria is associated with different health risks such as cardiovascular diseases, respiratory infections, tuberculosis, lower respiratory infections, chronic respiratory diseases, ischemic heart disease, stroke, and communicable, maternal, neonatal, and nutritional diseases.[39] Nigeria is ranked among the world's first five and the largest country in Africa, with the top-most level of premature death associated with air pollution.[40] In 2019, air pollution in Lagos alone led to approximately 23,900 premature deaths, accounting for 12.4% of total deaths.[41] Surprisingly, this surpassed the number of deaths caused by malaria, which accounted for 12% and was more than double the deaths caused by HIV/AIDS, which accounted for 5.2%.[42]

2.4. THEORETICAL FRAMEWORK

In examining air pollution control within Nigeria, a robust theoretical framework is essential for understanding the complex interplay between legal, economic, social, and environmental factors that impact regulatory effectiveness. This study draws on environmental justice theory, sustainable development theory, and regulatory enforcement theory to analyse the motivations, challenges, and goals of implementing effective air pollution controls in Nigeria. Each theory offers distinct perspectives on the need for a comprehensive legal framework capable of addressing both immediate environmental harms and long-term sustainability goals.

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[39] H T Pona, *'Environmental health situation in Nigeria: current status and future needs'* [2021] (7) (3) < www.ncbi.nlm.nih.gov/pmc/articles/PMC8022161/ > accessed 15 November 2024.
[40] *Ibid.*
[41] Clean Air Fund, 'Lagos and Air Pollution' <https://www.cleanairfund.org/clean-air-africas-cities/lagos/ > accessed 16 November 2024.
[42] *Ibid.*

2.4.1. Environmental Justice Theory

Environmental justice theory advocates for fair and equitable treatment of all people in environmental law, regulation, and policy implementation. This theory is grounded in the recognition that marginalized and vulnerable communities often experience a disproportionate share of environmental harms—such as exposure to air pollution—while reaping fewer benefits from regulatory protections. The theory contends that everyone, regardless of socioeconomic status, ethnicity, or location, has a right to a clean, safe, and healthy environment.

In Nigeria, urban centres and economically disadvantaged areas are particularly vulnerable to air pollution. These communities often experience elevated pollution levels from sources like industrial operations, unregulated small-scale enterprises, and high volumes of vehicular traffic. Applying environmental justice theory allows this study to critically examine whether Nigeria's legal framework addresses or exacerbates these environmental inequities. Key considerations include assessing if regulations fairly protect all demographics from air pollution's health impacts, whether enforcement efforts are consistent across different regions, and whether vulnerable communities have any recourse when affected by pollution. Environmental justice theory will also be used to evaluate whether Nigeria's policies aim to mitigate health and environmental risks for disadvantaged groups, ensuring that legal protections do not disproportionately benefit wealthier, less-impacted communities at the expense of others.

2.4.2. Sustainable Development Theory

Sustainable development theory highlights the need to meet the needs of the present without compromising the ability of future generations to meet their own needs. This theory is particularly relevant to air pollution control, as it encourages nations to balance economic

growth, environmental protection, and social equity to achieve a healthier, more sustainable future. The three primary pillars of sustainable development—economic growth, environmental protection, and social inclusion—provide a framework for considering how air pollution regulations should function in a country's broader development agenda.

In Nigeria, rapid urbanisation and industrialisation have brought economic growth, but they have also intensified air pollution problems, particularly in urban centres. Applying sustainable development theory helps this study assess whether Nigeria's legal and policy framework promotes a balance between economic activities and environmental stewardship. For instance, the study will explore whether Nigeria's laws incorporate pollution control standards that limit industrial emissions without stifling economic development. Sustainable development theory also raises questions about whether Nigeria has effective strategies for encouraging "green" industrial practices or for incentivising companies to adopt cleaner technologies. Furthermore, this framework is instrumental in evaluating whether Nigeria's long-term environmental policies align with global sustainability commitments, such as the United Nations' Sustainable Development Goals, which emphasise environmental health as a foundation for achieving broader social and economic progress.

2.4.3. Regulatory Enforcement Theory

Regulatory enforcement theory focuses on the practical aspects of enforcing environmental laws and ensuring compliance with established standards. This theory is critical in understanding the real-world challenges regulatory agencies face in implementing air pollution control measures, including resource constraints, administrative capacity, and political interference. It suggests that even well-designed legal frameworks may fail if they lack the necessary enforcement infrastructure and support.

In Nigeria, regulatory enforcement is a significant concern in air pollution control. Although several agencies, including the National Environmental Standards and Regulations Enforcement Agency (NESREA), have mandates to regulate environmental standards, these bodies often face challenges such as limited funding, inadequate staffing, and insufficient technical expertise. Regulatory enforcement theory allows this study to explore the effectiveness of these agencies in implementing air pollution laws and holding violators accountable. Additionally, this theory provides a lens to examine how political factors, such as government priorities and industry influence, affect the enforcement of pollution standards. For instance, powerful industries may have the capacity to resist strict enforcement, potentially undermining regulatory efforts. Regulatory enforcement theory will also be used to analyse the effectiveness of Nigeria's penalty structures, examining whether fines or other penalties are sufficient to deter polluters or if they are too low to be effective.

Together, these theories offer a comprehensive lens for examining Nigeria's air pollution control framework. Environmental justice theory ensures the study critically evaluates who benefits from and who is harmed by the current regulatory system. Sustainable development theory encourages a balanced approach to economic, social, and environmental objectives, highlighting the need for a framework that is adaptable to future challenges. Regulatory enforcement theory sheds light on the institutional and practical challenges that affect the real-world application of these laws.

In summary, the integration of environmental justice, sustainable development, and regulatory enforcement theories will allow this study to assess whether Nigeria's legal framework effectively addresses air pollution in a way that is fair, sustainable, and enforceable. This theoretical foundation will support the analysis of whether Nigeria's policies are achieving their intended objectives or if reforms are necessary to make air

pollution control more efficient, equitable, and aligned with the country's long-term development goals.

2.5. CONCLUSION

Chapter Two has explored the foundational concepts, theories, and literature on air pollution, establishing a comprehensive basis for understanding the issue in the context of Nigeria. From the various definitions and perspectives examined, it is evident that air pollution is a significant and complex environmental challenge that impacts human health, ecosystems, and economic stability. Scholars and experts agree that air pollution is characterised by the presence of harmful contaminants—whether gaseous, particulate, or biological—in the atmosphere at levels that pose risks to life and property. This consensus reinforces the importance of addressing air pollution through robust regulatory frameworks and sustainable practices. The chapter also highlighted several theoretical perspectives that frame the discourse on air pollution control. Environmental justice theory stresses the need for equitable treatment of all communities affected by pollution, especially marginalized groups who are often disproportionately exposed. Sustainable development theory underscores the need for a balanced approach to economic growth and environmental protection, advocating for long-term solutions that ensure the well-being of future generations. Regulatory enforcement theory points to the challenges and gaps in existing enforcement mechanisms, particularly in developing countries like Nigeria where financial and technical constraints limit the effectiveness of air pollution control efforts. The literature review further demonstrated that air pollution is a global issue affecting developed, developing, and underdeveloped nations alike, though each faces unique challenges. In Nigeria, urban areas, particularly the Niger Delta, face severe air quality issues due to industrial activities and the combustion of fossil fuels. The health and environmental consequences of these pollutants

are substantial, yet the response remains inadequate given the scale of the problem. The World Health Organization's data on the global toll of air pollution, causing millions of premature deaths annually, reinforces the urgency for improved air quality management. As Nigeria strives to balance economic growth with environmental and public health needs, this chapter has underscored the importance of a cohesive legal and regulatory approach. The literature suggests that while pollution control mechanisms are in place, their enforcement and practical effectiveness remain limited. Moving forward, this study will assess Nigeria’s legal framework for air pollution control, focusing on challenges to effective regulation and exploring strategies to strengthen policies for long-term environmental health and sustainability.

CHAPTER THREE

LEGAL AND INSTITUTIONAL FRAMEWORK GOVERNING AIR POLLUTION

3.1 INTRODUCTION

The legal and institutional frameworks governing environmental protection and pollution control are essential for sustainable development, particularly in countries with substantial industrial activities such as Nigeria. These frameworks provide the foundation for regulating environmental impacts, managing natural resources responsibly, and protecting public health and ecosystems. In Nigeria, environmental degradation—especially due to the activities of the oil and gas industry—has created an urgent need for robust legal mechanisms and strong institutional oversight to mitigate pollution and its consequences.

This chapter examines the Nigerian laws and institutions responsible for environmental regulation, focusing on the legislative and administrative structures that aim to protect the country's environment, particularly in the Niger Delta region. Key laws such as the Constitution of the Federal Republic of Nigeria, the Environmental Impact Assessment Act, and the Petroleum Industry Act, among others, establish standards for pollution control, mandate environmental assessments, and set penalties for non-compliance. These laws form the basis of Nigeria's environmental legal framework, setting out obligations for both government and industry players to uphold environmental standards.

In addition to legislation, Nigeria has developed a network of statutory agencies to enforce these environmental laws and manage specific challenges associated with industrial pollution. Agencies such as the National Environmental Standards and Regulations Enforcement Agency (NESREA), the National Oil Spill Detection and Response Agency (NOSDRA), and the Niger Delta Development Commission (NDDC) play critical roles in monitoring

compliance, responding to pollution incidents, and promoting sustainable development. By analysing both the legal instruments and the roles of these institutions, this chapter aims to evaluate the effectiveness of Nigeria's environmental governance framework in addressing pollution and ensuring accountability within the extractive industries.

This chapter provides an in-depth examination of these legal and institutional arrangements, shedding light on their strengths and weaknesses and identifying opportunities for enhancing Nigeria’s capacity to balance economic development and environmental sustainability.

3.2 LEGAL FRAMEWORKS

This section delves into key legislative frameworks established to safeguard and sustainably manage Nigeria's environment, with a particular focus on the Niger Delta region, which is significantly impacted by environmental pollution and degradation arising from extensive oil and gas operations. Given the economic importance of the oil and gas sector to Nigeria, the need for laws that balance resource extraction with environmental protection is critical. This chapter examines several principal laws that reflect Nigeria's commitment to environmental stewardship, specifically targeting the prevention of ecological damage and pollution associated with extractive industries.

Among the laws discussed are the Constitution of the Federal Republic of Nigeria 1999, which provides the foundational legal framework and enshrines the right to a healthy environment. The Harmful Waste (Special Criminal Provisions, etc.) The act addresses hazardous waste disposal issues, reflecting Nigeria’s efforts to curb harmful waste practices. The Petroleum Industry Act and Petroleum Act serve as pivotal regulations governing the oil and gas industry, with specific provisions for environmental standards and pollution control measures. The Oil in Navigable Waters Act and the Oil Pipelines Act provide guidelines for operations within navigable waters and pipeline construction, respectively, to minimize

environmental risks and promote safety in oil transportation. Additionally, the Environmental Impact Assessment (EIA) Act mandates that environmental impact assessments are conducted before significant industrial activities, thereby ensuring that potential environmental consequences are considered before projects commence.

The relevant provisions and specific measures within each of these laws are discussed in detail in the following paragraphs, providing insights into how each statute seeks to mitigate environmental impacts and promote sustainable development. This analysis highlights both the strengths and limitations of the existing legal framework and offers a foundation for understanding the role of law in addressing Nigeria's environmental challenges.

3.2.2. THE 1999 CONSTITUTION OF THE FEDERAL REPUBLIC OF NIGERIA (AS AMENDED)

Section 20 of the CFRN places a legal obligation on the Nigerian government to ensure environmental sustainability for its citizens. As part of this mandate, air pollution control is integral and essential. Despite the constitutional provision for environmental protection, Section 6(6) (c) of the CFRN makes it non-justiciable as it falls under Chapter II of the Constitution. Therefore, no individual can approach the court to enforce Section 20 of the Constitution which seeks to protect the ecosystem. The courts have established that Chapter II of the Constitution is non-justiciable as it is a solemn duty imposed on all organs of government and authorities to abide by the mandates contained therein.[43] However, Section 20 of the CFRN, read in conjunction with Section 33(1) of the CFRN and Article 24 of the African Charter on Human and Peoples' Rights, provides an avenue for Nigerians to sustain an action for enforcement against the violation of their right to a peaceful environment

43 *Attorney General of Lagos State v Attorney General of the Federation & Ors*. (2003) 35 WRN 7.

without relying solely on Section 20 of the Constitution. These provisions may be relied upon by aggrieved parties to seek redress for the polluted atmosphere or air quality.[10]

One of the objectives of Part II of the *CFRN* 1999 (Fundamental Objectives and Directive Principles of State Policy) is to ensure a safe and improved environment for the citizenry. Section 20 obligates the state to 'protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria'. By this provision, activities, including those aimed at achieving an economically vibrant state, must be carried out in a manner that achieves the purpose set out in section 20 of the CFRN 1999. This position is further strengthened by the provision of section 17(2)(d) which forbids the exploitation of human or natural resources in any form whatsoever for reasons, other than for the good of the community.[44]

While section 20 of the *CFRN* 1999, at first sight, appears to give some hope for the environment by providing that 'the State shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria,' it has in most cases been interpreted as a non-justiciable right on the ground that it falls under Fundamental Objective and Directive Principles of State Policy (FODPSP) as contained in Chapter II of the CFRN 1999. Rights under FODPSP are believed to be non-justiciable,[45] and therefore, lack judicial enforcement in Nigeria since by section 6(6) (c) of the CFRN 1999: The judicial powers vested by the foregoing provisions of this section – shall not except as otherwise provided by this Constitution, extend to any issue or question as to whether any act or omission by any authority or person or as to whether any law or any judicial decision conforms with the

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44 F O Ugbaja, *Regulation of Environmental Pollution in the Nigerian Oil and Gas Industry: The Need for an Alternative Approach* (Unpublished Master's Thesis, Faculty of Law, University of Calgary, Alberta, Canada 2016) 53.

45 RO Ugbe and ME Umo, '*Enforcement Provisions of Major Environmental Law Regimes in Nigeria'* (2015)5 *University of Ibadan Law Journal* 233; F Olarewaju, '*Reappraising the Nigerian Constitution for Environmental Management'* (2002) 1 (1) *AAU Law Journal* 44.

Fundamental Objectives and Directive Principles of State Policy set out in Chapter II of this Constitution.[46] Unfortunately, as envisaged by section 6(6) (c), there is no other provision for the protection of the environment in the CFRN 1999.[47]

The interpretation of section 20 of the CFRN 1999 as a non-justiciable right by the Nigerian courts, for several years, rendered those seeking to judicially enforce their environmental rights incapable of doing so. [16] The attitude of the Nigerian courts is well illustrated in *NNPC v Fawehinmi,*[17] where the Nigerian Supreme Court held that the provisions of Chapter II of the Constitution are wholly unenforceable under any guise whatsoever and remain mere governmental aspirations. Also, in *AG Ondo State v AG Federation*,[48] the Supreme Court stated that the provision of section 6(6) (c) of the Constitution makes rights under the FODPSP non-justiciable except as otherwise provided in the Constitution. Further, in *Archbishop Olubunmi Okogie (Trustees of Roman Catholic Schools) and Ors v The Attorney General of Lagos State*,[49] the Court of Appeal held that section 6(6)(c) of the Constitution makes rights outlined under FODPSP as contained in Chapter II of the CFRN 1999 non-justiciable.[50] However, the growing trend in the jurisprudence of human rights, especially, through the African Charter on Human and Peoples Rights (ACHPRs), has rendered the notion of non-justiciability of section 20 of the CFRN 1999 untrue. In Jonah *Gbemre* v *SPDC*,[51] the Federal High Court held that gas flaring violated the right of the plaintiff to enjoy a healthy environment as provided by Article 24 of the African Charter and the constitutionally guaranteed right to life and dignity of persons provided for in sections 33 and

46 CFRN 1999, s 6(6) (c).
47 See TT Onifade, *Legal and Institutional Framework for Promoting Environmental Sustainability in Nigeria through Renewable Energy: Possible Lessons from Brazil, China and India* (Master's Thesis, Faculty of Law, University of Ibadan, Nigeria 2014) 47.
48 *AG Ondo State v AG Federation* [2002] 9 NWLR (Pt. 772).
49 *Archbishop Olubunmi Okogie & Ors v Attorney General of Lagos State* [1981] 2 NCLR 337 350.
50 See generally, E OEkhator, 'Improving Access to Environmental Justice under the African Charter on Human and Peoples Rights: The Roles of NGOs in Nigeria' (2014) 22 (1) *African Journal of International and Comparative Law* 71.
51 *Gbemre v Shell* [2005] FHC/B/C/153/05.

34 of the CFRN 1999. The Court which ordered SPDC to stop gas flaring in the plaintiff's community affirmed that the constitutionally guaranteed rights to life and dignity of persons inevitably include the rights to a clean, poison-free, and healthy environment and that the actions of the defendants in continuing gas flaring was a violation of the rights.[52] It is, however, noteworthy, that the decision of the court is yet to be enforced as gas flaring has continued in Nigeria to date.

Also, in *Social and Economic Rights Action Centre and the Centre for Economic and Social Rights* (SERAP) *v Nigeria*,[53] the African Commission on Human Rights held that the Federal Government of Nigeria (FGN) and its multinational oil partners operating in the Niger Delta region had violated the environmental rights of the Ogonis, as provided for in Article 24 of the ACHPRs, in the process of oil exploration and production activities. The Commission took cognizance of the fact that the Federal Republic of Nigeria had incorporated the African Charter into its domestic law with the result that all the rights contained therein can be invoked in Nigerian courts including the environmental rights violations alleged by the plaintiff.[54] This case and the case of Jonah *Gbemre* v *SPDC* is a clear manifestation of how the provisions of the ACHPRs can help to protect the right to a clean and healthy environment in Nigeria.[25]

3.2.3. Harmful Waste (Special Criminal Provisions, Etc.) Act[55]

This Act was the first enactment directed at protecting the Nigerian environment. The Harmful Waste (Special Criminal Provisions, etc.) Act 1988 No 42 was enacted as a consequence of the illegal dumping of toxic wastes in Koko Port, Bendel State (now Delta

52 T Rhuks, 'The Judicial Recognition and Enforcement of the Right to Environment: Differing Perspectives from Nigeria and India' (2010) (3) *NUJS Law Review* 436.
53 *Social and Economic Rights Action Centre and the Centre for Economic and Social Rights (SERAP) v Nigeria*, Communication No 155/96.
54 Ibid.
55 Harmful Waste (Special Criminal Provisions, etc.) Act Cap H1 LFN 2004.

State) in 1988 to provide the legal framework for the effective control of the disposal of toxic and hazardous waste into any environment within the confines of Nigeria. [56] The act prohibits and declares unlawful the carrying, depositing, and dumping of harmful waste on any land, terminal waters, and matters relating thereto. Section 1(1) of the Act prohibits all activities relating to the purchase, sale, importation, transit, transportation, deposit and storage of harmful waste. The Act makes it a general offence for anyone to deal with harmful waste.[57] Section 2 of the Act provides that any person who, without lawful authority, carries, deposits, dumps or causes to be carried, deposited or dumped, or is in possession to carry, deposit or dumping, any harmful waste on any land or in any territorial waters or contiguous zone or Exclusive Economic Zone of Nigeria or its inland waterways shall be guilty of a crime.

The Act in section 6 provides penalties for any person found guilty of violating the provisions of sections 1 to 5 of the Act. Sections 1-5 of the Act talk about crimes against the environment. It is because of the importance of living in an environment that is not polluted that the Act provided stiff penalties for any person who violates the law. In light of this, Section 6 provides that, 'Any person found guilty of a crime under sections 1 to 5 of this Act shall on conviction be sentenced to imprisonment for life and in addition (a) any carrier, including aircraft, vehicle, container and any other thing whatsoever used in the transportation or importation of the harmful waste; and (b) any land on which the harmful waste was deposited or dumped, shall be forfeited to and vest in the Federal Government without any further assurance other than this Act'.[58]

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56 N Echefu and E Akpofure, 'Environmental Impact Assessment in Nigeria: Regulatory Background and Procedural Framework' *Law, Policy and Institutional Arrangements* (UNEP EIA Training Resource Manual-Case Studies from Developing Countries, Case Study 7) 63; See GS Ogbodo, 'Environmental Protection in Nigeria: Two Decades After the Koko Incident' (2009) 15 (1) *Annual Survey of International & Comparative Law* 2.

57 C Mordi and others, Corporate Social Responsibility and the Legal Regulation in Nigeria' (2012) 64 (1) *Economic Insights – Trends and Challenges* 3.

58 Harmful Waste Act (n 34), s 6(a) (b).

Section 7 of the Act provides punishment for environmental crimes committed by corporate bodies. It provides that 'Where a crime under this Act has been committed by a body Corporate and it is proved that it was committed with the consent or connivance of or is attributable to any neglect on the part of- (a) A director, manager, secretary or other similar officers of the body corporate; or (b) Any other person purporting to act in the capacity of a director, manager, secretary or other similar officers, he as well as the body corporate shall be guilty of the crime and shall be liable to be proceeded against and punished accordingly".[59]

The summary of the provisions of both sections 6 and 7 of the Harmful Waste Act is that anyone found contravening the provisions of the Act will on conviction be sentenced to imprisonment for life, forfeit to the Federal Government of Nigeria any carrier used in the transportation or importation of the harmful waste deposited or dumped by corporate bodies, including any director, manager, secretary or any other similar officer of such corporate bodies, will be held liable if found guilty of contravening the provisions of the Act.

The provisions of the Act can be applied to oil pollution (a major cause of environmental degradation in Nigeria, especially, in the Niger Delta region) which falls within the definition of 'harmful waste' in the Act. In other words, for a proper understanding of the protection of the environment by the Act, reference to the interpretation of section 15 of the Act is imperative. 'Harmful waste' according to section 15 of the Act[60] means anything injurious, poisonous, toxic, or noxious substance. The activities of oil and gas companies will certainly come within the ambit of this provision. It therefore means that any oil company that pollutes the environment will be caught by the provisions of the Act. In summary, if the provision of the Act is religiously complied with, the environment will be safe, healthy, and clean

59 Ibid s 7(a)(b).
60 Ibid s 15. 32 A Ibrahim, *Assessment of the Legal and Institutional Framework for the Prevention of Environmental Degradation by Oil and Gas Companies in Nigeria* (PhD Thesis, Faculty of Law, Ahmadu Bello University, Zaria, Nigeria 2014) 98.

particularly for the residents of the oil-producing areas because environmental degradation by oil companies will be minimal.[32]

3.2.4. Petroleum Industry Act

The PIA contains provisions that seek to protect the Nigerian environment, especially the Niger Delta region of the country. The PIA provides a mechanism to tackle oil spillage and gas flaring-induced environmental pollution and degradation in Nigeria.[61] Section 102 of the PIA 2021 provides that a licensee or lessee who engages in upstream or midstream petroleum operations is required to within one year or six months of the effective date or after the grant of the applicable license or lease, submit for approval of an environmental management plan in respect of projects which require environmental impact assessment to the Commission or Authority as the case may be.[34] The plan shall be approved where it complies with relevant Environmental Acts and the applicant has the capacity or has provided for the capacity to rehabilitate and manage negative impacts on the environment.[62]

The PIA 2021 also made provisions for financial contributions for the remediation of environmental damage. Section 103 of the PIA 2021 provides that as a condition for the grant of a license or lease and before the approval of the environmental management plan, the licensee or lessee is required to pay a prescribed financial contribution to an environmental remediation fund for the rehabilitation or management of negative environmental impacts of the petroleum operation. The financial contribution will take into account the size of the operations and the level of environmental risk that may exist.[63]

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61 SN Dambatta, 'Effects of the Petroleum Industry Act' *The Cable* (Lagos, 25 November 2021). 34 PIA Act 2021, s 102 (1) (a) & (b).
62 Ibid, s 102(3) (a) & (b).
63 PIA Act 2021, s 103(1) and (2).

Further, the PIA addresses the issue of gas flaring by prohibiting the flaring or venting of natural gas. Section 105 of the PIA provides that a licensee or lessee shall pay a penalty prescribed under the Flare Gas (Prevention of Waste & Pollution) Regulations.[64] Also, section 104(1) of the PIA provides that a licensee, lessee, or marginal field operator that flares or vents gas, except in the case of an emergency, under an exemption granted by the Commission, or as an acceptable safety practice under established regulations, commits an offence under this Act and is liable to a fine as prescribed by the Commission in regulations under this act.[65]

To better protect the Nigerian environment from the adverse effects of gas flaring and encourage gas utilization in the country, [66] section 52 of the PIA establishes a Midstream and Downstream Gas Infrastructure Fund (MDGIF), which shall be financed primarily from the 0.5% levy on the wholesale price of petroleum and natural gas sold. The Fund is expected to be deployed as equity investments of Government-owned participating or shareholder interests in infrastructure related to midstream and downstream gas operations to increase domestic gas utilization (consumption of Natural Gas in Nigeria) and encourage investments in gas projects, while also eliminating gas flaring.[67] Furthermore, based on the PIA, gas flaring penalties arising from midstream operations will also be credited to the MDGIF for environmental remediation and relief of the affected host communities of the settlor on which the fine is levied.[68] Also, section 108 of the PIA requires a licensee or lessee producing natural gas to prepare and submit a natural gas flare elimination and monetization plan to the

64 PIA 2021, s. 105; S Bhadare, 'Nigeria Petroleum Industry Act brings positive change' *African Law and Business News Analysis* (London, 2 September 2021).
65 PIA 2021, s. 104(1) (a), (b) &(c).
66 'Petroleum Industry Act – A New Era for the Nigerian Oil and Gas Upstream Industry' *Vanguard Newspaper*, (Lagos, 22 September 2021).
67 Petroleum Industry Act – A New Era for the Nigerian Oil and Gas Upstream Industry ibid; Highlights of the Petroleum Industry Act, 2021 ibid; S N Dambatta; Analysis of Petroleum Industry Act 2021 in Nigeria (Bomes Resources Consulting, 30 September 2021).
68 O Maiye and T Kolade, Nigeria: Petroleum Industry Act 2021: Opportunities for Key Industry Players (24 August 2021).

Nigerian Upstream Regulatory Commission (NURC). However, the PIA 2021 outlines the conditions in which gas may be flared in Nigeria. Section 107 of the PIA 2021 provides that the Commission or the Authority may grant a permit to a licensee or lessee to allow the flaring or venting of natural gas for a specified period- (a) where it is required for facility start-up; or (b) for strategic operational reasons, including testing.[69]

3.2.4. Petroleum Act[70]

The Petroleum Act is one of the laws not repealed by section 310 of the PIA. By the saving provisions of section 311 of the PIA 2021, the Petroleum Act shall continue to be in effect until the termination or expiration of all oil prospecting licenses and oil mining leases granted under the Petroleum Act that are subsisting at the effective date of the PIA 2021.[71] The Petroleum Act and the regulations made thereunder contain provisions that seek to protect and sustainably manage the Niger Delta environment. Section 9(1) of the Act[72] provides that the minister may make regulations for the prevention of pollution of water courses and the atmosphere.

The Petroleum (Drilling and Production) Regulation 1969[46] which was issued under the Petroleum Act in its Regulation 25 seeks to ensure that oil operators do not pollute the environment in the course of drilling and production by providing that a holder of an oil exploration and or oil prospecting licenses shall, 'Adopt all practicable precautions including the provision of up-to-date equipment approved by the Chief Petroleum Engineer (Department of Petroleum Research) to prevent the pollution of inland waters, rivers, water courses, the territorial water of Nigeria or the high seas by oil mild or other fluid or

69 PIA 2021, s 107(a) and (b).
70 Petroleum Act, Cap P10 LFN 2004.
71 PIA 2021, s 311(2) (c) and (9) (a).
72 Ibid, s 9(1) (b) (iii). 46
Petroleum (Drilling and Production) Regulation, Regulation 25; M T Abdulmumini, *An Assessment of Liabilities of Oil Producing Companies for Oil Spillage in Nigeria* (Master's Thesis, Faculty of Law, Ahmadu Bello University, Zaria, Nigeria 2013) 45.

substances which might contaminate the water, banks or shoreline or which might cause harm or destruction to freshwater or marine life, and where any such pollution occurs or has occurred will take prompt steps to control and, if possible, end it'.

Under Regulation 37 oil operators are enjoined to carry out their operations in a proper and workmanlike manner and to take reasonable steps to among others, prevent the escape of petroleum into any water, well, spring, stream, river, lake, reservoir, estuarine or harbour, and cause as little damage as possible to the surface of the relevant area and the trees, crops, buildings, structures and other property thereon.[73]

3.2.1. Oil in Navigable Waters Act (ONWA)

The ONWA 1968 prohibits the discharge of oil or any mixture containing oil into the sea and territorial or navigable inland waters of Nigeria.[74] Section 1(1) of the Act provides that 'If any oil to which this section applies is discharged from a Nigerian ship into a part of the sea which, about that ship, is a prohibited sea area, or if any mixture containing not less 100 parts of Oil to which this section applies is discharged from such a ship into such a part of the sea, the owner or master of the ship shall, subject to the provisions of this Act, be guilty of an offence under this section'.[75]

Section 3 of the Act provides that (1) if any oil or mixture containing oil is discharged into waters to which this section applies from any vessel, or any place on land, or from any apparatus used for transferring oil from or to any vessel (whether to or from a place on land or to or from another vessel), then subject to the provisions of this Act- (a) if the discharge is from a vessel, the owner or master of the vessel; or (b) if the discharge is from a place on land, the occupier of that place; or (c) if the discharge is from apparatus used for transferring oil

73 Petroleum (Drilling and Production) Regulation, Regulation 37(d) & (e).
74 Ibid.
75 ONWA s 1(1).

from or to a vessel, the person in charge of the apparatus, is guilty of an offence under this section.[76] Sub-section 2 provides that this section applies to the whole of the sea within the seaward limits of the territorial waters of Nigeria; and all other waters (including inland waters) which are within those limits and are navigable by seagoing ships.[77]

The Act imposes an obligation on ship owners to install anti-pollution equipment for the purpose of preventing water pollution. Section 5(1) of the Act further provides that for the purpose of preventing or reducing discharges of oil and mixtures containing oil into the sea, the minister may make regulations requiring Nigerian ships to be fitted with such equipment and to comply with such other requirements, as may be prescribed.[78]

The primary purpose of the provisions of sections 1(1), 3, and 5(1) is to prevent the sea (water environment) from oil pollution by discouraging oil operators and owners or masters of the ship from discharging oil from their ships into the sea in the course of transporting oil or oil-related product by ship. Compliance with the provision of the Act will certainly prevent pollution of the sea by ships which will result in a clean, safe, and healthy environment.[79]

Section 6 of the Act prescribes penalties for violations of the provisions of sections 1, 3, and 5[80] by providing that: A person guilty of an offence under sections 1, 3, or 5 of this Act shall, on conviction by a High Court or a superior court or on summary conviction by any court of inferior jurisdiction, be liable to a fine: provided that an offence shall not by this section be punishable on summary conviction by a court having jurisdiction inferior to that of a High Court by a fine exceeding N2,000.[81]

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76 Ibid s 3(1) (a-c).
77 Ibid s 3(2) (a-b).
78 Ibid s 5(1).
79 Ibid.
80 Oil in Navigable Waters Act, ss. 1, 3, 5 and 6.
81 Ibid s 6.

3.2.2. Oil Pipelines Act (OPA)

The OPA, enacted in 1956, contains model provisions that, where effectively used, could protect the Nigerian environment from the impacts of oil and gas developments.[82] The OPA and the regulations made under it, govern the grant of permits and licenses for the establishment and maintenance of pipelines incidental and supplementary to oilfields and oil mining and for ancillary purposes. The OPA seeks to regulate the transportation of oil and gas through pipelines to effectively protect the environment from oil spills and pollution arising therefrom.[83] Section 17(4) of the OPA provides that 'Every license shall be subject to the provisions contained in this Act as in force at the date of its grant and to such regulations concerning public safety, the avoidance of interference with works of public utility in, over and under the land included in the license and the prevention of pollution of such land or any waters as may from time to time be in force.'[84]

Regulation 8(b) of the Oil and Gas Pipeline Regulations (OGPRs) of 1995 provides that where the pipeline crosses or passes within 100 meters of a watercourse, the operator shall assure the Department that adequate contingency plans have been made for protecting the environment. Additionally, Regulations 9(a) (ii), (b) (ii), and (iii) of the OGPRs of 1995 provide that a licensee shall establish a written emergency plan for implementation in the event of systems failure, accidents, or other emergencies which shall include procedures for prompt and expedient remedial action for the protection of property and the environment and the control of accidental discharge from the pipeline.[85] To further protect the environment from damage resulting from oil pipeline operations, Part Four of the OPA provides for the payment of compensation to a person whose land was adversely affected by pipeline

82 F O Ugbaja (n 16) 67; See O Oluduro, *Oil Exploitation and Human Rights Violations in Nigeria's Oil Producing Communities* (Intersentia Publishing, United Kingdom 2014) 137.
83 FO Ugbaja ibid 67.
84 Oil Pipelines Act (n 57) ss 17(4) and 33(c).
85 Oil and Gas Pipeline Regulations of 1995, Regulations 9(a) (ii), (b) (ii) & (iii).

operations or who suffered damage due to a permit holder's neglect or due to pipeline breakage or leakage.[86]

3.2.3. Environmental Impact Assessment (EIA) Act

The EIA Act was enacted in 1992 as the core legislation that governs environmental impact assessment concerning proposed projects in Nigeria. It is particularly directed at regulating the industrialization process with due regard to the environment. By the provisions of the Act, no industrial plan/development/activity of both the public and private sectors of the economy can be executed without prior consideration of the environmental consequences of such proposed action, in the form of an environmental impact assessment. In other words, the EIA Act made environmental impact assessment mandatory for both public and private sectors for all development projects.[87] Section 2(2) of the EIA Act requires that where the extent, nature, or location of a proposed project or activity is such that is likely to significantly affect the environment, its environmental impact assessment should be carried out before undertaking such projects.[88]

If in the opinion of the Federal Ministry of Environment (FME), the project is likely to cause significant adverse environmental effects that cannot be mitigated and cannot be justified in the circumstances, it may refuse to grant a permit required to embark on the project in whole or in part.[89] An equally significant provision of the EIA Act is its requirement for the consultations of persons where the proposed projects are likely to have a substantial impact

86 Oil Pipelines Act (n 57), ss. 11(5) &20(2); See O Ayotunde, *Legal and Institutional Framework for Multi-Stakeholder Participation in Oil and Gas Management in Nigeria: Perspectives on the Multi-Stakeholder Dialogue Approach* (Master's Thesis, University of Saskatchewan, Saskatoon, Canada 2016) 61.
87 Ibid s 2(1); N Echefu & E Akpofure (n 27).
88 EIA Act, s. 2(2); See AA Ibrahim and others, 'Environmental impact Assessment in Nigeria - A Review' (2020) 8 (3) *World Journal of Advanced Research and Review* 332.
89 EIA Act, s 40(1) (b).

on the environment of surrounding villages and towns.[90] However, under the EIA Act, an impact assessment is not required for a proposed project in the following circumstances: where the President of Nigeria or the Federal Environmental Protection Council is of the view that the environmental impacts of the project may likely be minimal, the project is to be undertaken during national emergency period for which the government has taken temporary steps, and the Federal Ministry of Environment is of the view that such a project is in the interest of public health or safety.[68]

Considering the laws discussed in this section, it may be safe to state that there are laws intended to sustainably manage and protect the Nigerian environment, including the Niger Delta region of the country, against oil and gas companies-induced environmental pollution and degradation. However, the enforcement of these environmental laws has been a major challenge. Hence, the continued pollution and degradation of the Nigerian environment, especially, that of the Niger Delta region of the country.

3.3. INSTITUTIONAL FRAMEWORK

This section explores several key institutions in Nigeria responsible for sustainable environmental management and the regulation of environmental impacts, particularly those stemming from the oil and gas industry. These institutions, established by statutory mandates, play critical roles in enforcing environmental standards, monitoring pollution levels, and managing responses to environmental emergencies. Given the environmental vulnerabilities and extensive pollution challenges in Nigeria—especially in the oil-rich Niger Delta region—these agencies are crucial in ensuring that industrial activities are conducted responsibly, with minimal harm to the environment and surrounding communities.

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90 Ibid s 1(c). EIA Act, s 15(1) (a) – (c). See generally, CC Ekeolisa, *Framework for Obligations Regarding Environmental and Human Rights Protection in Nigeria's Bilateral Investment Treaties* (Master's Thesis, College of Law, University of Saskatchewan, Canada) 7.

Among these key institutions is the National Environmental Standards and Regulations Enforcement Agency (NESREA), the primary body responsible for enforcing environmental laws and regulations across Nigeria. NESREA is tasked with setting and enforcing environmental standards, ensuring compliance, and promoting environmental awareness and sustainable practices throughout the country. NESREA's role is foundational to environmental governance in Nigeria, overseeing regulatory adherence across multiple sectors, including manufacturing, agriculture, and energy.

The National Oil Spill Detection and Response Agency (NOSDRA) is another pivotal institution dedicated to managing Nigeria's specific challenges associated with oil spills. Given the country's dependence on oil production, NOSDRA plays a central role in both detecting oil spills and coordinating response efforts to mitigate environmental damage. This agency is also responsible for ensuring that oil companies adhere to strict spill-response protocols and are held accountable for the environmental consequences of their operations, particularly in ecologically sensitive areas like the Niger Delta.

The Nigerian Upstream Petroleum Regulatory Commission (NUPRC) regulates activities in the upstream oil sector, overseeing exploration and extraction practices to ensure that they comply with environmental standards. NUPRC's oversight functions include granting licenses, monitoring operational standards, and enforcing environmental compliance, making it instrumental in minimizing pollution and promoting safety within Nigeria's oil and gas industry. The agency plays a crucial role in overseeing environmental impact assessments, managing resource extraction in a way that mitigates environmental degradation, and ensuring that operators follow best practices to protect the environment.

The Niger Delta Development Commission (NDDC) was established specifically to address the unique environmental, economic, and social challenges facing the Niger Delta region,

which has long suffered from the environmental impacts of oil exploitation. The NDDC focuses on sustainable development initiatives, working to restore and protect the Niger Delta's ecosystems while promoting economic opportunities for local communities. The NDDC is also involved in regional infrastructure development and has a mandate to work on pollution mitigation projects, remediation of degraded lands, and initiatives that support the well-being of residents affected by industrial pollution.

Lastly, the Ministry of Niger Delta Affairs plays an important coordinating and policy-making role in the region, focusing on development programs and environmental restoration efforts. The ministry collaborates with other agencies to address environmental degradation and improve the quality of life for Niger Delta residents. Its mandate includes overseeing social and economic development projects, coordinating environmental programs, and ensuring that government and private sector efforts align with the goal of sustainable development.

Each of these institutions brings a unique set of responsibilities and resources to Nigeria's environmental management efforts. Together, they form a network of regulatory oversight, enforcement mechanisms, and developmental initiatives aimed at protecting the environment and promoting sustainable industrial practices. The following paragraphs delve into the mandates, structures, and challenges faced by each of these institutions, analysing their roles in fostering an environmentally sustainable and economically viable future for Nigeria. This analysis will highlight both the strengths and limitations of these agencies in addressing Nigeria's pressing environmental issues, especially in the context of pollution control and sustainable resource management.

3.3.1. National Environmental Standards Regulation Enforcement Agency (NESREA)

NESREA was established in 2007 by the *NESREA Act*[91] as the lead environmental agency charged with the mandate of protecting the Nigerian environment and ensuring compliance with enacted environmental laws.[92] Section 2 of the NESREA Act saddles NESREA with the responsibility for the protection and development of the environment, biodiversity conservation, and sustainable development of Nigeria's natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies, and guidelines. [93] Thus, section 2 empowers the NESREA to act for the environmental good of the country by ensuring a sustainable environment for Nigerians through the enforcement of existing environmental laws as well as regulations made under the *NESREA Act* 2007.[94]

Section 7 of the NESREA Act provides for the functions of NESREA. These functions include enforcing compliance with laws, guidelines, policies and standards on environmental matters; coordinating and liaising with stakeholders, within and outside Nigeria, on matters of environmental standards, regulations and enforcement; enforcing compliance with the provisions of international agreements, protocols, conventions and treaties on the environment, including climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wild life, pollution, sanitation and such other environmental agreements as may from time to time come into force; enforcing compliance with policies, standards, legislation and guidelines on water

91 National Environmental Standards Regulation Enforcement Agency (NESREA) Act 2007.
92 Ibid s 1(1); MT Ladan, 'Review of NESREA Act 2007 and Regulations 2009-2011: A New Dawn in Environmental Compliance and Enforcement in Nigeria' (2012) 8 (1) *Law, Environment and Development Journal* 120.
93 NESREA Act s 2.
94 Ibid.

quality, environmental health and sanitation, including pollution abatement; enforcing compliance with guidelines and legislations on sustainable management of the ecosystem, biodiversity conservation and the development of Nigeria's natural resources; enforcing compliance with any legislation on sound chemical management, safe use of pesticides and disposal of spent packages thereof.[95]

Further, by the provisions of section 7(g)(h)(j)(k), NESREA is saddled with the functions of enforcing compliance with regulations on the importation, exportation, production, distribution, storage, sale, use, handling and disposal of hazardous chemicals and waste other than in the oil and gas sector; enforcing through compliance monitoring, the environmental regulations and standards on noise, air, land, seas, oceans, and other water bodies other than in the oil and gas sector; enforcing environment control measures through registration, licensing and permitting system other than in the oil and gas sector; conducting environmental audit and establishing data bank on regulatory and enforcement mechanisms of environmental standards other than in the oil and gas sector; and creating public awareness and provide environmental education on sustainable environmental management, promote private sector compliance with environmental regulations other than in the oil and gas sector.[96]

To ensure compliance with the provisions of the NESREA Act and to enable the Agency to perform its functions diligently, section 8 of the Act made some enforcement powers available to the Agency and its officials. This includes the power to compel and conduct public investigations on pollution and the degradation of natural resources, except investigations on oil spillage; power to submit for the approval of the Minister, proposals for the evolution and review of existing guidelines, regulations and standards on environment

95 NESREA Act (n 69) s 7(a) (b) (c) (d) (e) (f).
96 Ibid s 7(g) (h) (I) (j) (k) (l).

other than in the oil and gas sector; [97] power to develop environmental monitoring networks, compile and synthesize environmental data from all sections other than in the oil and gas sector; at international levels, undertake, coordinate, utilize and promote the expansion of research experiments, surveys and studies by public or private agencies, institutions and organizations concerning causes, effects, extent, prevention, reduction and elimination of pollution and such other matters related to environmental protection and natural resources conservation other than in the oil and gas sector as the Agency may, from time to time, determine; power to enter into agreement and contracts with public or private organizations and individuals to develop, utilize, coordinate and share environmental monitoring programmes, research effects, and basic data on chemical, physical and biological effects of various activities on the environment and other environmental related activities other than in the oil and gas sector;[98] power to do such other things, other than in the oil and gas sector, as are necessary for the efficient performance of the functions of the Agency.[99]

Section 29 which also stipulates that the agency 'shall, in the face of pollution, co-operate with other government agencies for the removal of any pollution' excludes the removal of oil and gas-related pollution.[100] Another rather startling provision of the *NESREA Act* is in section 30 which expressly prohibits officials of the NESREA from enforcing any environmental regulations in the oil and gas sector.[79] It is rather interesting that Nigeria's principal environmental agency is under the provisions of section 29 of the NESREA Act prohibited from supervising or participating in the clean-up of any pollution resulting from oil and gas industry activities and from enforcing any environmental regulations in the oil and gas sector.

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97 Ibid s 8(g) (k).
98 Ibid s 8(k) (l) (m) (n).
99 Ibid s 8(o) (p) (s).
100 Ibid s 29. 79 Ibid s 30(1) (a); See L Stevens, 'The Illusion of Sustainable Development: How Nigeria's Environmental Laws are Failing the Niger Delta' (2011-2012) 36 *Vermont Law Review* 397; 59.

3.3.2. National Oil Spill Detection and Response Agency (NOSDRA)

NOSDRA was established by the NOSDRA Act[101] in 2006 as the lead agency with responsibility for preparedness, detection, and response for all matters relating to oil spill management in Nigeria.[102] The NOSDRA Act provides for certain objectives of the Agency ranging from monitoring and regulating oil spills; development, coordination, and implementation of the National Oil Spill Contingency Plan (NOSCP) for Nigeria;[103] ensuring a safe, timely, effective, and appropriate response to major or disastrous oil pollution; identify high-risk areas as well as priority areas for protection and clean up; establish the mechanism to monitor and assist or where expedient direct the response to save lives, protect threatened environment, and clean up to the best practical extent of the impacted site.[104]

Inasmuch as the functions of NOSDRA are partially embedded in the range of its objectives as detailed above, the NOSDRA Act for the avoidance of doubt, went on to specify the functions of NOSDRA in section 6 by providing that the Agency shall be responsible for surveillance and ensure compliance with all existing environmental legislation in the petroleum sector including those relating to prevention, detection and general management of oil spills, oily wastes and gas flare; enforce compliance with the provisions of international agreements, protocols, conventions and treaties relating to oil and gas and oil spill response management and such other related agreements as may from time to time come into force; receive reports of oil spillages and co-ordinate oil spill response activities throughout Nigeria; co-ordinate the implementation of the NOSCP as may be formulated, from time to time, by the Federal Government; co-ordinate the implementation of the NOSCP for the removal of hazardous and noxious substances as may be issued by the Federal Government pursuant to

101 National Oil Spill Detection and Response Agency (Establishment) Act (NOSDRA Act), Cap N157 LFN 2006.
102 Ibid ss. 1 and 19(2).
103 Ibid s 5.
104 Ibid s 5(a-c); See also s. 5(e-l) for other objectives of NOSDRA.

the NOSDRA Act.[105] In addition, section 7 of the NOSDRA Act provides for the special functions of NOSDRA.[106]

Further, the NOSDRA Act empowers the agency to impose penalties upon an oil spiller for failure to report an oil spill incident within 24 hours and for failure to clean up a polluted site to a reasonable extent. Section 6(2) of the Act specifically provides that an oil spiller is by this Act to report an oil spill to the Agency in writing, by fax, or electronic mail not later than 24 hours after the occurrence of an oil spill in default of which the failure to report shall attract penalty in the sum of N2,000,000 for each day of failure to report the occurrence. Section 6(3) of the Act further provides that the failure to clean up the impacted site, to all practical extents including an action plan for remediation within two weeks of the occurrence of the spill by the polluter pays principle shall constitute an offence and on conviction the oil spiller shall be liable to a fine not exceeding N5,000,000 or to imprisonment for a term not exceeding 2 years or to both such fine and imprisonment.[107]

3.3.3. Nigerian Upstream Regulatory Commission (NURC)

NURC, which repealed the Department of Petroleum Resources (DPR) and statutorily empowered to perform the functions of the defunct DPR,[108] is an agency of the Federal government established on the 18th of October 2021, following the passage and implementation of the Petroleum Industry Act (PIA).[109] The NURC has the mandate of environmental protection and management in compliance with the provisions of the PIA 2021. The NURC has among others, the objectives of promoting healthy, safe, efficient, and

105 Ibid s 6(1) (a-e).
106 Ibid s 7(a-f).
107 Ibid s 6(2) and (3).
108O Udegbunam, 'Nigeria Scraps DPR, PPPRA, PEF as New Oil Agencies Take Off' *Premium Times* (19 October 2021); K Jeremiah, 'Finally, Government Scraps DPR, PPPRA, PEF for New Agencies' *The Guardian Newspaper* (Nigeria, 19 October 2021); E Addeh, 'Upstream Commission, Midstream/Downstream Authority Formally Begin Operations' *THISDAY Newspaper* (Nigeria, 19 October 2021).
109 PIA 2021, s 4(1).

effective conduct of upstream petroleum operations in an environmentally acceptable and sustainable manner;[110] ensuring strict implementation of environmental policies, laws, and regulations for upstream petroleum operations; and[111] enforcing health safety and environmental regulations in the oil and gas industry and ensuring that those operations conform to national and international best oil field standards and practices.[92]

By the provision of section 102 of the PIA, the NURC is empowered to approve an environmental management plan (EMP) in respect of projects that require environmental impact assessment, only where such EMP complies with relevant Environmental Acts and the applicant has the capacity or has provided for the capacity to rehabilitate and manage negative impacts on the environment.[93] Also, section 103 of the PIA 2021 empowers the NURC to only grant a license or lease and approve the EMP of a licensee or lessee who has paid a prescribed financial contribution to an environmental remediation fund for the rehabilitation or management of negative environmental impacts of the petroleum operation. [112]It is hoped that the NURC will sufficiently discharge its statutory function of environmental protection and management by ensuring that petroleum industry operators do not continue to pollute the environment in the course of their operations. Recently, the Chief Executive Officer of the NURC, Gbenga Komolafe, assured of the Agency's commitment to tackle oil spills in Nigerian communities in fulfilment of its regulatory mandate.[113] However, since the NURC was only set up on the 18th of October 2021, only time will tell how well the NURC will fare in discharging its mandate of environmental protection and management in compliance with the provisions of the PIA 2021.

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110 Ibid s 6(d).
111 Ibid s 9(i). 92
112 PIA 2021, s 103(1) and (2).
113 H Edeh, 'Upstream Regulatory Commission to explore provisions of PIA in tackling oil spills, says CEO' (International Centre for Investigative Reporting (ICIR), December 6, 2021) <https://www.icirnigeria.org/upstream-regulatory-commission-to-explore-provisionsof-pia-in-tackling-oil-spills-says-ceo/ > accessed 17 November 2024.

3.3.4. Niger Delta Development Commission (NDDC)

NDDC is a Federal Government Agency established in 2000 by the NDDC Act[114] with powers to implement policies for the development of the Niger Delta region and protection of the region from environmental degradation among others.[115] The establishment of the NDDC is largely a response to the demands of the Niger Delta region that had for several years, confronted the Nigerian Government and multinational oil companies (MOCs) on the issue of extensive environmental pollution and degradation from oil activities of the MOCs that have operated in the region since the late 1950s.

Section 7(1) of the NDDC Act provides for the functions and powers of the Commission including its environmental functions. Section 7(1) (h) of the NDDC Act specifically provides that the NDDC shall tackle ecological and environmental problems that arise from the exploration of oil minerals in the Niger Delta area and advise the Federal Government and the Member States on the prevention and control of oil spillages, gas flaring, and environmental pollution.[116] Further, section 7(1)(i) of the NDDC Act provides that the NDDC shall liaise with the various oil mineral, and gas prospecting and producing companies on all matters of pollution prevention and control.[117]

From the provisions of section 7(1)(h) & (i) of the NDDC Act, it is obvious that the NDDC operates under the mandate of improving environmental conditions in the Niger Delta region.[100] However, the Commission, like others referred to above, is not living up to expectations in terms of discharging its responsibilities. The commission is characterized by greed and corruption. It is more into who gets what than ensuring that the core objectives of

114 Niger-Delta Development Commission (Establishment, Etc.) Act Cap N86 LFN 2004 (hereinafter, NDDC Act).
115 NDDC Act, s 1.
116 NDDC Act, s 7 (1) (h).
117 Ibid, s 7 (1) (I).

the commission i.e., tackling ecological problems which arise from the exploration of oil minerals in the Niger Delta area is achieved. Oil spills and gas flaring which are the major mediums of environmental degradation in the region are still on the increase.[118] Recently, the Minister of Niger Delta Affairs-Senator Godswill Akpabio was credited to have alleged that the majority of the NDDC projects were awarded to the National Assembly members.[119] Because of the high level of corruption, the Commission is notorious for cases of abandoned projects meant to prevent environmental degradation and contribute to the sustainability of the Niger Delta environment.[120]

3.3.5. Ministry of Niger Delta Affairs (MNDAs)

MNDAs was established by the Nigerian government in 2008, basically as an interventionist ministry to enhance, promote and coordinate the government's efforts to tackle the challenges of infrastructural development, environmental protection, and youth employment in the Niger Delta Region of the country.[121] To fulfil its environmental protection function, the MNDAs established an Environmental Management (EM) Department with the mandate to develop appropriate and effective strategies for restoring, conserving, and protecting the environment of the Niger Delta Region. However, it is asserted that the Ministry was created as a measure of placating the restive youths of the Niger Delta region. It served the political purpose of peace at that time but has now become a counterproductive measure. The existence of two bodies, that is, NDDC and MNDAs results in overlap in the discharge of their responsibilities. It is in light of this, that many Nigerians argued that the creation of the MNDAs is

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118 Ibid.

119 D Elumoye and A Akinwale, 'Akpabio Fires Back, Lists Senators, House Members Awarded NDDC Contracts' *THISDAY Newspaper* (Lagos, 27 July 2020); AM Jimoh and J Osahon, 'Akpabio's Letter Exposes Senators, Reps in NDDC Contract Scams' *The Guardian Newspaper* (Lagos, 27 July 2020); L Nwabughiogu, 'NDDC Contracts Beneficiaries: Akpabio Finally Names Senators, Reps' *Vanguard Newspaper* (Lagos, 27 July 2020).

120 Ibid.

121 C Ochay, 'Buhari's Determination for a New Niger Delta Sacrosanct-Akpabio' Vanguard Newspaper (Lagos, 25 June 2021); 'Nigeria: Why We Created Niger Delta Ministry, By Yar'Adua' THISDAY (Lagos, 12 September 2008) available at < https://allafrica.com/stories/200809120002.html> accessed 17 November 2024.

superfluous, given the fact that the NDDC is sufficiently empowered by law to address the issues in the region.[122] The allegation of non-performance and duplication of ministry seems to be the major criticisms of MNDAs. The region has not changed for good since the creation of the ministry as it is arguably alleged that the MNDAs have not made any concrete effort to tackle the problem of environmental pollution and degradation in the region.

3.4. Challenges to the Legal Enforcement of Environmental Laws in Nigeria

It is hardly arguable that environmental policies and legislation no matter how beautifully conceived towards the protection of the Nigerian environment will at best be an exercise in futility and of little significance unless and until they are accompanied by effective means of enforcement and compliance. This section identifies and discusses the challenges to the legal enforcement of environmental laws in Nigeria.

A. **Inadequate penalties**

The penalties or punishments prescribed by the laws for offenders or violators of environmental laws are in most cases, low and inadequate and thus, not deterrent enough to compel compliance with environmental laws. For example, sections 1, 3, and 5 of the ONWA prohibit the discharge of oil into the waters of Nigeria and mandate ships to install anti-pollution equipment to prevent water pollution.[123] If the above provisions are violated, the violator (ship owner or master) will be liable and guilty of an offence and will pay a fine of N2,000 for such violation.[124] The authors regard the punishment of a fine of N2,000 too small and grossly inadequate to serve the purpose of this law as it is not likely going to serve as an

[122] Ibid.
123 ONWA, ss. 1, 3 & 5.
124 Ibid s 6.

effective tool for deterrence to polluters of the environment, especially, the oil and gas companies operating in the Niger Delta region.[125]

Also, no provision in the NOSDRA Act specifically imposes fines for an oil spill incident; only failure to report an incident and to clean up and remediate the impacted (polluted) site within two weeks of the occurrence of the spill is punishable.[126] This provision is particularly concerning, as an oil spiller who would have assumed an obligation to report an oil spill incident may prefer to pay the fine of two million naira rather than engage in the clean-up process. This situation then removes deterrence and fosters an environment where the law is observed more in its breach than in compliance. Besides, the violators are usually multinational companies that are extremely rich and can afford to pay the fine with ease.[127]

A. Exemptions in Environmental Laws that Impedes Enforcement of its Provisions

There are exceptions in some environmental laws that impede the enforcement of their provisions by environmental enforcement agencies. For example, under the EIA Act, an impact assessment is not required for a proposed project where the President of Nigeria or the Federal Environmental Protection Council is of the view that the environmental impacts of the project may likely be minimal, the project is to be undertaken during the national emergency period for which the government has taken temporary steps, and the Federal Ministry of Environment is of the view that such a project is in the interest of public health or safety.[128] These exceptions are mostly responsible for non-compliance with the provisions of the EIA Act.[129] The last exception that allows non-compliance with the environmental impact assessment requirement appears to counteract the entire objective of the EIA Act. This is

125 Ibid.
126 NOSDRA Act, s 6(2) & (3).
127 Ibid.
128 EIA Act, s 15(1) (a-c).
129 CC Ekeolisa (n 68); See E Oshionebo, *Regulating Transnational Corporations in Domestic and International Regimes: An African Case Study* (University of Toronto Press 2009) 59. 115 Ekeolisa (n 68) 38.

because the only way to determine whether a project is safe or healthy for the public is by assessing its potential impacts on the environment.[115]

Also, the PIA which prohibits the flaring or venting of natural gas and imposes penalties on violators, equally allows the flaring or venting of natural gas for a specified period under certain conditions, such as where it is required for facility start-up; or (b) for strategic operational reasons, including testing.[130] These exceptions in the PIA which allows gas flaring may defeat the original intention of the PIA to put a stop to gas flaring in Nigeria.

B. Lack of Awareness of the Existence of Environmental Rights in Nigeria

Ignorance of the existence of the right to a healthy environment based on the notion of non-justiciability of section 20 of the CFRN 1999 has for several years hindered the enforcement of environmental laws. This lack of awareness of the existence of environmental rights was further promoted by the interpretation of section 20 as a non-justiciable right as evidenced in the cases of *NNPC v Fawehinmi,*[131] *A.G. Ondo State v A.G. Federation*,[132] and *Archbishop Olubunmi Okogie (Trustees of Roman Catholic Schools)and Ors v The Attorney General of Lagos State*,[133] where the Nigerian Court held that the provisions of Chapter II of the 1999 Constitution, including environmental rights provisions of section 20, are non-justiciable and therefore, unenforceable in Nigeria.

Most Nigerian are not yet aware that the growing trend in the jurisprudence of human rights, especially, through the African Charter on Human and Peoples Rights (ACHPRs), have rendered the notion of non-justiciability of section 20 of the CFRN 1999 untrue, as illustrated in the cases of Jonah *Gbemre* v *SPDC*,[134] and *Social and Economic Rights Action Centre and*

130 PIA 2021, s 107(a) and (b).
131 *NNPC v Fawehinmi* (n 17).
132 *AG Ondo State v AG Federation (*n 18).
133 Ibid.
134 Ibid.

the Centre for Economic and Social Rights (SERAP) *v Nigeria*, [135] where both the Nigerian court and the African Commission on Human Rights held that Nigerians have a right to a healthy environment.

C. Placing More Value on Economic Benefits over Environmental Protection

In the seemingly steady struggle between environmental protection and economic development, economic considerations still influence government's decisions in environmental protection issues in Nigeria.[136] This is well illustrated by the fact that the NESREA Act, the most comprehensive piece of legislation ever enacted for the sustainable management of the environment in Nigeria,[137] clearly exempted itself from protecting the environment against pollution arising from oil and gas companies in Nigeria. Sections 7, 8, 29, and 30 of the NESREA Act expressly exclude the Agency from entertaining issues of environmental pollution arising from the activities of oil and gas companies, which arguably account for more than 90 per cent of environmental pollution and degradation in Nigeria.[138]

D. Lack of Political Will on the Part of Government to Enforce Environmental Laws

A major challenge in the enforcement of environmental laws in Nigeria seems to be a lack of political will on the part of the government to enforce the provisions of the laws. For example, in the case of *Jonah Gbemre* v *SPDC,* the court gave a judgment that SPDC should stop gas flaring in 2005, but the Nigerian government has since displayed a lack of political will to enforce this judgment through its environmental institutions (agencies).

3.5. CONCLUSION

135 *Social and Economic Rights Action Centre and the Centre for Economic and Social Rights (SERAP)* (n 23).
136 J Eaton, 'The Nigerian Tragedy, Environmental Regulation of Transnational Corporations, and the Human Right to a Healthy Environment' (1997) 15 *Boston Univ Intl LJ* 291.
137 Ibid.
138 Ibid.

Several environmental laws and statutory regulatory institutions have been put in place by successive governments in Nigeria to protect and sustainably manage the Nigerian environment against environmental pollution, especially arising from the oil and gas sector. Yet, the Nigerian environment, particularly, the Niger Delta Region of the country, is presently today, a typical global example of a negatively degraded environment through unsustainable oil exploration and exploitation. There are basically, two reasons for the degraded state of the Nigerian environment, particularly, the Niger Delta region of the country. Firstly, there are some flaws in the laws designed to protect the nation's environment, which include, inadequate penalties or punishments for violators of environmental laws, exemptions in environmental laws that impede enforcement of its provisions, and lack of awareness of the existence of environmental rights in Nigeria. Secondly, factors are making the environmental regulatory agencies ineffective in enforcing the laws, which include placing more value on economic benefits over environmental protection and lack of political will on the part of the government to enforce environmental laws.

CHAPTER FOUR

A COMPARATIVE ANALYSIS OF THE REGULATION OF AIR POLLUTION IN OTHER JURISDICTIONS

4.1. INTRODUCTION

In this chapter, the air pollution legislation of the United Kingdom, Australia, and South Africa will be examined. This exploration aims to provide a detailed understanding of the legal frameworks and regulatory mechanisms employed by these three countries to address air pollution, laying the foundation for a comparative analysis in the subsequent chapter.

The focus of this chapter will be twofold. First, it will critically analyse the provisions of the relevant legislation in each jurisdiction, highlighting the scope, objectives, and key features of the laws that govern air quality and emission control. This includes identifying the pollutants regulated, the standards set, and the institutional frameworks established to oversee and enforce compliance.

Second, the chapter will evaluate the specific approaches adopted by the legislatures in these countries to combat air pollution. This involves examining the methods employed to ensure compliance with the legislative provisions, such as administrative oversight, financial incentives, penalties, and public engagement strategies. Particular attention will be paid to the role of governmental agencies, the judiciary, and other stakeholders in the enforcement process.

By delving into the legal provisions, enforcement mechanisms, and legislative strategies of the United Kingdom, Australia, and South Africa, this chapter seeks to provide a comprehensive understanding of how these jurisdictions address the complex challenge of air pollution. This analysis will not only shed light on the strengths and weaknesses of each system but also identify potential lessons and best practices that could be adapted to other contexts.

Through this approach, the chapter will offer a robust foundation for the comparative analysis to follow, aiming to contribute to the broader discourse on effective air pollution control and environmental governance.

4.2.COMPARATIVE STUDY

4.2.1. Air Pollution Regulation in Australia

Australia is a federation encompassing six states and two mainland self-governing territories. This report outlines national-level laws and regulatory measures related to air quality and air pollutant management, particularly regarding vehicle emissions. The 2016 *State of the Environment* report, published by the Australian government, explains the ambient air quality management framework as follows:

> Each level of government—Australian, state and territory, and local—plays a role in managing the impacts of air pollution by preventing or minimising air pollutant emissions. For the key air quality standards, the Australian, state and territory governments act cooperatively to set national objectives and develop the NEPMs [National Environment Protection Measures], through the NEPC [National Environment Protection Council]. The Australian Government is responsible for emissions standards for new motor vehicles, fuel standards, the National Pollutant Inventory, the national response to climate change, and international obligations such as the International Convention for the Prevention of Pollution from Ships (known as MARPOL). State and territory governments are responsible for implementing NEPMs and other measures with appropriate legislation, policies and programs. They report on progress made in achieving the NEPM goals. Local government authorities are generally responsible for managing air pollution from small businesses and domestic premises and through their role in urban planning.[139]

This report provides information on the measures that relate to air quality; the National Clean Air Agreement, which provides a basis for action at the national, state, and territory levels in a range of areas; national fuel quality standards; national vehicle emissions standards for new and imported vehicles; and the work of the Ministerial Forum on Vehicle Emissions about enhancing the fuel and emissions standards as well as the possible introduction of a mandatory vehicle fuel efficiency standard.

[139] Management Framework*: Ambient Air Quality (2016)*, AUSTRALIA: STATE OF THE ENVIRONMENT 2016.

The Australian government also has in place various policies and programs related to climate change and reducing greenhouse gas emissions, including certain funds, energy efficiency initiatives, and reporting programs.[140]

As indicated above, state and territory legislation and programs address the implementation of a range of measures and can also extend beyond the federal laws in some areas. As stated in the *State of the Environment* report,

> "[e]nvironmental agencies in the states and territories are responsible for controlling pollutant emissions from large industrial point sources, such as power stations, refineries, smelters, manufacturing plants, cement works and abattoirs."[141]

It further states that.

> [d]uring the past 30–40 years, state and territory environment protection agencies have employed a variety of regulatory measures (including works approval, licensing and notices) to control and greatly restrict emissions of air pollutants from industrial and commercial sources. More recently, non-regulatory measures (such as codes of practice, market-based mechanisms and cleaner production incentive schemes) have been increasingly used to complement regulatory controls. In some jurisdictions, local government has a role in controlling emissions (mainly of particles and odour) from commercial sources. Local government also tends to be the main tier of government responding to complaints at the neighbourhood level about smoke from domestic wood heaters. [142]

4.2.1.1.National Environment Protection Measures

National Environment Protection Measures (NEPMs) are "a special set of national objectives designed to assist in protecting particular aspects of the environment."[143] They are made by the National Environment Protection Council (NEPC), as authorized by the National Environment Protection Council Act 1994 and complementary state and territory

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[140] *Climate Change: Government and International Initiatives*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment.gov.au/climate-change/government > accessed 21 November 2024.

[141] Ibid, note 1.

[4] *Effectiveness of Management: Ambient Air Quality*, AUSTRALIA: STATE OF THE ENVIRONMENT 2016.

[5] *National Environment Protection Measures*, NATIONAL ENVIRONMENT PROTECTION COUNCIL (NEPC), http://www.nepc.gov.au/nepms > accessed 22 November 2024.

legislation,[144] and each jurisdiction is responsible for determining how to implement them through its laws and regulations.[145] The NEPC itself is made up of representatives from the federal government and the governments of each state and territory.[146]

NEPMs can cover a range of matters, including ambient air quality, guidelines for the assessment of site contamination, water quality, and recycling.[147] The NEPC can make measures related to motor vehicle noise and emissions, but where these involve standards relating to the design, construction, and technical characteristics of new and in-service motor vehicles they must "be developed and agreed in conjunction with the National Transport Commission" and determined by other relevant legislation.[148]

The NEPC has promulgated four NEPMs to date that relate to aspects of air pollution, including ambient air quality, air toxics, the National Pollutant Inventory, and diesel vehicle emissions.

a. National Environment Protection (Ambient Air Quality) Measure

The NEPM related to ambient air quality was first made in 1998. It "sets national standards for the six key air pollutants to which most Australians are exposed: carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide, lead and particles."[149] Under the NEPM, each state and territory government is required to monitor air quality, using Australian Standard Methods set out in the NEPM, and report against the standards.[150]

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6 National Environment Protection Council Act 1994 (NEPC Act), section 14.

7 *National Environment Protection Measures*, note 5.

8 NEPC Act s 9.

147 NEPC Act s 14(1).

148 NEPC Act s 14(2).

149 *Air Quality Standards*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY (DEE).

150 National Environment Protection (Ambient Air Quality) Measure, pt 4 & sch 3.

b. National Environment Protection (Air Toxics) Measure

The Air Toxics NEPM was established in 2004 for an initial group of pollutants. [151] It *"benchmarks monitoring investigation levels that, if exceeded, require further investigation*."[152] Each jurisdiction is required to assess locations within the jurisdiction to identify sites where "significantly elevated concentrations" of one or more of the listed air toxics are likely to occur, or sites, where there is the "potential for significant population exposure" to such air toxics, exists. [153] The measure then sets out appropriate methods for monitoring and assessment of air toxics, concerning methods used by certain foreign and international agencies, including the United States Environmental Protection Agency, the California Environmental Protection Agency, and the International Organization for Standardization.[154] The jurisdictions have reporting requirements that relate to the identification of relevant sites, monitoring of air toxics, and assessment and any planned actions.[19]

c. National Environment Protection (National Pollutant Inventory) Measure

The goals of the National Pollutant Inventory (NPI) NEPM, made in 1998, are to collect a broad base of information on emissions and transfers of substances on the reporting list and to disseminate the information collected to all sectors of the community in a useful, accessible and understandable form.[155] The NEPM was amended in 2008 to remove greenhouse gas and energy reporting requirements now covered by the National Greenhouse and Energy Reporting Act 2007.[156]

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[151] National Environment Protection (Air Toxics) Measure, *as amended*.
[152] *Air Toxics: Ambient Air Quality (2016)*, AUSTRALIA STATE OF THE ENVIRONMENT 2016.
[153] National Environment Protection (Air Toxics) Measure.
[154] Ibid.
[155] National Environment Protection (National Pollutant Inventory) Measure 1998.
[156] *National Environment Protection (National Pollutant Inventory) Measure*, NEPC.

The NEPM establishes a publicly accessible database, the NPI, which contains information about emissions and transfers of specified substances. [157] Occupiers of reporting facilities estimate emission data and provide this and supporting data to state and territory governments, which then aggregate the data and provide it to the federal government for collation and dissemination.[158]

The reporting list for the NPI under the NEPM includes emissions of ninety-three toxic substances.[159]

d. National Environment Protection (Diesel Vehicle Emissions) Measure

The goal of the NEPM on diesel vehicle emissions, which was made in 2001, is to reduce exhaust emissions from diesel vehicles, by facilitating compliance with in-service emissions standards for diesel vehicles.[160] The NEPM was developed to complement other measures to reduce the impact of emissions from diesel vehicles such as new vehicle emission standards, improved fuel quality and travel demand management.[161] Rather than establishing standards, the NEPM sets out principles for the management of emissions from diesel vehicles and provides guidelines to assist jurisdictions in developing programs for reducing emissions from in-service diesel vehicles, to achieve compliance with appropriate in-service emissions standards.

4.2.1.2. National Clean Air Agreement

On December 15, 2015, the environment ministers of each Australian jurisdiction established the National Clean Air Agreement.[162] The Agreement focuses on actions to reduce air

[157] National Environment Protection (National Pollutant Inventory) Measure 1998, cl 7.
[158] Ibid.
[159] Ibid.
[160] National Environment Protection (Diesel Vehicle Emissions) Measure 2001, *as varied*, cl 10.
[161] *EPHC Archive – Diesel Vehicle Emissions NEPM*, NEPC.
[162] AUSTRALIAN GOVERNMENT, NATIONAL CLEAN AIR AGREEMENT: TOWARDS A CLEAN AIR FUTURE FOR ALL AUSTRALIANS (Dec. 2015).

pollution and improve air quality through cooperative action between industry and government at the national, state and local levels. The Agreement is designed to incorporate a range of existing, new and complementary measures to improve Australia's air quality.[163]

At the time the Agreement was made, the environment ministers also agreed to three key initial actions under the Agreement, being the introduction of product emission standards for outdoor power equipment and marine engines; measures to reduce air pollution from wood heaters; and strengthened ambient air quality reporting standards for particle pollution.[164]

Concerning wood heaters, the Department of the Environment and Energy states that state and territory governments are working towards adopting standards for new wood heaters and have agreed to share cost-effective approaches tailored for local conditions and priorities.

Concerning particle pollution, all jurisdictions have agreed to implement strengthened standards for particles, with a longer-term goal to move to even tighter standards for annual average and 24-hour PM2.5 particles in 2025.[36] The ambient air quality NEPM was amended to reflect the agreed reporting standards and long-term goal.[165]

4.2.1.3.Product Emissions Standards Act 2017

The Product Emissions Standards Act 2017[166] which came into force on September 15, 2017, establishes a national framework to enable Australia to address the adverse impacts of air pollution from certain products on human and environmental health.[167] Under the Act, the relevant federal government minister can prescribe emission-controlled products and make rules relating to those products.[168] The Rules establish Australian Emissions Standards for products, which integrate particular technical requirements that are applicable in the United

[163] *National Clean Air Agreement*, DEPARTMENT OF ENVIRONMENT AND ENERGY.
[164] Ibid.
[165] Variation to the National Environment Protection (Ambient Air Quality) Measure 2015.
[166] Product Emissions Standards Act 2017.
[167] *Product Emissions Standards*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY.
[168] Ibid.

States under Title 40 of the Code of Federal Regulations.[169] The Rules also cover Australian certification of the products and recognize certain foreign certifications.[170]

4.2.1.4. Fuel Quality Standards

The information in this section relates to the fuel quality standards regime currently in place at the national level in Australia. The standards are currently under review by the Ministerial Forum on Vehicle Emissions, including consideration of harmonization with different international standards.

a. **Fuel Quality Standards Act 2000**

The Fuel Quality Standards Act, together with the Fuel Quality Standards Regulations 2001,[171] provides the legislative basis for national fuel quality and fuel quality information standards for Australia. Where a State or Territory has fuel quality standards in place, the Commonwealth standards operate concurrently. State or Territory standards apply where they regulate a fuel characteristic not covered by the Commonwealth standards.[172]

The Department of the Environment and Energy is responsible for setting fuel standards, monitoring industry compliance with the standards, granting approvals for businesses to supply fuel that varies from the standards, and reviewing fuel standards.[173] Before taking certain actions under the Act, including making a fuel standard, the relevant federal minister must consult the Fuel Standards Consultative Committee. The Committee includes at least one representative from each state and territory government plus a representative from the federal government and also includes at least one person representing fuel producers, a non-

[169] Product Emissions Standards Rules 201, pt 3.
[170] Ibid.
[171] Fuel Quality Standards Regulations 2001.
[172] *Fuel Quality*, Department of the Environment and Energy.
[173] *Review of the Fuel Quality Standards Act 2000*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY.

government body with an interest in the protection of the environment, and a person representing the interests of consumers.

An independent review of the Act was completed in April 2016, with the final report showing that the Act has led to a quantifiable reduction in the level of pollutants and emissions arising from the use of fuel that may cause environmental and health problems. The report contained several recommendations related to the retention of and possible amendments to the legislative framework. [174]

b. National Standards

National fuel quality standards have been set for the following fuels:[175]

- Petrol (i.e., gasoline):[176] Fuel Standard (Petrol) Determination 2001[177]
- Ethanol E85:[178] Fuel Standard (Ethanol E85) Determination 2012[179]
- Diesel:[180] Fuel Standard (Automotive Diesel) Determination 2001[181]
- Biodiesel:[182] Fuel Standard (Biodiesel) Determination 2003[183]

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[174]PACIFIC ENVIRONMENT LIMITED & MARSDEN JACOB ASSOCIATES, REVIEW OF THE FUEL QUALITY STANDARDS ACT 2000: FINAL REPORT viii–ix.

[175] Fuel Quality Legislation and Standards, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment.gov.au/topics/environment-protection/fuel-quality/legislation accessed 21 November 2024.

[176]*Petrol Fuel Quality Standard*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment. gov.au/topics/environment-protection/fuel-quality/standards/petrol > accessed 21 November 2024.

[177] Fuel Standard (Petrol) Determination 2001, https://www.legislation.gov.au/Details/F2008C00344 accessed 22 November 2024.

[178] *Ethanol E85 Fuel Quality and Fuel Quality Information Standards*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment.gov.au/topics/environment-protection/fuel-quality/standards/ethanol-e85 > accessed 21 Nigeria 2024.

[179] Fuel Standard (Ethanol E85) Determination 2012.

[180]*Diesel Fuel Quality Standard*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment. gov.au/protection/fuel-quality/standards/diesel accessed 24 November 2024.

[181] Fuel Standard (Automotive Diesel) Determination 2001, https://www.legislation.gov.au/Details/F2 009C00145,

[182]*Biodiesel Fuel Quality Standard*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment. gov.au/protection/fuel-quality/standards/biodiesel accessed 22 November 2024.

[183] Fuel Standard (Biodiesel) Determination 2003, https://www.legislation.gov.au/Details/F2009C00146 accessed 22 November 2024.

- Autogas (i.e., LPG for use in motor vehicles):[184] Fuel Standard (Autogas) Determination 2003[185]

4.2.2. Air Pollution Regulation in the United Kingdom

The UK has a wide range of environmental laws, with many that govern clean air stemming from the European Union (EU). The government has also issued several policies relating to climate change. The government considers air pollution a national health emergency,[186] since it contributes to the deaths of approximately 40,000 people in the UK each year, making it the second largest cause of mortality [in the UK] after smoking.[187] The cost of air pollution amounts to £20 billion (approximately US$29 billion) annually in the UK.[188] The government is currently investing £3.5 billion (approximately US$4.8 million) to improve air quality and reduce harmful emissions.[189] Despite this investment and extensive legislation, a government report notes that *"[t]he current legislative framework for air quality is not doing enough to protect public and environmental health,"*[190] and the government is currently considering how to improve the existing air quality legislation.[191]

4.2.2.1. Clean Air Regulations

England has several laws that aim to reduce pollutants in the air, and these laws have led to a long-term decrease in the emissions of several air pollutants.[192] Standards on air quality are driven at the EU level, notably by the Directive on Ambient Air Quality, which provides limits on the levels of major pollutants in outdoor air.[193] The UK is also a party to several

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[184] *Autogas Fuel Quality Standard*, DEPARTMENT OF THE ENVIRONMENT AND ENERGY, http://www.environment.gov.au/topics/environment-protection/fuel-quality/standards/autogas accessed 22 November 2024.
[185] Fuel Standard (Autogas) Determination 2003, https://www.legislation.gov.au/Details/F2014C01226 accessed 22 November 2024.
[186] House of Commons Environment, Food and Rural Affairs, Environmental Audit, Health and Social Care, and Transport Committees, Fourth Report: Improving Air Quality, 2017-18.
[187] Ibid.
[188] Ibid.
[189] Feb. 22, 2018, PARL. DEB., H.C. (5th Ser.) (2018) WS477, https://www.parliament.uk/business/publications/ written-questions-answers-statements/written-statement/Commons/2018-02-22/HCWS477 accessed 24 November 2024.
[190] House of Commons Environment, Food and Rural Affairs, Environmental Audit, Health and Social Care, and Transport Committees.
[191] Ibid.
[192] Department for Environment Food & Rural Affairs, *Statistical Release: 15 Feb. 2018, Emissions of Air Pollutants in the UK, 1970 to 2016*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/681445/Emissions_of_air_pollutants_statistical_release_FINALv4.pdf. accessed 24 November 2024.
[193] *Air Quality – Existing Legislation*, EUROPEAN COMMISSION, http://ec.europa.eu/environment/air/quality/ existing_leg.htm. accessed 24 November 2024.

international agreements on the environment, including the Kyoto Protocol,[194][195] the United Nations Framework Convention on Climate Change,[196] and the Paris Agreement,[197] and is actively working to meet targets set by these instruments.

a. National Legislation

England's domestic laws serve to prohibit industries from emitting some of the most serious pollutants in the air. Notably, the Clean Air Act 1995 provides that it is an offence, punishable upon conviction with an unlimited fine, for industries or trades to emit dark smoke from their premises.[198]

The Climate Change Act was enacted in 2008, setting a target for England to reduce its greenhouse gas emissions to levels that are 34% lower than 1990 levels by 2020, and 80% lower than 1990 levels by 2050.[199]

b. National Air Quality Standards

Part IV of the Environmental Act 1995 requires the UK government and devolved administrations (Scotland, Northern Ireland, and Wales) to produce a National Air Quality Strategy.[200] As part of this strategy, the government established Local Air Quality Management Areas, which imposed obligations on local authorities to monitor, assess, and, where appropriate, take action, to ensure the air quality in their area meets government targets.[201] Three pollutants are at the core of this program: nitrogen dioxide (NO_2), particulate matter (PM), and sulfur dioxide (SO_2).[202] The government has established a £255

[194] Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol), Dec. 11,
[195] , 2303 U.N.T.S. 162, annex B, http://unfccc.int/resource/docs/convkp/kpeng.pdf, accessed 24 November 2024.
[196] United Nations Framework Convention on Climate Change (UNFCCC), May 9, 1992, 1771 U.N.T.S. 107, http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf, accessed 21 November.
[197]Paris Agreement, Dec. 12, 2015.
[198] Clean Air Act 1995.
[199] Climate Change Act 2008.
[200] Environment Act 1995, c. 25, section 80.
[201] Department for Environment Food & Rural Affairs, Part IV of the Environment Act 1995 Local Air Quality Management Technical Guidance (TG16), Feb. 2018.
[202] Ibid.

million (approximately US$345 million) Implementation Fund to help local authorities develop clean air plans, and an additional Clean Air Fund of £220 million (approximately US$300 million) was announced in 2017 to further help support the implementation of such plans.[203]

The Local Air Quality Management Areas require local authorities to monitor air quality. If the local authority is not satisfied that an objective under the plan will be met, an Air Quality Management Area must be declared and an Action Plan must be implemented that details the measures that will be established to reduce pollution.[204] Such measures could include "changing road layouts; reducing congestion; encouraging active travel and public transport use; encouraging Ultra Low Emission Vehicle (ULEV) uptake; and retrofitting existing vehicles."[205]

If these initial measures prove to be insufficient to bring levels of pollutants down to acceptable levels, local authorities may use the powers granted to them under the Transport Act 2000[206] to establish Clean Air Zones. These zones would require owners of vehicles that do not meet a specified emissions standard to pay to enter or move around a designated area.[207] The government has stated that Clean Air Zones are the fastest way to decrease NO_2 emissions and that the measures should be temporary and "lifted once legal compliance is achieved and there is no risk of legal limits being breached again."[24]

[203] House of Commons Environment, Food and Rural Affairs, Environmental Audit, Health and Social Care, and Transport Committees.
[204] *Air Quality Management Areas*, DEPARTMENT FOR ENVIRONMENT FOOD & RURAL AFFAIRS.
[205] House of Commons Environment, Food and Rural Affairs, Environmental Audit, Health and Social Care, and Transport Committees.
[206] Transport Act 2000.
[207] DEPARTMENT FOR ENVIRONMENT FOOD & RURAL AFFAIRS AND DEPARTMENT FOR TRANSPORT, CLEAN AIR ZONE FRAMEWORK, May 2017.

c. **Breach of EU Directive on Ambient Air Quality**

The UK is currently in breach of the 2008 EU Directive on Ambient Air Quality, which required member states to comply with limits for certain air pollutants by 2010.[208] In cases where these limits are exceeded, the Member State is required to implement an air quality plan to help reduce these pollutants, which would include measures used in an Air Quality Management Area (discussed above) and may also include reducing traffic volume, the type of fuels used in vehicles, or encouraging people to adjust their driving behaviour.[209]

The European Commission started an infringement case[210] against the UK for failing to meet the obligations contained in this Directive in sixteen air-quality zones, and in February 2017, it issued a Reasoned Opinion, a final written warning, for the UK to comply with the obligations imposed by the Directive. If the UK does not meet these obligations, the European Commission has stated that it will refer the case to the Court of Justice of the European Union,[211] which could order the UK to pay a financial penalty. The government has stated that it is not aware of the amount this penalty could be, or whether the penalties would be imposed before or after the UK exits the EU.[212]

> England's plans to enable it to comply with the Directive have also been subject to domestic legal action, brought by ClientEarth, which claimed that the government's plan to reduce NO_2 emissions to comply with its obligations under the Directive was insufficient. The High Court sided with ClientEarth and ruled that the government "must aim to achieve compliance by the soonest date possible, that [the Secretary of State] must choose a route to that objective which reduces exposure as quickly as possible, and that [the Secretary of State] must take steps which mean meeting the value limits is not just possible, but likely."[213]

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[208] Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on Ambient Air Quality and Cleaner Air for Europe (Ambient Air Quality Directive), 2008.
[209] Press Release, European Commission, Commission Warns Germany, France, Spain, Italy and the United Kingdom of Continued Air Pollution Breaches (Feb. 15, 2017), http://europa.eu/rapid/press-release_IP-17238_en.htm accessed 24 November 2024.
[210] Ibid.
[211] Ibid.
[212] House of Commons Environment, Food and Rural Affairs, Environmental Audit, Health and Social Care, and Transport Committees.
[213] ClientEarth v. Secretary of State for the Environment, Food & Rural Affairs et al., [2016] EWHC 2740.

In 2017, the government published a new plan to tackle NO_2 pollution,[214] and ClientEarth brought further legal proceedings, claiming that the new plan "failed to adequately address the magnitude of the problem."[215] While the court dismissed two complaints, finding the government's approach to combat NO_2 pollution in areas with the worst air quality to be "sensible, rational and lawful,"[216] it did rule in favour of ClientEarth, opining that the measures across England were not sufficient to "ensure substantive compliance with the 2008 Directive and the English Regulations."[217] The government responded to the judgment by issuing legally binding directions to all local authorities instructing them to consider any further actions that could be made to accelerate compliance with the Directive.[218] It also aims to publish a supplement to the 2017 plan in the fall of 2018 and will release a comprehensive Clean Air Strategy in 2018 to detail further steps that it plans to take to combat air pollution.

d. **Reducing Industrial Emissions**

The EU's National Emission Ceiling Directive[219] sets limits on the total emissions of certain pollutants from land sources in the Member States that are not covered under the EU's Emissions Trading System (EU ETS, discussed below), which establishes a limit on greenhouse gas emissions by the Member States.

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[214] Department for Environment Food & Rural Affairs and the Department for Transport, UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations, July 2017, https://assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf accessed 24 November 2024.

[215] ClientEarth v. Secretary of State for the Environment, Food & Rural Affairs et al., [2016] EWHC 2740.

[216] *R (on the application of ClientEarth) No. 3 v. Secretary of State for Environment, Food and Rural Affairs et al.,* [2018] EWHC 315.

[217] Ibid.

[218] Feb. 22, 2018, PARL. DEB., H.C. (5th Ser.) (2018) WS477, https://www.parliament.uk/business/publications/ written-questions-answers-statements/written-statement/Commons/2018-02-22/HCWS477/. Accessed 21 November 2024.

[219] Directive 2016/2284/EU of the European Parliament and of the Council of 14 December 2016 on the Reduction of National Emissions of Certain Atmospheric Pollutants, Amending Directive 2003/35/EC and Repealing Directive 2001/81/EC (National Emissions Ceilings (NEC) Directive), art. 2, 2016 O.J. (L 344) 1.

In early 2018, the government passed regulations to implement a further EU Directive[220] that established limits for air pollution from medium-sized combustion plants and generators, filling the gap between large industries covered by the Industrial Emissions Directive that have a thermal input of more than 50 megawatts[221] and small appliances, such as boilers and heaters with a thermal input of 1 megawatt or less that are covered by the Ecodesign Directive.[222] The regulations require existing medium-combustion plants to reduce emissions by 2025 to 2030, depending upon the size of the plant. New medium-combustion plants must comply with the reduced emissions requirements starting December 20, 2018.[223]

4.2.2.2. Renewable Fuel Standards

In 2008, the UK introduced the Renewable Transport Fuel Obligation Order (RTFO),[224] which serves as "one of the Government's main policies for reducing greenhouse gas (GHG) emissions from road transport in the UK."[225] At the time of the RTFO's introduction, the UK's road transportation accounted for approximately 25% of the UK's greenhouse gas emissions, amounting to 112.5 million metric tons of carbon dioxide annually.[226]

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[220] Directive 2015/2193/EU of the European Parliament and of the Council of 25 November 2015 on the Limitation of Emissions of Certain Pollutants Into the Air from Medium Combustion Plants (Medium Combustion Plant (MCP) Directive), 2015 O.J. (L 313).

[221] Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on Industrial Emissions (Integrated Pollution Prevention and Control), ch. III & annex V, 2010 O.J. (L 334) 17.

[222] Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 on Establishing a Framework for the Setting of Eco-design Requirements for Energy-related Products (Recast), 2009 O.J. (L 285) 10, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0125&from=EN. Accessed 24 November 2024.

[223] Department for Environment, Food & Rural Affairs & Thérèse Coffey MP, *New Emission Controls Will Help Improve Air Quality* (Jan. 24, 2018), https://www.gov.uk/government/news/new-emission-controls-will-helpimprove-air-quality, Accessed 23 November 2024.

[224] The RTFO was made under the Energy Act 2004, c. 20, https://www.legislation.gov.uk/ukpga/2004/20

[225] DEPARTMENT FOR TRANSPORT, RENEWABLE TRANSPORT FUEL OBLIGATION ANNUAL REPORT 2015–16, 2017, Cm. 9436.

[226] Explanatory Memorandum to the Renewable Transport Fuel Obligation Order 2007, 2007 No. 3072, 7.1, http://www.legislation.gov.uk/uksi/2007/3072/pdfs/uksiem_20073072_en.pdf, accessed 20 November 2024.

The RTFO aims to reduce the UK's greenhouse gas emissions by imposing an obligation on suppliers of fuel in the UK[227] to demonstrate that a specified percentage of fuel they supply originates from renewable sources and, as the result of a 2011 amendment to prevent environmental damage due to the production of biofuels, is produced from sustainable sources.[228]

4.2.2.3.Other Energy Efficiency Measures

There are several laws in place to help reduce the UK's carbon footprint. As referenced above, the UK has its own Climate Change Act, with a carbon price floor applicable to UK-based electricity generators that aims to reduce the UK's carbon emissions faster than the EU ETS can alone.[125] The UK has restrictions on excessive packaging of products, stemming from an EU directive. The Regulations require companies to reduce excessive packaging unless it is essential for safety, the protection of the health and hygiene of the packed products, or transport requirements.[229]

4.2.2.4.Impact of the UK's Exit from the EU on Environmental Laws

As noted above, a large amount of the UK's legislative regime regulating air quality has been established at the EU level and therefore reflects the "polluter pays" approach and the "precautionary principle" of EU law.[230] Concerns have been raised as to how the government will legislate to ensure environmental protection after the UK leaves the EU.[231] The House of Commons Environment, Food and Rural Affairs, Environmental Audit, Health and Social Care, and Transport Committees have stated that the current legislative

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[227] Fuel suppliers are defined in the Order as those that provide at least 450,000 liters of fuel each fiscal year, for both transport and non-road mobile machinery. Renewable Transport Fuel Obligation Order 2007, SI 2007/3072, 4.

[228]The number of certificates awarded per liter varies according to the type of fuel.

[229]Packaging (Essential Requirements) Regulations 2015, SI 2015/1640, http://www.legislation.gov.uk/uksi/2015/1640/pdfs/uksi_20151640_en.pdf, accessed 24 November 2024.

[230] Ibid.

[231] House of Commons Library, *Brexit and the Environment*, Briefing Paper No. CBP8132, Jan. 2018, http://researchbriefings.files.parliament.uk/documents/CBP-8132/CBP-8132.pdf, accessed 22 November 2024.

framework for air quality is insufficient to protect the public and environment and that it should be updated and improved during the UK's departure from the EU.[232]

With thirty successful cases out of thirty-four brought by the Environment Directorate-General against the UK for not meeting its environmental obligations, concerns have been raised that the UK's approach to environmental protection and its enforcement mechanisms will not be as robust upon its exit.[233] Lord Rooker stated before the Select Committee on the European Union that:

> [t]he Government by definition opposed what it was doing; in other words, we had to be forced to operate environmental policies under threat of legal action. That will be removed following Brexit. Leaving the ECJ and the Commission leaves a gaping hole in the Government's arrangements.[131]

ClientEarth, who has also undertaken successful legal action against the UK over its failure to meet its environmental obligations, has also expressed concern over what body will replace the European Commission and European Court of Justice.[234]

The Secretary of State for Environment, Food and Rural Affairs acknowledged that the concerns raised are legitimate, and that, without action, exit from the EU would leave a governance gap,[235] but that the government has a responsibility to address this and create an enforcement body, and this will be done during the "course of the progress of the Withdrawal Bill."[236] The Secretary of State has proposed "establishing a body that is independent of Government . . . [and] placed on a statutory footing, ensuring it has clear authority. Its ambition will be to champion and uphold environmental standards."[237] While there were differing opinions within the government on whether such a body or Parliament, is the best

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[232] Ibid.
[233] Ibid.
[234] Ibid.
[235] Department for Environment, Food & Rural Affairs & The Rt. Hon. Michael Gove, *Environment Secretary Sets Out Plans to Enhance Environmental Standards*, GOV.UK (Nov. 13, 2017), https://www.gov.uk/government/ speeches/environment-secretary-sets-out-plans-to-enhance-environmental-standards accessed 21 November 2024.
[236] Select Committee on the European Union Energy and Environment Sub-Committee, *supra* note 1311, at 17.
[237] Department for Environment, Food & Rural Affairs & The Rt. Hon. Michael Gove.

body to enforce environmental laws and hold the government to account,[238] in spring 2018, the government announced that it would work to establish an "independent statutory body to hold Government to account for upholding environmental standards."[239]

4.2.3. South Africa

South Africa's GHG emissions are among the highest in the world and its absolute carbon dioxide (CO_2) emissions rank among the top twenty countries, "with emissions per capita in the region of 10 metric tons per annum."[1] The 2011 National Climate Change White Paper described this challenge as follows:

> The energy intensity of the South African economy, largely due to the significance of mining and minerals processing in the economy and our coal-intensive energy system, has resulted in an emissions profile that differs substantially from that of other developing countries at a similar stage of development as measured by the Human Development Index. Since coal is the most emissions-intensive energy carrier, South Africa[']s economy is very emissions-intensive. Furthermore, emissions from land-use change (primarily deforestation) contribute a significantly smaller share to our emission profile than for many other developing countries. In 2000, average energy use emissions for developing countries constituted 49% of total emissions, whereas South Africa's [sic] energy use emissions constituted just under 80% of total emissions. Even in some fast-developing countries with a similar reliance on coal for energy, energy use emissions are lower than in South Africa.[240]

South Africa is a party to several multinational environmental agreements. These include the United Nations Framework Convention on Climate Change (UNFCCC), which South Africa ratified in 1997; the Kyoto Protocol, which South Africa ratified in 2002; and the Paris

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[238] Select Committee on the European Union Energy and Environment Sub-Committee, *supra* note 1331, ¶ 25.

[239] HM GOVERNMENT, A GREEN FUTURE: OUR 25 YEAR PLAN TO IMPROVE THE ENVIRONMENT, 2018, at 7, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-yearenvironment-plan.pdf, accessed 23 November 2024.

[240] DEPARTMENT OF ENVIRONMENTAL AFFAIRS, NATIONAL CLIMATE CHANGE RESPONSE WHITE PAPER 26 (Oct. 12, 2011), https://www.environment.gov.za/sites/default/files/legislations/national_climatechange_response_whitepaper.pdf, accessed 22 November 2024.

Agreement on Climate Change, ratified by South Africa in 2016.[241] In the 2009 Copenhagen Climate Change Conference, South Africa committed to reducing its GHG emissions by 34% below its current levels (see below) by 2020 and 42% below current levels by 2025, "with emissions peaking in 2020–2025, stabilizing in 2025–2035 and declining in absolute terms from around 2035."[242]

As part of its plan to implement the environment clause of the Constitution and its obligations under international law, South Africa enacted the National Environmental Management: Air Quality Act in 2004. The Act delegates a great deal of power to the executive branch to, among other things, put in place national policy and a regulatory framework for pollution prevention and the enhancement of air quality.

4.2.3.1.National Environmental Management: Air Quality Act

A. Delegated Powers

The Air Quality Act, which, among other things, seeks to impose "reasonable measures for the prevention of pollution" and national norms and standards to regulate air quality, accords the executive branch a great deal of national regulatory authority for purposes of realizing the Act's objectives. The executive branch, more specifically the Minister of Environmental Affairs, is mandated to establish a national framework for the effective implementation of the objectives of the Act, including:

> a. mechanisms, systems and procedures to attain compliance with ambient air quality standards;
>
> b. mechanisms, systems and procedures to give effect to the Republic's obligations in terms of international agreements;

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[241] 2012 NATIONAL FRAMEWORK FOR AIR QUALITY MANAGEMENT IN THE REPUBLIC OF SOUTH AFRICA § 2.4 (Dec. 2012), available on the Centre for Environmental Rights website, *at* https://cer.org.za/wp-content/uploads/2013/12/Framework-for-Air-Quality-Management_new.pdf accessed 22 November 2024.

[242] DEPARTMENT OF ENVIRONMENTAL AFFAIRS, NATIONAL CLIMATE CHANGE RESPONSE WHITE PAPER, pg. 25.

c. national norms and standards for the control of emissions from point and nonpoint sources;

d. national norms and standards for air quality monitoring;

e. national norms and standards for air quality management planning;

f. national norms and standards for air quality information management; and,

g. any other matter which the Minister considers necessary for achieving the object of this Act.[243]

In addition to the Ministry of Environmental Affairs, several other national departments are accorded jurisdiction in matters relating to the management of atmospheric emissions. These include the Department of Energy, which is responsible for emissions resulting from the use of fossil fuels and the Department of Mineral Resources, which, among other matters, deals with emissions from mining haul roads and emissions from fires in working and abandoned coal mines.

4.3. LESSONS FOR NIGERIA

Here are lessons for Nigeria on Air Pollution Control from the UK, Australia, and South Africa examples above.

1. **Comprehensive Legal Frameworks:**

The UK, Australia, and South Africa have established robust legal frameworks for air quality management, such as the Environmental Act 1995 in the UK, the National Environment Protection Council Act 1994 in Australia, and the National Environmental Management: Air Quality Act 2004 in South Africa. Nigeria could consider adopting unified national air quality legislation that delineates standards and responsibilities, providing clear and enforceable guidelines for addressing air pollution.

[243] National Environmental Management: Air Quality Act 39 of 2004, section 7, 20 STATUTES OF THE REPUBLIC OF SOUTH AFRICA − LAND (updated through 2016).

2. **Pollant Regulation and Monitoring:**

In the UK, local authorities monitor air quality and ensure compliance with targets under Local Air Quality Management Areas. Australia employs National Environment Protection Measures (NEPMs) to regulate pollutants like ozone and particulate matter, while South Africa mandates emission limits and air quality standards under its Air Quality Act. Nigeria could enhance its pollutant monitoring systems by empowering local authorities and integrating real-time technologies for tracking pollutants.

3. **Emission Reduction Strategies:**

The UK ties vehicle taxes to emissions levels, Australia offers financial incentives for renewable energy projects, and South Africa implements carbon taxation to reduce industrial emissions. Nigeria could explore similar measures, such as emission-based taxation, incentivising cleaner technologies, and promoting renewable energy to address emissions from industries and vehicles.

4. **Government Agency Empowerment:**

The UK's DEFRA, Australia's Department of Climate Change, Energy, the Environment, and Water, and South Africa's Department of Environmental Affairs play central roles in enforcement and policy-making. Strengthening Nigerian environmental agencies like NESREA and ensuring adequate funding and autonomy would enhance enforcement capabilities and promote effective air pollution control.

5. **Clean Energy Transition:**

The UK has committed to ending the sale of petrol and diesel vehicles by 2030 and transitioning to renewable energy. Australia is investing in large-scale renewable energy

projects, and South Africa has introduced policies to transition from coal to cleaner energy sources. Nigeria can develop policies supporting electric vehicles, alternative fuels, and renewable energy projects to achieve a clean energy transition.

6. **Public Engagement and Education:**

Public involvement is integral in all three jurisdictions. The UK uses campaigns and consultations to engage stakeholders, Australia promotes environmental awareness through education programmes, and South Africa employs community engagement strategies to address pollution hotspots. Nigeria could implement awareness campaigns to promote eco-friendly practices and foster public participation in policy development.

7. **Regional and International Cooperation:**

The UK's historical participation in EU directives, Australia's engagement in the Asia-Pacific Partnership on Clean Development, and South Africa's collaboration within SADC highlight the importance of regional and international cooperation. Nigeria could strengthen partnerships through ECOWAS and the African Union to address trans boundary air pollution challenges.

8. **Judicial Involvement in Enforcement**:

Legal actions, such as those initiated by ClientEarth in the UK, community litigation in Australia, and advocacy-driven cases in South Africa, underscore the role of the judiciary in enforcing environmental laws. Nigeria could strengthen judicial pathways for public interest litigation and empower courts to hold polluters accountable effectively.

By adopting these strategies, Nigeria can address its air pollution challenges effectively while promoting public health and environmental sustainability.

4.4. CONCLUSION

The regulation of air pollution is vital to safeguarding public health and the environment. This chapter has explored the legislative frameworks and strategies employed by the United Kingdom, Australia, and South Africa—three jurisdictions with advanced systems for managing air quality. Their approaches demonstrate the importance of clear legal standards, robust enforcement mechanisms, and a commitment to innovation in addressing air pollution.

The analysis highlights the need for comprehensive national legislation supported by empowered regulatory agencies and collaborative multi-stakeholder approaches. The UK's use of localised air quality management areas, Australia's pollutant-specific National Environment Protection Measures, and South Africa's carbon taxation policies underscore the effectiveness of targeted and adaptable strategies. Moreover, these countries exemplify how financial incentives, public engagement, and judicial oversight contribute to a sustainable and enforceable air pollution control system.

For Nigeria, these insights offer a valuable roadmap. By integrating best practices from these jurisdictions, Nigeria can strengthen its legal and institutional frameworks to address air pollution effectively. This includes adopting clear regulatory standards, fostering public-private partnerships, and promoting cleaner technologies to mitigate emissions from industrial and vehicular sources.

Ultimately, learning from the successes and challenges of the UK, Australia, and South Africa can guide Nigeria in developing a robust air pollution control framework that not only improves air quality but also aligns with global environmental goals and supports sustainable development.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1. SUMMARY

The introductory chapter of the study evaluates Nigeria's legal framework for air pollution control, addressing its weaknesses, challenges, and strategies for improvement. Air pollution is highlighted as a growing threat to public health and the environment, exacerbated by industrialisation, urbanisation, and regulatory shortcomings. Existing laws, such as the NESREA Act and EIA Act, are critiqued for outdated provisions, weak enforcement, and insufficient resources. The research underscores socio-economic and political factors, including poverty and inadequate coordination, as barriers to effective air quality management. Drawing lessons from the EU's stringent policies, the study suggests reforms, including strengthening regulatory bodies, adopting updated pollution control standards, and enhancing public education and international collaboration. These steps aim to align Nigeria's framework with global environmental commitments, safeguard public health, and promote sustainability. The chapter also outlines the study's scope, methodology, and significance, emphasizing its relevance to policymakers, legal practitioners, and environmental scholars in Nigeria.

Chapter Two has explored the foundational concepts, theories, and literature on air pollution, establishing a comprehensive basis for understanding the issue in the context of Nigeria. From the various definitions and perspectives examined, it is evident that air pollution is a significant and complex environmental challenge that impacts human health, ecosystems, and economic stability. Scholars and experts agree that air pollution is characterised by the presence of harmful contaminants—whether gaseous, particulate, or biological—in the

atmosphere at levels that pose risks to life and property. This consensus reinforces the importance of addressing air pollution through robust regulatory frameworks and sustainable practices. The chapter also highlighted several theoretical perspectives that frame the discourse on air pollution control. Environmental justice theory stresses the need for equitable treatment of all communities affected by pollution, especially marginalized groups who are often disproportionately exposed. Sustainable development theory underscores the need for a balanced approach to economic growth and environmental protection, advocating for long-term solutions that ensure the well-being of future generations. Regulatory enforcement theory points to the challenges and gaps in existing enforcement mechanisms, particularly in developing countries like Nigeria where financial and technical constraints limit the effectiveness of air pollution control efforts. The literature review further demonstrated that air pollution is a global issue affecting developed, developing, and underdeveloped nations alike, though each faces unique challenges. In Nigeria, urban areas, particularly the Niger Delta, face severe air quality issues due to industrial activities and the combustion of fossil fuels. The health and environmental consequences of these pollutants are substantial, yet the response remains inadequate given the scale of the problem. The World Health Organization's data on the global toll of air pollution, causing millions of premature deaths annually, reinforces the urgency for improved air quality management. As Nigeria strives to balance economic growth with environmental and public health needs, this chapter has underscored the importance of a cohesive legal and regulatory approach. The literature suggests that while pollution control mechanisms are in place, their enforcement and practical effectiveness remain limited. Moving forward, this study will assess Nigeria’s legal framework for air pollution control, focusing on challenges to effective regulation and exploring strategies to strengthen policies for long-term environmental health and sustainability.

Chapter Three examines the Nigerian laws and institutions responsible for environmental regulation, focusing on the legislative and administrative structures that aim to protect the country's environment, particularly in the Niger Delta region. Key laws such as the Constitution of the Federal Republic of Nigeria, the Environmental Impact Assessment Act, and the Petroleum Industry Act, among others, establish standards for pollution control, mandate environmental assessments, and set penalties for non-compliance. These laws form the basis of Nigeria's environmental legal framework, setting out obligations for both government and industry players to uphold environmental standards. In addition to legislation, Nigeria has developed a network of statutory agencies to enforce these environmental laws and manage specific challenges associated with industrial pollution. Agencies such as the National Environmental Standards and Regulations Enforcement Agency (NESREA), the National Oil Spill Detection and Response Agency (NOSDRA), and the Niger Delta Development Commission (NDDC) play critical roles in monitoring compliance, responding to pollution incidents, and promoting sustainable development. By analysing both the legal instruments and the roles of these institutions, this chapter aims to evaluate the effectiveness of Nigeria's environmental governance framework in addressing pollution and ensuring accountability within the extractive industries. This chapter provides an in-depth examination of these legal and institutional arrangements, shedding light on their strengths and weaknesses and identifying opportunities for enhancing Nigeria's capacity to balance economic development and environmental sustainability.

Chapter Four provides a comparative analysis of air pollution regulation in the UK, Australia, and South Africa, offering insights into their strategies and legal frameworks. The UK employs the Environmental Act 1995 and its Local Air Quality Management system, focusing on emission reduction through vehicle taxes, public engagement, and clean energy initiatives. Australia's NEPMs regulate pollutants, supported by federal and local government

collaboration, financial incentives for renewable energy, and strict vehicle emission standards. South Africa's Air Quality Act sets national norms, imposes emission limits, and incorporates carbon taxation. Key lessons for Nigeria include adopting unified air pollution legislation, strengthening agencies like NESREA, and integrating technologies for pollutant monitoring. Emission-based taxation, incentives for cleaner technologies, and renewable energy projects are recommended strategies. Public engagement, stakeholder participation, and judicial enforcement—evident in all three jurisdictions—highlight the importance of a multi-stakeholder approach. Nigeria can also benefit from regional cooperation within ECOWAS and African Union frameworks to address trans-boundary pollution. By leveraging these practices, Nigeria can develop a robust air pollution control system, aligning with global environmental standards while promoting sustainability and public health.

Chapter Five summarizes the key findings of the study, synthesizing insights from the analysis of Nigeria's legal framework and the comparative study. The chapter draws conclusions on the adequacy of Nigeria's air pollution regulations and identifies the most pressing challenges needing reform. Finally, it provides recommendations for strengthening the legal and institutional structures for air pollution control in Nigeria, focusing on policy reforms, enhanced enforcement mechanisms, and strategies to address identified challenges. These recommendations aim to guide policymakers and regulators in developing more effective air pollution control measures.

5.2. RECOMMENDATIONS

1. Strengthen Legal Frameworks

Nigeria should update and consolidate its air pollution laws to align with modern international standards. This includes introducing comprehensive national legislation that defines clear emission limits, regulates industrial and vehicular pollution, and incorporates

stricter penalties for violations. Laws should also emphasise preventive measures, such as mandating cleaner production technologies.

2. Enhance Enforcement Capacity

Regulatory agencies like NESREA require increased funding, technical resources, and autonomy to enforce air quality standards effectively. Recruiting and training personnel, deploying modern monitoring equipment, and ensuring inter-agency coordination are essential for achieving better compliance with environmental laws.

3. Promote Sustainable Development

Nigeria should balance economic growth with environmental protection by incentivising green industrial practices and renewable energy adoption. Tax breaks and grants for clean energy projects, along with stricter regulations on industries contributing heavily to pollution, can drive sustainable development.

4. Raise Public Awareness and Engagement

Government and non-governmental organisations should implement widespread public education campaigns about the health and environmental impacts of air pollution. Encouraging community involvement in pollution monitoring and policy development can foster accountability and behavioural changes.

5. Foster Regional and International Collaboration

Nigeria should strengthen partnerships with organisations like ECOWAS, the African Union, and the United Nations to address trans-boundary pollution challenges. Technical and financial support from international bodies can assist in developing and implementing

advanced pollution control strategies. Collaboration can also ensure adherence to global agreements such as the Paris Climate Accord.

5.3. CONCLUSION

The study concludes that air pollution represents a critical challenge in Nigeria, with significant implications for public health, environmental sustainability, and economic growth. Despite the existence of key legislative frameworks such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act and the Environmental Impact Assessment (EIA) Act, the effectiveness of these measures remains limited due to weak enforcement, inadequate statutory provisions, and insufficient coordination among regulatory agencies. These challenges are compounded by socio-economic factors, including rapid urbanisation, poverty, and limited political commitment to environmental governance. Industrial emissions, vehicular pollution, improper waste management, and the combustion of fossil fuels remain major contributors to air pollution in Nigeria. These issues disproportionately impact vulnerable populations, particularly those in urban centres and economically disadvantaged communities. The health consequences, such as respiratory diseases and premature mortality, underscore the urgency of addressing air quality concerns comprehensively. Drawing lessons from international best practices, the study highlights the importance of adopting a multi-faceted approach to air pollution control. Recommendations include strengthening existing legislation, empowering regulatory agencies through increased funding and autonomy, and incorporating modern technologies for pollution monitoring. Additionally, public awareness campaigns, stricter penalties for non-compliance, and incentives for adopting cleaner technologies are vital for fostering a culture of environmental responsibility. Furthermore, Nigeria must integrate sustainable development principles into its policies, balancing economic growth with environmental protection and aligning with

international commitments such as the Paris Agreement. Enhanced collaboration with regional and international organisations can also provide technical and financial support for addressing trans-boundary pollution challenges. Achieving effective air pollution control in Nigeria requires a robust, equitable, and enforceable regulatory framework. By prioritising public health, environmental sustainability, and intergenerational equity, Nigeria can create a healthier environment, reduce the socio-economic costs of pollution, and secure long-term developmental benefits for its citizens.

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