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Title: ASSESSING NIGERIA'S NATIONALLY DETERMINED
CONTRIBUTION (NDC) GOALS AND CLIMATE ACTION TARGETS

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Abstract

Assessing Nigeria's NDC Goals and Climate Action Targets through the current greenhouse gas (GHG) emissions profile provides vital insights into the country's climate change challenges and opportunities for targeted intervention. Based on data from the 2021 Global Carbon Project and the Nigerian National Environmental Agency, a sectoral breakdown of emissions reveals significant contributions from various sectors, each with distinct characteristics and mitigation strategies.

1.0 Introduction

Climate change poses one of the most significant challenges of our time, affecting ecosystems, economies, and communities worldwide. For Nigeria, a country richly endowed with natural resources yet facing substantial socio-economic hurdles, addressing climate change is paramount not only for environmental sustainability but also for national development and resilience. In this context, Nigeria's Nationally Determined Contributions (NDCs) serve as a pivotal framework for outlining the country's commitments to reduce greenhouse gas emissions and enhance climate resilience. Nigeria's NDCs, first submitted in 2015 and subsequently updated, reflect the nation's strategy to balance development needs with environmental stewardship. They set specific goals for emission reductions and adaptation measures, grounded in the Paris Agreement's aspiration to limit global temperature rise to well below 2 degrees Celsius. Furthermore, these commitments are crucial for catalysing international support and investment, enabling the country to achieve its climate objectives. This assessment critically analyses Nigeria's NDC goals and climate action targets, evaluating their comprehensiveness, feasibility, and alignment with sustainable development objectives. It investigates the mechanisms of implementation, the roles of various stakeholders, and the resources required to meet these ambitious targets. Additionally, it highlights the current challenges and gaps in policy frameworks that may impede progress. Nigeria's Nationally Determined Contributions (NDC) show the country's dedication to lowering greenhouse gas (GHG) emissions and adapting to climate change effects. NDCs are a vital part of the Paris Agreement, in which nations detail their climate strategies to keep global warming below 2 degrees Celsius.

1.1 Statement of Problem

Nigeria, as one of Africa's largest economies and a major contributor to global greenhouse gas emissions, faces urgent challenges in tackling climate change while striving for sustainable development. The country's Nationally Determined Contributions (NDC) outline ambitious aims to cut emissions and boost resilience to climate impacts; however, several fundamental issues hinder the practical realisation of these targets. Despite setting specific aims, there is a lack of a solid framework and coordinated policies to support the implementation of the NDC.

1.2 Justification

The justification for this research lies in the connection between Nigeria's climate commitments and its broader development goals, highlighting the importance of effective implementation to ensure sustainable growth and ecological resilience.

1.2 Aim

The research aims to provide a comprehensive overview of Nigeria's NDC goals and climate action targets by elucidating the commitments made, challenges faced, responses proposed, and the overall framework for achieving sustainable climate resilience in Nigeria.

1.3 Objectives

- Clarification of NDC Goals
- Assessment of Sectoral Contributions
- Identification of Implementation Challenges

1.0 Literature Review

Nigeria's NDC, submitted under the Paris Agreement, includes both unconditional and conditional targets to mitigate climate change impacts. It aims for a 20% reduction in greenhouse gas emissions by 2030 relative to a business-as-usual scenario, with a conditional target of up to 45%, depending on available international support (Federal Republic of Nigeria, 2015).

2.1 Sectoral Contributions to Emissions

A significant body of literature focuses on the sectoral breakdown of emissions in Nigeria, notably from the energy, agriculture, and waste management sectors. Research indicates that the energy sector is the most significant contributor, accounting for over 50% of total emissions, primarily from fossil fuel use (Akinyemi, A., & Abubakar, I., 2020).

2.2 Challenges in Implementation

Several studies have identified significant challenges in implementing Nigeria's NDC commitments, including inadequate financing, institutional capacity, and policy coherence. The significant financing gap, estimated at USD 6.9 billion annually, remains a significant barrier to achieving the targets (Idowu, O., & Modupe, E., 2021).

2.3 Adaptation Strategies and Agriculture

Nigeria's reliance on climate-sensitive sectors, such as agriculture, poses risks to food security. The literature emphasises the necessity of adaptation measures alongside mitigation strategies. Research highlights that climate-smart agricultural practices can boost resilience against climate impacts (Ojo, J., & Olaniyan, O., 2022).

2.4 Stakeholder Engagement and Public Awareness

The literature emphasises the importance of stakeholder involvement, particularly local community engagement in climate action. Studies indicate that grassroots organisations play a critical role in mobilising community awareness and participation in climate programs (Ogbuli et al., 2020).

2.5 Renewable Energy Transition

The transition to renewable energy is pivotal in meeting Nigeria's NDC goals. Various studies argue that diversifying the energy mix and increasing the share of renewables, particularly solar energy, is essential for reducing emissions (Adedoyin & Makarfi, 2021).

2.6 Monitoring and Evaluation Frameworks

Establishing robust monitoring and reporting systems is crucial for tracking progress against NDC targets. The existing literature outlines frameworks for improving transparency and accountability in Nigeria's climate actions (Okereke, C., & Coventry, P., 2016).

3.0 Methodology

This research integrates qualitative insights with quantitative data analysis to understand the progress, challenges, and impact of Nigeria's Nationally Determined Contributions (NDCs) in climate action.

4.0 Findings on Nigeria's NDC Goals and Targets

In Nigeria's NDC, the country made specific commitments to reducing greenhouse gas (GHG) emissions by:

- Unconditional Target: 20% reduction by 2030 relative to a business-as-usual scenario.
- Conditional Target: 45% reduction by 2030, contingent on international support.

Business-as-Usual Baseline

To analyse the effectiveness of these targets, it is essential to define a baseline (business-as-usual scenario). GHG emissions in Nigeria were estimated to be about 1.31 GtCO₂e in 2020.

Current GHG Emissions Overview

-Sectoral Breakdown of Emissions

Using data from the 2021 Global Carbon Project and Nigeria's National Environmental Agency, the following sectoral contributions to GHG emissions are estimated:

- **Energy Sector (51%):** The most significant contributor, primarily from fossil fuel combustion.
- **Agriculture (27%):** Emissions from practices such as livestock production and methane from rice paddies.
- **Land Use Change & Forestry (17%):** Deforestation primarily for agriculture and urban development.
- **Waste Management (5%):** Emissions from landfills and waste treatment processes.

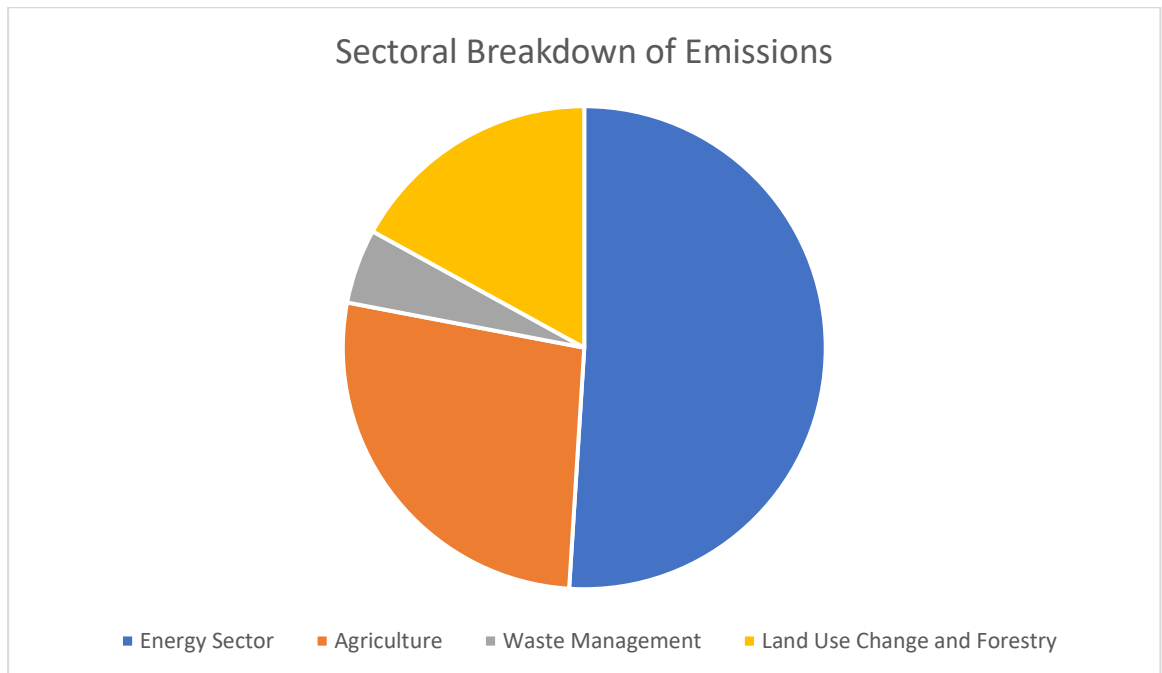


Fig 1: 2021 Global Carbon Project data for Nigeria

4.2 Conceptual Analysis

Studying Fig. 2 above, the sectoral breakdown of GHG emissions in Nigeria underscores the complexity of addressing climate change within the country's unique socio-economic and environmental context. The energy sector's dominance underscores the need for a transformative shift in energy production and consumption patterns. Meanwhile, substantial emissions from agriculture and land use underscore the urgent need for integrated approaches that incorporate sustainable practices in these sectors. To effectively mitigate Nigeria's GHG emissions, a holistic strategy that encompasses policy reforms, stakeholder engagement, and investment in green technologies is essential. By focusing on the identified mitigation opportunities, Nigeria can align its climate action efforts with its developmental goals and make significant strides toward achieving its Nationally Determined Contributions (NDCs) and overall sustainability objectives.

A comprehensive assessment of Nigeria's Nationally Determined Contributions (NDCs) and climate action targets requires a multidimensional approach that encompasses key aspects

such as climate governance, sustainable development, stakeholder engagement, and comparative evaluation. This framework provides a structured way to understand the functional and strategic aspects of Nigeria's climate commitments and their implications for both national and global contexts.

Climate Governance

At its core, climate governance involves the systems and processes through which policies related to climate change are developed, implemented, and monitored. In Nigeria, assessing NDC goals requires an exploration of the institutional frameworks that govern climate action, including:

- **Policy Frameworks:** Analysing existing policies, laws, and regulations that guide climate action, including the Climate Change Act and various sectoral strategies.
- **Policy Coherence:** Examining the alignment of NDCs with national development plans, such as the Economic Recovery and Growth Plan (ERGP), and their integration into broader governance strategies.
- **Accountability Mechanisms:** Assessing how Nigeria tracks its progress toward meeting its NDC targets, including the role of independent assessments, reporting systems, and transparency measures.

Sustainable Development

The relationship between climate action and sustainable development is foundational to understanding the broader implications of Nigeria's NDCs. This analysis involves:

- **Synergy with Development Goals:** Investigating how Nigeria's climate goals align with other national and global objectives, such as the United Nations Sustainable Development Goals (SDGs). Specific attention should be given to areas like poverty reduction, gender equity, and sustainable urban development.
- **Economic Implications:** Evaluating the potential economic impacts of NDCs on key sectors, including energy, agriculture, and transportation. This includes considering the costs of implementation and potential co-benefits, such as job creation and energy access.
- **Resilience Building:** Assessing how climate action within the NDC framework contributes to the resilience of vulnerable communities and ecosystems, particularly in the context of Nigeria's diverse geographic and socio-economic landscapes.

Stakeholder Engagement

Effective climate action requires the involvement and collaboration of multiple stakeholders, including government agencies, civil society, the private sector, and local communities. This aspect of the analysis encompasses:

- **Inclusivity:** Examining the extent to which diverse voices, particularly those of marginalised communities, are included in the formulation and implementation of NDCs.
- **Capacity Building:** Investigating the initiatives in place to strengthen the abilities of local governments and communities to participate actively in climate action.
- **Public Awareness and Education:** Analysing efforts to raise awareness about climate change and the importance of NDCs, seeking to mobilise support and engagement from the public.

Comparative Evaluation

To assess Nigeria's NDC goals in a broader context, it is essential to compare them with those of other countries, particularly in Sub-Saharan Africa. This includes:

- **Benchmarking Against Peers:** Evaluating Nigeria's targets relative to those of similar economies, assessing ambition levels, transparency, and accountability in climate governance.
- **Learning from Best Practices:** Identifying successful strategies from other nations that can be adapted or adopted to enhance Nigeria's climate commitments and implementation effectiveness.
- **Global Commitments:** Understanding Nigeria's NDCs in the context of international climate agreements and the collective global efforts toward climate mitigation and adaptation, such as the goals outlined in the Paris Agreement.

Integration of the Framework

By employing this multi-dimensional conceptual framework, the assessment of Nigeria's NDC goals can yield valuable insights into the effectiveness and potential impact of its climate action strategies. Each component is interrelated, highlighting how governance structures influence sustainable development outcomes, while stakeholder engagement can enhance or hinder policy implementation.

Identifying Challenges and Opportunities

An essential outcome of this analysis is to identify existing challenges and opportunities within Nigeria's NDC framework. Some key areas to explore include:

- **Gaps in Data and Research:** Investigating the availability and quality of data necessary for monitoring progress toward NDC targets and the identification of knowledge gaps.
- **Implementation Barriers:** Identifying institutional, financial, and socio-political challenges that may obstruct effective delivery of the NDCs.

- Opportunities for Innovation: Exploring avenues for technological innovation and partnership-based approaches that can facilitate the achievement of climate targets.

Conclusion and Recommendations

- Implementing Comprehensive Funding Strategies: Leveraging international climate finance and partnerships to bridge the financing gap.
- Enhancing Capacity Building: Training local governments and communities for effective implementation of NDCs.
- Promoting Renewable Energy Solutions: Drawing investments towards renewable energy infrastructure.
- Increasing Public Engagement: Raising awareness about climate issues and the importance of NDCs among the general population.

Through diligent data analysis and targeted interventions, Nigeria can bolster its NDC efforts, driving significant progress toward its climate targets while ensuring sustainable development.

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