Community-Based Adaptation Financing Models: Exploring Green Taxes and Public-Private Partnerships in Nigeria

[1] Benjamin Okezie Kalu (PhD), [2] Ugonna Obi-Emeruwa (PhD)

[1] Abuja Leadership Centre for Excellence, University of Abuja, Nigeria

[2] Department of Public Policy and Public Administration, African University of Science and Technology (AUST)

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Abstract:

This study investigates the potential of community-based adaptation financing models, specifically green taxes and public-private partnerships (PPPs), to address climate adaptation challenges in Nigeria. Employing a qualitative research design, the study analyses institutional frameworks, financial mechanisms, and community engagement strategies to evaluate their effectiveness in mobilizing resources for climate resilience. Data were collected through document analysis, key informant interviews with 25 stakeholders from government, private sector, and local communities, and thematic analysis to identify patterns and insights. Findings reveal that Nigeria faces significant barriers in accessing international climate funds, including weak institutional frameworks, limited technical capacity, and over-reliance on external aid. However, innovative domestic financing solutions such as green taxes and PPPs offer transformative pathways to bridge funding gaps and enhance local adaptive capacity. Green taxes incentivize sustainable practices while generating revenue for adaptation initiatives, promoting environmental stewardship. PPPs leverage private sector capital, innovation, and operational efficiency alongside public sector oversight to implement large-scale adaptation projects in critical sectors such as agriculture, water management, and renewable energy. The study underscores the importance of integrating indigenous knowledge and participatory decision-making processes to ensure context-specific and inclusive adaptation strategies. It also identifies structural reforms, including policy incentives and robust regulatory frameworks, as essential to unlocking the full potential of these financing mechanisms. By fostering multi-stakeholder collaboration and embedding adaptation initiatives within local governance structures, Nigeria can create resilient and equitable climate action systems. The study concludes by advocating for a holistic approach that combines innovative financing, institutional strengthening, and inclusive stakeholder engagement to advance Nigeria's climate resilience. These findings provide actionable insights for policymakers, practitioners, and stakeholders seeking to address climate adaptation challenges through sustainable and community-driven solutions.

Keywords: *Community-Based Adaptation, Green Taxes, Public-Private Partnerships, Climate Financing, Indigenous Knowledge*

Introduction

Climate change has emerged as one of the most pressing global challenges of the 21st century, with its impacts disproportionately affecting developing nations like Nigeria. As Africa's most populous country and a key player in the global energy market, Nigeria faces multifaceted climate-related challenges that threaten its socio-economic stability and environmental sustainability. Rising temperatures, erratic rainfall patterns, desertification, coastal erosion, and flooding have become increasingly prevalent, exacerbating vulnerabilities across critical sectors such as agriculture, water resources, health, and infrastructure (IPCC, 2023). For instance, the Niger Delta region, which contributes significantly to Nigeria's oil revenues, is grappling with severe coastal erosion and rising sea levels, endangering livelihoods and ecosystems (Adelekan et al., 2024). Similarly, northern Nigeria experiences recurrent droughts and desert encroachment, leading to food insecurity and heightened tensions over dwindling natural resources.

These climate-induced disruptions not only undermine Nigeria's economic growth but also deepen poverty and inequality, particularly among rural and marginalized communities. The socio-economic implications are profound, as climate change compounds existing structural issues such as weak governance, inadequate infrastructure, and limited access to basic services (UNDP, 2025). Agriculture, which employs approximately 70% of Nigeria's population, is especially vulnerable, with declining yields threatening food security and exacerbating rural-urban migration (FAO, 2024). Furthermore, climate change poses significant risks to public health, as vector-borne diseases like malaria expand their geographic range due to changing climatic conditions (WHO, 2023).

In response to these challenges, there is an urgent need for innovative financing models to bridge the adaptation gap the shortfall between available funding and the resources required to implement effective climate adaptation measures. While international climate funds, such as the Green Climate Fund (GCF) and the Adaptation Fund, provide crucial support, many developing countries, including Nigeria, face barriers in accessing these resources. These barriers include complex application processes, stringent eligibility criteria, and insufficient institutional capacity to design and execute bankable projects (OECD, 2024). Consequently, domestic financing mechanisms must be explored and strengthened to complement external funding sources and ensure sustainable climate action at the local level.

Community-based approaches offer a promising pathway to enhance resilience by empowering local populations to actively participate in designing and implementing adaptation strategies. Such approaches recognize the unique

knowledge, skills, and priorities of communities, fostering ownership and ensuring that interventions are context-specific and culturally appropriate (Reid et al., 2023). In Nigeria, where diverse ethnic groups and traditional systems coexist alongside modern governance structures, integrating indigenous knowledge into climate adaptation efforts can yield transformative outcomes. For example, traditional water harvesting techniques practiced by some northern Nigerian communities have proven effective in mitigating the impacts of drought, highlighting the value of leveraging local expertise (Ifeanyi-Obi & Okoye, 2025).

Problem Statement

Despite the clear need for robust climate adaptation initiatives, Nigeria continues to grapple with significant barriers to accessing international climate funds. One major challenge lies in the country's inability to meet the rigorous requirements set by multilateral funding agencies. These requirements often demand detailed project proposals, feasibility studies, and evidence of strong institutional frameworks—resources and capacities that are frequently lacking in Nigeria's public sector (World Bank, 2024). Additionally, bureaucratic inefficiencies and political instability further hinder the timely disbursement and utilization of international funds, leaving many adaptations needs unmet.

At the domestic level, Nigeria's financing mechanisms for climate adaptation remain underdeveloped and fragmented. While policies such as the National Climate Change Policy and Response Strategy (NCCPRS) outline ambitious goals for climate resilience, their implementation has been hampered by inadequate budgetary allocations and poor coordination among stakeholders (Federal Ministry of Environment, 2023). Moreover, there is a notable absence of innovative fiscal instruments, such as green taxes, which could generate much-needed revenue for adaptation projects while simultaneously promoting environmentally sustainable practices. Public-private partnerships (PPPs), another potential avenue for mobilizing resources, are yet to be fully harnessed in the context of climate adaptation. Existing PPP frameworks in Nigeria tend to focus on infrastructure development rather than addressing the specific needs of climate-vulnerable communities (PwC, 2024).

The lack of integration of indigenous knowledge and participatory processes into adaptation strategies represents another critical gap. Although Nigeria boasts a rich tapestry of traditional practices and community-led solutions for managing natural resources, these assets are often overlooked in favour of top-down approaches driven by external actors. This disconnect not only undermines the effectiveness of adaptation initiatives but also erodes trust and cooperation between communities and government agencies (Akinbami et al., 2024). Without meaningful engagement of local stakeholders, adaptation efforts risk being

misaligned with actual needs and priorities, ultimately failing to deliver equitable and sustainable outcomes.

This study seeks to address the identified gaps in Nigeria's climate adaptation financing landscape through three primary objectives. First, it aims to explore the potential of green taxes as a viable financing tool for climate adaptation. Green taxes, which impose levies on activities that harm the environment, have gained traction globally as a means of generating revenue while incentivizing sustainable behaviour. By examining case studies from other developing countries and assessing Nigeria's regulatory and fiscal environment, this research will evaluate the feasibility and benefits of introducing green taxes to fund adaptation initiatives. Specific areas of focus include carbon pricing, pollution charges, and resource extraction fees, all of which could contribute to building climate resilience while promoting environmental stewardship (IMF, 2024).

Second, the study will assess the role of public-private partnerships (PPPs) in mobilizing resources for adaptation projects. PPPs leverage private sector capital, innovation, and operational efficiency alongside public sector oversight to deliver large-scale infrastructure and service delivery projects. In the context of climate adaptation, PPPs hold immense promise for addressing funding gaps and enhancing adaptive capacity in critical sectors such as agriculture, water management, and renewable energy. Through interviews with key stakeholders and analysis of successful PPP models from other regions, this research will identify best practices and propose actionable recommendations for scaling up PPPs in Nigeria (ADB, 2024).

Third, the study will examine the integration of indigenous knowledge and participatory processes in adaptation strategies. Indigenous knowledge encompasses the accumulated wisdom, practices, and innovations of local communities in managing natural resources and coping with environmental changes. By documenting and analysing examples of indigenous practices in Nigeria, this research will highlight their relevance and applicability to contemporary climate challenges. Furthermore, it will explore methods for fostering inclusive decision-making processes that empower communities to shape adaptation initiatives, thereby ensuring that interventions are equitable, effective, and sustainable (UNESCO, 2024).

The findings of this study carry significant implications for policy development and institutional strengthening in Nigeria's climate resilience agenda. By shedding light on the potential of green taxes and PPPs, the research provides a roadmap for diversifying and expanding domestic financing options for climate adaptation. Policymakers can use these insights to design targeted fiscal policies

and regulatory frameworks that encourage green investments while addressing the unique needs of vulnerable populations. For instance, introducing a carbon tax could not only generate substantial revenue but also align Nigeria's economic trajectory with global decarbonization goals (IEA, 2024).

Equally important is the study's contribution to fostering inclusive, equitable, and sustainable adaptation initiatives. By emphasizing the integration of indigenous knowledge and participatory processes, the research underscores the importance of placing communities at the heart of climate action. This approach not only enhances the legitimacy and effectiveness of adaptation efforts but also promotes social cohesion and shared responsibility. Lessons learned from this study can inform capacity-building programs aimed at equipping local stakeholders with the skills and tools needed to engage meaningfully in climate governance (UNFCCC, 2024).

The study serves as a catalyst for broader discussions on the role of innovative financing and multi-stakeholder collaboration in advancing climate resilience. Its findings are relevant not only to Nigeria but also to other developing countries facing similar challenges. By demonstrating how green taxes, PPPs, and community-driven solutions can work together to address adaptation gaps, the research offers a holistic model for achieving transformative climate action at scale (Global Commission on Adaptation, 2024).

Literature Review

Theoretical Framework

The exploration of community-based adaptation financing models, particularly green taxes and public-private partnerships (PPPs), is underpinned by several theoretical frameworks. Environmental economics provided a foundation for understanding the economic rationale behind green taxes, which are designed to internalize environmental externalities. According to Pearce and Turner (1990), environmental economics emphasized the need to align economic activities with ecological sustainability through mechanisms such as taxation. By imposing levies on environmentally harmful activities, green taxes incentivize sustainable practices while generating revenue for climate adaptation initiatives. This theory has been widely applied in developed countries, where carbon taxes and pollution levies have demonstrated success in reducing emissions and funding green projects (OECD, 2023).

Stakeholder theory further complemented this discussion by emphasizing the importance of multi-stakeholder collaboration in addressing complex societal challenges. As articulated by Freeman (1984), stakeholder theory posits that organizations must consider the interests of all stakeholders' government,

private sector, civil society, and local communities to achieve sustainable outcomes. In the context of climate adaptation, this theory underscores the critical role of partnerships between public institutions and private entities in mobilizing resources and implementing large-scale adaptation projects. The integration of stakeholder theory into PPPs ensures that diverse perspectives are incorporated, fostering inclusivity and shared responsibility.

Adaptive governance, another relevant framework, highlighted the need for flexible and participatory approaches to governance in response to dynamic environmental challenges. Adaptive governance is characterized by decentralized decision-making, iterative learning, and collaboration among multiple actors (Dietz et al., 2003). In the Nigerian context, adaptive governance can facilitate the integration of indigenous knowledge systems and community participation into climate adaptation strategies, ensuring that solutions are context-specific and culturally appropriate. These theoretical frameworks collectively provide a robust lens for analysing the potential of green taxes and PPPs in enhancing climate resilience.

Green Taxes

Green taxes, also known as environmental taxes, are fiscal instruments levied on activities that generate negative environmental externalities, such as carbon emissions, pollution, or resource depletion. The primary objective of green taxes is to correct market failures by aligning private costs with social costs, thereby encouraging behavioural changes toward sustainability (Baranzini et al., 2021). Principles of green tax implementation include equity, efficiency, and transparency. Equity ensures that the tax burden is distributed fairly, while efficiency guarantees that the tax achieves its environmental objectives at minimal cost. Transparency involves clear communication of the tax's purpose and benefits to stakeholders.

Globally, green taxes have been successfully implemented in various forms. For instance, Sweden's carbon tax, introduced in 1991, has been instrumental in reducing greenhouse gas emissions while stimulating investments in renewable energy (Andersson, 2019). Similarly, British Columbia's carbon pricing system has demonstrated significant reductions in per capita fuel consumption without adversely affecting economic growth (Murray & Rivers, 2020). These examples illustrate the potential of green taxes to simultaneously address environmental challenges and generate revenue for adaptation initiatives.

In the Nigerian context, green taxes hold immense promise as a domestic financing mechanism for climate adaptation. Nigeria faces pressing environmental issues, including deforestation, oil spills, and air pollution, which could be mitigated through targeted taxation. For example, a levy on fossil fuel

consumption could discourage reliance on non-renewable energy sources while generating funds for renewable energy projects. Additionally, a plastic tax could reduce plastic waste and support recycling initiatives. However, the implementation of green taxes in Nigeria would require careful consideration of socio-economic factors to avoid disproportionately impacting vulnerable populations.

Public-Private Partnerships (PPPs)

Public-private partnerships (PPPs) represent collaborative arrangements between government entities and private sector actors to deliver public services or infrastructure projects. In the context of climate adaptation, PPPs leverage private sector capital, innovation, and operational efficiency alongside public sector oversight to implement large-scale adaptation initiatives. According to Yescombe and Farquharson (2018), PPPs can be classified into three typologies: service contracts, joint ventures, and build-operate-transfer (BOT) models. Service contracts involve private entities providing specific services under government supervision, while joint ventures entail shared ownership and responsibilities. BOT models allow private firms to design, finance, and operate projects before transferring ownership to the government after a specified period. Several case studies from developing countries demonstrate the effectiveness of PPPs in climate adaptation. For instance, Bangladesh's Community Climate Change Project (CCCP), funded through a partnership between the government and international donors, has successfully implemented community-based adaptation initiatives, including flood-resistant housing and water management systems (World Bank, 2022). Similarly, Kenya's Lake Turkana Wind Power Project, developed through a PPP involving private investors and government agencies, has significantly increased renewable energy capacity while promoting economic development (IRENA, 2023). These examples highlight the transformative potential of PPPs in addressing climate challenges through innovative financing and collaborative governance.

In Nigeria, PPPs could play a pivotal role in bridging the funding gap for climate adaptation. Critical sectors such as agriculture, water management, and renewable energy present opportunities for PPP-driven interventions. For example, private agribusinesses could partner with government agencies to develop climate-resilient farming practices, while private energy companies could collaborate on solar power projects to enhance rural electrification. However, the success of PPPs in Nigeria would depend on the establishment of robust regulatory frameworks and transparent procurement processes to ensure accountability and equitable benefit-sharing.

Community-Based Adaptation

Community-based adaptation (CBA) emphasizes the active involvement of local communities in designing and implementing climate adaptation strategies. This approach recognizes that communities possess valuable knowledge and skills derived from their lived experiences, making them indispensable stakeholders in climate action (Ayers & Forsyth, 2009). In Nigeria, where over 70% of the population resides in rural areas, community-based initiatives are particularly relevant for addressing climate vulnerabilities.

Indigenous knowledge systems, which encompass traditional practices, beliefs, and innovations, offer unique insights into sustainable resource management. For instance, indigenous irrigation techniques and crop rotation methods have been used for centuries to mitigate the impacts of drought and soil degradation (UNESCO, 2022). By integrating these practices into modern adaptation strategies, policymakers can develop solutions that are both effective and culturally appropriate. Furthermore, participatory decision-making processes ensure that adaptation initiatives reflect the priorities and needs of local communities, fostering ownership and long-term sustainability.

Despite its potential, community-based adaptation remains underexplored in Nigeria due to limited institutional support and inadequate funding. Strengthening local governance structures and providing capacity-building programs for community leaders could enhance the effectiveness of CBA initiatives. Additionally, fostering partnerships between communities, government agencies, and private sector actors could unlock new opportunities for resource mobilization and knowledge exchange.

Identified Gaps in literature

While significant progress has been made in understanding global climate adaptation strategies, several gaps remain in the literature concerning Nigeria. First, there is a notable lack of focus on domestic financing mechanisms, such as green taxes and PPPs, which are critical for addressing the country's unique climate challenges. Most studies tend to emphasize international climate funds, overlooking the potential of locally driven solutions (Olanrewaju et al., 2023).

Second, limited attention has been paid to the role of multi-stakeholder collaboration in adaptation financing. Although stakeholder theory highlights the importance of inclusive partnerships, empirical research on how these collaborations can be effectively structured and sustained in the Nigerian context is scarce. Addressing these gaps requires a deeper exploration of innovative financing models and their applicability to Nigeria's socio-economic and environmental landscape.

Methodology

The methodology adopted for this study is designed to provide a comprehensive understanding of community-based adaptation financing models, with a focus on green taxes and public-private partnerships (PPPs) in Nigeria. A qualitative research design was employed to analyse institutional frameworks, financial mechanisms, and community engagement strategies. This approach is particularly suited for exploring complex social phenomena, as it allows for an in-depth examination of the contextual factors influencing climate adaptation financing (Creswell & Poth, 2018). By prioritizing depth over breadth, the study seeks to uncover nuanced insights into the potential of innovative financing mechanisms to address climate resilience challenges.

Data collection was conducted through two primary methods: document analysis and key informant interviews. Document analysis involved the systematic review of policy documents, reports, and case studies relevant to climate financing, green taxes, and PPPs. These documents are sourced from governmental agencies, international organizations such as the United Nations Framework Convention on Climate Change (UNFCCC), and academic publications. Through this method, existing institutional frameworks and financial mechanisms are critically examined to identify gaps and opportunities for enhancing adaptive capacity (Bryman, 2016). Additionally, case studies of successful PPPs and green tax implementations in other developing countries are analysed to draw lessons applicable to the Nigerian context.

Key informant interviews were utilized to gather firsthand perspectives from stakeholders across government, private sector, and local communities. Participants were selected based on their expertise and involvement in climate adaptation initiatives. Government officials provided insights into policy formulation and regulatory frameworks, while private sector representatives offered perspectives on investment incentives and operational challenges. Local community leaders and members contributed valuable knowledge on grassroots-level adaptation needs and indigenous practices. Interviews were semi-structured, allowing for flexibility in exploring emergent themes while maintaining focus on the research objectives (Taylor et al., 2015). Prior to data collection, informed consent was obtained from all participants, ensuring ethical compliance and transparency in the research process.

Data analysis was conducted using thematic analysis, a widely recognized method for identifying patterns, trends, and insights within qualitative data (Braun & Clarke, 2022). Transcripts from interviews and notes from document analysis were coded systematically to generate initial themes. These themes were then reviewed, refined, and organized into broader categories that align with the study's objectives. The use of thematic analysis ensured that findings are

grounded in the data while facilitating a coherent narrative that addresses the research questions.

Ethical considerations were integral to the research process. Informed consent was obtained from all participants, who are provided with detailed information about the study's purpose, procedures, and potential risks. Confidentiality is maintained by anonymizing participant identities and ensuring that sensitive information is securely stored. Transparency is upheld by clearly communicating the intended use of data and providing participants with the opportunity to withdraw at any stage of the research (Israel & Hay, 2006). These measures were critical for fostering trust and ensuring the integrity of the research.

Findings

The findings of this study are derived from a comprehensive analysis of data collected through document analysis, key informant interviews, and thematic analysis. A total of 25 respondents participated in the study, representing diverse stakeholders from government agencies, private sector organizations, and local communities. These respondents provided critical insights into the potential of green taxes and public-private partnerships (PPPs) as community-based adaptation financing models in Nigeria. The findings are organized into four key themes: barriers to climate financing, the potential of green taxes, the role of PPPs, and the integration of indigenous knowledge and participatory decision-making**.**

1. Barriers to Climate Financing in Nigeria

A significant portion of the findings highlighted the challenges faced by Nigeria in accessing international climate funds and implementing domestic financing mechanisms. Respondents consistently identified weak institutional frameworks, limited technical capacity, and inadequate regulatory structures as major barriers. For instance, a government official noted, "*The absence of clear policies and guidelines for accessing international climate funds has hindered our ability to secure much-needed resources for adaptation projects*" (Respondent #3). This sentiment was echoed by several other participants, who emphasized the need for stronger institutional frameworks to streamline the process of securing and managing climate funds.

Additionally, respondents pointed out that Nigeria's reliance on external funding has created a dependency syndrome, limiting the country's ability to develop sustainable domestic financing mechanisms. A private sector representative stated, "*We need to move away from over-reliance on international donors and focus on developing innovative domestic solutions like green taxes and PPPs*"

(Respondent #14). These findings underscore the urgency of addressing structural weaknesses in Nigeria's climate financing architecture to enhance adaptive capacity at the local level.

2. The Potential of Green Taxes

Green taxes emerged as a promising financing mechanism with the potential to generate significant revenue for climate adaptation initiatives while promoting sustainable practices. Respondents highlighted the dual benefits of green taxes: incentivizing environmentally friendly behaviour and providing a stable source of funding for adaptation projects. For example, a respondent from the private sector explained, "*Green taxes can encourage industries to adopt cleaner technologies while generating funds that can be reinvested into community-based adaptation programs*" (Respondent #7).

However, the implementation of green taxes in Nigeria faces several challenges, including resistance from businesses and a lack of public awareness about their benefits. A government official remarked, "*Many businesses view green taxes as an additional burden rather than an opportunity to contribute to climate resilience*" (Respondent #19). To address these challenges, respondents recommended the development of clear policy incentives and public education campaigns to build support for green taxes. Furthermore, the importance of designing equitable tax structures that do not disproportionately affect low-income households was emphasized by multiple participants.

3. The Role of Public-Private Partnerships (PPPs)

Public-private partnerships were widely recognized as a transformative approach to mobilizing resources for large-scale adaptation projects. Respondents praised the ability of PPPs to leverage private sector capital, innovation, and operational efficiency alongside public sector oversight. A community leader stated, "*PPPs allow us to combine the strengths of both sectors to implement projects that neither could achieve alone*" (Respondent #12). Examples of successful PPPs in agriculture, water management, and renewable energy were cited as evidence of their potential to address critical adaptation needs.

Despite their promise, respondents identified several barriers to the effective implementation of PPPs in Nigeria. These include a lack of trust between public and private sector actors, insufficient legal frameworks to govern PPP agreements, and challenges in ensuring transparency and accountability. A private sector representative noted, "*Without robust regulatory frameworks and transparent processes, PPPs risk becoming ineffective or even exploitative*" (Respondent #21). To overcome these challenges, respondents recommended the

establishment of dedicated PPP units within government agencies to facilitate collaboration and ensure compliance with best practices.

4. Integration of Indigenous Knowledge and Participatory Decision-Making

The integration of indigenous knowledge and participatory decision-making processes was identified as a critical factor in ensuring the success of community-based adaptation initiatives. Respondents emphasized the value of indigenous practices in enhancing resilience to climate change, particularly in rural areas. A community leader explained, "*Our traditional methods of water conservation and crop rotation have been passed down for generations and continue to play a vital role in adapting to changing environmental conditions*" (Respondent #5).

However, respondents also highlighted the marginalization of indigenous knowledge in formal adaptation planning processes. A government official admitted, "*We often overlook the contributions of local communities in favour of top-down approaches that fail to address their specific needs*" (Respondent #8). To address this gap, participants advocated for the inclusion of community representatives in decision-making forums and the documentation of indigenous practices to inform policy development. Additionally, the importance of building trust and fostering collaboration between stakeholders was emphasized as a prerequisite for effective participatory processes.

Discussion of Finding

The findings of this study, derived from interviews with 25 respondents and supported by document analysis, reveal critical insights into the potential of green taxes and public-private partnerships (PPPs) as community-based adaptation financing models in Nigeria.

One of the most significant findings of this study is the identification of institutional weaknesses and funding gaps as major barriers to climate financing in Nigeria. Respondents consistently highlighted issues such as weak regulatory frameworks, limited technical capacity, and over-reliance on international donors. These findings align closely with recent scholarly works that emphasize the importance of institutional strengthening in climate adaptation efforts. For instance, Ayers and Forsyth (2023) argue that institutional reforms are essential for creating an enabling environment that supports innovative financing mechanisms like green taxes and PPPs.

Empirical data from the NBS (2025) corroborate these findings, revealing that only 35% of climate adaptation projects in Nigeria are fully funded, with the majority relying on external aid. This dependency underscores the need for

domestic financing solutions that can bridge funding gaps and enhance local adaptive capacity. The NBS report further highlights that inadequate institutional frameworks have resulted in inefficiencies in project implementation, with nearly 40% of adaptation initiatives failing to achieve their intended outcomes due to poor governance and coordination.

The study's findings also resonate with Nelson et al. (2022), who identify structural reforms as a prerequisite for unlocking the full potential of innovative financing models. According to these scholars, strengthening regulatory frameworks and building technical capacity are critical steps toward ensuring the sustainability and scalability of adaptation initiatives. By addressing these institutional weaknesses, Nigeria can create a more resilient climate financing architecture that prioritizes local needs and fosters long-term sustainability.

Green taxes emerged as a promising financing mechanism with dual benefits: generating revenue for adaptation initiatives and promoting environmental stewardship. Respondents emphasized the potential of green taxes to incentivize sustainable practices while providing a stable source of funding for community-based projects. For example, a private sector representative noted, "Green taxes can encourage industries to adopt cleaner technologies while generating funds that can be reinvested into adaptation programs" (Respondent #7). These findings are consistent with recent scholarly research highlighting the transformative potential of green taxes in developing countries.

Scholars such as Smith and Brown (2024) argue that green taxes can play a pivotal role in addressing climate challenges by aligning economic incentives with environmental goals. Their study on green tax implementation in Kenya demonstrates how such mechanisms can generate significant revenue while reducing carbon emissions. Similarly, empirical data from the NBS (2025) indicate that countries with well-designed green tax systems have achieved up to a 20% reduction in greenhouse gas emissions over a five-year period, alongside increased funding for adaptation projects.

However, the study's findings also highlight challenges in implementing green taxes in Nigeria, including resistance from businesses and a lack of public awareness. These challenges are echoed in recent literature, which emphasizes the importance of designing equitable tax structures and conducting public education campaigns to build support for green taxes (Taylor et al., 2023). The NBS report further reveals that public awareness of green taxes in Nigeria remains low, with only 25% of respondents in a national survey expressing familiarity with the concept. Addressing these barriers will require targeted policy interventions and stakeholder engagement to ensure the successful adoption of green taxes as a financing mechanism.

Public-private partnerships were widely recognized by respondents as a transformative approach to mobilizing resources for large-scale adaptation projects. The ability of PPPs to leverage private sector capital, innovation, and operational efficiency was highlighted as a key advantage. A community leader stated, "PPPs allow us to combine the strengths of both sectors to implement projects that neither could achieve alone" (Respondent #12). These findings are supported by recent scholarly works that underscore the potential of PPPs to address critical adaptation needs in developing countries.

For example, Okonkwo and Okafor (2023) conducted a comparative analysis of PPPs in climate adaptation projects across Africa, finding that successful partnerships can lead to improved project outcomes and enhanced resilience. Their study highlights the importance of trust, transparency, and clear legal frameworks in ensuring the effectiveness of PPPs. Similarly, empirical data from the NBS (2025) reveal that PPPs account for 45% of completed adaptation projects in Nigeria, with higher success rates compared to projects funded solely by the public or private sector.

Despite their promise, the study's findings identify several barriers to the effective implementation of PPPs, including mistrust between stakeholders and insufficient regulatory frameworks. These challenges are consistent with recent literature, which emphasizes the need for dedicated PPP units within government agencies to facilitate collaboration and ensure compliance with best practices (Adelaja et al., 2022). The NBS report further highlights that only 30% of PPP agreements in Nigeria include provisions for transparency and accountability, underscoring the need for stronger legal frameworks to govern these partnerships.

The integration of indigenous knowledge and participatory decision-making processes was identified as a critical factor in ensuring the success of community-based adaptation initiatives. Respondents emphasized the value of indigenous practices in enhancing resilience to climate change, particularly in rural areas. A community leader explained, "Our traditional methods of water conservation and crop rotation have been passed down for generations and continue to play a vital role in adapting to changing environmental conditions" (Respondent #5). These findings align with recent scholarly works that highlight the importance of indigenous knowledge in climate adaptation.

For instance, Adeleke and Ogunbode (2023) conducted a study on the role of indigenous knowledge in climate resilience, finding that traditional practices can complement modern adaptation strategies and enhance community ownership. Their research underscores the need for policies that recognize and integrate indigenous knowledge into formal adaptation planning processes. Similarly,

empirical data from the NBS (2025) reveal that communities utilizing indigenous practices have reported a 15% higher success rate in adaptation initiatives compared to those relying solely on external interventions.

However, the study's findings also highlight the marginalization of indigenous knowledge in formal adaptation planning processes. This issue is echoed in recent literature, which calls for greater inclusion of local communities in decision-making forums and the documentation of indigenous practices to inform policy development (Ogundele et al., 2022). The NBS report further indicates that only 20% of adaptation projects in Nigeria incorporate indigenous knowledge, underscoring the need for more inclusive approaches.

Conclusion and Recommendations

This study has explored the potential of green taxes and public-private partnerships (PPPs) as innovative financing mechanisms for community-based climate adaptation in Nigeria. Through qualitative analysis of interviews with 25 respondents and document reviews, the research highlights significant barriers to climate financing, including weak institutional frameworks, limited technical capacity, and over-reliance on international aid. However, it also underscores the transformative potential of green taxes and PPPs in addressing these challenges by generating revenue, leveraging private sector resources, and fostering multi-stakeholder collaboration. The integration of indigenous knowledge and participatory decision-making further emphasizes the importance of context-specific solutions that prioritize local needs and enhance adaptive capacity. These findings align with recent scholarly works and empirical data from the National Bureau of Statistics (NBS), 2025, which demonstrate the critical role of structural reforms and inclusive approaches in advancing climate resilience. By adopting a holistic strategy that combines innovative financing, institutional strengthening, and stakeholder engagement, Nigeria can create sustainable and equitable climate action systems.

Recommendations

- Government should establish a dedicated units within government agencies to oversee the implementation of green taxes and PPPs, ensuring compliance with best practices and fostering trust among stakeholders.
- Formulate comprehensive policies and legal frameworks to govern green taxes and PPP agreements, emphasizing transparency, accountability, and equitable benefit-sharing.

- Launch nationwide campaigns to educate businesses and communities about the benefits of green taxes, addressing misconceptions and building public support for their adoption.
- Integrate traditional practices into formal adaptation planning processes by creating platforms for community representatives to contribute to decision-making forums.
- Provide training and resources to government officials, private sector actors, and local communities to improve technical expertise in climate financing and project management.
- Encourage partnerships between government, private sector, and civil society organizations to pool resources, share risks, and implement large-scale adaptation projects.
- Establish robust monitoring and evaluation systems to track the performance of green taxes and PPPs, using data-driven insights to refine strategies and ensure long-term impact.

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