



## A CRITICAL HUMAN RIGHTS AIDITS OF NIGERIA’S CLIMATE CHANGE MITIGATION POLICIES: GAPS AND PATHWAYS

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### ABSTRACT

Drawing on an analysis of Nigeria’s domestic drivers of environmental degradation such as oil spills, gas flaring, deforestation, and unsustainable land-use practices, this paper situates the country’s contribution to global greenhouse-gas emissions within broader patterns of weak environmental governance. It further examines Nigeria’s obligations under international and domestic law and reveals a persistent gap between ambitious climate commitments and inadequate implementation. The paper demonstrates that climate change in Nigeria deepens socio-economic vulnerabilities, threatening fundamental human rights through food and water insecurity, loss of livelihoods, environmental displacement, and disproportionate impacts on marginalized communities. In evaluating the institutional responses, including the creation of the National Council on Climate Change under the Climate Change Act 2021, the paper identifies structural obstacles such as weak enforcement, insufficient funding, and limited technological capacity. It proposes targeted reforms which include comprehensive land-use planning, investment in climate research, the development of a Monitoring, Evaluation, and Learning (MEL) system, and the strengthening of climate-related agencies such as NiMET, NIHSA, and NEMA. The study further recommends leveraging advanced technologies, including satellite monitoring, geospatial analytics, artificial intelligence, and machine learning, to enhance climate-policy implementation. The paper concludes that achieving climate justice in Nigeria requires a paradigm shift from mere aspirational environmental governance to a legally enforceable, rights-based climate-action model. It contends that only a coordinated effort by government institutions, the judiciary, civil society, and international partners can ensure the protection of human rights and environmental sustainability in the face of an intensifying climate crisis

**Keywords:** Climate Change, Human Rights, Environmental Justice, Nigeria, Climate Governance, Sustainable Development

### 1. INTRODUCTION

Climate change has morphed from a trivialized subject, once dismissed as a “hoax” by an American president,<sup>1</sup> into a global crisis with large-scale ramifications. Consequently, it has become an indispensable focal point in contemporary global discourse.<sup>2</sup> As a transnational issue, human-induced

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<sup>1</sup>Donald Trump, ‘Trump Called Climate Change a “Con Job” at the United Nations—Here Are the Facts and Context’ (PBS NewsHour, 24 September 2019) <<https://www.pbs.org/newshour/politics/trump-called-climate-change-a-con-job-at-the-united-nations-here-are-the-facts-and-context>> Accessed 22 March 2025. Trump blasted the U.N.’s climate efforts, saying he withdrew America from the “fake” Paris climate accord because “America was paying so much more than every country, others weren’t paying.” He dismissed the concept

of climate change as a hoax.

<sup>2</sup> There is now a global consensus that climate change is real. Even though there will always be uncertainty in understanding a system as complex as the world’s climate. International Academies, *Joint Science Academies’ Statement: Global Response to Climate Change* (2005)



climate change in one country inevitably affects others. It is also a transgenerational concern, which impose upon this present generation an ethical and legal obligation to ensure environmental sustainability for future generations. The failure to do so would constitute a deprivation of their fundamental right to a livable environment, one that supports life in all its dimensions.

In Nigeria, rising temperatures and increasing rainfall variability which are both direct consequences of climate change have led to droughts, desertification, rising sea levels, erosion, flooding, thunderstorms, bushfires, landslides, land degradation, and more frequent and extreme weather conditions. The resulting heatwaves are projected to diminish agricultural productivity, a sector that contributes approximately 22 percent to Nigeria's Gross Domestic Product (GDP)<sup>3</sup> and employs more than one-third of the population.

The challenges posed by climate change are not uniform across Nigeria's geographical regions due to varying precipitation patterns. The southeast and southwest experience high precipitation, while the northern region suffers from low precipitation. These disparities exacerbate distinct environmental vulnerabilities: aridity, desertification, and drought in the north, and erosion and flooding in the south and other regions. The heightened susceptibility of northern states to climate change presents a significant threat to food security nationwide. These environmental crises inevitably raise profound human rights concerns and call to mind the urgent need for access to environmental justice.

Nigeria's economic prosperity is deeply intertwined with the exploration and exploitation of its vast oil and gas reserves. Petroleum exports account for approximately 90 percent of the nation's foreign exchange earnings<sup>4</sup>, making crude oil revenue the linchpin of Nigeria's economy.<sup>5</sup> Since the discovery of commercially viable oil reserves in the Niger Delta in 1956, hydrocarbon activities- including exploration, extraction, refining, exportation, and domestic distribution- have intensified, solidifying the sector's dominance. However, this heavy reliance on fossil fuels has propelled Nigeria into the ranks

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<[https://www.waterwiseconsulting.com/climate\\_change](https://www.waterwiseconsulting.com/climate_change)>  
accessed 22 March 2025.

<sup>3</sup>Food and Agriculture Organisation of the United Nations (FAO), *Nigeria at a Glance* (2021) FAO in Nigeria' <<https://www.fao.org/nigeria/fao-in-nigeria/nigeria-at-a-glance/en/>> accessed 25 July 2025.

<sup>4</sup> Even though oil revenue as a share of the nation's total revenue declined from about 75 per cent in 2012 to about 47 per cent in 2016, it is still uncontestedly a major player in shaping the outlook of the Nigerian economy. See Central Bank of Nigeria. (2017). Statistical Bulletin

<sup>5</sup> M A Babatunde, 'Oil Price Shocks and Exchange Rate in Nigeria' (2015)(9)(1) *International Journal of Energy Sector Management* 2



of the world's top 25 greenhouse gas emitters, contributing approximately 0.8 percent of global emissions.<sup>6</sup>

This paper explores the nature and challenges of climate change, its environmental implications, and its impact on human rights and access to environmental justice.

## 2. CONCEPTUAL CLARIFICATION

### Climate Change

Climate change is a term used to describe a phenomenon characterized by an increase in the global average temperature. This definition presupposes the existence of a baseline global temperature deemed "normal" and a threshold beyond which temperature changes are considered significant. This raises the question: What degree of temperature change qualifies as climate change, given that global temperatures are in constant flux? It appears, therefore, that the term is not meant to address minor fluctuations but rather substantial and sustained shifts in global temperature over several decades. Moreover, temperature is not the sole indicator of climate change; other key measures include precipitation patterns, wind variations, sea-level rise, ocean acidification, and increasing greenhouse gas concentrations, among others.

Climate change refers to long-term alterations in the state of the climate, identifiable through changes in mean climate properties or their variability, persisting for extended periods - typically decades or longer. These changes occur when the balance of energy stored within the climate system is disrupted. Such disruptions arise from variations in the equilibrium between incoming solar radiation and outgoing terrestrial radiation. Several natural mechanisms contribute to this imbalance, including shifts in the Earth's orbital dynamics, variations in ocean circulation, and changes in atmospheric composition.

Currently, the Earth's surface temperature is approximately 1.2°C warmer than it was in the late 1800s, prior to the Industrial Revolution, marking the highest temperature levels in at least 100,000 years. The decade from 2011 to 2020 was the warmest on record, and each of the last four decades has been successively warmer than any previous decade since 1850.<sup>7</sup>

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<sup>6</sup> 'Emission Index, *Greenhouse Gas Emissions in Nigeria* (latest available data 2021)' <<https://www.emission-index.com/countries/nigeria>> (accessed 25 July 2025).

<sup>7</sup> United Nations, *what is climate change*, <<https://www.un.org/en/climatechange/what-is-climate-change>>. Accessed 22 March 2025.



The American Chemical Society asserts that “comprehensive scientific assessments of our current and potential future climates clearly indicate that climate change is real, largely attributable to emissions from human activities, and potentially a very serious problem.”<sup>8</sup>

Similarly, the American Geophysical Union maintains that “human-induced climate change requires urgent action.”<sup>9</sup> It emphasizes that civilizations play a crucial role in influencing climate change on a global scale and that rapid societal responses can significantly mitigate destructive consequences.

The American Medical Association endorses the findings of the Intergovernmental Panel on Climate Change’s (IPCC)<sup>10</sup> Fourth Assessment Report, concurring with the scientific consensus that the Earth is experiencing adverse global climate change and that anthropogenic activities are substantially impacting the global commons.

The American Meteorological Society asserts that “the dominant cause of the rapid change in climate over the past half-century is human-induced.”<sup>11</sup> It identifies the primary contributors as increased atmospheric concentrations of greenhouse gases, including carbon dioxide (CO<sub>2</sub>)<sup>12</sup>, chlorofluorocarbons (CFCs), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O).

The American Physical Society views the evidence on climate change as irrefutable. It warns that, in the absence of mitigation efforts, significant disruptions to the Earth's physical and ecological systems, as well as social structures, security, and public health, are likely to occur<sup>13</sup>.

The Geological Society of America (GSA)<sup>14</sup> concurs with assessments from the National Academies of Sciences (2005), the National Research Council (2006), and the IPCC (2007), all of which present

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<sup>8</sup> Dan Farber, ‘Environmental Law and Climate Policy Insights’ (Legal Planet, 10 March 2017) <<https://legal-planet.org/2017/03/10/pruitt-shows-his-true-colors/>> accessed 22 March 2025.

<sup>9</sup> <<https://www.science.gov/topicpages/c/called+climate+change>> Accessed on 22 March 2025.

<sup>10</sup> The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and the United Nations Environment Programme in 1988 with the mandate to provide the world community with the most up-to date and comprehensive scientific, technical and socio-economic information about climate change. See, IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M L Parry, and others (eds), (Cambridge University Press 2007).

<sup>11</sup> American Meteorological Society, ‘AMS and Climate Change’ (American Meteorological Society) <<https://www.ametsoc.org/ams/about-ams/ams-and-climate-change/>> accessed 22 March 2025.

<sup>12</sup> The concentration of CO<sub>2</sub> in the atmosphere is now higher than it has been for at least three million years, see USGCRP. Climate science special report: U.S. Global Change Research Program, *Fourth National Climate Assessment, Volume 1* (Washington, DC, 2017).

<sup>13</sup> <<https://www.aps.org/about/governance/statements/changing-climate>,> Accessed on 22 March 2025.

<sup>14</sup> GSA climate policy statement reads, “Human-induced increases in greenhouse gases, especially CO<sub>2</sub>, are the main drivers of recent global warming. Sound public policy and successful climate change mitigation and adaptation require scientifically validated assessment of current and future climate impacts.” <[https://rock.geosociety.org/net/documents/gsa/positions/pos10\\_climate.pdf](https://rock.geosociety.org/net/documents/gsa/positions/pos10_climate.pdf)>, Accessed on 22/03/2025



compelling evidence that global climate systems are deteriorating due to human activities, particularly the emission of greenhouse gases.

The United States National Academy of Sciences maintains that “the scientific understanding of climate change is now sufficiently clear to justify taking steps to reduce the amount of greenhouse gases in the atmosphere.”<sup>15</sup>

The United States Global Change Research Program similarly asserts that “the global warming of the past 50 years is due primarily to human-induced increases in heat-trapping gases.” Moreover, human-induced climate change has been detected in multiple aspects of the climate system, including ocean heat content, precipitation patterns, atmospheric moisture levels, and Arctic sea ice decline.<sup>16</sup>

Climate change is driven by both natural and human-induced factors, but the surge in carbon dioxide concentrations has been the primary trigger for global warming. Since the Industrial Revolution in the mid-1700s, CO<sub>2</sub> levels have been steadily rising due to fossil fuel combustion and widespread deforestation. Human activities have also increased emissions of other greenhouse gases, including methane, nitrous oxide, and halocarbons.

The IPCC has established a range of scenarios in its Special Report on Emissions Scenarios (SRES) to explore potential climate futures. None of these scenarios—not even the “low emissions” model—includes robust policies aimed at mitigating climate change or stabilizing atmospheric greenhouse gas concentrations. Instead, the variations among these scenarios stem from differing projections related to population growth, technological advancements, socio-economic development, and other influencing factors<sup>17</sup>.

## **Human Rights**

Human rights reflect a timeless and universal effort to protect the dignity of every individual against the abuse of power. This quest for protection is as ancient as human history itself, with various cultures and civilizations recognizing the inherent worth and dignity of all human beings. However, the modern concept of human rights as we know it today is a relatively recent development, marked by a global commitment to uphold human dignity through internationally accepted legal standards and accessible implementation mechanisms.<sup>18</sup> The ethical basis of human rights has been defined using concepts such

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<sup>15</sup>[https://www.waterwiseconsulting.com/climate\\_change](https://www.waterwiseconsulting.com/climate_change), Accessed on 22/03/2025.

<sup>16</sup> N Oreskes, ‘Beyond the Ivory Tower: The Scientific Consensus on Climate Change’ (2004) 306(5702) *Science* 1686 <https://doi.org/10.1126/science.1103618>.

<sup>17</sup> G C Hegerl and others, ‘Understanding and Attributing Climate Change’ in Patrick Umoh, *Climate Change Law Context* (Sidon Books Limited 2022) 6.

<sup>18</sup> David Antia, ‘Analysing the Impact of Judicial Activism on Human Rights Protection: A Comparative Review of Nigerian and Indian Jurisprudence’ (27 July 2024) SSRN <<https://ssrn.com/abstract=4913442>>



as human flourishing, dignity, duties to family and society, natural rights, individual freedom, and social justice against exploitation based on sex, class or caste. Human rights have in common an ethical concern for just treatment, built on empathy or altruism in human behavior and concepts of justice in philosophy.<sup>19</sup>

The Nigerian Constitution<sup>20</sup> provides a foundation for environmental protection, which, when interpreted broadly, includes the obligation to implement effective climate policies. A robust climate policy is essential for safeguarding the fundamental human right to a clean, healthy, and sustainable environment. The most relevant constitutional provision in this regard is Section 20, which states that the State shall protect and improve the environment and safeguard the water, air, land, forest, and wildlife of Nigeria.

This provision establishes the state's duty to ensure environmental sustainability and climate resilience. Additionally, Section 17(2)(d) reinforces this commitment by stating that exploitation of human or natural resources in any form whatsoever for reasons other than the good of the community shall be prevented.

These provisions create a constitutional basis for climate action, requiring the government to adopt policies that mitigate environmental harm and protect communities from climate-related risks. While Nigeria's environmental laws derive their legitimacy from these constitutional mandates, the increasing global recognition of climate change as a human rights issue further strengthens the need for their enforcement.

Internationally, the right to a healthy environment has been affirmed as a fundamental human right by the United Nations. Climate change threatens this right by contributing to extreme weather events, desertification, flooding, food insecurity, and displacement - disproportionately affecting vulnerable populations. In Nigeria, environmental degradation due to climate change exacerbates existing human rights violations, including threats to life, health, and livelihoods. Fundamental rights, such as the right to life (Section 33) and dignity (Section 34), have been judicially interpreted to encompass the right to a clean and healthy environment. The protection of these rights necessitates urgent climate action and strong environmental policies.

A common argument against the enforceability of environmental provisions in Chapter II of the Constitution is their non-justiciability, as stipulated in Section 6(6)(c). However, this limitation is mitigated by Item 60 of the Exclusive Legislative List, which empowers the National Assembly to

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<sup>19</sup> Stephen P Marks, *Human Rights: A Brief Introduction* (Harvard University 2016) 4.

<sup>20</sup> Constitution of the Federal Republic of Nigeria 1999 (as amended).



promote and enforce the Fundamental Objectives and Directive Principles of State Policy. Item 60 states:

"The establishment and regulation of authorities for the Federation or any part thereof-  
(a) To promote and enforce the observance of the Fundamental Objectives and Directive Principles contained in this Constitution."

This provision allows for the enactment of laws that give legal force to the state's environmental obligations. Therefore, while Chapter II provisions may not be independently justiciable, their implementation through statutory enactments ensures their enforceability. Various environmental laws, policies, and regulatory frameworks have been enacted under this mandate, reinforcing the argument that climate-related rights, though initially framed as non-justiciable, attain legal recognition through legislative action.

As climate change increasingly impacts human rights, Nigeria's legal framework must evolve to explicitly recognize and enforce environmental and climate justice.

### **3. OVERVIEW OF THE PROBLEM OF CLIMATE CHANGE IN NIGERIA**

Nigeria is classified as one of the ten most vulnerable countries to the impacts of climate change and natural hazards.<sup>21</sup> By virtue of Nigeria's geographical positioning that extends from the Gulf of Guinea in the Atlantic Ocean in the South to the Sahara desert in the North, Nigeria is particularly vulnerable to the deleterious effects of climate change.

Most recently, Nigeria experienced a double shock of severe drought in the northeast and widespread flooding that affected nearly the entire country in 2012. The floods caused nearly \$17 billion in damages and losses in the 12 most affected states. Nigeria is regularly affected by multiple hazards such as floods and droughts. Furthermore, low-income households are the most vulnerable to weather-related natural disasters<sup>22</sup>

Experts have produced extensive reports on the current and future impacts of climate change in Nigeria. For instance, experts on Climate Change have demonstrated that Nigeria is already experiencing various degrees and categories of ecological and meteorological problems caused by changes to the climate system.

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<sup>21</sup>Climate Scorecard (2019). Nigeria Listed as One of the 10 Most Climate Vulnerable Countries. URL: <<https://www.climatecorecard.org/2018/11/nigeria-listed-as-one-of-the-10-most-climate-vulnerable-countries>> Accessed 12 March 2025.

<sup>22</sup> A Echendu, 'The Impact of Flooding in Nigeria's Sustainable Development Goals' (2020) 6(1) *Journal of Ecosystem Health and Sustainability*<<https://doi.org/10.1080/20964129.2020.1791735>> accessed 13 March 2025



These ecological and meteorological problems include inter alia a decreasing amount of rainfall in the continental interiors and an increasing amount of rainfall in the southern coastal parts of Nigeria.

Agriculture, which is heavily impacted by flooding and drought, serves as the main source of income for 80% of the rural poor. The rapid rise of urbanization and urban poverty also increases potential flood risk. An estimated 24 percent of Nigeria's population (approximately 41 million people) are living in high climate exposure areas. Some of the highest overall exposure is concentrated in the coastal states, including the coastal areas of Lagos, Delta and Rivers states, where large population concentrations live in the cities of Lagos, Warri and Port Harcourt, where poorer households and slum areas are at risk from flooding and storm surges.<sup>23</sup> An estimated 27 to 53 million people may need to be relocated due to a 0.5 meter increase in sea level, which is projected for Nigeria by end of the century.<sup>24</sup>

Additionally, ongoing coastal erosion, rising sea levels, and oil pollution are rapidly degrading the Niger Delta's mangrove forests, which serve as a critical natural barrier against storm surges from the sea. Food insecurity is an escalating concern, as disasters contribute to land and infrastructure degradation, direct crop failures from flooding and heavy rainfall, and nutrient depletion and fungal growth due to heightened humidity. Water availability is also at risk, with prolonged droughts becoming more frequent. Given that the majority of Nigeria's domestically consumed food is produced in the northern region, the persistent and intensifying droughts pose a severe threat to national food security

Given Nigeria's reliance on climate-sensitive sectors such as agriculture, forestry, and oil and gas extraction, failing to address climate change could have severe economic consequences. By 2050, the country could face losses ranging from 6 percent to 30 percent of its GDP, amounting to an estimated US\$100–460 billion.<sup>25</sup>

Another environmental consequence of climate change is the alarming depletion of Nigeria's water bodies. Numerous rivers, streams, and ponds have already dried up, while experts warn that many remaining water sources, particularly in the northern region, are on the brink of disappearing.<sup>26</sup> This escalating crisis threatens water security, disrupts ecosystems, and exacerbates socio-economic challenges for communities that rely on these water bodies for sustenance and livelihoods. The rapid shrinking of Lake Chad from approximately 45,000 km<sup>2</sup> in 1960 to less than 3,000 km<sup>2</sup> in 2007 has

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<sup>23</sup> World Bank, *The Cost of Coastal Zone Degradation in Nigeria: Cross River, Delta, and Lagos States* (2020) <<https://openknowledge.worldbank.org/handle/10986/34758>> accessed 13 March 2025.

<sup>24</sup> USAID, *Fragility and Climate Risks in Nigeria* (2018) <[https://pdf.usaid.gov/pdf\\_docs/PA00TBFK.pdf](https://pdf.usaid.gov/pdf_docs/PA00TBFK.pdf)> accessed 7 March 2025

<sup>25</sup> World Bank Group, *Country Partnership Framework for the Federal Republic of Nigeria for the Period FY21– FY25* (16 November 2020) <<https://openknowledge.worldbank.org/handle/10986/35098>>

<sup>26</sup> PAO Odjugo, 'The Impacts of Global Warming on Climate Change and Extreme Weather Conditions: Global and Regional Evidences' (2007) 7 *Asia Pacific Journal on Environment and Development* 52, 53



been primarily attributed to changes in the climatic change. A certain report conclude that hydro-electric power generation can be negatively affected due to lower and irregular inflows in dams<sup>27</sup>.

Experts have issued a dire warning that if the current trajectory of global warming and climate change remains unchecked, Nigeria and other West African nations could experience a temperature rise of between 2.5°C and 4.5°C by the year 2100. Such an increase would have devastating consequences, including more extreme weather events, reduced agricultural productivity, and heightened risks to human health and biodiversity.

Nigeria has faced several major flooding events, with the most severe occurring in 2012, impacting seven million people and causing economic losses estimated at \$500 million. Another significant flooding event in 2015 affected one million people, resulting in damages of approximately \$25 million. These recurring floods highlight the growing vulnerability of the country to climate-related disasters, emphasizing the urgent need for effective mitigation and adaptation strategies<sup>28</sup> A 2009 DFID study warned that without proactive adaptation measures, Nigeria could face economic losses ranging from 2% to 11% of its GDP by 2020. The Post-Disaster Needs Assessment (PDNA) Report following the devastating 2012 floods further underscored this vulnerability, estimating total damages at \$16.9 billion - equivalent to a 1.4% reduction in real GDP growth for that year<sup>29</sup>. These findings highlight the significant economic risks posed by climate change and the urgent need for comprehensive mitigation and adaptation strategies.

#### 4. NIGERIA'S CONTRIBUTION TO THE CLIMATE CHANGE CRISIS

Nigeria is classified among the ten most vulnerable nations to the adverse impacts of climate change and environmental hazards.<sup>30</sup> As previously established, climate change is a transnational phenomenon wherein anthropogenic emissions in one jurisdiction inevitably exert consequences beyond its borders. It is, therefore, imperative to critically assess Nigeria's contribution to climate crisis. The country's principal source of greenhouse gas (GHG) emissions is the extensive flaring of natural gas in the Niger Delta by multinational oil corporations.

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<sup>27</sup>Nigeria, *First Biennial Update Report of the Federal Republic of Nigeria under the UNFCCC* (2018) <[https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/218354\\_Nigeria-BUR1-1-Nigeria%20BUR1\\_Final%20\(2\).pdf](https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/218354_Nigeria-BUR1-1-Nigeria%20BUR1_Final%20(2).pdf)> accessed 14 March 2025.

<sup>28</sup> GERICS, *Climate Fact Sheet, Nigeria* (2015) <[https://www.climate-service-center.de/products\\_and\\_publications/fact\\_sheets/index.php.de](https://www.climate-service-center.de/products_and_publications/fact_sheets/index.php.de)> accessed 17 March 2025.

<sup>29</sup> Nigeria, *Updated Nationally-Determined Contributions* (2021) <<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/NDC%20INTERIM%20REPORT%20SUBMISSION%20-%20NIGERIA.pdf>> accessed 17 March 2025

<sup>30</sup> Climate Scorecard, 'Nigeria Listed as One of the 10 Most Climate Vulnerable Countries' (2019) <<https://www.climatescorecard.org/2018/11/nigeria-listed-as-one-of-the-10-most-climate-vulnerable-countries/>> accessed on 14/3/025



Despite Nigeria's official zero-gas-flaring policy, enforcement remains weak. The Nigerian National Petroleum Corporation (NNPC) reported that in 2015 alone, 271.38 billion standard cubic feet of gas - valued at approximately US\$518.33 million - were flared. In 2014, losses amounted to an even higher figure of US\$868.8 million<sup>31</sup>. This process releases substantial quantities of carbon dioxide (CO<sub>2</sub>) and other pollutants into the atmosphere, thereby amplifying the global problem of climate change. According to the Post Carbon Institute, Nigeria's flaring and venting of natural gas result in the annual emission estimated to be 150 to 200 million metric tons of CO<sub>2</sub>

This staggering figure makes Nigeria a significant contributor to global warming in sub-Saharan Africa. The deleterious environmental impact of gas flaring has been shown by satellite observations, which indicate that Nigeria's emissions account for approximately one-tenth of the global total of gas flaring emissions - second only to Russia, whose emissions constitute one-quarter of the worldwide total.

The gravity of Nigeria's contribution to climate change is made worst by the fact that CO<sub>2</sub>, the primary gas emitted through flaring, is recognized as the most potent and enduring greenhouse gas among the six major GHGs identified by the United Nations Framework Convention on Climate Change (UNFCCC). Energy analysts have posited that in order to maintain global temperature rise within safe thresholds, global GHG emissions must not exceed 32,000 million metric tons by 2025. However, Nigeria's persistent gas flaring practices threaten the attainment of this critical target.

In addition to direct emissions from the oil and gas sector, Nigeria's escalating problem of deforestation serves as another driver of climate change. The nation faces the challenge of acute deforestation, exacerbated by its dense population which has been approximated to 180 million people within a relatively limited land area of 923,678 km<sup>2</sup>. A combination of factors - including rapid population growth, agricultural expansion, urbanization, industrialization, commercial logging, overgrazing, wildfires, mining activities, petroleum extraction, and unsustainable fuelwood collection - has contributed immensely to a severe depletion of forest resources.

The Food and Agriculture Organization (FAO) of the United Nations reported in 2005 that Nigeria exhibited the highest rate of deforestation globally. Between 2000 and 2005, Nigeria has lost an estimated 5.7 percent of its primary forests,<sup>32</sup> a rate that escalated to approximately 8 percent between 2006 and 2010. By 2011–2015, Nigeria's deforestation rate had surged to an alarming percent.

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<sup>31</sup>Nigerian National Petroleum Corporation (NNPC), *2015 Annual Statistical Bulletin* (2015) <<https://s3.amazonaws.com/rgidocuments/22b9740130cbd8871ad0259e2ee7aa33ec7cbc2e.pdf>> accessed 14 March 2025.

<sup>32</sup> T E Olagunju, 'Impact of Human Induced Deforestation, Forest Degradation and Fragmentation on Food Security' (2015)(8)(1) *New York Science Journal* 1, 7.



Historical data further illustrate the extent of this environmental degradation: in 1970, forested areas accounted for 10 percent of Nigeria's total landmass; today, this figure has dwindled to a mere 4.05 percent.

Nigeria already has a statutory framework to address deforestation, which is the Natural Conservation Act of 1989. In addition to this legislation, the country has also developed policies which are aimed at combating deforestation. One such initiative was incorporated into Vision 2020, which proposed measures to curb deforestation and promote sustainable forest management. As part of its targets, Vision 2020 aimed to increase forest cover from 4.05 percent to 10 percent, reflecting the by the Nigerian government to ensure environmental sustainability.

This analysis shows that Nigeria has contributed substantially to the problem of climate change in many ways, but most especially through extensive gas flaring and relentless deforestation. This calls for urgent policy interventions, as lack of concerted efforts by the government to mitigate emissions by reduction of gas flaring, curtailing of deforestation, and adoption of sustainable environmental practices, will only put the country on the trajectory of continuing to exacerbate the global climate crisis, which has dire environmental consequences at both national and international levels.

## 5. STATE'S OBLIGATION TO MITIGATE CLIMATE CHANGE

It is apposite to draw a distinction between a state's specific and general obligations regarding climate change mitigation. Specific obligations are those explicitly defined in legal instruments such as treaties, statutes, or international agreements. These obligations impose clear, measurable duties on states to take concrete actions toward reducing greenhouse gas emissions. For example, the Kyoto Protocol established quantified emission limitation and reduction commitments (QELRCs) for developed country parties during its first commitment period (2008–2012).<sup>33</sup> Similarly, the Doha Amendment extended these commitments, requiring certain states to achieve additional QELRCs in a second commitment period (2013–2020)<sup>34</sup>.

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<sup>33</sup> In the first commitment period of the Kyoto Protocol (2008–2012), participating countries pledged to reduce their

greenhouse gas emissions by an average of 5% below 1990 levels. <<https://climate.ec.europa.eu/eu-action/international-action-climate-change/kyoto-1st-commitment-period-2008>

12\_en#:~:text=In%20the%20first%20period%20of,the%20bloc%20as%20a%20whole> Accessed on 22/03/025

<sup>34</sup> Under the Doha Amendment to the Kyoto Protocol, the European Union, its Member States, and Iceland committed to limiting their average annual greenhouse gas (GHG) emissions between 2013 and 2020 to 80% of their base year emissions. European Commission. (2013). *Ratification of the second commitment period of the Kyoto Protocol to the United Nations Framework Convention on Climate Change* (COM(2013) 768 final, 2013/0376 (NLE)). Brussels



In contrast, general obligations on climate change mitigation is gleaned from broader legal principles, customary international law, or non-binding frameworks such as the Paris Agreement's nationally determined contributions (NDCs)<sup>35</sup>. While general obligations may lack strict legal enforceability, they establish the duty of states to adopt policies, implement adaptation measures, and promote sustainable development in response to climate change.

The principle of sovereign equality imposes an obligation on every state to respect the rights of others, particularly by ensuring that activities within its territory do not negatively affect the rights of other states. Article 55(1) of the Kyoto Protocol to the UNFCCC reinforces this duty by mandating that states prevent activities under their jurisdiction from causing environmental damage to other states or areas beyond national jurisdiction.

### **1. Nigeria's Mitigation Policy: An Analysis**

Mitigation refers to efforts which are aimed towards preventing or reducing greenhouse gas (GHG) emissions in order to minimize the impact of climate change. It involves reducing emission sources, such as by expanding the use of renewable energy and promoting cleaner transportation systems, as well as enhancing carbon sinks, for example, by increasing forest cover. Essentially, mitigation is an anthropogenic intervention that curtails GHG emissions and/or enhances their absorption.

India's renewable energy policy is a good example of an effective mitigation strategy which involves balancing short-term energy access with long-term energy security and sustainable development. It follows a country-driven approach, integrated into five-year development plans with commitments at the highest political level. Also, India's National Action Plan on Climate Change (NAPCC), launched on June 30, 2008, prioritizes a transition toward renewable energy, higher energy efficiency, and a low-carbon growth. India's growth in energy-related carbon dioxide emissions was reduced over the last decade through economic restructuring, enforcement of existing clean air laws by the Supreme Court of India, and renewable energy programs. In 2000, energy policy initiatives in India, reduced carbon emissions by 18 million tons - over 5 percent of India's gross carbon emissions. About 120 million tons of additional carbon mitigation could be achieved over the next decade at a cost ranging from \$0-15 per ton. Major opportunities include improved efficiency in both energy supply and demand, fuel switching from coal to gas, power transmission improvements, and afforestation.<sup>36</sup>

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<sup>35</sup> Article 4, paragraph 2 of The Paris Agreement 2015 requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. The section provides that Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

<sup>36</sup> Chandler, William, et al. *Climate Change Mitigation in Developing Countries: Brazil, China, India, Mexico, South Africa, and Turkey*. Prepared for the Pew Center on Global Climate Change, Oct.



Nigeria has also demonstrated a strong commitment to climate action through its policy frameworks and international engagements. Nigeria submitted its Third National Communication to the UNFCCC in 2020, its First Biennial Update Report in 2018, and its Nationally Determined Contributions (NDCs) in 2016. To achieve its adaptation goals, Nigeria has adopted an integrated approach that aligns its national policies with environmental sustainability and climate change adaptation efforts. These efforts include strengthening legislative and regulatory frameworks and enhancing capacity development.

Nigeria just like India has also intensified its response to climate change through enhanced policies on renewable energy. These policies have been implemented through various well-conceived strategic actions. Under its national development plan, Vision 2020, the government of Nigeria set an ambitious target of to maximizing the production and utilization of renewable energy by 2020. The key renewable energy sources identified in this plan include wind, solar, hydro, and biomass, with particular emphasis on solar and hydro power. Vision 2020 highlights plans to expand the use of these energy sources through the construction of multiple solar and hydroelectric<sup>37</sup> plants across the country.

One of the earliest actions taken by the government of the Nigeria, in in search of a coherent renewable programme in Nigeria, was the establishment in the 1982/83 year, of two Renewable Energy centers, namely, the National Center for Energy Research and Development (NCERD) at the University of Nigeria, Nsukka and the Sokoto Energy Research Center (SERC) at the Usmanu Danfodiyo University, Sokoto, which are funded through the Energy Commission of Nigeria. Their activities, together with those of tertiary and other research institutions, have led to the development of a number of solar thermal, biomass and biogas devices and improved woodstoves technologies that are ready for commercial production and adoption into the national economy<sup>38</sup>

In 2010, the Ministry of the Environment announced the nation's target of increasing the share of renewable energy in its total electricity supply to 20 percent by 2020. Although these targets were

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2002.<<https://www.c2es.org/document/climate-change-mitigation-in-developing-countries-brazil-china-india-mexico-south-africa-and-turkey/>> Accessed on 26 March 2025

<sup>37</sup> The total exploitable large scale hydropower potential of Nigeria is estimated at over 14,120 MW, capable of producing 50,832 GWh of electricity annually. Only about 13.50 percent the nation's large hydropower potential has been developed. The Small hydropower potential of Nigeria is estimated at 3,500 MW of which only 60.58 MW which represents about 1.70% had been developed. See, Energy Commission of Nigeria. *Draft National Renewable Energy and Energy Efficiency Policy (NREEEP)*. Federal Ministry of Science and Technology, Mar. 2014,

<[https://www.energy.gov.ng/Energy\\_Policies\\_Plan/natonal\\_renewable\\_energy\\_and\\_energy\\_efficiency\\_policy.pdf](https://www.energy.gov.ng/Energy_Policies_Plan/natonal_renewable_energy_and_energy_efficiency_policy.pdf)> Accessed 11 March 2025.

<sup>38</sup>Energy Commission of Nigeria.*Draft National Renewable Energy and Energy Efficiency Policy (NREEEP)*.Federal Ministry of Science and Technology, Mar. 2014,

<[https://www.energy.gov.ng/Energy\\_Policies\\_Plan/natonal\\_renewable\\_energy\\_and\\_energy\\_efficiency\\_policy.pdf](https://www.energy.gov.ng/Energy_Policies_Plan/natonal_renewable_energy_and_energy_efficiency_policy.pdf)>



largely unmet due to poor implementation and infrastructural constraints, they go a long way to show the country's commitment to transitioning towards cleaner energy sources. In addition to solar and hydro energy, the government also introduced policies to develop the biofuel sector.<sup>39</sup> A research data in 2012 on Nigeria's total energy consumption showed that biofuels accounted for 85 percent of the 99.3 million tonnes of oil equivalent (Mtoe) consumed that year.<sup>40</sup> The National Biofuel Policy, adopted in 2007, have at its core, the objective of creating an enabling environment for biofuel production, offering tax exemptions and other incentives to encourage private sector participation. This sector has seen some progress, with the establishment of the Biofuel Energy Commission and the Biofuel Research Agency to oversee policy implementation and research efforts. United Nations set a target for 2013 to increase the Renewable energy usage by 50% and reduce the conventional energy source by 50 percent. In line with the Renewable Energy Master Plan, the Federal Government of Nigeria announced plans to launch a National Policy on Renewable Energy and Energy Efficiency, further reinforcing its commitment to sustainable energy development. To advance its renewable energy agenda, Nigeria has also sought international assistance, particularly through the Clean Technology Fund (CTF). The CTF Investment Plan, which envisions a \$1.3 billion funding package, is designed to support Nigeria's low-carbon growth objectives, including energy efficiency initiatives. Additionally, the country is exploring the introduction of national legislation on clean technology to provide a legal framework for the development and deployment of sustainable energy solutions.

Despite challenges in meeting past renewable energy targets, Nigeria's continued efforts to expand clean energy infrastructure, attract investment, and strengthen regulatory mechanisms reflect a growing recognition of the critical role renewable energy plays in mitigating climate change and fostering sustainable economic growth.

Nigeria is also committed to implementing mitigation measures that promotes low-carbon, sustainable, and high-growth economic pathways. The country in its adaptation strategy, aims to increase investment in climate-related science, technology, and research and development (R&D) in order to strengthen participation in international climate cooperation. Additionally, efforts focus on reinforcing national institutions and policy mechanisms to establish a robust framework for climate governance.

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<sup>39</sup> The Federal Government of Nigeria in August 2005 directed the implementation of Automotive Biomass Programme for Nigeria by the Nigeria National Petroleum Corporation. Based on current demand for gasoline in the country, at 10 percent blending ratio with fuel ethanol, about 1.3 billion litres will be required for the country. This was projected to increase to about 2 billion litres by 2020. It was also estimated that market demand for biodiesel will be about 900 million litres by 2020 as compared to 2014 market possibility of about 480 million litres for a 20 percent blend for biodiesel. Ibi

<sup>40</sup>NESP, "The Nigerian Energy Sector - An Overview with a Special Emphasis on Renewable Energy, Energy Efficiency and Rural Electrification," 2015.



It is however noted that despite these commitments, Nigeria faces significant barriers in implementing Carbon Capture and Storage (CCS) technology which is a critical tool for reducing greenhouse gas emissions. While developed countries continue to struggle with large-scale CCS deployment despite access to financing and expertise, Nigeria's peculiar challenges include inadequate infrastructure for geological carbon storage, limited experience with CCS technology, lack of government incentives and regulations, increased fuel consumption due to CO<sub>2</sub> capture, and higher operational costs, and so on.

In order to address climate change in a coordinated and strategic manner, the National Council on Climate Change (NCCC) was established under the Climate Change Act of 2021.<sup>41</sup> The NCCC serves as the national authority empowered to formulate climate policies and coordinate mitigation and adaptation efforts across various sectors. Meanwhile, the existing Climate Change Commission Bill proposes the establishment of a Climate Science, Inventories, and Mitigation (CSIM) department, tasked with expanding research and policy development on greenhouse gas reduction. However, the reluctance of many developing nations to fully commit to CCS development suggests that its near-term prospects in Nigeria remain uncertain.

While CCS presents an opportunity for industrialization with environmental responsibility, policy uncertainties and financial constraints hinder its adoption. Rather than allowing these challenges to stall progress, Nigeria should integrate CCS into its long-term mitigation strategy by addressing policy gaps, raising public awareness about its benefits, and incentivizing investment in climate technologies.

## 6. CONCLUSION

Climate change in Nigeria is no longer an environmental abstraction; it is a lived and accelerating threat to life, health, livelihood, dignity, and the survival of vulnerable communities. Intensifying floods, advancing desertification, ecosystem collapse in oil-bearing regions, food and water insecurity, and climate-driven displacement compound the country's pre-existing socio-economic fragilities and fall most heavily on rural households, women, children, and low-income populations. These realities demand a rights-centred response.

This paper has argued that Nigeria's fragmented environmental governance - hampered by weak enforcement, overlapping mandates, chronic under-resourcing, and the sluggish delivery of judicial remedies - fails to translate constitutional commitments and international climate obligations into timely, rights-protective action, thereby entrenching environmental injustice and climate vulnerability.

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<sup>41</sup> Section 2 of the CCA 2021 provides thus : "This Act applies to the Ministries, Departments and Agencies (MDAs) of the Application. Federal Government of Nigeria, and to public and private entities within the territorial boundaries of Nigeria for the development and implementation of mechanisms geared towards fostering low carbon emission, environmentally sustainable and climate resilient society"



Reversing this trajectory requires elevating environmental protection from aspirational policy to enforceable legal duty- this is to be achieved by amending the Constitution to recognise environmental rights as a fundamental right under Chapter 4 of the Constitution.

Although Section 20 of the Constitution articulates environmental stewardship as a Directive Principle, its non-justiciability creates an unjustifiable limit to direct courtroom traction. Despite this challenge, it is recognised that pathways exist: Nigerian courts can and should read a justiciable right to a healthy, climate-resilient environment into the entrenched rights to life, dignity, and (where implicated) property, reinforced by Nigeria's treaty commitments, including under the UNFCCC and Paris Agreement. This does not derogate from the fact that explicit constitutional amendment would provide firmer ground, but progressive judicial interpretation can begin the work now.

Judicial mechanisms must also be made fit for purpose. Accelerated environmental dockets, relaxed standing for affected communities and public interest litigants, broader use of interim and structural remedies, case management technologies, and robust post-judgment enforcement (including contempt sanctions and monitoring orders) are essential to cure delayed justice. Without timely relief, rights remain paper guarantees. Governance reforms must match judicial ones. The National Council on Climate Change (NCCC) can serve as Nigeria's coordinating brain only if backed by clear mandates, data authority, and funding. Climate risk assessment, adaptation, and emissions management should be mainstreamed across land-use planning in agriculture, oil and gas, forest and biodiversity conservation, coastal and delta protection, and urban development. Participatory mechanisms that center frontline communities will improve legitimacy and implementation outcomes.

Sound decisions require sound evidence. Expanded investment in climate impact studies; a national Monitoring, Evaluation, and Learning (MEL) framework; and strengthened technical capacity in meteorology, climatology, hydrology, and disaster preparedness are critical. Enhancing the capabilities and data integration of NiMET, NIHSA, and NEMA - supported by satellite remote sensing, drones, geospatial analytics, artificial intelligence, and machine-learning decision tools - will improve early warning, compliance monitoring, and targeted adaptation finance.

Financing remains a decisive constraint. Nigeria should develop a coherent climate finance architecture that links domestic budget lines, subnational implementation funds, just transition mechanisms for hydrocarbon-dependent regions, and access to international climate, adaptation, and loss-and-damage windows. Transparent, accountable deployment of technology transfer partnerships will multiply impact. Environmental protection must be treated as a legal and moral imperative of constitutional stature, not a discretionary development add-on. Coordinated commitment by government at all levels, the judiciary, legislature, civil society, affected communities, the private sector, and international partners is indispensable. Acting with urgency now offers Nigeria the opportunity to protect human



rights, stabilize its ecosystems, and build a resilient and just future in the face of an escalating climate crisis.