



LAW HUB DEVELOPMENT AND ADVOCACY CENTRE



**ASSESSING STATE-LEVEL
CLIMATE ACTION IN NIGERIA:
AWARENESS, POLICY IMPLEMENTATION,
AND RESPONSE TO CLIMATE CHANGE**

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AND RESPONSE TO CLIMATE CHANGE**

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STATE-LEVEL CLIMATE ACTION

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Law Hub hopes that the insights presented here will inform and inspire policymakers, practitioners, and community leaders to champion collaborative, locally led climate initiatives that foster a more resilient and sustainable Nigeria.

EXECUTIVE SUMMARY

Climate change poses a profound challenge to Nigeria's sustainable development, with impacts ranging from coastal flooding and erosion in the south to desertification and drought in the north. Recognizing these risks, the Federal Government ratified the Paris Agreement and adopted the National Climate Change Policy (2021–2030), yet the translation of these national directives into effective state-level action remains uneven. This research, “Assessing State-Level Climate Action in Nigeria: Awareness, Policy Implementation, and Response to Climate Change,” examines twelve states namely Abia, Adamawa, Anambra, Bayelsa, Borno, Kogi, Lagos, Ogun, Plateau, Rivers, Sokoto, and Zamfara, across Nigeria's six geopolitical zones. It explores how local governments and communities perceive climate change, integrate national policy frameworks into sub-national planning, and carry out mitigation and adaptation initiatives.

The primary objectives of the research were to assess public and institutional awareness of climate change and the National Climate Change Policy; evaluate the degree to which states have integrated these policies into their governance structures; document the range and effectiveness of state-led climate initiatives across key sectors (energy, agriculture/forestry, water, waste, transport, and health); and identify common barriers and enabling factors. The twelve states represent diverse environmental contexts—from the oil-producing Niger Delta (Bayelsa, Rivers) to arid northern regions (Sokoto, Zamfara) and major urban centres (Lagos)—allowing for a comprehensive, cross-regional analysis. A mixed-methods approach combined structured surveys with semi-structured interviews of key informants,

including government officials, NGO representatives, and private-sector stakeholders. Surveys captured quantitative measures of awareness, perceptions of policy effectiveness, and personal experiences with climate impacts. Interviews provided qualitative depth on institutional capacity, coordination mechanisms, and the lived realities of policy implementation. Additionally, in-depth case studies were developed for each state to contextualize the quantitative and interview data, highlighting localized successes and challenges.

Across all twelve states, more than 90% of survey respondents had heard of climate change, with schools, media, and social platforms cited as primary information sources. However, awareness of the National Climate Change Policy averaged only 58%, indicating a critical gap between general climate consciousness and understanding of formal policy frameworks. Government-led sensitization campaigns were consistently the least cited source of information. States such as Lagos, Anambra, Abia, and Plateau have taken early steps to institutionalize climate governance by creating dedicated departments or agencies, mainstreaming climate concerns into planning, and developing draft or adopted climate action plans. In contrast, Ogun, Kogi, and Zamfara showed minimal formal structures and relied on ad hoc or donor-driven projects. Sokoto and Bayelsa possess environmental institutions but lack coherent, state-specific climate policies. While afforestation, flood control, and waste management were common across many states, the scale and strategic coherence varied. Lagos has pursued renewable energy installations, waste-to-energy projects, and large-scale

drainage upgrades. Borno, despite insecurity, initiated low-emission transport and solar-powered water systems. Bayelsa's Ministry of Blue Economy offers a novel coastal resilience focus, though it remains under-resourced. Agricultural adaptation, particularly climate-smart farming, appeared in states like Adamawa and Rivers, though often as localized pilot programs. Four interrelated constraints emerged across all states: insufficient funding and lack of dedicated climate budgets; weak inter-ministerial coordination and siloed governance; limited technical capacity, including data systems and monitoring tools; and low levels of grassroots engagement, especially in rural and marginalized communities. These obstacles have perpetuated a reactive rather than proactive stance toward climate risks. Political leadership, especially when governors publicly champion climate initiatives, proved a catalyst for progress. Youth and civil society networks have shown a strong willingness to participate in local actions, providing a foundation for community-driven programs. International partnerships and pilot projects have introduced innovative solutions, though sustainability depends on local ownership and integration into state budgets.

To realize this transformation, Nigeria's sub-national climate architecture must evolve from top-down decrees to a bottom-up paradigm in which state and local governments design and lead context-specific strategies. Each state should develop its climate action plan, rooted in the national policy but responsive to local hazards and socio-economic realities, and enshrined in a legally binding framework. Dedicated climate institutions, properly staffed, funded, and equipped with modern data and monitoring tools, will provide the backbone for sustained action. At the same time, sustainable financing mechanisms, including green bonds, resilience funds, and public-private partnerships, must be established to ensure predictable resources. Crucially, climate action must be integrated into everyday governance across all sectors such as

agriculture, health, transport, energy, and urban planning, rather than confined to environmental agencies. Genuine community engagement, facilitated through schools, traditional institutions, and civil society networks, will anchor policies in lived experience and foster local ownership. A standardized, transparent monitoring and evaluation system will also help to track progress, drive accountability, and enable adaptive learning.

INTRODUCTION

Background

Nigeria is currently experiencing some of the most challenging climate change impacts in Africa. With rapid population increase, urban development, a reliance on natural resources for livelihoods, and substantial infrastructural and public service deficits, the country is becoming more vulnerable to the impacts of climate change. Some of these impacts include rising temperatures, increased frequency and severity of floods and droughts, coastal erosion, and desertification. In recognition of these challenges, the government has embarked on a continuous revision and strengthening of national policy instruments. The most recent revision is encapsulated in the National Climate Change Policy for Nigeria 2021–2030, which is designed to integrate mitigation and adaptation measures within a dynamic framework for sustainable development. Over the past five decades, evidence shows that Nigeria is experiencing a warming trend, with mean temperatures increasing by about 1.01°C between 1951 and 2005, and projections indicate further temperature rises of up to 3.5°C by 2070 relative to 1990 baseline conditions (Federal Ministry of Environment, Department of Climate Change, 2021). Coupled with rising temperatures, rainfall patterns have also become unpredictable, characterized by increased interannual variability. Certain regions have witnessed prolonged dry spells and episodes of extreme rainfall events that lead to devastating floods, as observed notably in 2019. The World Food Programme, in its 2020 global report on food crises, stated that, in 2019, floods hit 32 of the 36 states of Nigeria and there was a serious food crisis owing to agricultural damage. In October of the same year, Adamawa state, Nigeria state was hit by its worst flooding

disaster in 17 years, affecting more than 100,000 people (World Food Programme 2020).

Nigeria is undeniably vulnerable to climate change, and this vulnerability is exacerbated by several interconnected factors, such as high poverty levels, a rapidly growing population, widespread reliance on climate-sensitive sectors (such as agriculture, fisheries, and forestry), and a general lack of adaptive capacity, particularly in the arid and semi-arid north. Vulnerability is determined by the type, size, and rate of climatic variability to which a system is exposed, as well as its sensitivity and adaptive capability (Mbanyeude, 2022).

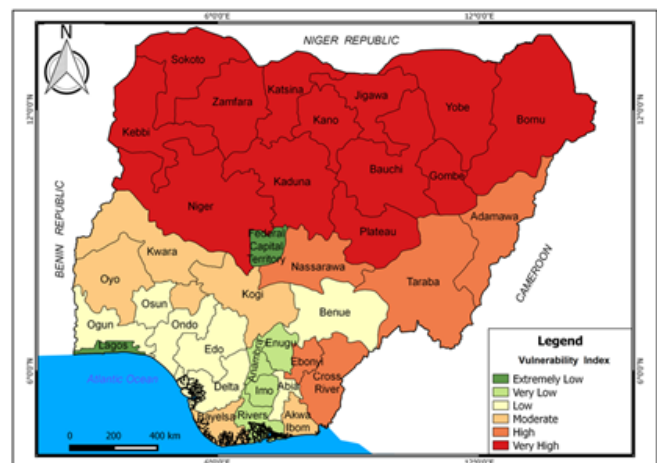


Figure 1. Climate Change Vulnerability in Nigeria

The impacts of climate change are not uniform across Nigeria's ecological zones due to variable levels of sensitivity. Figure 1. above indicates that Northern Nigeria is more sensitive to climate change than Southern Nigeria due to less rainfall and rising temperatures in those areas. This decrease in rainfall has increased aridity, drought, and desertification, resulting in wetland shrinkage, less surface water, and reduced

biodiversity in several ecosystems across Northern Nigeria. This vulnerability is made even worse by the region's large number of rural settlements and reliance on agricultural and forest resources. Similarly, increased rainfall, rising sea levels, coastal erosion, and floods have left the Niger Delta area of the South-South vulnerable, causing some coastal communities to be displaced.

Climate change in Nigeria has far-reaching economic and social implications, in addition to environmental degradation. Extreme weather events cost the Nigerian economy billions of dollars every year. Without considerable adaptation efforts, climate change might cost Nigeria's GDP between 6% and 30% by 2050 (Federal Ministry of Environment, 2020). Floods, in particular, disrupt critical economic activity by destroying infrastructure, reducing agricultural production, and displacing populations, increasing already existing social and economic disparities. Critical sectors such as electricity, health care, and transportation are also vulnerable to climatic extremes. For example, Nigeria's energy sector, which is dominated by fossil fuel-based power generation, experiences operational disruptions during extreme weather events, while the health sector suffers from an increase in the incidence of water- and vector-borne diseases as temperature and humidity shift (see sections 4 and 5 of the National Climate Change Policy). Moreover, climate-related stresses tend to impact the most vulnerable groups disproportionately, including women, children, and marginalized communities. This intersection between climate change and gender inequality is increasingly recognized in both the national policy framework and the broader literature. Gender-responsive methods are crucial for minimising climate effects and ensuring that adaptation strategies improve rather than impede the capacity of vulnerable communities to recover from disasters (UN WomenWatch, 2009).

Nigeria's climate policy trajectory has evolved in response to local concerns and evolving global priorities. The establishment of the Nigeria Climate Change Policy Response and Strategy (NCCPRS) in 2012 signified the country's first venture into publicly addressing the impacts of climate change through a comprehensive policy framework (Federal Ministry of Environment, Department of Climate Change, 2021). The NCCPRS aimed to promote low-carbon development while increasing national resilience via mitigation and adaptation initiatives. However, as the global discourse about climate change progressed, notably following the signing of the Paris Agreement in 2015, there was an obvious need to update and expand the existing policy framework. This revision brought about the National Climate Change Policy for Nigeria 2021-2030. The revision was driven by the need to integrate more ambitious targets and adapt to rapidly changing environmental conditions. The review process also included extensive stakeholder engagement, seminars, and consultations at the federal and state levels. The updated policy incorporates lessons learnt from previous initiatives and aligns Nigeria's response with international obligations, such as its Nationally Determined Contribution (NDC) under the Paris Agreement. It also emphasises not just reducing greenhouse gas (GHG) emissions through sectoral interventions, but also the significance of incorporating climate change into national development plans.

The National Climate Change Policy 2021-2030 provides a detailed framework for both mitigation and adaptation. On the mitigation front, the policy highlights important sectors that contribute to Nigeria's GHG emissions, such as agriculture, energy, oil and gas, industry, and transportation, and recommends sector-specific actions to transition to a low-carbon economy. In the agriculture and forestry sectors, for instance,

initiatives are aimed at minimising deforestation, promoting climate-smart agriculture, and improving carbon sequestration through afforestation and reforestation. In addition to mitigation, the policy prioritises comprehensive adaptation strategies for key sectors. Adaptation strategies include developing climate-resilient water delivery systems and infrastructure, as well as implementing novel agricultural methods that reduce sensitivity to irregular rainfall and temperature extremes. The policy also provides enabling conditions, such as legislative and institutional reforms, financial mobilisation (e.g., green bonds), and capacity building to support both mitigation and adaptation efforts.

The policy also acknowledges that robust, localised implementation is required to transform national goals into effective, context-specific actions. Despite these provisions, the implementation of climate action in Nigeria remains disproportionate. Variations in socioeconomic situations, institutional capacity, and public awareness within Nigeria's geographical zones mean that national policies are not consistently translated into on-the-ground actions. In some areas, proactive state-level participation has resulted in innovative local responses, whilst in others, inadequate resources and awareness of the regulatory framework have hampered successful implementation. This gap emphasises the need for a comprehensive empirical assessment of state-level climate action, particularly how awareness and policy implementation vary among regions.

This study aims to assess the awareness of climate change and the Nigerian Climate Change Policy (2021–2030) at the state level, evaluate policy implementation, and document the actions taken by states to address climate challenges. This will be achieved through the following objectives:

1. Assess the level of awareness among state governments and key stakeholders

regarding climate change and the Nigerian Climate Change Policy.

2. Examine how states have integrated the National Climate Change Policy into their development plans and governance frameworks.
3. Document and analyse state-led initiatives, projects, and programs addressing climate change, including renewable energy, afforestation, and disaster management.
4. Compare climate action efforts across Nigeria's six geopolitical zones to identify disparities and common challenges.
5. Identify barriers hindering effective state-level climate action and highlight opportunities for enhanced collaboration, policy alignment, and implementation.
6. Provide evidence-based recommendations for strengthening state-level climate action in alignment with national and global climate goals.

The study focuses on a nationwide perspective that includes a comparative analysis of states across the six geopolitical zones of Nigeria, acknowledging the regional variations in climate impacts and policy implementation. While the national framework provided by the National Climate Change Policy 2021–2030 serves as the overarching guideline, this study concentrates primarily on the dynamics at the state and sub-national levels, where local governance shapes the practical responses to climate challenges. While the study is designed to provide a comprehensive mapping of state-level climate actions, it acknowledges limitations. Disparities in data availability and quality among states might restrict detailed comparisons in certain areas, and regional peculiarities may limit the universal generalizability of findings. Despite these challenges, the study is expected to yield actionable insights, identify key success factors and barriers in policy implementation, and offer

evidence-based recommendations that will enhance the alignment of state-level efforts with national and international climate objectives.

Methodology

This study adopted a case study approach and a mixed-methods design, combining quantitative surveys, qualitative semi-structured interviews, and detailed case studies to assess state-level climate action in Nigeria. Data were collected from twelve states representing the six geopolitical regions of Nigeria (South East, South South, South West, North Central, North East, North West), specifically Abia, Adamawa, Anambra, Bayelsa, Borno, Kogi, Lagos, Ogun, Plateau, Rivers, Sokoto, and Zamfara. This selection ensured that the research encompassed a diverse range of geographical, socio-economic, and environmental contexts.

For the quantitative component, structured surveys were deployed to capture responses from community members and local stakeholders. The aim was to secure approximately 50 survey responses per state, although actual numbers varied, with some states like Borno recording fewer responses. The survey questionnaire was designed with both closed-ended and a few open-ended questions to gauge respondents' knowledge of climate change, their awareness of the National Climate Change Policy (2021–2030), and their perceptions regarding the effectiveness of state-level policy implementation. Respondents frequently expressed scepticism about the likelihood of government action, indicating that many viewed their participation as unlikely to bring about change. Despite this, the survey provided valuable quantitative insights into local attitudes and regional disparities. In parallel, semi-structured interviews were conducted with key informants including state government officials responsible for environmental or climate change-related issues, representatives from non-governmental

organizations, and private sector stakeholders. The initial target was to secure at least three interview participants per state. However, bureaucratic hurdles in many ministries resulted in a lower number of interviews in some states. For example, Abia, Anambra, and Ogun each yielded only one interview response. These interviews focused on exploring operational challenges, institutional barriers, and the practical experiences of policy implementation at the state level. Interviewees highlighted issues such as administrative delays, limited responsiveness of government agencies, and challenges in inter-agency coordination, which hinder effective policy translation into action.

Data analysis involved both statistical and thematic techniques. Quantitative indicators such as levels of awareness and perceptions of policy implementation revealed how local factors and sentiment toward government action varied among regions. Interview transcripts were analysed to extract recurrent themes regarding bureaucratic challenges, resource limitations, and the practical barriers to implementation. This qualitative data was then integrated with the quantitative findings, allowing for a comprehensive view of state-level climate action. These insights provided a nuanced understanding of the effectiveness of state-level climate interventions. The data collection process was carried out over a period of 3 months. Initial phases included the design and piloting of survey instruments and interview guides, followed by data collection in the selected states. Ethical considerations were integral throughout the research process. All participants were informed about the purpose of the study, and their informed consent was obtained before data collection. The research maintained strict confidentiality standards, ensuring that the responses of individuals and officials were anonymized and that their identities were protected.

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CASE STUDIES

ABIA STATE

Presentation of Survey Findings

The survey recorded responses from 39 individuals, comprising 22 males (56%) and 17 females (44%). The gender distribution suggests a fairly balanced representation, allowing for a broad perspective on climate-related issues. The age distribution showed that the majority of respondents were between 18–24 years (59%), followed by those aged 25–34 years (31%), while 8% fell within the 35–44 bracket, and 2% into the 45–54 age bracket. The predominance of younger respondents indicates that climate change awareness and action are primarily driven by youth.

In terms of educational background, 69% of respondents had attained tertiary education, 18% completed secondary school, and 13% had postgraduate education. The high level of education among respondents implies that their perspectives on climate change are likely informed by formal knowledge, which may influence their understanding of policies and solutions. Regarding primary occupation, students made up the largest group at 49%, while 28% were engaged in trading or business. Civil servants accounted for 5% of respondents, while farmers represented 2%. The legal profession had an 8% share, with another 8% falling under other professional categories. The dominance of students and traders suggests that economic and academic considerations may influence respondents' views on climate change and state-led policies.

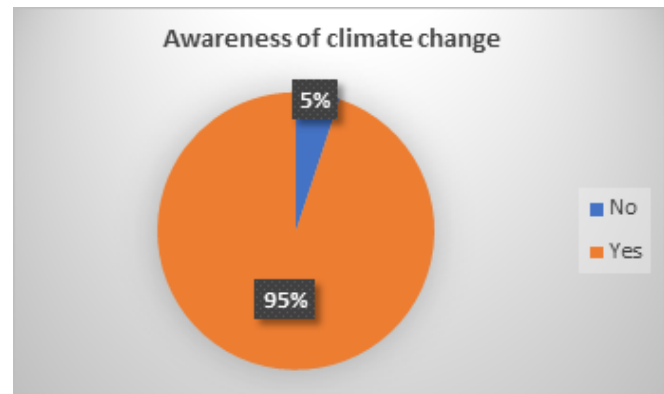


Figure 1. Awareness of climate change

A significant 95% of respondents had heard of climate change, whereas only 5% were unfamiliar with the term. This high awareness level suggests that climate change is a well-known issue within the state, likely due to education and media exposure.

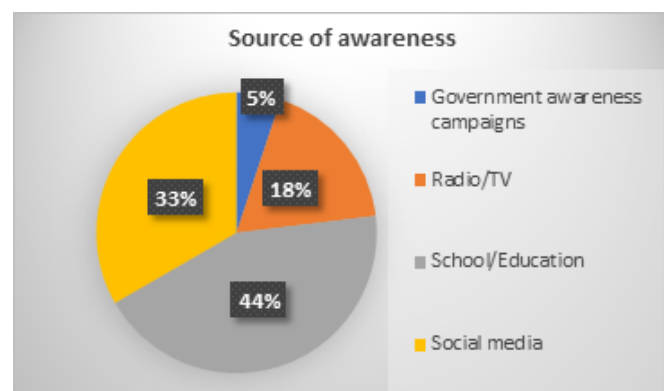


Figure 2. Source of climate change awareness

When asked about the primary sources of their climate change knowledge, 44% indicated that they first learned about it through school or formal education. Social media was the second most cited source at 33%, followed by radio and television broadcasts at 18%. Only 5% reported learning about climate change through government

awareness campaigns. The relatively low impact of government initiatives in raising awareness highlights a gap in official outreach efforts, indicating the need for more structured public education campaigns.

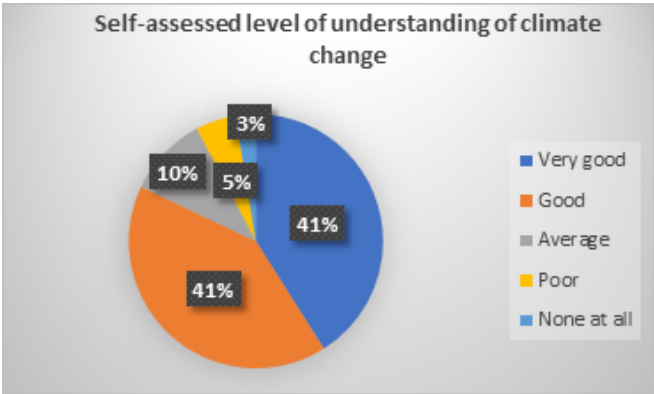


Figure 3. Understanding of climate change

In assessing their understanding of climate change, 41% of respondents rated their knowledge as very good, another 41% considered it good, while 10% described it as average. Meanwhile, 5% rated their understanding as poor, and 3% admitted to having no understanding at all. This suggests that while general awareness is high, there is still room for deeper knowledge acquisition and comprehension.

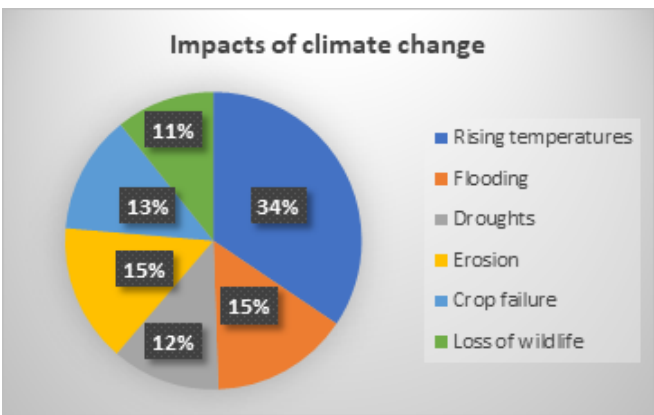


Figure 4. Perceived impacts of climate change

When identifying the impacts of climate change, 34% of respondents pointed to rising temperatures, while 15% cited flooding as a major consequence. Droughts were mentioned by 12%,

whereas 15% identified erosion as a significant challenge. Crop failure was noted by 13%, and 11% expressed concern over the loss of wildlife due to changing climatic conditions. These responses indicate that climate change is already affecting multiple sectors, particularly agriculture and the environment, underscoring the need for urgent adaptation measures.

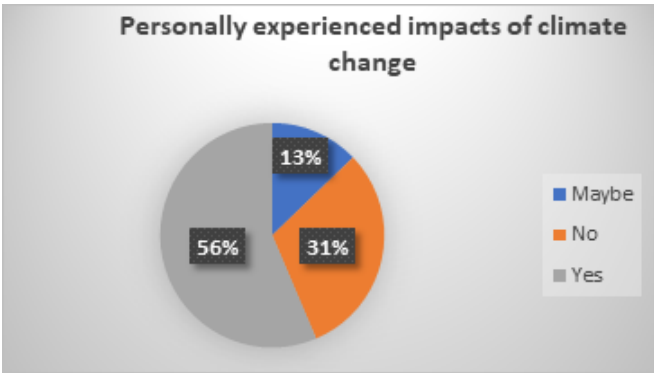


Figure 5. Direct experience with climate change

Regarding personal experience of climate change, 56% confirmed they had directly encountered its impacts, while 31% stated they had not. The remaining 13% were uncertain about whether they had experienced such effects. Specific climate-related occurrences highlighted by respondents included rising temperatures, unpredictable rainfall, excessive heat, food insecurity, and flooding.

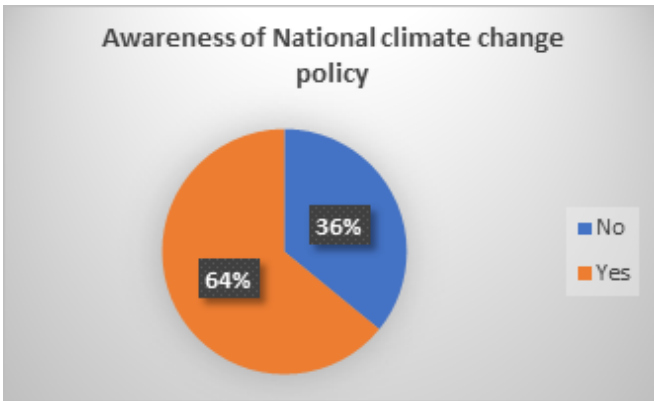


Figure 6. Awareness of national climate change policy

When asked about awareness of Nigeria's National Climate Change Policy, 64% of respondents confirmed they were familiar with it, while 36% did not know the policy. While this indicates a moderate level of awareness, the significant proportion of those uninformed suggests that more needs to be done to communicate national climate policies to the public.

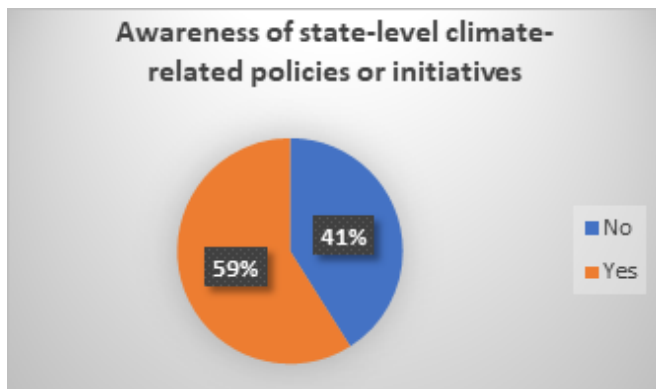


Figure 7. Awareness of state-led climate actions

Awareness of state-level climate policies and initiatives in Abia State was slightly lower, with 59% indicating familiarity with such efforts, while 41% were unaware of any government-led climate actions in the state. This implies that state-led efforts have not been effectively communicated or may not be sufficiently visible to the public.

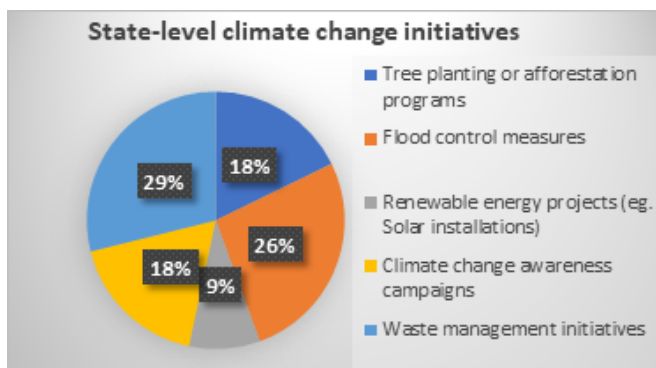


Figure 8. Types of climate change initiatives identified

In terms of specific state-led climate initiatives, 29% of respondents cited waste management programs, while 26% mentioned flood control

measures. Tree planting and afforestation programs were identified by 18%, while another 18% highlighted climate change awareness campaigns. Renewable energy projects, such as solar installations, were mentioned by 9% of respondents. The emphasis on waste management and flood control suggests that these are the most prominent interventions, possibly due to their direct impact on urban areas.

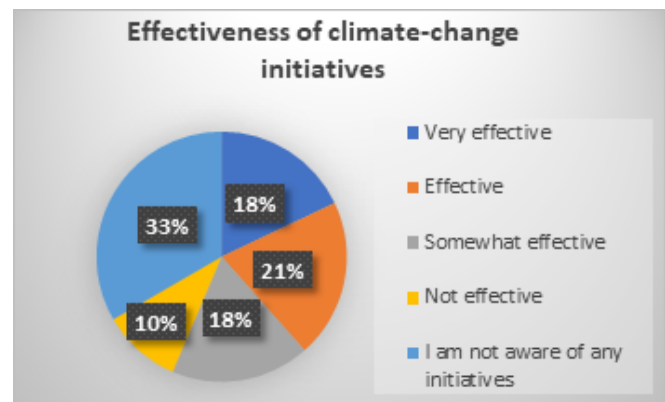


Figure 9. Perceived effectiveness of initiatives

When evaluating the effectiveness of these initiatives, only 18% of respondents considered them very effective, while 21% described them as effective. Another 18% found them somewhat effective, whereas 10% believed they were not effective at all. A significant 33% stated they were unaware of any climate initiatives in Abia State. These responses indicate that while some initiatives exist, their visibility, implementation, and perceived impact remain low, suggesting the need for better communication and more comprehensive execution.

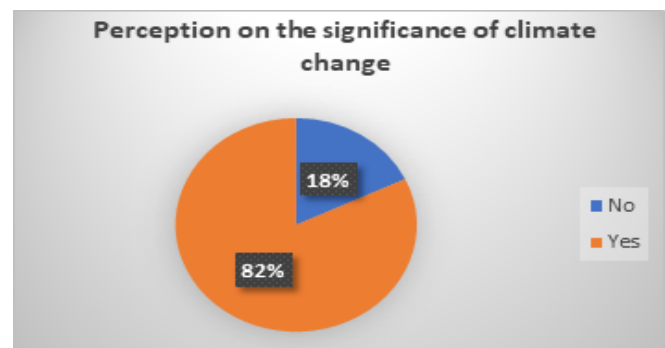


Figure 10. Perception of climate change urgency

A strong majority of 82% of respondents agreed that climate change is a significant issue that requires urgent attention in their community, while 18% did not view it as a pressing concern.

Respondents identified several key challenges hindering climate action in Abia State. These included a lack of government attention and political will, limited financial and institutional resources, public ignorance and lack of awareness, corruption, misallocation of funds, and a shortage of technical expertise and personnel. These barriers highlight systemic issues that require a multi-pronged approach involving governance reforms, financial investments, and capacity-building efforts. When asked about the priority actions the state government should undertake, respondents emphasized the need for afforestation and erosion control, investment in renewable energy and climate-resilient infrastructure, public education and awareness campaigns, stronger policy implementation and enforcement, as well as improved waste management and recycling initiatives. The emphasis on afforestation and erosion control aligns with the major environmental challenges highlighted earlier, suggesting that these are urgent priorities for residents.

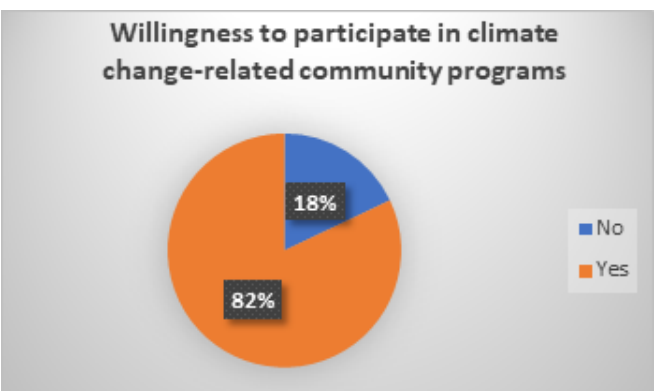


Figure 11. Willingness to participate in climate programs

In terms of willingness to participate in climate change programs, 82% of respondents expressed interest in engaging in community-based

initiatives aimed at addressing climate challenges, while 18% showed no interest in participating. This strong willingness presents an opportunity for community-driven climate initiatives, which, if well-structured, could complement government efforts and enhance local resilience.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

The findings from Abia State reveal a significant shift in climate change awareness, particularly following the emergence of a new political administration committed to environmental sustainability. Historically, awareness was limited across the state, especially among rural communities. According to the participant, “Before now, our people were not too aware of the impacts of climate change.” Many residents observed symptoms such as gully erosion, drying springs, and extreme heat but lacked the knowledge to link these experiences to climate change. This changed significantly with the inauguration of Governor Alex Otti's administration, which prioritized climate action as a core governance focus. One of the administration's early steps was the creation of a Department of Climate Change under the Ministry of Environment in September 2023, a first for the state. The participant, who serves as the pioneer director of this department, described this move as foundational to institutionalizing climate action. To build a knowledge base and guide public engagement, the department conducted a Climate Change Vulnerability Assessment across all 17 LGAs. This assessment classified areas based on degrees of vulnerability ranging from low to moderate to high. The approach allowed policymakers to map climate risks geographically and prioritize responses: “We classified all the local government areas in ranking... most vulnerable,

moderately vulnerable, and low vulnerability.” Complementing this was a Community Climate Asset Assessment, which identified environmental assets that could aid mitigation efforts. The participant cited the Arochukwu Long Juju Cave, being considered for UNESCO heritage status, as an example of a natural carbon sink. “We conducted the climate change community asset assessment so that we can reduce sediment emissions and make sure we have a lot of carbon capture.” Both assessments formed the basis for the Abia State Climate Change Investment Readiness Document, which compiles data and insights to support evidence-based planning and attract investment. The participant explained that this document: “Captures our story on climate change.”

In terms of awareness of national frameworks, stakeholders in Abia State are informed about the National Climate Change Policy (NCCP) and the Climate Change Act of 2021. The participant emphasized that this national awareness has guided the state's alignment with federal goals: “It was because of the awareness of the climate change policy that we began to make sure that some of the policies we are announcing in the state align with the federal policies.” This awareness has already led to the drafting of a state-level Climate Change Policy and Action Plan, which, at the time of the interview, had been submitted to the National Council on Climate Change and international partners for review. Efforts to deepen public understanding of climate change have extended to schools, communities, and youth networks. Through an ongoing “climate change educational visit” program, the state targets 10 public schools in each LGA, where practical lessons are delivered. These include recycling initiatives, in which students sell collected plastic waste and use proceeds for school greening projects: “We preach the message of climate change, make them understand what climate change is all about... and how to mitigate

it.”

Theme 2: Policy Integration and Implementation

A major milestone in this process is the establishment of the Department of Climate Change in September 2023, which has enabled focused coordination, policy development, and inter-agency engagement. According to the participant, the department was created to mainstream climate change into all sectors of governance: “We are mainstreaming climate change into the budget process, into planning, into implementation, into monitoring and evaluation.”

This commitment is evident in several key initiatives:

1. Climate Vulnerability and Asset Assessments: As detailed in Section 1, these assessments were conducted across all 17 LGAs and directly informed policy direction. By mapping vulnerabilities and climate assets, the government is now able to prioritize interventions and guide resource allocation in a targeted way which is something very few states have institutionalized.
2. Drafting of a State Climate Change Policy and Action Plan: Abia has already submitted a draft of its climate policy to the National Council on Climate Change and several development partners. The plan outlines sectoral targets, investment pathways, and implementation frameworks, aligning closely with national policies and the Climate Change Act. “We are developing a comprehensive State Climate Change Policy and Action Plan that would drive sectoral alignment and guide implementation.”
3. Integration into State Budgeting and Planning: One of the most significant steps taken is the integration of climate considerations into the 2024 state budget

process. The Department of Climate Change now works with the Ministry of Budget and Planning to ensure that climate goals are factored into annual budgeting cycles and project selection criteria. “We have engaged with the Budget and Planning Commission. We are beginning to develop climate budget coding... so that every ministry is held accountable.”

4. **Cross-Ministerial Engagement:** The department has begun engaging other ministries such as Agriculture, Education, Health, and Energy to ensure their policies and programs reflect the climate agenda. While full integration is ongoing, a system of sector-specific climate action units or focal persons is under development to coordinate this process.
5. **International Alignment and Investment Readiness:** Abia is positioning itself to access international climate finance through the State Climate Change Investment Readiness Document, which outlines pathways to engage the Green Climate Fund (GCF), Global Environment Facility (GEF), and other multilateral donors. “We want to be investment-ready. Our climate policy includes tracking tools, monitoring frameworks, and alignment with the NDCs.”
6. **Public and Private Sector Engagement:** While still in the early stages, the participant reported that the state is initiating dialogue with the private sector, including manufacturers and developers, on issues such as emissions reporting, energy efficiency, and green infrastructure.

While most of these developments have occurred within the last 6–8 months, the participant emphasized that the state government is treating climate change as a foundational development issue, not a niche environmental concern. This has

enabled unprecedented access to the political space and inter-agency cooperation for the climate department.

Theme 3: State-Led Climate Actions

One of the most visible and well-structured initiatives is the state's tree-planting campaign, which has already led to the planting of over 1,000 trees across the three senatorial zones. According to the participant, this project is not only symbolic but is also climate-smart and community-integrated. The campaign includes educating residents, especially youths on deforestation, biodiversity loss, and the role of trees in carbon capture: “We are now going to the local governments to implement our tree planting... not just ceremonial, but strategic tree planting with proper selection, spacing, and mapping.” The department has also rolled out a school-based climate education and action program, reaching 10 public schools in each LGA. These schools have been equipped with climate clubs, and students participate in plastic recycling projects, where they gather used plastic bottles, sell them to recyclers, and use the proceeds to green their schools. “We give them tasks to recycle plastic and use the money to plant trees or flowers in their school compound. This is how we drive climate consciousness.”

On the adaptation side, the state is responding to gully erosion and water scarcity, which are among its most pressing environmental threats. Through the climate vulnerability assessment, the government identified the most vulnerable LGAs and is now working to design targeted interventions in collaboration with development partners. These actions are being coordinated with the Abia State Flood and Erosion Watershed Management Agency (ABFEWMA) and involve engineering responses combined with nature-based solutions like tree planting and slope protection. A significant development is the establishment of a State Climate Change Resource

and Information Centre, which serves as a hub for data collection, stakeholder coordination, and training. According to the participant, this centre is the first of its kind in the region and is already supporting the tracking of emissions-related data and project performance.

Another noteworthy action is the Community Climate Asset Assessment, conducted to identify natural carbon sinks, wetlands, and biodiversity zones that could be leveraged for mitigation and conservation purposes. Importantly, the department's leadership is also pursuing external partnerships and investment, submitting its State Climate Change Policy and Action Plan for validation by the National Council on Climate Change and aligning efforts with the Nationally Determined Contributions (NDCs). This positioning is critical for tapping into climate finance sources such as the Green Climate Fund (GCF) and UNDP-supported resilience projects.

Theme 4: Challenges in Climate Policy Implementation

While Abia State has made visible strides in establishing a structure for climate governance, the interview reveals that the state still faces critical challenges in the implementation of its climate policy agenda. These challenges relate primarily to institutional novelty, legacy issues, and limited foundational structure. The most pressing challenge, as articulated by the participant, is the lack of sustained funding. Although the state has shown strong political will, it still depends significantly on state funding to drive many of its programs. "We are trying to do so much with so little. We need more funding and support from the federal government and international community." This financial constraint affects the state's ability to scale up programs such as afforestation, community sensitization, and climate-smart infrastructure development.

Another challenge is the relatively recent

institutionalization of climate governance. The participant clearly stated that before the current administration, there was no institutional framework or department in charge of climate change. "Before this administration, nobody was in charge. So there was no institutional framework for implementing climate action." This historical vacuum meant that there were no existing structures, plans, or records to build upon. The absence of a legacy system created the need to start climate governance from scratch, which has made progress both challenging and resource-intensive. The Department of Climate Change was only established in September 2023, meaning it is still building its internal systems, frameworks, and inter-ministerial coordination. As a result, the mainstreaming of climate policy into other MDAs (ministries, departments, and agencies) is ongoing, with varying levels of buy-in and understanding: "We are beginning to engage other ministries, but not everyone has understood that climate change affects their sector directly."

Another major challenge has been the lack of environmental data and policy documents when the department was first established. The participant recounted that upon their appointment as director, they found "no existing climate data, policy, or document" in the Ministry of Environment. This lack of baseline information and planning tools posed an initial setback for informed policy-making and implementation. To address this, the department had to conduct vulnerability assessments and asset mappings independently across the 17 LGAs. These assessments served as the state's first structured attempt to understand and document climate risks and potential mitigation assets. However, the participant hinted at the difficulty and scale of undertaking such foundational work without pre-existing government support or a structured roadmap. Furthermore, the participant noted that although community awareness is improving, climate change has only recently become a public

and institutional concern in the state. As such, while policy drafting and program planning are now ongoing, actual implementation is still in its early stages and will require time to scale. “It’s a new process... we are doing the groundwork now.”

Theme 5: Opportunities and Recommendations

One of the most significant opportunities lies in education and public engagement, particularly through youth-oriented programs. This approach not only strengthens climate literacy but also creates a new generation of environmentally responsible citizens who can scale these practices within their communities. Another opportunity lies in the state’s forward-thinking approach to planning and investment. Abia has produced what the participant described as a first-of-its-kind “Climate Change Investment Readiness Document,” which outlines the vulnerabilities, climate risks, and environmental assets of each local government area. The purpose of this document is to position the state to access both national and international climate finance by presenting clear, data-driven investment opportunities. With this in hand, Abia is seeking partnerships with development institutions and funding bodies such as the Green Climate Fund and the Global Environment Facility, while also engaging bilateral donors. This proactive effort to become investment-ready reflects a shift from reactive governance to anticipatory planning. Cultural and ecological heritage also plays a role in Abia’s climate strategy. The state has identified the Arochukwu Long Juju Cave as both a cultural asset and a potential natural carbon sink. In collaboration with UNESCO, the government is exploring ways to protect and promote the site while aligning it with broader environmental conservation efforts. This vision positions climate action not only as a scientific or technical issue but also as one that respects and incorporates history, identity, and tourism potential.

Additionally, the department is exploring the opportunity to build local capacity for climate action through collaboration with institutions, ministries, and community leaders. The goal is to mainstream climate change into governance, budgeting, and inter-agency programs, using the structure now provided by the department. The participant described ongoing collaborations between the Department of Climate Change and other ministries, aiming to ensure that climate considerations are not treated as isolated concerns but are embedded into planning, budgeting, and program execution. Although this integration is still developing, the groundwork is being laid through policy alignment and inter-agency dialogue.

In terms of actionable recommendations, the participant stressed the importance of finalizing and operationalizing the draft Abia State Climate Change Policy and Action Plan. This policy will serve as a roadmap for long-term implementation, linking state-level activities with the objectives of the national climate agenda. Furthermore, sustained education and outreach, particularly in rural and vulnerable communities, are seen as essential. By extending awareness beyond urban centres and engaging local leaders, the state hopes to foster inclusive climate resilience.

Discussion

The findings from both survey and interview data indicate a high level of general awareness of climate change in Abia State. A significant 95% of survey respondents indicated that they had heard of climate change, while 64% were aware of the National Climate Change Policy (NCCP). These figures are notable, suggesting that climate change has penetrated public discourse, particularly among youth and educated demographics. The largest sources of awareness were formal education (44%) and social media

(33%), followed by radio/TV (18%). In contrast, only 5% of respondents attributed their awareness to government-led campaigns, pointing to a gap in structured public education from official channels. Interview findings corroborate this pattern, highlighting a recent surge in public and institutional awareness due to political shifts. The inauguration of Governor Alex Otti's administration in 2023 marked a turning point, with the creation of the Department of Climate Change under the Ministry of Environment. The director of this new department explained that previous administrations had not institutionalized climate governance, and awareness was limited, especially in rural communities. To address this, the current administration initiated a "climate change educational visit" program across schools, aiming to integrate climate knowledge and action into the educational system. Together, the survey and interview findings suggest that while baseline awareness is high, deeper understanding and targeted dissemination, particularly through government outreach, remain underdeveloped. Furthermore, the awareness of national frameworks like the NCCP and Climate Change Act is concentrated among officials and less widespread among the general public, particularly outside urban centres.

Abia State has made significant strides in integrating climate policy into its governance framework, although these efforts are still in the early stages. From the interviews, it is evident that policy integration is being institutionalized through both structural and procedural reforms. The establishment of the Department of Climate Change in 2023 has enabled focused coordination, allowing the state to mainstream climate considerations into budgeting, planning, and inter-ministerial operations. The state has developed a Climate Change Vulnerability Assessment and a Community Asset Assessment across all 17 LGAs. These assessments serve as

data-driven tools that inform policy planning and investment decisions, thus strengthening the evidence base for adaptation and mitigation efforts. The development of a draft State Climate Change Policy and Action Plan, aligned with national frameworks, is another milestone. This policy, currently under review by national and international stakeholders, outlines sectoral goals, investment priorities, and implementation frameworks.

Survey data further reinforce the perception of increasing state-led engagement, with 59% of respondents indicating awareness of climate-related government efforts in Abia. However, the remaining 41% were unaware of such efforts, and 33% admitted they could not identify any specific initiatives, indicating a disconnect between policy planning and public communication. Despite these efforts, the interview highlighted challenges with full inter-agency integration. The Climate Department is currently engaging ministries such as Agriculture, Education, and Energy, but integration is uneven, with varying levels of buy-in. This emphasizes the need for a coordinated, cross-sectoral approach to ensure climate action becomes embedded in all arms of government. Survey data show that respondents identified waste management (29%), flood control (26%), afforestation (18%), and awareness campaigns (18%) as key climate-related initiatives being implemented. However, only 18% of respondents considered these initiatives "very effective," and 33% were unaware of them altogether, highlighting gaps in visibility and possibly in project scale or reach. Interview insights provide a richer narrative of these initiatives. The state's tree planting campaign, for instance, goes beyond ceremonial activities and focuses on strategic selection, community involvement, and mapping. Similarly, the school-based recycling and greening initiative engages students in plastic collection and recycling.

On the adaptation front, Abia has begun addressing gully erosion and water scarcity through engineering and nature-based solutions, especially in the most vulnerable LGAs identified through the vulnerability assessment. The state is also piloting community-based early warning systems, aimed at integrating local knowledge and digital alerts to improve disaster preparedness. These steps indicate a growing emphasis on building climate-smart communities, although the full implementation and scaling of these initiatives remain constrained by funding and institutional capacity.

Both datasets underscore significant challenges facing climate action in Abia State. The most prominent barriers identified by survey respondents include lack of government attention, inadequate funding, limited public awareness, corruption, and technical skill shortages. These systemic challenges align with the interview findings, where the participant emphasized the state's struggle to “do so much with so little.” The institutional novelty of the Department of Climate Change is a double-edged sword: while it represents progress, its recent establishment means it is still building systems, processes, and credibility. The department began operations without existing climate data, baseline assessments, or policy documents, forcing it to start from scratch. The absence of prior frameworks has made implementation resource-intensive and slow. Furthermore, engagement with other ministries is still developing, and full mainstreaming has yet to occur. These challenges highlight a broader issue across many Nigerian states—namely, the historic neglect of climate governance at the subnational level. In Abia's case, recent efforts signal a commitment to change, but successful implementation will require sustained investment, coordination, and capacity-building.

Despite these barriers, the Abia case presents

multiple opportunities for strengthening climate action. Youth engagement stands out as a strategic entry point, given the high percentage of young, educated respondents and the strong willingness (82%) to participate in climate programs. The integration of climate education into schools offers a scalable model for building long-term resilience. Abia's development of a Climate Change Investment Readiness Document which presents a comprehensive profile of local risks and assets, is another forward-thinking approach. It positions the state to access international funding and aligns it with global climate finance mechanisms. The recognition of natural and cultural assets such as the Arochukwu Long Juju Cave as potential carbon sinks also reflects a holistic, place-based approach to climate action. Finally, the ongoing efforts to institutionalize climate governance, including collaboration with federal ministries and development partners, represent a foundational shift from fragmented environmental interventions to a coordinated, multisectoral strategy. If sustained, this approach could serve as a model for other states in Nigeria seeking to strengthen their climate resilience.

Conclusion

The Abia State case study reveals that with committed leadership and institutional innovation, even states without historical climate governance frameworks can make significant strides in a short period. The high level of public awareness and willingness to participate in climate programs presents an opportunity for inclusive, community-driven climate action. While Abia has laid a solid foundation through policy drafting, institutional reforms, and pilot programs, the sustainability and scalability of these efforts will depend on adequate funding, continued political support, and deeper inter-agency collaboration. The state's alignment with national policies and its investment-readiness strategy position it well to attract external support, but

much remains to be done to translate plans into measurable impact.

The findings also highlight that climate change is increasingly being understood not just as an environmental issue, but as a developmental imperative that requires integration across all sectors of governance. Abia State offers a model that, with refinement and support, could be replicated across other Nigerian states.

Recommendations

1. **Operationalize the State Climate Change Policy and Action Plan:** Finalize and adopt the draft policy to guide long-term implementation. Clearly outline sectoral responsibilities, timelines, and monitoring frameworks aligned with national climate objectives.
2. **Strengthen Public Awareness Campaigns:** Expand government-led awareness initiatives beyond urban centres to rural communities. Use local media, traditional institutions, and community-based organizations to disseminate climate information in accessible formats.
3. **Institutionalize Climate Policy Across All Ministries:** Accelerate the development of climate action units or focal persons in key ministries (e.g., agriculture, health, infrastructure) to ensure integration of climate considerations into all policy areas.
4. **Increase Funding for Climate Action:** Explore innovative financing mechanisms such as green bonds, public-private partnerships, and climate levies. Advocate for increased federal support and collaborate with international donors to bridge funding gaps.
5. **Expand Youth and School-Based Engagement Programs:** Scale up successful programs such as school-based recycling and greening initiatives to foster early climate consciousness and civic responsibility.
6. **Invest in Data Infrastructure and Research:** Establish a robust system for climate data collection, analysis, and dissemination to support evidence-based planning and monitoring of climate initiatives.
7. **Enhance Community Resilience Through Localized Interventions:** Focus on building climate-smart communities by integrating local knowledge into early warning systems, afforestation drives, and erosion control programs.
8. **Leverage Cultural and Environmental Assets:** Collaborate with UNESCO and other stakeholders to protect sites like the Arochukwu Long Juju Cave as part of an integrated climate mitigation and tourism strategy.
9. **Foster Inter-State Collaboration:** Share best practices and collaborate with neighbouring states to address transboundary climate challenges and promote regional climate resilience.

ADAMAWA STATE

Presentation of Survey Findings

Adamawa State, 27 respondents (54%) were male, while 23 respondents (46%) were female. This gender balance suggests an encouraging level of participation from both men and women in climate-related discussions. The survey showed a diverse age distribution among respondents. The largest age group was 25 to 34 years old, representing 42% of the participants. This was followed by the 35 to 44 age group, with 34% of respondents. Those aged 45 to 54 years made up 16% of the survey population while 8% were aged 18 to 24 years. This indicates significant participation from young and middle-aged adults, who are likely to be key stakeholders in addressing climate challenges in the state.

Educational attainment among respondents was varied, with the majority (54%) holding tertiary education qualifications. Postgraduate education accounted for 42%, while 4% of respondents had completed secondary school. This educational profile suggests that climate awareness may be concentrated among the more educated population, highlighting the need for outreach to less-educated groups. Respondents reported a range of occupations. Civil servants constituted 40% of the sample, while trading and business made up 24%. Legal practitioners represented 26%, students accounted for 6%, and 4% identified their occupation as “others.” This occupational diversity reflects the various ways climate change might impact different sectors in Adamawa State

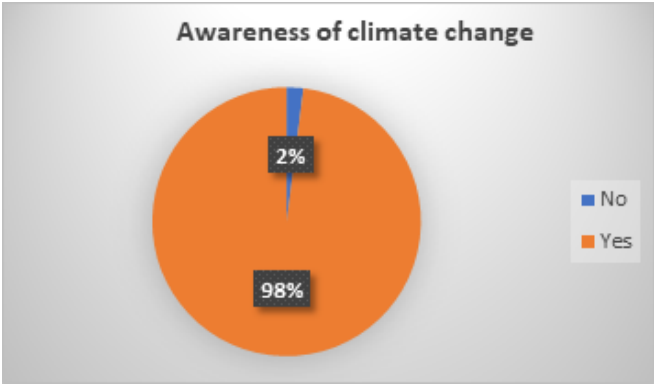


Figure 1. Awareness of climate change

Almost all respondents (98%) stated that they had heard of climate change, while only 2% were unfamiliar with the term. This high level of awareness indicates that climate change is a recognized issue in Adamawa State.

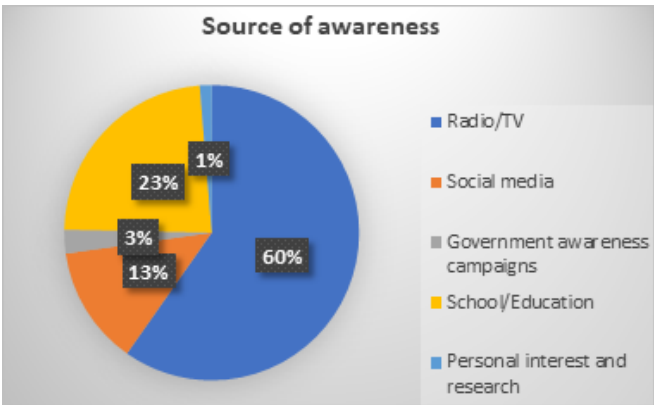


Figure 2. Source of climate change awareness

Most respondents (60%) first learned about climate change through radio and television programs. Schools and educational institutions were the second most common source of information, cited by 23% of respondents. Social media was mentioned by 13%, while 3% learned about climate change through government awareness campaigns and 1% through personal

research. These findings underscore the importance of media and education in promoting climate awareness.

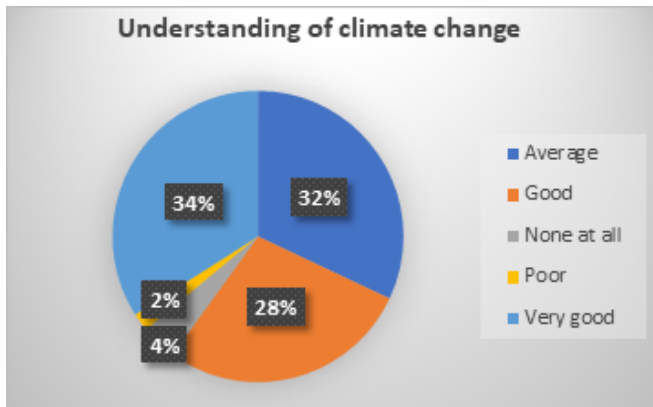


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 34% of respondents described their knowledge as very good, while 28% rated it as good. Meanwhile, 32% considered their understanding average, 2% admitted to having a poor understanding of climate change, and 2% had no understanding of it at all. This suggests that while a significant portion of the population is confident in their knowledge, there is still a need for targeted education efforts.

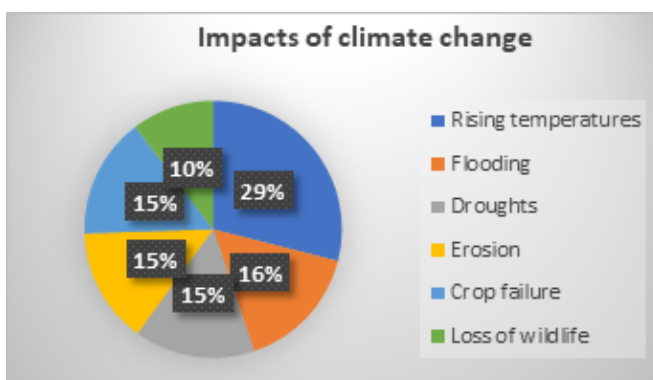


Figure 4. Perceived impacts of climate change

Respondents identified several impacts of climate change. Rising temperatures were cited by 29% of participants, followed by flooding (16%) and droughts (15%). Erosion and crop failure were

mentioned by 15% of respondents, while 10% recognized the loss of wildlife as a consequence. These responses reflect the wide-ranging environmental challenges affecting the state.

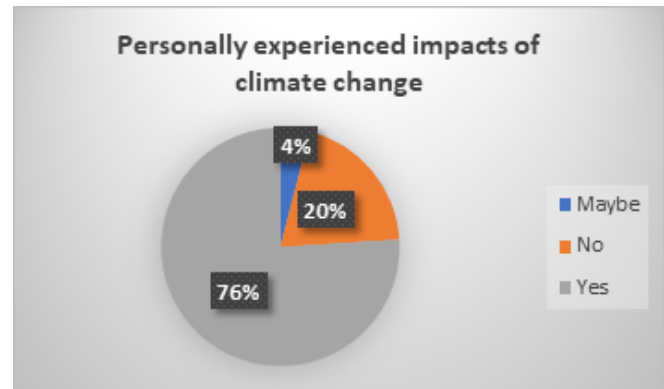


Figure 5. Direct experience with climate change

A majority of respondents (76%) reported that they had personally experienced the impacts of climate change, while 20% said they had not, and 4% were unsure. Respondents reported various observed impacts, including rising temperatures, droughts, and flooding. Many highlighted changes in weather patterns, such as delays in rainfall and prolonged dry seasons, which have negatively affected farming and crop yields. Other respondents mentioned intense heatwaves, erosion, and health challenges associated with extreme weather conditions.

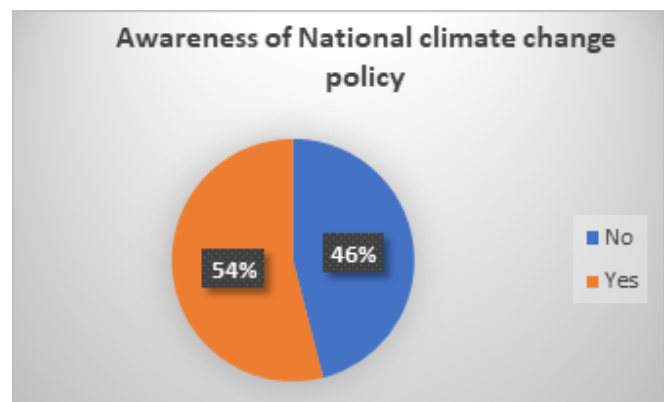


Figure 6. Awareness of national climate change policy

Awareness of Nigeria's National Climate Change Policy was evenly split among respondents, with

54% indicating that they were aware of the policy, while 46% were not.

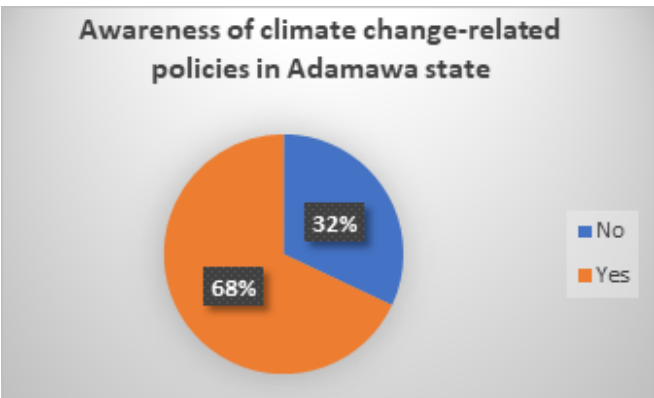


Figure 7. Awareness of state-led climate actions

A majority of respondents (68%) reported that they were aware of climate-related policies or initiatives in Adamawa State, while 32% were not.

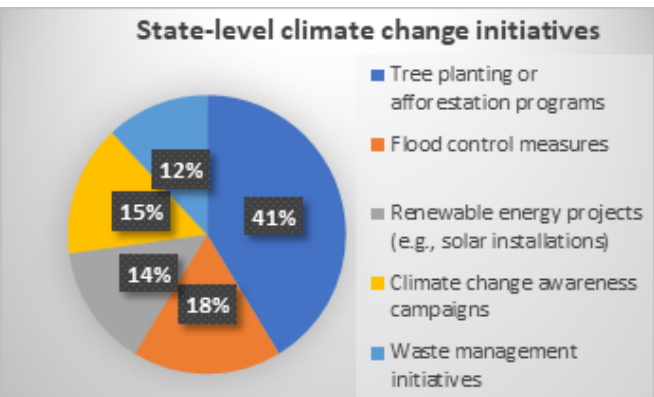


Figure 8. Types of climate change initiatives identified

Among those aware of state-level initiatives, 41% identified tree planting and afforestation programs as the most recognized action. Flood control measures were noted by 18%, followed by climate change awareness campaigns (15%), renewable energy projects (14%), and waste management initiatives (12%).

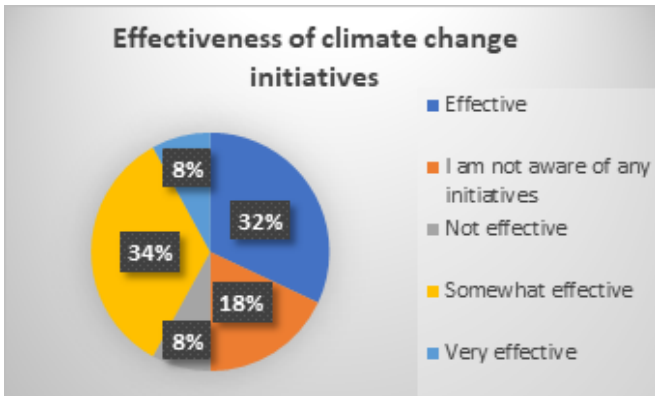


Figure 9. Perceived effectiveness of initiatives

Respondents had mixed views on the effectiveness of climate change initiatives in Adamawa State. While just 8% rated these initiatives as very effective, 32% found them effective, and 34% believed they were somewhat effective. Meanwhile, 8% stated that the initiatives were not effective, and another 18% reported being unaware of any initiatives..

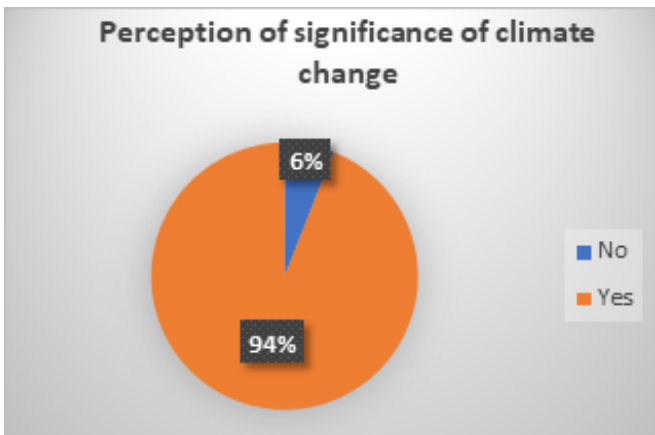


Figure 10. Perception of climate change urgency

An overwhelming 94% of respondents agreed that climate change is a significant issue that must be addressed, while only 6% did not see it as a pressing concern.

Respondents identified several barriers to effective climate action in Adamawa State. The most frequently mentioned challenges included lack of awareness, inadequate government policy

implementation, and insufficient funding. Other barriers cited were poor political will, lack of public orientation, corruption, and weak enforcement of environmental regulations. Additionally, some respondents noted that security issues and limited technical expertise also hinder climate change adaptation efforts. Respondents also proposed a variety of actions for the state government, emphasizing the importance of public awareness campaigns and education. Many suggested tree planting and afforestation programs, stricter enforcement of environmental laws, and investment in renewable energy. Respondents also called for more funding, collaboration with civil society organizations, and the development of climate-resilient infrastructure to mitigate the effects of climate change.

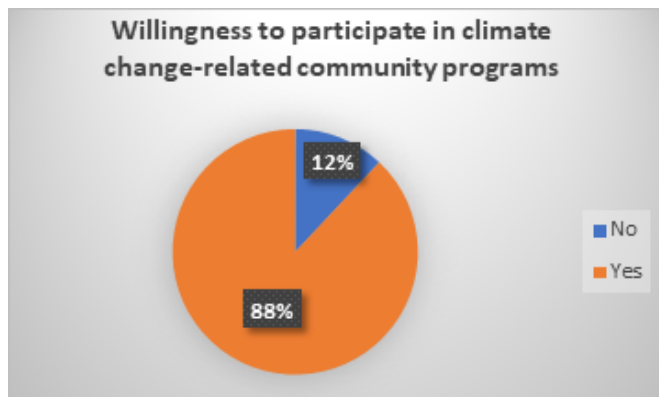


Figure 11. Willingness to participate in climate programs

A significant majority (88%) of respondents expressed willingness to participate in community programs related to climate change, indicating a strong IPresentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 offered a relatively optimistic view, asserting that awareness of climate change in

Adamawa State is widespread. According to this participant, "the majority of the people of Adamawa State know about climate change and have understood alternative ways to mitigate its effects." This assertion indicates that climate literacy may be reasonably strong among certain population segments, possibly influenced by local programs, educational efforts, or collaborations with development partners. Participant 1 further elaborated that several initiatives including tree planting, monthly sanitation exercises, and waste management improvements have played a role in raising awareness across the central and northern zones. The Great Green Wall activities were cited as visible and impactful components of these awareness efforts. However, this view was not universally shared. Participant 2 painted a more cautious picture, suggesting that although awareness is gradually increasing, it remains uneven and insufficient. They emphasized that while some actors are engaged in climate action, the broader public and many government agencies still lack deep understanding: "Awareness is still not as widespread or intense as expected." This participant highlighted that the majority of both state and non-state actors are unfamiliar with the NCCP. The response from communities and even decision-makers was described as sluggish, reflecting a systemic lack of emphasis on policy-driven climate governance in the state. While a State Climate Change Working Group was noted as a step forward, it appears to be in its early stages and not yet widely influential. Participant 3 provided the most critical assessment, indicating that climate change awareness in Adamawa State is "quite low." Despite visible environmental changes in the communities, the respondent noted that many residents do not understand what climate change is or what is causing it. This suggests a disconnect between lived experiences and conceptual understanding of climate science. The participant added that government-led awareness initiatives are minimal and that civil society organizations

(CSOs) have borne the brunt of climate education efforts. They referenced a specific “bank-assisted credit card project” and various community engagements facilitated by CSOs as some of the few active awareness-raising efforts.

Across all three responses, a common theme emerged regarding the limited awareness and influence of the National Climate Change Policy. Even where climate change itself was understood, the policy framework meant to guide state action namely the NCCP remained obscure to most stakeholders. Participant 1 acknowledged that although stakeholders were aware of the policy, its implementation was hindered by the absence of a fully functional climate change department in the state, with only a small unit existing within the Ministry of Environment. On the other hand, Participant 2 emphasized that most state and non-state actors were unaware of the policy and that its integration into decision-making processes was weak. This was corroborated by Participant 3, who stated that only a few stakeholders within ministries like Environment, Agriculture, and Water Resources had any awareness of the NCCP, while most lacked understanding of both national and local climate policies. Efforts to raise awareness have been varied but uneven. Participant 1 pointed to activities such as awareness campaigns, street planting programs, and collaborations with universities and religious organizations as contributing factors to growing climate consciousness. This perspective was moderately reinforced by Participant 2, who mentioned the formation of the State Climate Change Working Group as a meaningful but still nascent initiative. Participant 3, however, observed that CSOs, not the government, had driven most of the awareness-raising efforts, highlighting a critical gap in state-led climate education.

Theme 2: Policy Integration and Implementation

Participant 1 provided a relatively encouraging view, indicating that Adamawa State has taken commendable steps toward integrating climate concerns into development planning. They stated that “climate change issues are considered during development planning and project design and implementation.” This suggests that there is a policy-level awareness of climate change within relevant ministries, departments, and agencies (MDAs), which has translated into a certain degree of institutional responsiveness. However, even in this more optimistic account, the participant acknowledged that the existing institutional setup is weak. Specifically, they revealed that the climate change unit within the Ministry of Environment lacks both the autonomy and technical capacity to drive meaningful policy implementation: “There is only a small unit... not a full department.” Moreover, although some state-level planning activities are said to include environmental assessments, it was not clear whether these assessments are guided by the principles and strategic objectives outlined in the NCCP. This lack of clarity suggests that policy integration may be more incidental than systemic.

Participant 2, while agreeing that awareness of the NCCP exists among some policymakers, expressed concern about the absence of a coordinated and strategic framework for its implementation. They explained that the policy has not been fully domesticated in Adamawa State: “The policy has not been fully adopted nor mainstreamed into the state planning framework.” Although the formation of a Climate Change Working Group is a positive step, it was described as lacking the legal and institutional power to effect significant change. The participant noted that climate issues are mostly addressed on an ad hoc basis, often triggered by environmental crises or donor-driven initiatives, rather than

being rooted in a long-term, state-owned strategy.

Further, this participant underscored the tendency of political leaders to prioritize short-term infrastructural and economic projects over longer-term environmental planning, stating that "climate change is still not mainstreamed into budgeting or major project implementation." This indicates a misalignment between awareness and actionable policy integration, where climate considerations are sidelined in the absence of political will and dedicated resources. Participant 3 presented a more critical view, arguing that there is virtually no integration of the NCCP into the state's development planning. According to them, climate considerations are rarely included in sectoral planning, especially in critical sectors like agriculture and water. They remarked, "The government hardly refers to the policy during planning. Many do not even know it exists." This response highlights a fundamental disconnect between national-level policy aspirations and subnational realities. While individual MDAs such as the Ministry of Agriculture may conduct climate-sensitive activities like soil conservation or irrigation support, these efforts are not systematically linked to the NCCP or any coherent climate policy. The participant also emphasized that the climate change policy is seen by many state officials as abstract and not directly applicable to their immediate governance priorities. As a result, even where climate projects are implemented, they tend to lack strategic continuity or alignment with national policy frameworks. This was further compounded by a lack of technical expertise among planning officers and limited inter-sectoral coordination.

Despite these shortcomings, there is some consensus among all three participants that the recent creation of the State Climate Change Working Group holds promise for better integration. However, it remains under-resourced

and politically marginal. According to Participant 2, this group could serve as a coordination platform, but only if its mandate is expanded and supported through legal backing, capacity building, and consistent engagement with sectoral ministries.

Theme 3: State-Led Climate Actions

Participant 1 described a range of government-supported environmental and climate-responsive initiatives that are being carried out in Adamawa. These include tree planting exercises, waste management programs, and a monthly state-wide sanitation program. The participant emphasized that these initiatives are meant to both improve environmental cleanliness and raise awareness: "We carry out tree planting every year... we also do monthly sanitation across the state." This suggests that the state government has taken some proactive steps in promoting environmental protection as part of its broader development agenda. They also noted that these actions have some visibility in urban and semi-urban areas, especially in central and northern zones, although the southern zone appears to receive less attention.

Another notable effort mentioned by Participant 1 was the state's engagement in the Great Green Wall (GGW) initiative, a federally-supported program targeting desertification through large-scale afforestation. According to the participant, Adamawa State has hosted tree-planting campaigns under this initiative in collaboration with federal and international partners. However, while the state appears to be participating in externally driven programs, it remains unclear how much of these activities are internally initiated and funded. Participant 2 offered a more measured view, acknowledging that while Adamawa has made some efforts, they remain "small in scale and largely fragmented." The participant highlighted examples such as

riverbank protection through local dredging, promotion of water harvesting practices, and some integration of climate-resilient crops in agricultural programs. However, they emphasized that these projects are mostly reactive and rarely sustained: “Most actions are donor-driven or triggered by emergencies like floods.” This underscores the challenge of sustaining climate action beyond the life cycle of externally funded projects or crisis responses. The participant also pointed out that there is limited cross-sectoral coordination, meaning that actions taken by the Ministry of Agriculture, for instance, are not necessarily aligned with those of the Ministry of Environment. Additionally, there is no formal monitoring or evaluation framework to assess the long-term impact of the interventions. Without such systems, it is difficult to track progress or institutionalize best practices. Participant 3 was the most critical, asserting that state-led climate action in Adamawa is weak and largely rhetorical. While they acknowledged some tree planting and sanitation efforts, they characterized these as “surface-level” and insufficient to meet the scale of the climate crisis: “The state talks about climate change, but not much is being done at scale.” They noted that most impactful climate programs especially those focused on community adaptation have been initiated and implemented by NGOs and development agencies rather than the state government. This observation suggests a heavy reliance on non-state actors to fill the implementation gap.

In terms of mitigation efforts, such as renewable energy or emission reduction programs, none of the participants identified any significant state-led initiatives. This indicates that while adaptation (e.g., afforestation, soil conservation, sanitation) receives some attention, mitigation remains absent from the state's climate agenda. All participants agreed that the involvement of civil society organizations and community-based groups has been vital in supporting state efforts.

Participant 1 mentioned partnerships with universities and faith-based organizations in promoting climate education and environmental stewardship. Participant 3, however, stressed that the government often fails to adequately support or scale up these non-governmental efforts, missing opportunities for more comprehensive and coordinated action.

Theme 4: Challenges in Climate Policy Implementation

A central theme across all three interviews is the lack of institutional capacity and structure. Participant 1 noted that although the state has a unit for climate change within the Ministry of Environment, it is neither fully developed nor empowered: “There is only a small unit... it's not a full-fledged department.” This under-resourcing reflects a broader issue of inadequate institutional arrangements, where climate responsibilities are relegated to peripheral offices without sufficient manpower, funding, or authority to drive meaningful policy implementation. As a result, even when policies or strategies exist on paper, the mechanisms to enforce, monitor, or expand them are lacking. Participant 2 reinforced this point, emphasizing that inter-ministerial coordination is weak and that most government agencies operate in silos. They explained that “climate issues are not being mainstreamed across ministries,” and that this results in fragmented responses to climate challenges. The participant also pointed to the absence of clear implementation frameworks, stating that “there's no clear roadmap or domesticated policy guiding implementation at the state level.” Without defined roles, benchmarks, or reporting systems, progress on climate initiatives tends to be reactive, short-term, and donor-driven rather than systemic and state-led.

Funding limitations were another prominent concern. All three participants identified

insufficient financial resources as a key barrier to implementing climate policy. Participant 3 noted that “climate change is not budgeted for,” and that most projects rely on federal allocations or support from NGOs and international partners. This dependence undermines local ownership and limits the scalability or continuity of climate programs. Participant 2 added that even when funds are allocated, they are often misaligned with strategic priorities or diverted to more politically visible projects. The low political prioritization of climate change was cited as a fundamental obstacle by both Participants 2 and 3. According to Participant 2, climate change is “not a political priority” and is frequently overshadowed by issues such as security, infrastructure, and employment. Participant 3 expanded on this, observing that “leaders don’t see climate change as urgent or relevant,” especially when compared to more immediate challenges like flooding or desert encroachment. This lack of political will leads to secondary problems such as poor funding, limited public engagement, and weak institutional commitment. Public engagement itself was also flagged as a significant challenge. Participant 3 pointed out that many citizens are unaware of climate policies or their potential benefits. They stated, “People don’t understand what climate change means... the message is not reaching the grassroots.” This insight aligns with findings from Section 1, suggesting that weak communication strategies and limited grassroots mobilization continue to undermine the broader goals of policy implementation.

Another critical challenge discussed is the inadequate technical expertise within government institutions. Participant 2 remarked that many officers in key ministries “do not have the capacity to implement climate-specific projects.” Without trained personnel in areas like climate risk assessment, green technology, or monitoring and evaluation, the state struggles to design and manage complex climate initiatives.

This gap is further exacerbated by the absence of training programs or institutional partnerships that could enhance human resource development. Finally, all three participants touched on the limited legal and regulatory framework guiding climate governance in the state. While there is some reference to national-level policies, there appears to be no enabling legislation at the state level to operationalize climate mandates. Participant 1 suggested that the creation of a dedicated climate change department with legislative backing could help formalize roles and unlock greater funding. Participant 2 similarly called for a law that would mainstream climate issues across ministries and local governments.

Theme 5: Opportunities and Recommendations

All three participants acknowledged that the establishment of a climate change unit within the Ministry of Environment, albeit under-resourced, presents a foundational platform that could be expanded. Participant 1 emphasized that this unit could evolve into a fully operational department, given the right political and financial backing. They noted, “If government prioritizes it, the unit can grow into a department with mandate and capacity.” The presence of such a unit, even in its infancy, provides a foothold for more structured policy development and coordination. Participant 2 highlighted the potential of the newly formed State Climate Change Working Group. Although not yet fully institutionalized, it offers an avenue for inter-ministerial and multi-sectoral collaboration. According to the participant, “this group can become a central coordination platform... we just need to give it structure, funding, and legal status.” Formalizing this group could help harmonize fragmented efforts across ministries and provide a singular voice for climate policy direction and implementation. There is also an opportunity for legislative advancement.

Participants agreed that passing a state-level climate change bill would provide a robust legal framework to support planning, budgeting, and enforcement. Participant 3 suggested that this law should mandate climate mainstreaming in all development sectors, from agriculture to infrastructure, and establish accountability mechanisms: “We need laws that bind agencies to include climate in their programs.”

On the capacity-building front, there is a strong demand for training and knowledge transfer. Participant 2 recommended partnerships with academic institutions and international agencies to build technical expertise in areas such as climate risk assessment, renewable energy, and environmental monitoring. This would help equip civil servants and local officials with the tools needed to design and implement effective climate interventions. Participants also saw potential in enhancing public and community engagement. While awareness remains low at the grassroots level, they believed that targeted sensitization campaigns, especially in local languages and through traditional leaders, could bridge this gap. Participant 1 stated, “We can reach the grassroots through schools, religious institutions, and local leaders... they are trusted voices.” Empowering civil society organizations and community-based groups to act as intermediaries in awareness and action was seen as a viable strategy for deepening public participation.

Another opportunity lies in leveraging donor and federal support more strategically. Participant 2 observed that while several climate-related projects are donor-driven, the state often fails to coordinate them effectively or scale up their impacts. Better alignment of donor programs with state priorities, as well as improved monitoring and reporting systems, could help ensure sustainability beyond project lifecycles. Lastly, the political momentum at the federal level including Nigeria's commitments under the Paris

Agreement and the Nationally Determined Contributions (NDCs) offers a policy window for Adamawa to align itself with national and global climate goals. Participants stressed that this alignment could attract technical and financial support, but it would require demonstrable political will at the state level.

Discussion

The survey data suggests an encouraging baseline in terms of climate change awareness in Adamawa State. Nearly all respondents reported awareness of climate change and agreed that climate change is a critical issue requiring immediate action. Moreover, the demographic profile including an almost equal gender distribution and significant participation from young and middle-aged adults reflects a broad-based engagement that is crucial for long-term climate resilience. However, this widespread awareness does not extend uniformly to an understanding of the specific policy framework designed to combat climate change. In theory, this level of public understanding and concern should fuel a strong demand for effective local climate policies and create an engaged citizenry poised to support necessary adaptations. However, this optimism is tempered by notable gaps when it comes to understanding and implementing the climate change policy. Only about 54% of survey respondents indicated that they were aware of Nigeria's National Climate Change Policy. Interviews further revealed that even among institutional actors such as those in key ministries and local government agencies, familiarity with the NCCP is patchy. This highlights a disconnect between general environmental consciousness and policy literacy. Such gaps are particularly troubling given that the NCCP (2021–2030) outlines critical strategies to integrate climate considerations into development planning and budgeting.

An examination of the survey findings shows that the primary sources through which respondents

first learned about climate change were traditional media radio and television which accounted for 60% of the responses. Schools and educational institutions came a distant second at 23%, followed by social media (13%), while government-led awareness campaigns were rarely cited (only 3%). These findings indicate that although public awareness is high, the channels responsible for disseminating information may not be effectively linked to the specific content of climate policies. This communication gap is significant. For instance, the National Climate Change Policy explicitly emphasizes the need for integrated communication strategies that not only raise general awareness but also enhance understanding of policy frameworks and directives. Given that only 3% of respondents cited government campaigns as a source of their information, it suggests that state authorities might be missing a critical opportunity to inform citizens about the actionable components of climate policy. The survey respondents were well aware of the diverse impacts that climate change has on the state. When asked about the effects, respondents most commonly cited rising temperatures, flooding, droughts, erosion, crop failure, and loss of wildlife. Notably, 76% of those surveyed reported experiencing the impacts of climate change directly, highlighting that these environmental changes are not merely perceived threats but are affecting daily life and livelihoods. This direct experience with the adverse effects of climate change should ideally translate into a more nuanced demand for robust state-led climate action. In Adamawa, however, the immediacy of these impacts contrasts sharply with the fragmented and largely reactive approach the state is currently taking. While respondents see the problems clearly, there remains a concerning lack of sustained and coordinated climate action at the state level.

A crucial factor contributing to the observed shortcomings in policy integration is the

fragmented nature of institutional responses. Interviews with state officials shed light on a disjointed approach in which climate change initiatives are often implemented in isolated pockets rather than as part of a comprehensive state-wide strategy. For example, while some ministries particularly the Ministry of Environment do incorporate climate considerations in planning, these efforts are isolated and reactive rather than being part of a coordinated, long-term vision. Another interviewee observed that the climate change unit within the Ministry of Environment was severely under-resourced, lacking both the technical capacity and the institutional mandate to implement far-reaching climate policies effectively. A third, more critical participant argued that the integration of the NCCP is virtually non-existent in key sectors such as agriculture and water resources, with climate considerations remaining a peripheral concern rather than a central priority in state development plans. This situation is starkly at odds with the mandates of national policies like Nigeria's Climate Change Act, 2021, which requires the establishment of a National Council on Climate Change with the responsibility of coordinating climate action across all levels of government. The failure to effectively domesticize such frameworks at the state level thus represents both a policy and an institutional challenge.

Despite the challenges in policy integration, the survey reveals that a majority of respondents are aware of some form of state-led climate initiatives. However, the mixed perception of the effectiveness of these initiatives suggests that while the state has launched several programs, their scale, continuity, and impact remain inadequate in the eyes of the public. One of the recurring themes in the interviews is the criticism that state-led actions are often primarily triggered by crises such as flooding or donor-driven emergencies rather than being part of a proactive, strategic vision for climate resilience. This

approach not only limits the long-term effectiveness of interventions but also contributes to public scepticism about the state's commitment to addressing climate issues comprehensively. The recent presentation of the draft Adamawa State Policy on Climate Change (ADASPOCC) by the Global Initiative for Food Security and Ecosystem Preservation (GIFSEP) exemplifies a growing recognition among policymakers of the need to institutionalize climate change frameworks at the subnational level. Yet, the slow pace of domesticating these policies reveals the deep structural and political challenges that continue to impede state-level climate action. Another significant issue is the chronic underfunding that plagues state-led climate initiatives. Political will, or the lack thereof, is another barrier that emerges from both survey responses and interviews. Several respondents and interviewees noted that state-level political priorities often tilt toward infrastructure and short-term economic development projects. In a context where environmental challenges such as flooding, drought, and soil degradation directly impact livelihoods, it is particularly frustrating to see climate action relegated to a lower priority. The NCCP calls for a rigorous integration of environmental considerations into all sectors of governance, yet political inertia and competing priorities hinder effective implementation.

Despite these challenges, there are opportunities that Adamawa can leverage to create a more sustainable and coordinated climate response. The high level of public awareness and the willingness expressed by the majority of respondents to participate in community climate programs suggest that the groundwork for a more engaged and resilient society already exists. What is required now is a concerted effort by the state government to strengthen institutional capacity and improve inter-agency coordination. By expanding the climate change unit into a more robust department with a clear mandate,

providing sufficient resources and training, and establishing platforms for regular stakeholder dialogue, the state can begin to bridge the policy-implementation gap. Although national policies offer an ambitious and comprehensive framework to achieve net zero emissions and build resilience, their successful implementation at the state level depends on their effective adaptation to local contexts. Adamawa's experience shows that while national priorities are well articulated at the federal level, the process of "domesticating" these policies, in other words, adapting and integrating them into state developmental plans, is hampered by institutional, financial, and political challenges. A holistic approach to strengthening Adamawa's climate governance would also involve developing robust monitoring and evaluation systems. These systems would provide feedback on the effectiveness of state initiatives, highlight areas for improvement, and build greater public confidence by demonstrating tangible progress. Regular stakeholder dialogues, similar to the "State Policy Dialogue and Co-Creation Workshop" organized by the Adamawa State Planning Commission, should be institutionalized. Such forums are invaluable for consolidating public input and ensuring that the state's climate strategy remains dynamic and adaptable in the face of evolving environmental challenges.

Conclusion

Adamawa State's research findings highlight both the strengths and challenges inherent in its climate action efforts. On one hand, there is remarkable public awareness evidenced by the nearly universal recognition of climate change and a strong willingness to engage in local climate programs. However, this enthusiasm is dampened by the limited dissemination and operationalization of specific policy directives. The state's fragmented institutional framework, which struggles with insufficient inter-agency coordination and chronic underfunding, has resulted in a largely reactive approach to climate

issues. State-led initiatives, while present, are perceived as sporadic and inadequate to address the urgent and diverse environmental challenges experienced by communities.

The findings emphasize that while community awareness and desire for effective climate action exist, the translation of national frameworks into tangible state policies remains a significant gap. Improving the state's response will require strengthening institutional capacity, securing dedicated funding streams, and adopting more proactive, integrated strategies. Enhanced communication efforts are equally vital, ensuring that citizens not only know about climate change but also understand the specific policies and actions available to address its impacts.

Recommendations

Adamawa State can strengthen its climate action framework by taking a multifaceted and integrated approach that aligns local priorities with national mandates. Based on this study, the following recommendations are made:

- 1. Strengthen Institutional Capacity:** Upgrade the climate change unit within the Ministry of Environment into a full-fledged department with clear mandates, sufficient staffing, and technical expertise.
- 2. Legal Framework Development:** Domesticate the National Climate Change Policy to mainstream climate considerations across all sectors and provide a legal foundation for climate budgeting, planning, and accountability.
- 3. Enhance Policy Awareness:** Conduct targeted capacity-building programs for government officials and local leaders to improve understanding of the NCCP and its implications for state governance.
- 4. Mainstream Climate into**

Development Planning: Integrate climate considerations systematically into state development plans, particularly in sectors like agriculture, water, and infrastructure.

- 5. Secure and Align Funding:** Allocate dedicated budgetary resources for climate change and ensure that donor projects align with the state's long-term climate goals. Improve financial tracking and transparency mechanisms.
- 6. Expand Public Engagement:** Partner with CSOs, educational institutions, and religious organizations to run public awareness campaigns in local languages and formats accessible to grassroots communities.
- 7. Leverage Existing Structures:** Institutionalize and empower the State Climate Change Working Group as a central coordinating body with legal backing and inter-ministerial representation.
- 8. Foster Multi-Stakeholder Collaboration:** Encourage collaboration between government, NGOs, academia, and the private sector to foster innovation and share best practices in climate action.
- 9. Develop Monitoring and Evaluation Systems:** Establish frameworks to track the effectiveness of climate initiatives, learn from past interventions, and adjust strategies accordingly.
- 10. Align with National and Global Goals:** Position Adamawa State to benefit from federal and international climate support by aligning local plans with Nigeria's NDCs and the Paris Agreement. Interest in grassroots involvement. Only 12% stated they were not interested.

ANAMBRA STATE

Presentation of Survey Findings

In Anambra State, 33 respondents (66%) were male, while 17 respondents (34%) were female. This indicates a moderate gender disparity, suggesting that men may be more engaged in climate-related issues in Anambra State.

The age distribution of respondents in Anambra State showed that the largest proportion (21 respondents, 42%) were between 25 and 34 years old. This was followed by the 18 to 24 age group, which accounted for 18 respondents (36%). The 35 to 44 age group represented 10 respondents (20%), while only 1 respondent (2%) was aged 45 to 54 years. These results suggest that young adults form the most engaged demographic in climate-related issues in Anambra State.

A significant majority (66%) of respondents had attained tertiary education, while 30% reported having postgraduate qualifications. Only 2% of respondents had completed secondary school, and another 2% had primary school education. This indicates that climate awareness efforts in Anambra State have been more successful in reaching educated individuals.

Respondents in Anambra State reported diverse occupations. Students made up the largest group, representing 32% of the sample. Civil servants accounted for 24%, while those involved in trading or business made up 18%. Artisans represented 4%, and the "others" category accounted for 22%, reflecting a wide range of additional professional backgrounds. This occupational diversity indicates that climate change awareness is relevant across different sectors in Anambra State.

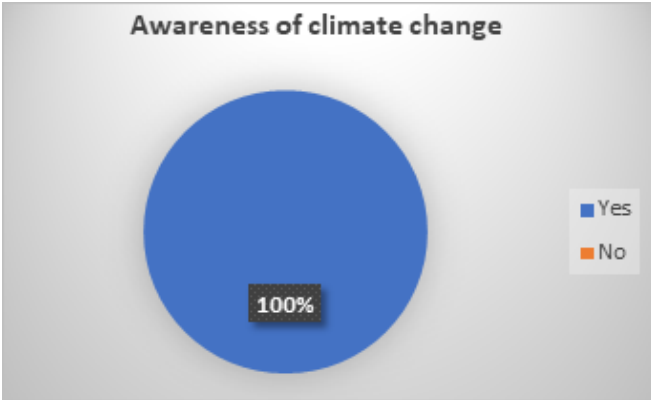


Figure 1. Awareness of climate change

All respondents (100%) reported that they had heard of climate change, reflecting a high level of general awareness among Anambra State residents.

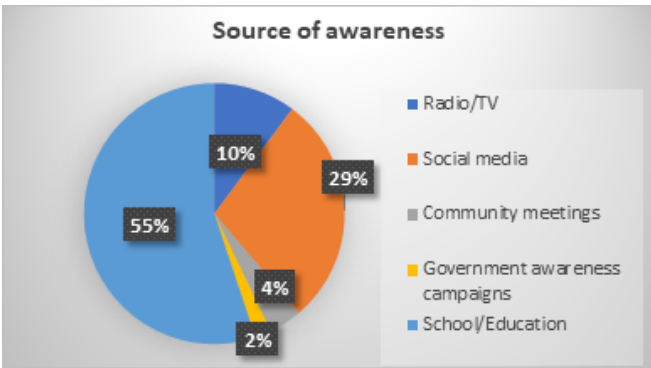


Figure 2. Source of climate change awareness

Schools and educational institutions were the most frequently cited sources of information about climate change, mentioned by 55% of respondents. Social media followed at 29%, while 10% of respondents first learned about climate change through Radio/TV. Community meetings accounted for 4%, and Government awareness campaigns were cited by 2% of respondents. These findings highlight the influential role of both formal education and media in spreading

climate awareness.

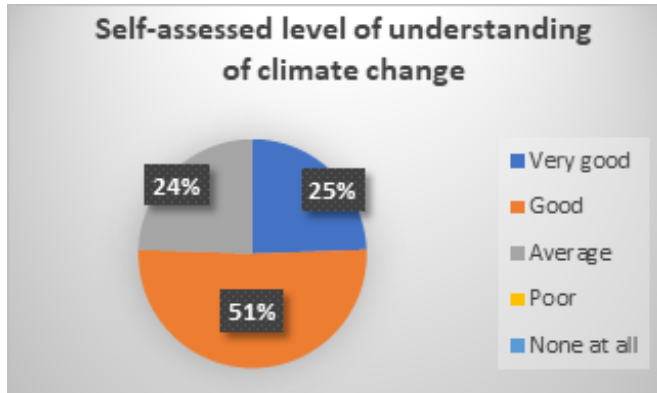


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 51% of respondents rated their knowledge as good, while 25% described it as very good. Meanwhile, 24% reported having an average understanding, and no respondents rated their understanding as poor or indicated that they did not know about climate change. These results suggest that most respondents have a solid grasp of climate change issues.

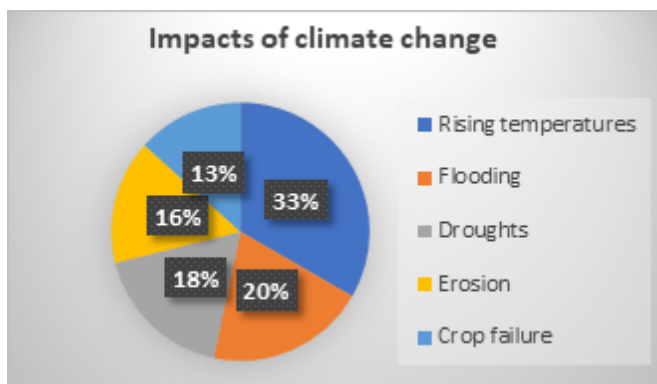


Figure 4. Perceived impacts of climate change

Respondents identified multiple consequences of climate change in Anambra State. Rising temperatures were the most frequently mentioned impact, cited by 33% of participants. Flooding was mentioned by 20%, while droughts were identified by 18% of respondents. Erosion and crop failure were cited by 16% and 13% of respondents, respectively. These findings reflect

the diverse environmental challenges posed by climate change in Anambra State.

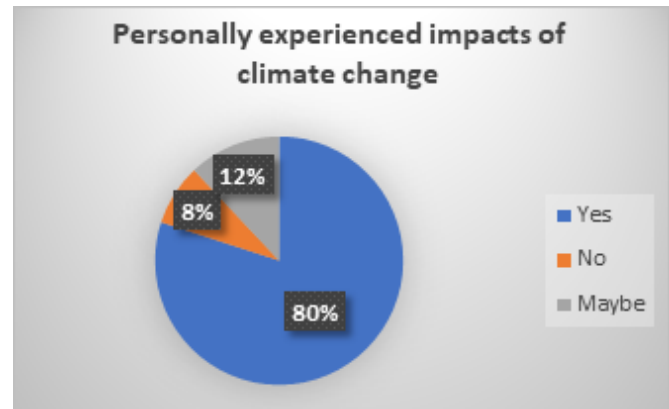


Figure 5. Direct experience with climate change

A large majority (80%) of respondents reported that they had personally experienced the impacts of climate change. Meanwhile, 8% said they had not, and 12% were uncertain. Respondents reported a wide range of observed impacts, including increased flooding, rising temperatures, and unpredictable weather patterns. Several participants mentioned prolonged dry seasons and the disappearance of the harmattan season. Others reported low agricultural yields due to extreme weather, increased erosion, and infrastructure damage from flooding. Respondents also noted that heatwaves and air pollution have affected human health and economic productivity.

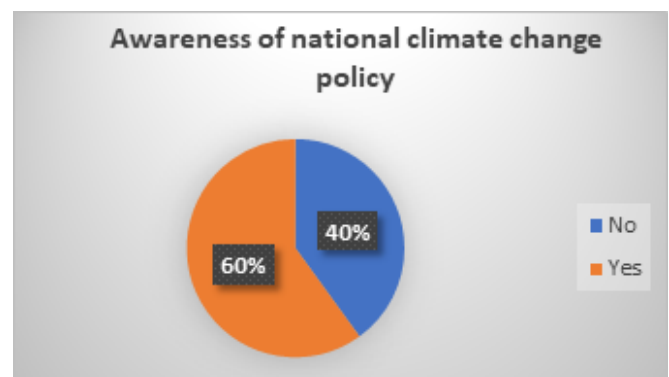


Figure 6. Awareness of national climate change policy

Awareness of Nigeria's National Climate Change Policy was moderate, with 60% of respondents

indicating they were aware of it, while 40% reported being unaware of the policy.

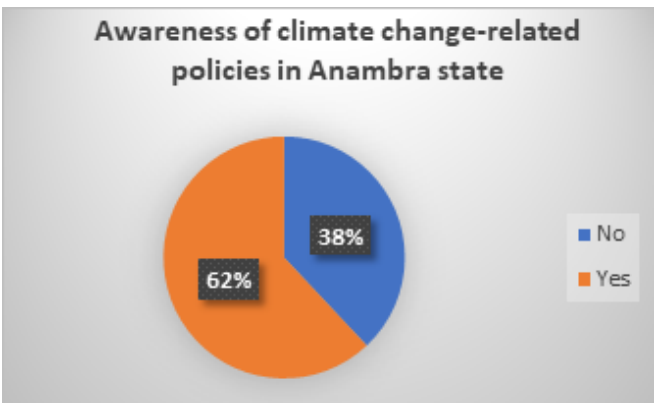


Figure 7. Awareness of state-led climate actions

Awareness of state-level climate initiatives was relatively high, with 62% of respondents stating they were aware of such policies, while 38% were not.

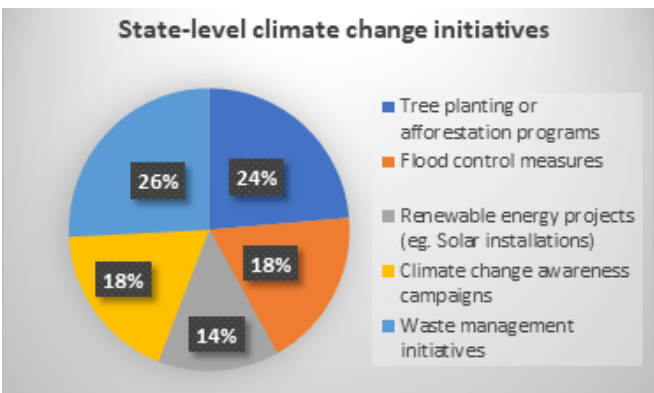


Figure 8. Types of climate change initiatives identified

Among those aware of state-led initiatives, 26% identified waste management initiatives as the most recognized action. Tree planting and afforestation programs were mentioned by 24%, while flood control measures and climate change awareness campaigns were each cited by 18%. Renewable energy projects, such as solar installations, were mentioned by 14% of respondents

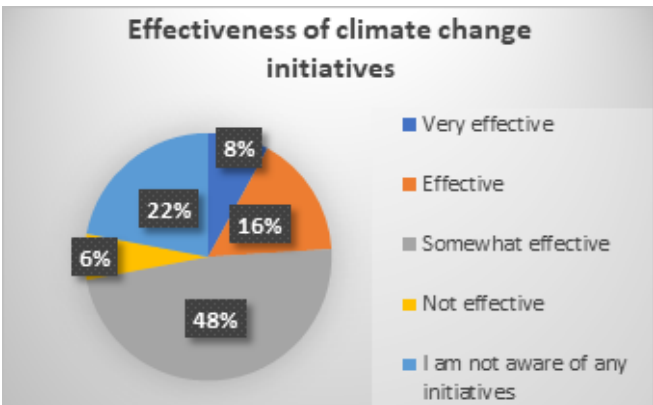


Figure 9. Perceived effectiveness of initiatives

Respondents had mixed views on the effectiveness of climate change initiatives in Anambra State. While just 8% rated these initiatives as very effective, 16% found them effective. Meanwhile, a significant 48% considered them somewhat effective, and 6% described them as ineffective. Another 22% reported being unaware of any state-level initiatives..

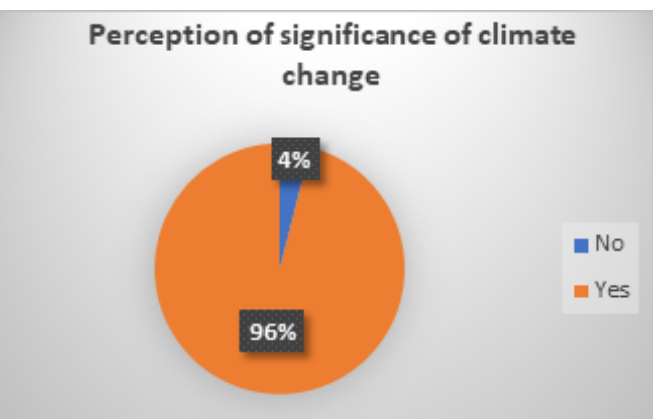


Figure 10. Perception of climate change urgency

An overwhelming 96% of respondents agreed that climate change is a significant issue that needs to be addressed in Anambra State, while only 4% did not see it as a pressing concern.

Respondents identified several barriers to effective climate action in Anambra State. Lack of awareness, poor governance, and corruption were the most frequently mentioned challenges. Other

barriers included inadequate funding, weak policy enforcement, and limited technical expertise. Respondents also cited rapid urbanization, deforestation, and poor infrastructure as significant obstacles. Respondents also proposed several measures for the state government, including increased public awareness campaigns, improved waste management, and investment in renewable energy. Many suggested expanding flood control infrastructures, promoting afforestation, and improving agricultural resilience to climate shocks. Respondents also emphasized the need for stricter environmental regulations and greater political accountability.

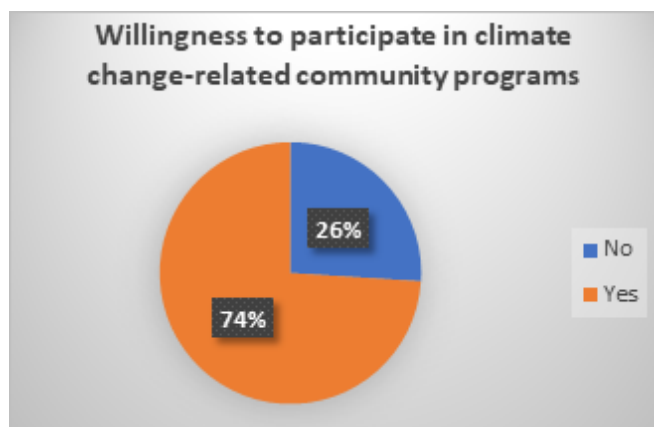


Figure 11. Willingness to participate in climate programs

A strong majority (74%) of respondents expressed willingness to participate in community programs related to climate change, while 26% stated they were not interested.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

The respondent expressed concern that awareness creation is not happening at the rate the crisis demands and that the public continues to engage in environmentally harmful practices

such as indiscriminate development and tree felling. The current state of climate communication is characterized by irregular and insufficient outreach efforts, largely carried out through radio and television, especially on the state-owned media, and ad hoc sensitization sessions with traditional rulers and community leaders. As the participant noted: "There are pockets of awareness creation on radio... and irregular sensitisation with traditional rulers and presidents-general of communities." However, these efforts are often spearheaded by NGOs, rather than being sustained or institutionalized by the government. The participant specifically mentioned SIDECE, STI Foundation, BCROF, and SafePath Alliance as key actors filling the awareness gap. Yet their efforts, while commendable, are limited by funding constraints and geographic reach: *"Sometimes, sensitization programs are organised and bankrolled by NGOs and not the state government... they can only carry such campaigns to the limits of their funding capacity."*

A clear disconnect exists between stakeholders familiar with national climate frameworks and the general public. While the National Climate Change Policy (NCCP) is known among government officials in relevant MDAs, academics, and climate advocates, it has not been effectively communicated to the broader population. The participant noted: "The general public is not appreciably aware of the policies and laws as well as their contents. And you wonder how they can key into the fight if they are unaware of these documents." This lack of widespread policy literacy raises concerns about the inclusiveness of the climate response and the extent to which citizens can participate in or support state initiatives. Notably, the absence of strong public awareness also contributes to non-compliance with existing environmental regulations, such as the state housing policy which mandates green space and tree planting. The participant observed that

despite the policy, compliance is poor: *“That policy is hardly adhered to.”*

Theme 2: Policy Integration and Implementation

A key milestone in Anambra's policy journey is the establishment of the Erosion, Watershed and Climate Change Agency (ANSEWCCA) in 2020. This agency is tasked with mainstreaming and implementing the state's climate resilience agenda, and spearheading actions such as reforestation, ecological restoration, and other environmentally sustainable interventions. According to the respondent: “Anambra has a climate change action plan... and has established an agency... to implement climate resilience agenda while also undertaking reforestation and vegetative measures.” This places Anambra among a small number of Nigerian states with a dedicated agency focused on climate change, which provides a strong institutional foundation for further integration. There is evidence that climate change is being addressed not only within the Ministry of Environment but also in collaboration with other relevant MDAs, particularly the Ministries of Transportation and Agriculture. For example, the development of a statewide rail masterplan reflects deliberate alignment with the National Climate Change Policy and Nigeria's Nationally Determined Contributions (NDCs). The rail project incorporates climate-resilient design principles, renewable energy integration, and low-carbon transport technologies aimed at reducing the state's reliance on fossil fuel-based transportation: *“The rail masterplan incorporates climate-resilient design principles... and is expected to contribute to reducing GHG emissions.”*

In addition to the transport sector, the Ministry of Agriculture is reportedly promoting climate-smart agriculture, including the cultivation of short-duration and flood-resistant crops, agroecological practices, and crop diversification.

These actions target vulnerable farming communities in flood-prone areas, helping to build agricultural resilience to climate variability. However, challenges to full integration remain. While Anambra has a climate action plan, it does not yet have a comprehensive state-level climate change policy, which would provide legal weight, clearly defined institutional roles, and enforceable obligations across all sectors. The participant stated: *“The state does have a climate change plan... but it cannot be said to have properly implemented same”*

In terms of sectoral engagement, while progress has been made in transport and agriculture, energy governance is limited by institutional gaps. The state has no Ministry of Energy, only a Ministry of Power and Water Resources, and according to the respondent, there is little public knowledge about its climate-related work. This indicates an area where integration is still underdeveloped. Moreover, although climate awareness is improving among MDAs and some policy actions are underway, the enforcement of environmental and urban development policies is weak. The housing policy that mandates green space and tree planting is routinely ignored, especially by wealthy developers: *“My experience around the state shows that that policy is hardly adhered to.”*

Theme 3: State-Led Climate Actions

One of the most significant government-led efforts is the statewide rail masterplan, jointly developed by the Ministry of Transportation and the Ministry of Environment. This project represents a strategic move to align state infrastructure with national and global climate mitigation targets, notably Nigeria's NDC. It is designed to promote low-carbon, climate-resilient transportation, incorporating features such as sustainable construction materials, energy-efficient systems, and renewable energy use: *“The rail masterplan is poised to facilitate a sustainable and low-carbon transportation*

system... contributing significantly to Anambra State's journey towards a net-zero carbon future." Beyond transportation, Anambra State is also investing heavily in tree planting and forest restoration as part of its climate adaptation and mitigation agenda. A major initiative involves the distribution of economic tree seedlings to residents to combat erosion and enhance community livelihoods. The state has launched a goal to plant up to ten million seedlings, complemented by a community-driven afforestation campaign in which each of the 179 communities is expected to contribute 1,000 trees totalling 179,000 seedlings: *"This initiative is expected to sequester approximately 5,303.7 tons of CO₂ over 30 years... enhancing environmental resilience."*

These actions are part of a broader strategy to combat gully erosion, which poses a severe threat in many parts of the state. The emphasis on community-led restoration suggests a strong grassroots component and reflects the government's attempt to embed climate solutions at the local level. In the agriculture sector, the state is promoting a suite of climate-smart practices through its Ministry of Agriculture. These include short-duration crop varieties, which can be harvested before flood seasons, flood-resistant and early-maturing rice strains, suited to vulnerable regions, and crop diversification, to mitigate the risks of climate-induced crop failure. According to the respondents, many farmers especially those informed through government outreach have begun to adopt these strategies to cope with climate variability, particularly in high-risk areas.

The state's green and just transition efforts also received international visibility in November 2024, during a two-day climate event supported by UNIDO. This engagement points to Anambra's ambition to align with global climate frameworks and signals its interest in attracting international

partnerships and funding for sustainable development. While the respondent acknowledged that NGOs play a vital role in filling gaps, particularly in public education and advocacy, it is clear that many of these climate actions are state-initiated and government-led, especially under the guidance of the Erosion, Watershed and Climate Change Agency (ANSEWCCA). Community members are also actively participating in planting trees, promoting environmental campaigns, and supporting government outreach initiatives at the local level.

Theme 4: Challenges in Climate Policy Implementation

One of the most significant challenges is the gap between policy formulation and implementation. While the state has a climate change plan, the respondent noted that it "cannot be said to have properly implemented same as its mean," implying that while the plan exists in theory, its execution lacks depth, structure, and measurable results. The absence of a formal climate change policy distinct from the climate plan is also a limiting factor. Without a legally binding framework, climate action remains optional and lacks enforcement power, making it difficult to mandate inter-agency coordination or allocate long-term resources effectively. The participant suggested that formal legislation would enhance accountability and streamline policy alignment across ministries and sectors.

A recurring barrier is inadequate funding, which affects the state's capacity to implement projects at scale. The respondent pointed out that funding constraints have affected awareness campaigns, compliance monitoring, infrastructure investment, and the rollout of renewable energy or adaptation measures. "Funding, which is critical to climate response, is a major gap... We still talk and plan more than we do." The implementation of the National Climate Change Policy (NCCP) is also seen as lacking momentum, both at the federal

and state levels. The respondent observed that weak national-level enforcement and coordination ripple down to the states, where climate action is still not treated with sufficient urgency. *“The implementation of the policy at the national level is not as serious as expected and that is also affecting the subnational.”*

Another pressing issue is the weak enforcement of environmental and planning regulations, especially in urban development. The interviewee emphasized that Anambra's wealthy elite often disregard housing and environmental guidelines, such as the requirement to plant green vegetation and preserve land space. This non-compliance undermines urban sustainability and contributes to worsening erosion and ecological degradation. *“Anambra is a home to many multi-millionaires and billionaires... urbanisation is done in flagrant disregard for the environment.”* The challenge is further compounded by low public awareness, which continues to hinder community engagement and compliance. While NGOs and select government departments are active in sensitization, the lack of a unified, state-led communication strategy means that climate literacy remains limited, especially in rural areas. The absence of decentralized implementation mechanisms was also noted. The state has not yet effectively empowered local governments to implement or monitor climate-related initiatives. Without this vertical integration, grassroots actions remain disconnected from state policies, and bottom-up innovations are less likely to be captured and scaled.

Theme 5: Opportunities and Recommendations

One of the most promising opportunities lies in the development of a comprehensive state climate policy to complement the existing action plan. The respondent emphasized the need to formalize climate governance through legislation, which would clarify institutional roles, strengthen

enforcement mechanisms, and promote policy continuity across political administrations. On the institutional front, there is a call to strengthen the State Climate Change Agency (ANSEWCCA) and ensure that climate action desks are active across all key MDAs, particularly in Agriculture, Environment, Urban Planning, and Power. A major recommendation is the establishment of a Multi-Stakeholder Climate Council, involving government, civil society, academia, and the private sector to coordinate efforts and harmonize policies. The respondent advocated for integrating climate action into the state's development plans and budgeting processes, including mandating Climate Impact Assessments (CIAs) for new infrastructure projects. This would help to mainstream climate considerations into all sectors and elevate environmental sustainability to a development priority. Financially, the state is encouraged to pursue green budgeting by dedicating a significant portion of its budget to climate mitigation and adaptation. The idea of establishing a Green Investment Fund was raised to attract private sector investment and unlock access to federal and international climate finance (e.g., the Green Climate Fund, Adaptation Fund, and African Development Bank grants).

Another key opportunity is in renewable energy adoption, especially for underserved rural communities. The state could incentivize solar energy for homes, businesses, and public institutions, and support the growth of solar mini-grids and energy-efficient technologies. Public-private partnerships were recommended to mobilize financing for clean energy infrastructure. In agriculture, the state has the potential to build on existing climate-smart practices by scaling up farmer training in drought-resistant crops, agroforestry, and improved irrigation systems. This would enhance food security and reduce vulnerability to droughts and floods. The respondent also highlighted waste management

and circular economy practices as opportunities. These include expanding waste recycling programs, promoting composting, and exploring waste-to-energy technologies. Incentives should be provided for businesses that adopt eco-friendly packaging and sustainable production methods. On the education and advocacy front, the state is encouraged to integrate climate change into school curricula and launch public awareness campaigns targeting schools, markets, and communities. Importantly, the respondent advocated for the inclusion of traditional and religious leaders in climate messaging to boost cultural legitimacy and behavioural change: "Climate education campaigns... must be beefed up by involving traditional and religious leaders." Digital innovation was also mentioned. The creation of mobile platforms or apps to deliver real-time climate alerts, risk warnings, and guidance could serve as a valuable adaptation tool, especially in flood-prone areas. Finally, the interviewee emphasized the importance of building a robust climate data infrastructure. This includes establishing a Climate Data Center to monitor emissions, temperature trends, and disaster risks. The state could also partner with universities and research institutions to provide evidence-based planning and technical support.

Discussion

Survey data indicate a remarkably high level of general awareness about climate change among respondents with 100% of participants confirming they were aware of climate change. Formal education, predominantly occurring in schools and higher education institutions (with 66% holding tertiary and 30% postgraduate qualifications), has played a significant role in fostering this awareness. The younger demographics (particularly those between 18 and 34 years old) overwhelmingly dominate the sample, suggesting that contemporary education and media channels, especially social media, are effectively transmitting climate knowledge.

However, a notable divergence appears when it comes to policy-specific awareness. While 60% of respondents were aware of Nigeria's National Climate Change Policy and 62% knew of state-led initiatives, this leaves a significant proportion with limited or no familiarity with the concrete policy frameworks that underpin state actions. Interview narratives further reinforce this point; key stakeholders argue that while there is an understanding of climate change among elites and affiliated agencies, there is a clear disconnect between national frameworks and the general public's policy literacy. This gap not only limits public engagement in climate initiatives but also compromises collective compliance with environmental guidelines.

A standout institutional development in Anambra State is the creation of the Erosion, Watershed and Climate Change Agency (ANSEWCCA). This agency symbolizes the state's proactive steps towards mainstreaming climate resilience and underscores a commitment to institutionalizing climate action. The state's climate action plan reflected in notable projects such as the statewide rail masterplan demonstrates efforts to integrate climate resilience into infrastructural and sectoral development. For instance, the rail master plan, which incorporates low-carbon technologies and climate-resilient design principles, represents a forward-looking initiative aimed at reducing greenhouse gas emissions. Similarly, tree planting and afforestation projects aim not only at environmental restoration but also at community resilience against climate impacts like erosion and flooding.

Despite these initiatives, interviews consistently highlighted a key limitation: the absence of a robust, legally binding state climate policy. The existing climate action plan, though ambitious, lacks the enforceable structure necessary to ensure accountability and inter-agency coordination. The fragmented implementation

becomes particularly evident in sectors like energy governance, where the limited role of the Ministry of Power and Water Resources and the absence of a dedicated Ministry of Energy results in insufficient integration of climate considerations. This institutional gap is mirrored in other areas such as urban planning, where poor enforcement of environmental regulations and non-compliance by affluent developers continue to undermine sustainable development.

The survey findings reveal that while respondents are aware of a range of state-led initiatives (with waste management, afforestation, and flood control receiving notable recognition), perceptions of their effectiveness are mixed. The majority of respondents classified these initiatives as “somewhat effective,” and a significant minority admitted to limited awareness of any state-level interventions. This mixed assessment is not unfounded; in interviews, experts and stakeholders pointed to funding constraints as a primary barrier to effective implementation. Funding shortfalls appear to affect multiple fronts; from the rollout of climate education campaigns to large-scale infrastructure investments inhibiting the scaling and impact of otherwise innovative projects.

An underlying theme across both survey and interview data is the challenge posed by inconsistent policy enforcement. Survey respondents identified multiple barriers to effective climate action, including corruption, inadequate funding, poor governance, rapid urbanization, and limited technical expertise. These challenges are compounded by what interviewees characterize as the “gap between policy formulation and actual implementation.” Despite having sound conceptual frameworks (such as the climate action plan), the absence of a comprehensive and enforceable state climate policy means that many initiatives remain underfunded, poorly coordinated, or subjected to lax monitoring. This inadequacy is particularly

evident in urban areas, where weak enforcement of environmental regulations by affluent developers exacerbates issues such as erosion and unsustainable land use.

Despite systemic challenges, the study's findings suggest significant optimism for future improvements. A large majority (96%) of respondents view climate change as a pressing issue, with 74% willing to participate in community climate programs. This high level of perceived urgency and willingness to engage indicates that community mobilization can potentially compensate for some institutional gaps if properly harnessed. Interviewees recommend leveraging digital tools for real-time climate alerts and engaging traditional leaders to enhance local compliance and resilience. Both the survey and interview responses suggest that with a more cohesive strategy comprising robust policy formulation, decentralized implementation mechanisms, and comprehensive public engagement, the state's climate actions can be substantially strengthened.

Conclusion

The Anambra State case study highlights both the opportunities and challenges inherent in subnational climate governance in Nigeria. Public awareness of climate change is relatively high, and there is a strong sense of urgency among residents and stakeholders. The state has made notable strides in integrating climate considerations into infrastructure, agriculture, and environmental management. The establishment of a dedicated climate agency and the development of a climate action plan place Anambra ahead of many states in Nigeria. However, implementation remains fragmented. The absence of a binding state climate policy, inadequate funding, and limited institutional coordination reduces the impact of otherwise promising initiatives. There is also a disconnect between government-led efforts and grassroots awareness, hampering effective

community participation and compliance. Despite policy awareness among officials, weak enforcement and poor urban planning continue to aggravate environmental degradation.

The findings from Anambra mirror broader national challenges of climate governance in Nigeria, including limited policy enforcement, resource constraints, and a need for greater inclusivity. Nevertheless, with its existing foundation and demonstrated commitment, Anambra holds significant potential to become a model for effective state-level climate action if systemic barriers are addressed.

Recommendations

1. **Development of a Localised Climate Change Policy:** Transition from a non-binding climate action plan to developing a localised climate change policy to ensure legal accountability for climate initiatives.
2. **Strengthen Institutional Capacity:** Enhance and resource ANSEWCCA and establish dedicated climate units within key ministries to improve coordination and action.
3. **Integrate Climate in Planning and Budgeting:** Mandate Climate Impact Assessments for projects and adopt green budgeting practices, including a dedicated Green Investment Fund.
4. **Enhance Public Awareness:** Launch sustained, multi-channel educational campaigns and engage traditional leaders to boost both general climate literacy and policy-specific understanding.
5. **Decentralize Implementation:** Empower local governments with capacity-building and resources to

effectively implement and monitor climate initiatives.

6. **Expand Renewable Energy Initiatives:** Promote the adoption of renewable energy technologies through incentives and public-private partnerships, particularly in rural areas.
7. **Improve Waste Management:** Invest in modern waste-to-energy and recycling systems while encouraging sustainable practices among businesses and communities.
8. **Invest in Climate Data and Digital Tools:** Establish a state climate data centre and leverage digital platforms for real-time alerts and public engagement in climate monitoring.

BAYELSA STATE

Presentation of Survey Findings

In Bayelsa State, 25 respondents (61%) were male, while 16 respondents (39%) were female. This indicates a fairly balanced gender distribution, suggesting that both men and women are actively engaged in climate-related issues in Bayelsa State. The age distribution of respondents in Bayelsa State showed that the 45 to 54 age group made up the largest proportion, with 11 respondents (27%). The 35 to 44 age group followed closely, representing 10 respondents (24%), while the 25 to 34 and 55 & above age groups each accounted for 9 respondents (22%). Only 2 respondents (5%) were aged 18 to 24. These results indicate that young and middle-aged adults form the most engaged demographic in climate-related issues in Bayelsa State.

A significant proportion of respondents (51%) had attained tertiary education, while 34% reported having postgraduate qualifications. Only 12% of respondents had completed secondary school, and 3% had primary school education. This suggests that climate awareness efforts in Bayelsa State have been more successful in reaching educated individuals.

Respondents in Bayelsa State reported a variety of occupations. Civil servants made up the largest group, representing 37% of the sample. Those involved in trading or business accounted for 22%, while artisans comprised 7%. Students and artisans each represented 5% of respondents, and the “others” category accounted for 24%, reflecting a diverse range of additional professional backgrounds. This occupational diversity indicates that climate change awareness is relevant across different sectors in Bayelsa State

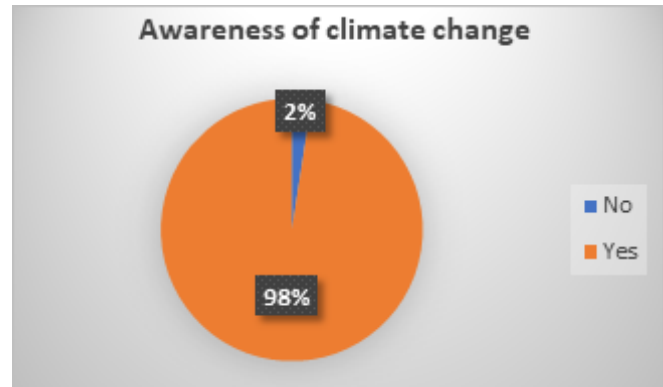


Figure 1. Awareness of climate change

An overwhelming 98% of respondents reported that they had heard of climate change, while only 2% indicated that they were unfamiliar with the term. This reflects a high level of general awareness of climate change in Bayelsa State..

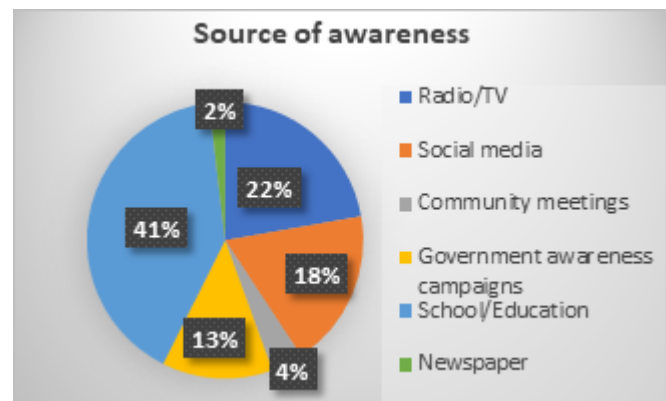


Figure 2. Source of climate change awareness

Schools and educational institutions were the most frequently cited sources of information about climate change, mentioned by 41% of respondents. Radio/TV followed at 22%, while 18% of respondents first learned about climate change from social media. Government awareness campaigns accounted for 13%, while community meetings and newspapers were mentioned by 4%

and 2% of respondents, respectively. These findings highlight the role of both formal education and media in spreading climate awareness.

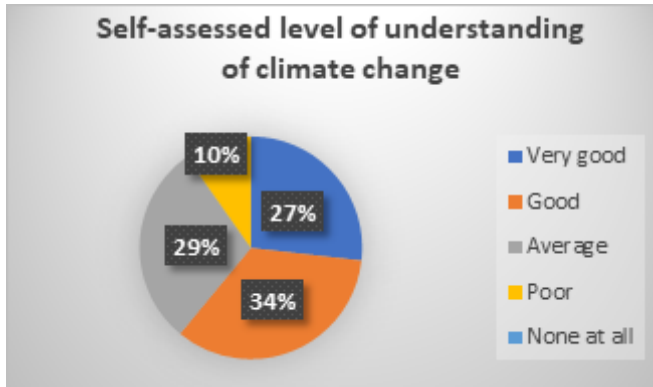


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 34% of respondents rated their knowledge as good, while 27% described it as very good. Meanwhile, 29% reported having an average understanding, and 10% admitted to having poor knowledge. No respondents stated that they had no understanding of climate change. These results suggest that while many respondents have a solid grasp of climate change issues, there is room for deeper understanding.

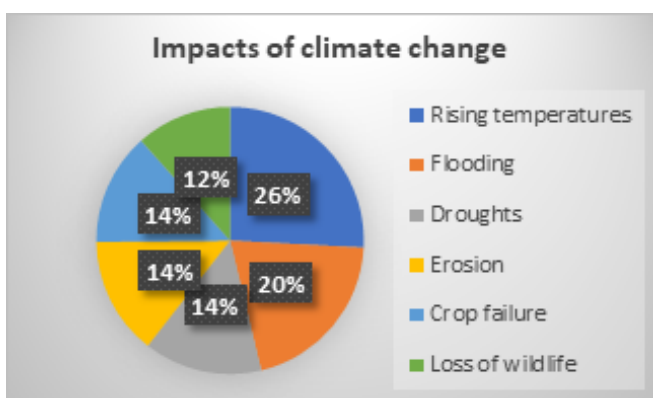


Figure 4. Perceived impacts of climate change

Respondents identified multiple consequences of climate change in Bayelsa State. 'Rising temperatures' was the most frequently mentioned impact, cited by 26% of participants,

followed by flooding (20%) and crop failure, erosion, and droughts at 14% each. Loss of wildlife was mentioned by 12% of respondents. These findings reflect the diverse environmental challenges posed by climate change in Bayelsa State.

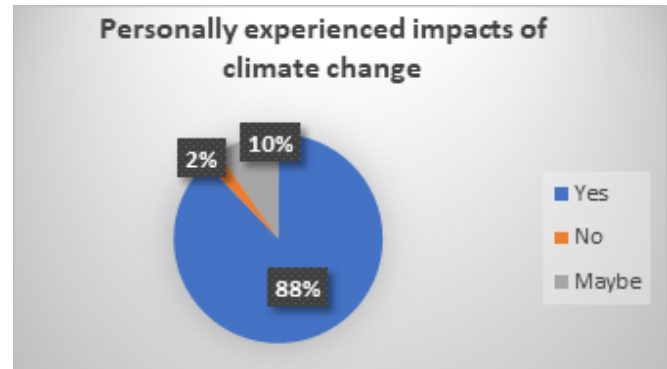


Figure 5. Direct experience with climate change

A large majority (88%) of respondents reported that they had personally experienced the impacts of climate change. Meanwhile, 10% said they were uncertain, and only 2% stated that they had not observed any direct impacts.

Respondents detailed a range of observed impacts, including flooding, rising temperatures, and increased heat levels. Many noted that seasonal patterns have become more unpredictable, with excessive rainfall and flooding displacing communities and damaging infrastructure. Others reported soot pollution from industrial activity, increased crop failure, and health challenges due to extreme weather. Increased erosion and deforestation were also mentioned as significant environmental issues.

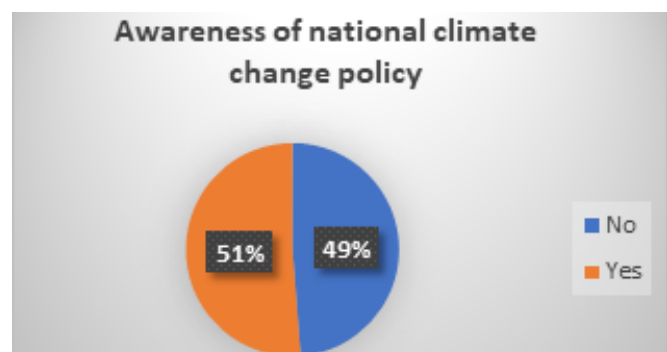


Figure 6. Awareness of national climate change policy

Awareness of Nigeria's National Climate Change Policy was moderate, with 51% of respondents indicating they were aware of it, while 49% reported being unaware of the policy.

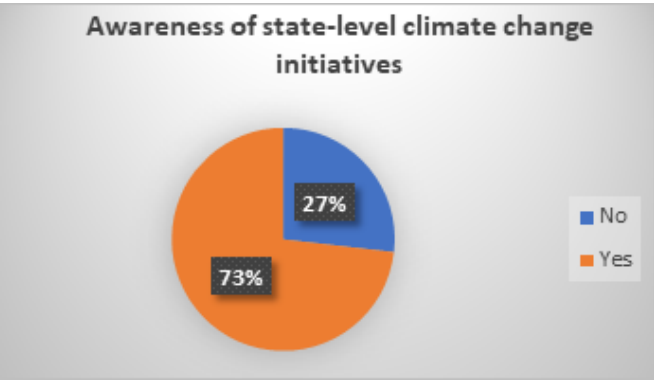


Figure 7. Awareness of state-led climate actions

Awareness of state-level climate initiatives was relatively high, with 73% of respondents stating they were aware of such policies, while 27% were not.

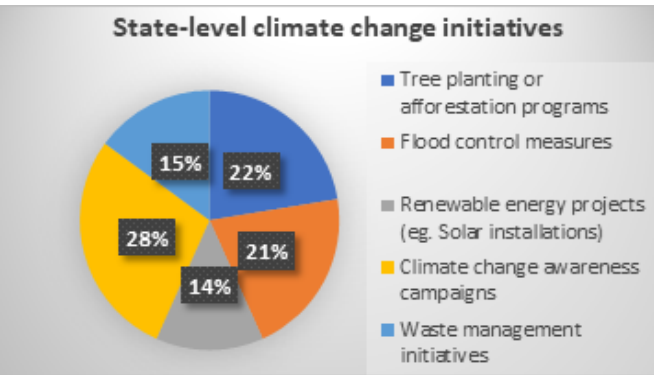


Figure 8. Types of climate change initiatives identified

Among those aware of state-led initiatives, 28% identified climate change awareness campaigns as the most recognized action. Tree planting and afforestation programs were cited by 22%, while flood control measures were mentioned by 21%. Waste management initiatives were cited by 15% of respondents while renewable energy projects accounted for 14%.

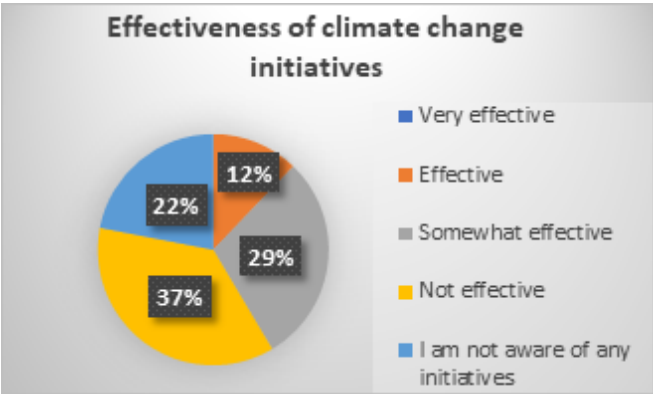


Figure 9. Perceived effectiveness of initiatives

Respondents had mixed views on the effectiveness of state-level initiatives. While 37% rated these initiatives as not effective, 29% described them as somewhat effective. Meanwhile, 22% found them very effective and 12% found them effective.

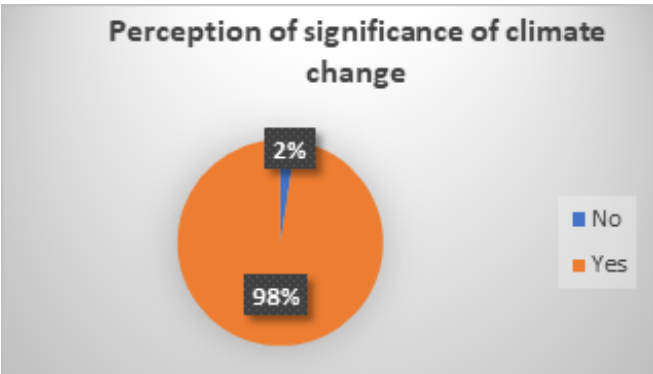


Figure 10. Perception of climate change urgency

An overwhelming 98% of respondents agreed that climate change is a significant issue that needs to be addressed in Bayelsa State, while only 2% did not see it as a pressing concern.

Respondents identified several barriers to effective climate action in Bayelsa State. Lack of political will, poor governance, and corruption were the most frequently mentioned challenges. Other barriers included poor infrastructure, limited funding, and inadequate waste management systems. Some respondents cited industrial pollution, particularly from oil companies, as a major environmental challenge.

Respondents proposed several measures for the state government, including increased public awareness campaigns, improved flood control infrastructure, and stricter enforcement of environmental regulations. Many suggested reducing deforestation, investing in renewable energy, and developing better waste management systems. Respondents also emphasized the need for greater political accountability and increased funding for climate action programs.

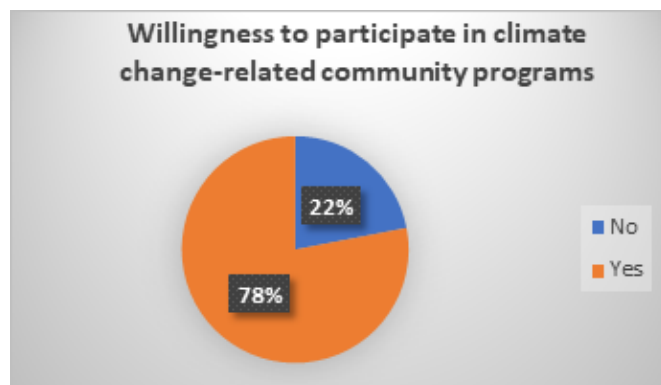


Figure 11. Willingness to participate in climate programs

A strong majority (78%) of respondents expressed willingness to participate in community programs related to climate change, while 22% stated they were not interested.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change

and the Nigerian Climate Change Policy
The findings indicate a significant gap in awareness of climate change in Bayelsa State, particularly among local communities. Participants 1, 3, and 5 noted that while some residents recognize environmental changes such as flooding and rising temperatures, they lack the knowledge to contextualize these changes as manifestations of climate change. Participant 5 stated: "People are feeling the impact but may not be able to describe the phenomenon... If you ask what is climate change, they may not be able to

put it into context." Participant 2 highlighted some improvement in awareness due to frequent flooding in Bayelsa: "More floods have happened in the past 10 years... people are now more aware." The Nigerian Climate Change Policy aims to provide a framework for addressing climate risks at the national and sub-national levels. However, findings suggest limited awareness and application of this policy at the state level. Participant 1 remarked: "I think they're fully aware of it, but I've not seen any influence or actions being taken at the state level." Participant 5 admitted to being aware of the policy's existence but not its content: "Even as a CSO person, I cannot boldly say that I had read through the climate policy, but I am just aware that it exists." This reflects broader concerns in literature about the disconnect between federal policies and their implementation at the state and community levels. Participant 3 highlighted that while Bayelsa stakeholders attend international climate events, such as COP, translating this exposure into actionable state-level frameworks remains unclear.

The study findings revealed limited state-led efforts to raise climate awareness. Participant 2 mentioned periodic advocacy campaigns tied to international observances like World Water Day, while Participant 1 identified waste management as the only notable state initiative. Participant 5 stated: "I cannot confidently tell you that the Bayelsa State government has a program to create awareness on climate change." As highlighted by Participant 3: "NGOs have been involved in creating awareness about climate change."

Theme 2: Policy Integration and Implementation

The findings reveal that Bayelsa State has yet to fully integrate the National Climate Change Policy into its governance and development frameworks. Participant 2 described the state's approach as reactionary, noting: "We typically just

wait for something to happen, then we react.” Similarly, Participant 1 observed minimal state-level action to address critical climate issues such as gas flaring, despite efforts to mitigate oil spillage and illegal bunkering: “They are putting in a lot of measures to curb the effects of oil spillage and illegal bunkering... but I don’t think they are doing much about gas flaring.” Participant 3 noted some positive strides, such as the establishment of the Ministry of Blue Economy, which aligns with national and global frameworks. Adaptation efforts in key sectors such as agriculture, energy, and transport remain limited, with most initiatives driven by communities and NGOs. Participant 3 highlighted campaigns promoting early planting to mitigate flooding impacts: “The Ministry of Agriculture deliberately took up a campaign this year to say, look, we need to kick off early farming.” Participant 5 also noted grassroots-level practices like sack farming and irrigation techniques, but acknowledged the absence of state-driven programs: “Simple things like using sack bags to plant... people are learning to do things differently to adapt to climate change.” Participants identified several challenges hindering policy implementation, including weak institutional capacity, funding constraints, and poor inter-ministerial collaboration. Participant 3 highlighted the lack of technical expertise among key personnel: *“The people in those two ministries which are key to climate change actions are not people who have very deep knowledge about climate change activities.”* Funding was another significant barrier, with Participant 5 stating: *“Access to funding for intervention is low compared to the enormity of climate change issues in the state.”* The reliance on federal ecological funds, as noted by Participant 2, further limits the state’s ability to implement proactive measures.

Theme 3: State-Led Climate Actions

One of the most notable state-led initiatives in Bayelsa is the establishment of additional weather stations to monitor rainfall and water levels, as

highlighted by Participant 2. This development has improved flood preparedness by providing timely information on weather patterns. However, the integration of this data into broader disaster management frameworks appears limited, underscoring the reactive nature of climate action in the state. Efforts in ecosystem restoration, particularly mangrove restoration and reforestation, have also been prioritized. Participants 3 and 4 emphasized the critical role these programs play in mitigating coastal erosion and preserving biodiversity. For instance, Participant 4 noted the involvement of community networks in managing coastal resources, reflecting a localized approach to environmental conservation. However, challenges such as limited funding and inconsistent community engagement, as noted by Participant 4, continue to undermine the sustainability of these programs.

Institutional reforms, including the establishment of the Ministry of Blue Economy, represent a significant step toward aligning state governance with global frameworks. Participants 3 and 4 described this initiative as a proactive measure to promote the sustainable use of marine and coastal resources, with Participant 4 highlighting that Bayelsa is the only Nigerian state to create such a ministry. Despite these efforts, much of the state’s climate action is driven by external stakeholders, particularly NGOs. Participants 1, 3, and 5 consistently highlighted the critical role of these organizations in raising awareness and implementing grassroots solutions. Participant 1 remarked that NGOs are often more effective and efficient than state actors in driving meaningful change. However, private-sector involvement in climate action remains minimal, as noted by Participants 1 and 4. Grassroots contributions to climate action in Bayelsa also show significant potential, with examples such as community-driven bans on deforestation illustrating the power of local leadership. Participant 4 described

how one community independently enforced a policy to protect their forest, demonstrating the capacity for self-regulation and environmental stewardship at the local level. However, as Participant 5 noted, the linkage between grassroots initiatives and policymakers remains weak, with limited opportunities for communities to influence state-level decisions.

Challenges to state-led climate action in Bayelsa are substantial. Funding constraints, as highlighted by Participants 3 and 5, are a major barrier, with insufficient resources allocated to support initiatives such as mangrove restoration and waste management. Participant 4 pointed to weak policy coordination among government ministries, which often results in fragmented implementation. Furthermore, cultural and socioeconomic dynamics within local communities, including reliance on deforestation for livelihoods, exacerbate environmental degradation and hinder the effectiveness of state-led programs.

Theme 4: Challenges in Climate Policy Implementation

A key challenge identified by multiple participants is the lack of coordination among government ministries and agencies responsible for climate policy implementation. Participant 4 described the level of inter-agency collaboration as poor, noting that this often leads to fragmented efforts and inefficient use of resources. Similarly, Participant 2 remarked that Bayelsa's climate actions are largely reactive, stating: "We typically just wait for something to happen, then we react." Institutional weaknesses are further exacerbated by a lack of technical expertise within key government ministries. Participant 3 emphasized that many officials tasked with implementing climate policies lack the necessary knowledge and training: "The people in those two ministries which are key to climate change actions are not people who have very deep knowledge about

climate change activities." Funding constraints are another major obstacle, as highlighted by Participants 3 and 5. Participant 5 noted that the scale of climate change challenges in Bayelsa far exceeds the resources allocated to address them: "Access to funding for intervention is low compared to the enormity of climate change issues in the state." The limited financial resources are further compounded by misaligned budgets, as described by Participant 3: *"The ministries are not properly funded, or budget items are not aligning with what actions need to be taken."*

Community-level barriers also present significant challenges. Participants 1 and 5 emphasized the low levels of awareness among local communities, with Participant 5 explaining: "The awareness on the environment is low because it is scientific to an extent... People are not comfortable talking environment if they don't have that capacity." This gap in understanding makes it difficult to foster community support for climate initiatives, particularly in regions where livelihood practices such as logging and deforestation conflict with environmental goals. Participant 4 highlighted how these practices undermine conservation efforts, stating: "If you carry out any adaptation or mitigation program, the next minute it's polluted again." Cultural and power dynamics within communities also pose challenges to effective implementation. Participant 5 described the difficulty of engaging with communities due to local leadership structures and competing priorities: "When you now get to the communities, you could also be faced with the community dynamics, understanding the best time to engage." The limited inclusion of grassroots voices in policy-making further complicates climate governance in Bayelsa. Participant 4 pointed out that local governments and communities are often excluded from federal-level discussions on climate policy, stating: "They will just stay in Abuja and discuss and read out a policy... but not take

into cognizance the voices of the communities.” Technical and logistical barriers further constrain policy implementation. Participant 4 identified the lack of critical infrastructure, such as flood walls and dikes, as a significant limitation to effective adaptation efforts. Participant 5 added that the complexity of climate communication materials makes it difficult to engage local communities, noting: *“Climate change communications are more academic... How can we break it down for the common man to understand?”*

Theme 5: Opportunities and Recommendations

A major opportunity lies in the proactive role of non-governmental organizations (NGOs) and civil society in driving climate awareness and grassroots initiatives. Participant 1 emphasized the effectiveness of NGOs, stating: “NGOs are more effective and efficient in educating people and carrying out measures... the government should give them full support, both in funding and policies.” Community-led initiatives also present a significant opportunity for scaling up climate action. Participant 4 described a successful example of grassroots leadership, where a community independently enforced a ban on deforestation: “One of the communities decided on their own to ensure nobody cuts a single tree in their forest.” Such actions demonstrate the potential for self-regulation and local stewardship in addressing environmental challenges. Expanding these initiatives through training and financial support can amplify their impact.

Another key opportunity lies in the development of a Bayelsa-specific climate policy that aligns with national frameworks while addressing local realities. Participant 5 stressed the importance of such a policy, stating: “If there is no Bayelsa State policy on climate change, then the need for advocacy around that area is crucial.” A localized policy can help bridge the gap between national directives and state-level implementation,

ensuring that interventions are tailored to the region's unique socioeconomic and environmental contexts.

The establishment of the Ministry of Blue Economy is another promising development. Participants 3 and 4 highlighted this ministry as a proactive step toward promoting the sustainable use of marine and coastal resources. Participant 4 noted: “Bayelsa State Government is the only state that established a ministry to promote sustainable use of coastal and marine resources.” Strengthening the ministry's capacity and integrating its efforts with broader state policies can maximize its impact. Improving collaboration between federal, state, and local governments is critical for effective climate governance. Participant 4 proposed the creation of joint steering committees and task forces to enhance coordination: “Joint task forces would ensure inclusivity at federal, state, and local levels.” Participant 3 echoed this, emphasizing the importance of partnerships with agencies like the National Emergency Management Agency (NEMA) to improve disaster response. Increased funding and resource allocation are essential to address the resource gaps identified by participants. Participant 5 noted the limited availability of funds relative to the scale of climate challenges: *“Access to funding for intervention is low compared to the enormity of climate change issues in the state.”*

Capacity building is another crucial area for improvement. Participant 3 recommended structured training programs for government officials to enhance their technical expertise: “Capacity building must be structured to accommodate new leadership cycles.” Similarly, Participant 4 highlighted the need for repetitive training sessions to ensure continuity and effectiveness. Finally, simplifying climate communication can enhance grassroots engagement and foster greater public awareness.

Participant 5 emphasized the need to make information accessible and relatable: “Develop materials that are not science-inclined, so civil society actors can pick and utilize them.” Participant 1 suggested conducting workshops to educate communities on climate change impacts: *“The major thing is awareness... to educate people on what climate change is, the effects, and how it affects every aspect of our lives.”*

Discussion

The survey data indicates an impressive 98% awareness rate of climate change among respondents, suggesting successful diffusion of the term and concept. However, the qualitative findings add critical nuance: awareness is superficial for many. Interviewees revealed that local communities often recognize environmental disruptions like flooding and excessive heat but cannot accurately conceptualize them as climate change phenomena. This disconnect between perception and understanding is particularly significant when considering the origin of information. Schools and media (especially radio and TV) are leading sources of climate change awareness, while government-led sensitization efforts are sparse. The state's limited engagement in structured public education campaigns on climate change raises concerns about the sustainability of awareness and the capacity of communities to adopt adaptive practices independently. Notably, civil society actors particularly NGOs emerge as the most influential players in educating the public, reinforcing the pivotal role of non-state actors. Only 51% of respondents were aware of the National Climate Change Policy, and interview insights revealed that even informed stakeholders had a limited understanding of the policy's content. This gap reflects poor policy dissemination and institutional inertia at the sub-national level. Several respondents reported that although Bayelsa delegates participate in global conferences like COP, translation of these

experiences into local strategies or policies remains inadequate. A recurring theme in both surveys and interviews is the absence of a coherent, state-specific climate policy framework. Without a localized strategy that aligns with federal directives and addresses Bayelsa's distinct climate vulnerabilities, especially coastal threats, the state's actions will likely continue to be fragmented and reactionary. The establishment of the Ministry of Blue Economy is a noteworthy development, reflecting alignment with global climate frameworks and signalling political will. Yet, for such structures to be impactful, they require integration with other ministries, adequate funding, and the technical capacity to design and implement climate programs.

Bayelsa's climate governance is marked by poor inter-ministerial collaboration, a lack of technical expertise, and a dependency on federal ecological funds. Interviewees consistently described state institutions as lacking both the knowledge and resources to operationalize climate plans. As Participant 3 noted, key ministries are staffed with personnel who have “not very deep knowledge” of climate issues. Budget misalignment further exacerbates the problem, with many government allocations not targeting climate-relevant outcomes. Adaptation actions such as promoting early planting or small-scale reforestation are largely community-driven, with limited institutional backing. While there are examples of innovation (e.g., sack farming or localized deforestation bans), these remain ad hoc and unsustainable due to limited financial and logistical support. Furthermore, the use of weather stations and monitoring tools remains under-leveraged in disaster risk reduction planning, highlighting a persistent gap between data availability and policy response.

Civil society organizations and community networks are leading climate responses in Bayelsa. From organizing awareness campaigns to piloting

grassroots adaptation strategies, NGOs have filled a critical vacuum left by weak government action. Local communities have also shown agency, such as enforcing bans on tree felling or adapting to flood risks with innovative farming methods. However, these efforts are often isolated, and linkages to formal government structures are minimal. The absence of mechanisms to incorporate grassroots voices into state-level decision-making weakens the legitimacy and sustainability of climate governance in Bayelsa. The challenges identified in Bayelsa are deeply rooted in structural and socioeconomic factors. Corruption, lack of political will, and patronage politics hinder the prioritization of long-term climate goals. Moreover, cultural dynamics and competing livelihood needs such as reliance on deforestation for income, complicate enforcement of environmental protections. The technical complexity of climate discourse also alienates large portions of the population. Scientific jargon, lack of translation, and top-down communication strategies limit public engagement. Climate change communication must be made accessible, culturally sensitive, and rooted in local languages to ensure meaningful participation.

Conclusion

The case of Bayelsa State illustrates both the challenges and opportunities of climate governance at the sub-national level in Nigeria. There is a clear public recognition of climate change and its impacts, yet this has not translated into robust, state-led, and policy-aligned actions. Despite the high level of awareness among citizens, institutional weaknesses including limited policy integration, funding constraints, and poor coordination, hinder the development and implementation of effective climate strategies. Bayelsa's unique environmental vulnerabilities, such as flooding and coastal erosion, demand urgent, tailored responses. While NGOs and community-based efforts have stepped

up to fill critical gaps, their work remains disconnected from state frameworks. Without strong leadership, better funding mechanisms, and institutional capacity, Bayelsa risks remaining trapped in a cycle of reactive, fragmented climate interventions.

Nevertheless, the establishment of the Ministry of Blue Economy, grassroots innovations, and civil society engagement represent significant opportunities for building a more resilient climate response. These elements provide a foundation upon which a comprehensive and context-sensitive state climate strategy can be developed.

Recommendations

1. **Develop a Bayelsa-Specific Climate Change Policy:** A localized policy aligned with the national framework is essential. This policy should reflect the state's unique environmental, socioeconomic, and cultural realities, and include actionable strategies for adaptation and mitigation.
2. **Enhance Institutional Capacity and Coordination:** Capacity-building programs should be implemented for key personnel in relevant ministries. Cross-ministerial climate task forces or steering committees can help improve coordination and avoid fragmented responses.
3. **Increase and Diversify Climate Financing:** Bayelsa should explore alternative funding sources, including international climate funds, public-private partnerships, and green bonds. Improved budget alignment and transparency are also crucial for efficient resource allocation.
4. **Support and Scale Community-Based Initiatives:** Local innovations, such as community-enforced conservation practices and adaptive farming

techniques, should be documented, supported, and scaled. Creating linkages between these grassroots efforts and formal policy frameworks can improve their impact and sustainability.

5. **Strengthen NGO and Civil Society Engagement:** NGOs have proven to be effective agents of awareness and implementation. The state should formally collaborate with these groups through funding support, policy consultations, and shared platforms for project implementation.
6. **Promote Inclusive and Simplified Climate Communication:** Climate messaging should be tailored to different literacy levels and cultural contexts. Materials should be translated into local languages and presented in formats accessible to all segments of society, including traditional leaders and women.
7. **Invest in Resilient Infrastructure and Ecosystem Restoration:** Expand efforts such as mangrove restoration and flood preparedness infrastructure. Leverage data from weather stations to develop predictive early-warning systems and integrate them into community disaster response plans.
8. **Foster Federal-State-Community Collaboration:** Establish mechanisms for joint decision-making that include representatives from federal agencies, state institutions, and local communities. This will ensure policies are not only top-down but also reflect grassroots realities.

BORNO STATE

Presentation of Survey Findings

Out of 25 respondents, 60% were male and 40% female. Although there's a close gender balance, male voices still slightly dominate, which may affect how environmental concerns are discussed and prioritized within communities.

The majority of respondents (61%) were aged 25–34, followed by 18–24 (23%). Only 8% were 35–44 and another 8% aged 45–54. This suggests youth are the most engaged or most accessible group for climate-related surveys, implying a need to sustain youth-targeted climate programs.

61% of respondents had tertiary education, 35% had postgraduate education, and only 4% had secondary education. This highly educated sample indicates strong potential for informed engagement in climate issues but also suggests outreach may not be reaching less educated or rural populations.

Respondents were mainly traders/business people (36%) and civil servants (24%), with students (20%), legal practice (8%), farming (4%), and other jobs (8%). This suggests climate discourse may be circulating more in academic and government environments than in traditional rural sectors like farming

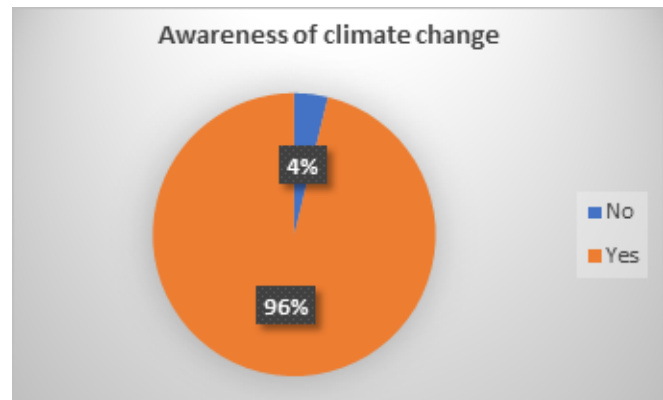


Figure 1. Awareness of climate change

A remarkable 96% of respondents said yes, showing widespread awareness and the success of climate messaging..

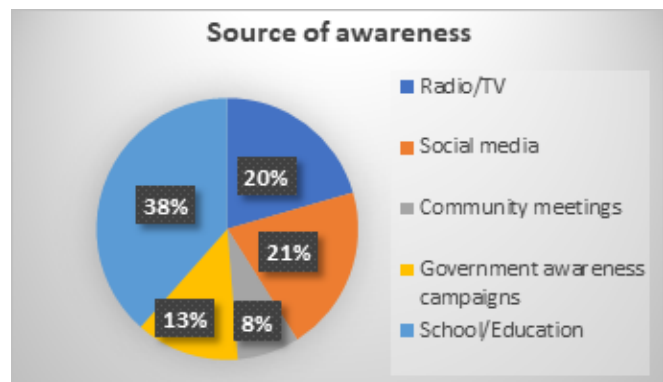


Figure 2. Source of climate change awareness

Most respondents cited school/education (38%), followed by social media (21%), radio/TV (20%), government campaigns (13%), and community meetings (8%). The strong role of formal education and media underlines the importance of structured and accessible information dissemination.

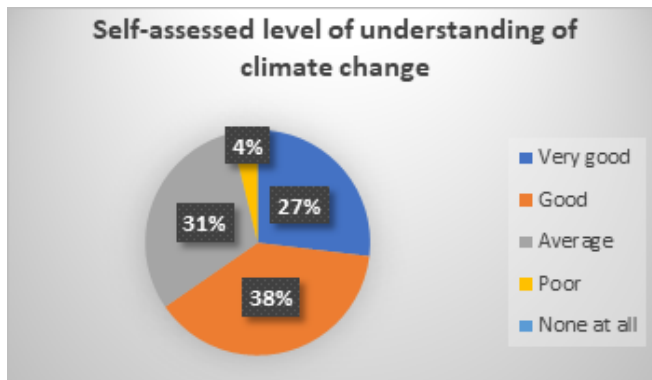


Figure 3. Understanding of climate change

38% rated their understanding as "Good", 31% as "Average", and 27% as "Very Good". Only 4% rated it as "Poor". While most respondents believe they understand climate change well, deeper evaluation is needed to assess whether this self-reported knowledge translates into action or resilience.

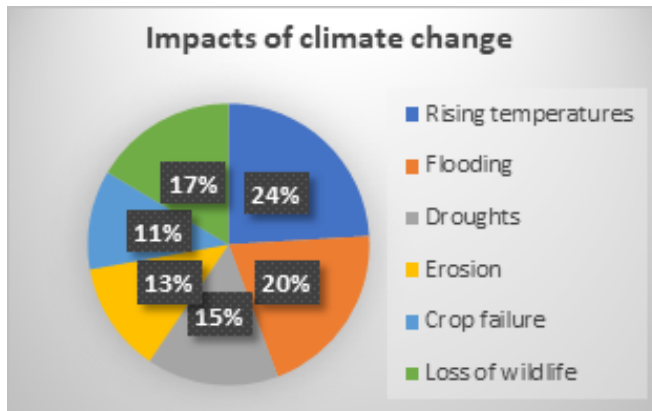


Figure 4. Perceived impacts of climate change

Respondents identified flooding (20%), rising temperatures (24%), droughts (15%), erosion (13%), crop failure (11%), and wildlife loss (17%). These highlight an acute awareness of climate impacts that threaten agriculture and biodiversity which are key concerns for Borno.

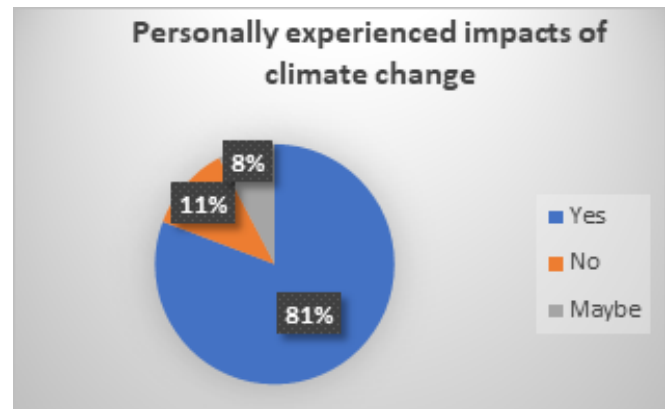


Figure 5. Direct experience with climate change

An overwhelming 81% confirmed personal experience, showing climate change is not abstract but already affecting daily life. Responses included flooding, extreme heat, crop failure, air pollution, and rising climate change-related illnesses, indicating that climate change is now affecting health, agriculture, and ecosystems.

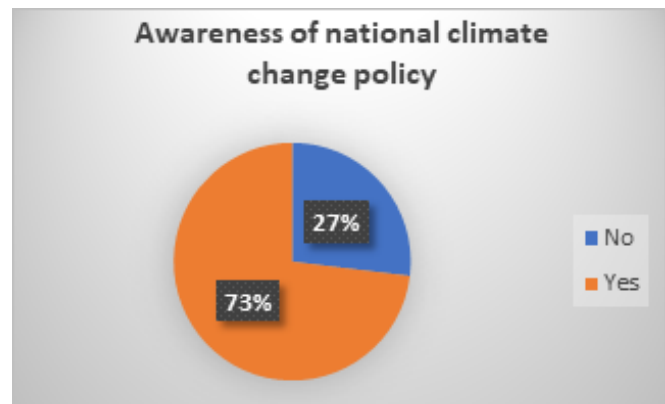


Figure 6. Awareness of national climate change policy

Awareness of the national climate change policy was relatively high, with 73% of respondents stating they were aware of it while 27% were not.

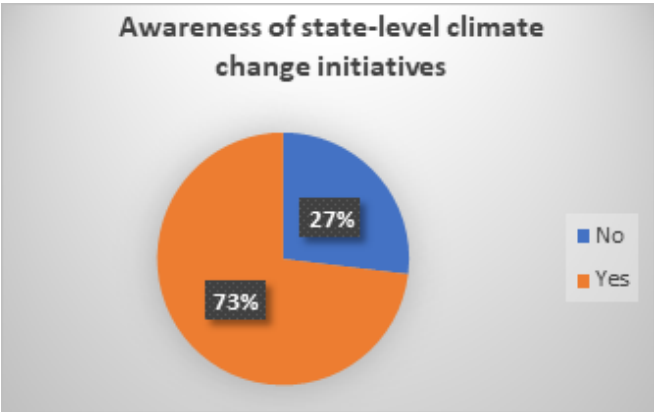


Figure 7. Awareness of state-led climate actions

Similarly, awareness of state-level climate initiatives was relatively high, with 73% of respondents stating they were aware of such policies, while 27% were not.

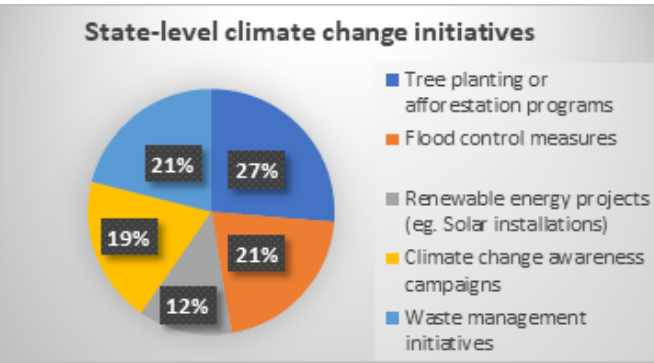


Figure 8. Types of climate change initiatives identified

Among the initiatives cited were afforestation (27%), flood control measures (21%), waste management initiatives (21%), climate awareness campaigns (19%), and renewable energy (12%). The diversity of responses suggests fragmented but visible efforts.

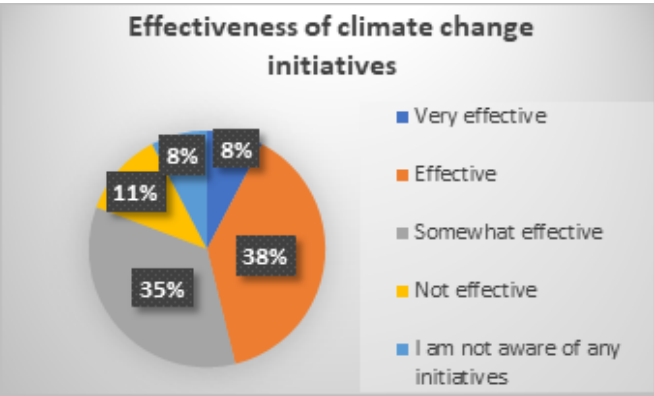


Figure 9. Perceived effectiveness of initiatives

38% found them "Effective", 35% said "Somewhat effective", 11% found them "Not effective", 8% each rated them "Very effective" and another 8% said they were unaware.

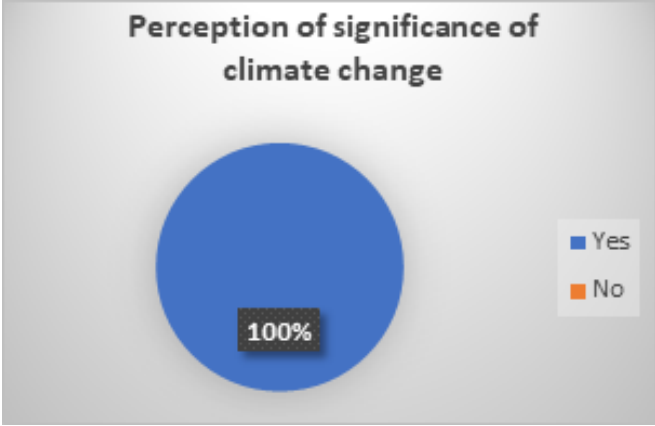


Figure 10. Perception of climate change urgency

All respondents (100%) said yes. This unanimity is powerful and should be leveraged to build community ownership of climate change action.

When asked about the main challenges preventing Borno state from addressing climate change, respondents cited lack of awareness, political will, education, funding, law enforcement, insecurity, and poor infrastructure. These indicate systemic barriers that require multi-level interventions and political commitment.

Common suggestions to the state government for prioritizing climate change action included afforestation, education, public awareness, solar energy, support for NGOs, and stronger legislation. Emphasis was also placed on grassroots engagement, traditional leadership involvement, water conservation, and climate-resilient agriculture suggesting an integrated approach is needed.

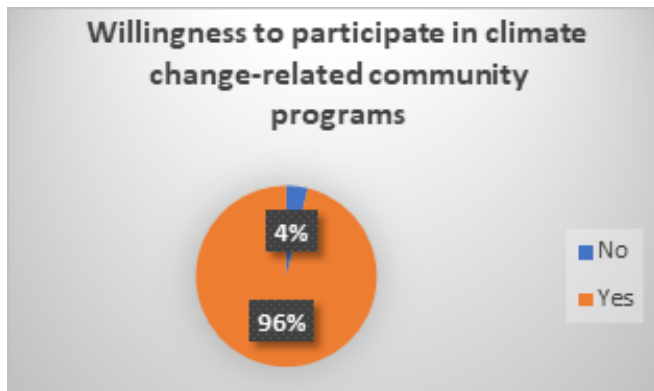


Figure 11. Willingness to participate in climate programs

A strong 96% expressed willingness to participate. This highlights a major opportunity for community mobilization if initiatives are accessible, safe, and inclusive.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 described the general awareness of climate change in the state as “very low,” specifically among the broader population. While political leaders and government agencies in Borno have demonstrated an understanding of climate-related issues, there appears to be minimal investment in disseminating this awareness to the general public. This participant emphasized, “It’s very low in Borno State, especially among the general public... the state’s political leaders and government agencies understand the effect and impact of climate change. There’s little effort to spread awareness to the broader population.” This highlights a communication gap between policymakers and citizens, one that could hinder the effectiveness of any climate initiatives implemented at the community level. Participant 2 reinforced this observation by stating, “The awareness of climate change is low. There is a need to get the people on board.” This sentiment further underscores the

urgent need to bridge the disconnect between high-level climate strategies and grassroots awareness, indicating that current campaigns and sensitization efforts may not be sufficiently widespread or effective.

Despite this, both participants acknowledged that there have been deliberate government efforts aimed at raising awareness and promoting climate-conscious behaviour. According to Participant 1, the Borno State Climate Action Plan includes measures aimed at climate change mitigation and education. These include programs promoting climate-smart agriculture, the establishment of agricultural development initiatives, and the introduction of low-emission vehicles in the transport sector. The participant explained, “For agriculture... the climate-smart agriculture. And also... the agriculture development program,” and further noted, “For transport, we have the low-emission vehicle... even last week, they provided some of the vehicles.” Participant 2 provided additional examples of the state’s efforts to publicize climate issues, particularly through inter-ministerial collaborations. According to this participant, “The government is doing well to create awareness because now there is synergy, there is collaboration between all these ministries.” This synergy reportedly manifests through joint awareness campaigns and educational programs conducted across ministries, suggesting an internal push within government systems to mainstream climate considerations.

In terms of stakeholder awareness of the Nigerian Climate Change Policy, both participants confirmed that officials are familiar with it and have taken steps to align with national and international commitments. Notably, Participant 2 shared that the state had sponsored nearly ten individuals to attend COP 29 in Baku, Azerbaijan. “The state government has sponsored almost ten people to attend COP 29 in Baku, Azerbaijan. This

shows compliance with the national policy on climate change,” the participant stated. This involvement in global forums reflects a proactive posture at the state level, potentially helping Borno attract international attention and interventions, while also enhancing internal policy coherence.

Theme 2: Policy Integration and Implementation

Participant 1 explained that BOSCAP provides a multi-sectoral approach to climate change, incorporating actions from sectors such as agriculture, transport, and infrastructure. The participant stated, “There is a climate action plan in the state, and it outlines climate actions and strategies across sectors. The transport sector has low-emission vehicles. The agriculture sector is implementing climate-smart practices.” This suggests a deliberate attempt to mainstream climate resilience across development planning, which aligns with Nigeria's National Climate Change Policy that calls for climate integration across all tiers of government. Participant 2 confirmed the existence of BOSCAP and emphasized its role in both national and international reporting. They noted that the document serves as a working tool for climate governance in the state: “The state has already developed a climate change policy document. It is called the Borno State Climate Action Plan (BOSCAP). It is in use for both national and international reporting.” This acknowledgement reinforces the state's intention to comply with national mandates while positioning itself to attract support through transparency and alignment with global climate goals.

Furthermore, both participants highlighted that climate considerations are now being integrated into development plans, with ministries increasingly aware of their roles in implementing climate-related goals. According to Participant 2, “Every ministry knows its role in climate change. In

BOSCAP, it is spelt out.” This signals that there is growing internal coordination and sectoral accountability, a crucial step for operationalizing policy and preventing fragmented approaches. In addition, the interviews point to a shift from theoretical planning to practical implementation, although this is still in its early stages. Participant 1 referenced actions such as the distribution of low-emission vehicles and the rollout of climate-smart agriculture initiatives, stating, “In the implementation of the policy, the transport sector has started low-emission vehicles... the agriculture sector is also using the policy to guide climate-smart agriculture.” These actions demonstrate that climate policy is beginning to move beyond rhetoric into tangible projects, albeit incrementally.

However, while these developments represent progress, both participants implied that the implementation of BOSCAP is not yet fully institutionalized across all state operations. Participant 2 hinted that more work is needed to embed climate thinking into the entire governance structure: “There is synergy, there is collaboration between all these ministries, but we need to continue to deepen it.” This suggests that although policy awareness exists within ministries, sustained inter-agency collaboration and stronger mechanisms for execution are still evolving. Another key insight from the interviews is that political leadership in the state has shown interest in climate governance, which has accelerated policy integration efforts. Participant 2 mentioned that “The governor has shown keen interest. That's why we have representation at COP.” This level of political buy-in is vital for driving implementation and securing both public and international support. It also provides an enabling environment for scaling up the integration of climate actions into broader development priorities.

Theme 3: State-Led Climate Actions

A prominent area of focus is the transport sector, where the state government has introduced low-emission vehicles. Participant 1 highlighted this initiative as part of the operationalization of the Borno State Climate Action Plan (BOSCAP), stating: “For transport, we have the low-emission vehicle... even last week, they provided some of the vehicles.” This reflects an effort to reduce greenhouse gas emissions from one of the more carbon-intensive sectors in urban environments. Although limited in scale for now, it represents a pilot step toward cleaner mobility options and could set the tone for future investments in green infrastructure. In the agriculture sector, climate-smart agriculture (CSA) practices are being promoted. According to Participant 1, initiatives such as the Agricultural Development Programme are focused on improving food production systems while building resilience to climate variability. They said: “For agriculture... the climate-smart agriculture. And also... the agriculture development program.” This move aligns with broader national goals of enhancing food security under changing climate conditions, and it serves both adaptation and sustainable development objectives in a state heavily dependent on agriculture for livelihoods. Afforestation and environmental restoration also appear to be key priorities. Participant 2 noted that Borno is actively involved in tree planting and reforestation campaigns, particularly as part of broader ecosystem restoration efforts. Although the participant did not specify the scale or geographic spread of these campaigns, their mention suggests an understanding of the role afforestation plays in mitigating desertification, reducing atmospheric carbon, and improving biodiversity which are critical issues in the northeastern ecological landscape.

The interviews also indicated a strong commitment to environmental education and awareness, especially within governmental

structures. As Participant 2 mentioned, “The government is doing well to create awareness because now there is synergy, there is collaboration between all these ministries.” This inter-ministerial collaboration is reportedly being channelled into education campaigns, public outreach, and the inclusion of climate topics in governance dialogues. While the public reach of these campaigns may still be limited, the efforts point to an internal push to normalize climate consciousness within the administrative system.

Furthermore, Borno State's participation in global climate dialogues signals a strategic intent to attract attention and funding for its initiatives. Participant 2 highlighted that the state had sponsored delegates to the upcoming COP 29 in Baku, remarking: “The state government has sponsored almost ten people to attend COP 29 in Baku, Azerbaijan.” This not only demonstrates political will but also suggests that the state views climate action as a space for international engagement and cooperation. Such moves can open doors to partnerships, funding, and technical assistance for scaling local climate solutions. Although these actions are promising, the interviews did not present detailed data on project outcomes or the scale of impact, indicating that monitoring, documentation, and scaling-up may still be areas in need of development. Moreover, both participants implicitly acknowledged that while climate actions are underway, they remain fragmented and nascent. Full systematization across sectors and communities will be required to create widespread and measurable impact.

Theme 4: Challenges in Climate Policy Implementation

A dominant challenge emphasized by both participants is the ongoing insecurity and insurgency in the region, which severely hampers development efforts, including those related to climate action. Participant 1 directly linked

security concerns with the state's ability to implement projects, stating: "There is insurgency in the state. We cannot go to some areas to implement projects because they are not safe." This security crisis, largely fueled by long-standing conflicts and the presence of non-state actors, restricts access to rural areas where many climate-related interventions such as afforestation, agriculture, and community sensitization would typically take place. The inability to reach these vulnerable and often highly impacted communities undermines the reach and effectiveness of climate programs. Echoing this, Participant 2 remarked: "The major challenge is insecurity. There are some areas we want to go and do sensitization, but we cannot go there because of insecurity." This reinforces the idea that even where there is policy will and technical planning, the volatile security situation has created physical and psychological barriers to policy delivery, grassroots engagement, and long-term investment in vulnerable zones. In addition to insecurity, both participants cited low public awareness and engagement as a significant obstacle. While the state government has developed the Borno State Climate Action Plan and engaged in internal sensitization, there remains a disconnect with the general populace. Participant 1 pointed out that the awareness level among the broader public is "very low," emphasizing that "there's little effort to spread awareness to the broader population." Without a well-informed and engaged citizenry, even well-intentioned policies risk limited adoption or outright resistance—particularly when they involve behaviour change in areas like farming practices, energy use, and environmental protection.

Institutional capacity and coordination also emerged as a challenge, although it appears to be improving. Participant 2 acknowledged ongoing efforts to improve inter-ministerial collaboration but indicated that more needs to be done: "There

is synergy... but we need to continue to deepen it." This suggests that while coordination has started, sustaining it will require more structured frameworks, leadership consistency, and capacity development across ministries and departments. Another significant barrier relates to funding and resource constraints. Although not as explicitly emphasized as insecurity, Participant 1 noted the difficulty in sustaining implementation, implying that the availability of resources might be an issue. Without sufficient financing from both government budgets and external sources, the scope of state-led interventions remains limited, and initiatives like low-emission transport, afforestation, and CSA may struggle to scale or be maintained long-term.

Theme 5: Opportunities and Recommendations

A key opportunity lies in the existence and operationalization of the Borno State Climate Action Plan (BOSCAP). Both participants identified this policy document as a vital framework already guiding sectoral climate actions. Participant 2 remarked: "The state already has a climate policy document... it is in use for both national and international reporting." The presence of BOSCAP means the state has a policy infrastructure that can be scaled up and better institutionalized to anchor future initiatives. Strengthening the implementation of BOSCAP by deepening sectoral integration, allocating specific budgets, and improving monitoring mechanisms presents a major opportunity for tangible progress. Political leadership was also highlighted as an enabler. The state governor's active interest in climate-related governance was mentioned multiple times as a driving force behind initiatives such as sponsoring delegates to attend COP 29. According to Participant 2: "The governor has shown keen interest. That's why we have representation at COP." This level of political will can be leveraged to secure increased funding, technical support, and partnerships with

international development agencies and NGOs working in climate resilience.

Another opportunity exists in the state's growing inter-ministerial collaboration. Participant 2 stated: "There is synergy, there is collaboration between all these ministries." While this coordination still needs to be deepened, the existing groundwork provides a solid base for building climate governance structures that are cross-sectoral, inclusive, and more effective in addressing the multifaceted nature of climate issues. Moreover, Borno's involvement in international climate dialogues such as the UNFCCC Conference of the Parties (COP) presents a chance to build networks, attract investments, and align local initiatives with global funding opportunities such as the Green Climate Fund and Loss and Damage Finance. Being visible on the global stage also provides legitimacy and motivation for stronger domestic action.

From the interviews, a clear recommendation is the need to expand climate awareness and education, especially at the grassroots level. Participant 1 emphasized that while internal awareness has improved, "the general public is not very aware." Building widespread understanding through schools, local institutions, and civil society engagement will be critical to driving behaviour change and securing public support for environmental policies. Both participants also pointed to the need for improved access and mobility, especially in areas affected by insecurity. While this may largely depend on national and military interventions, creative approaches such as partnering with humanitarian organizations already working in inaccessible zones could offer short-term alternatives for outreach and climate education. Finally, there is a need to enhance capacity-building within ministries and local agencies. Although roles have been assigned in BOSCAP, consistent training and technical support are required to translate policies into effective

programs. Equipping local staff with tools for climate budgeting, vulnerability assessments, and community-based adaptation planning will ensure that climate integration is not just policy-deep but operationally entrenched.

Discussion

The survey data suggests a relatively high level of awareness among sampled individuals (96% reported knowing about climate change, and 73% were aware of both national and state climate policies). This is significant, especially in a state where development priorities are often overshadowed by security concerns. However, this quantitative picture contrasts sharply with qualitative insights from interviews, where respondents consistently emphasized that awareness among the general public remains low. This suggests that while educated, urban, or government-linked populations are well-informed, rural and marginalized groups, the ones most vulnerable to climate impacts, are largely excluded from the climate conversation. This disparity highlights a top-down pattern of climate engagement, where policy and planning are concentrated within government ministries and elite spaces, but not sufficiently translated into grassroots mobilization. This is a critical gap, particularly in the context of Borno, where the effectiveness of climate interventions relies heavily on behavioural change in communities including farmers, pastoralists, and local traders, who form the backbone of the informal economy and are most exposed to environmental degradation.

The presence and operational use of the Borno State Climate Action Plan (BOSCAP) represents a significant institutional achievement. Unlike many subnational governments that struggle to align with national climate directives, Borno has developed a formal strategy that integrates climate considerations into key sectors such as agriculture, transportation, and infrastructure.

BOSCAP also serves as a tool for both national and international reporting, illustrating a commitment to transparency and policy coherence. Interview data reveal that ministries are increasingly aware of their roles in implementing climate goals, and cross-sectoral collaboration is improving. The climate-smart agriculture initiatives and adoption of low-emission vehicles underscore a deliberate attempt to embed climate considerations into public service delivery and development planning. However, the scale of these initiatives remains limited, and their effectiveness is constrained by capacity gaps, inconsistent inter-ministerial coordination, and weak mechanisms for monitoring and evaluation. This reflects a broader pattern observed in Nigerian climate governance, where policy documents often outpace implementation. While the presence of BOSCAP suggests compliance with national policy, the real challenge lies in its institutionalization, ensuring that climate action is not only “everyone’s responsibility” in theory, but is budgeted, coordinated, and measured in practice.

The range of climate actions identified in the findings, from afforestation and flood control to waste management and renewable energy, demonstrates that Borno is engaging across both mitigation and adaptation fronts. The promotion of climate-smart agriculture is especially pertinent given the state’s agrarian economy and vulnerability to desertification and drought. Similarly, the adoption of low-emission vehicles, although still at a pilot scale, is a rare and forward-looking intervention at the state level in Nigeria. However, these efforts appear fragmented and underdeveloped in terms of scale and public visibility. Survey respondents varied significantly in their perceptions of initiative effectiveness, with only 8% finding them “very effective” and 11% labelling them “not effective.” This points to implementation gaps, possibly due to inadequate community engagement, limited follow-through,

or a lack of clear impact measurement frameworks. Moreover, the emphasis on tree planting and awareness campaigns, while important, reflects a tendency to prioritize highly visible but often short-term interventions. Without a stronger focus on long-term resilience strategies, such as climate-resilient infrastructure, integrated water management, and disaster risk reduction, Borno’s efforts may fall short of addressing the structural vulnerabilities that exacerbate climate impacts.

The single most significant barrier to effective climate action in Borno is the protracted insecurity caused by insurgency and armed conflict. Both interview participants emphasized that large areas of the state remain inaccessible, limiting the reach of climate projects, education campaigns, and even basic government services. This severely compromises the ability to conduct outreach in areas where vulnerability to climate change is highest. Beyond security, the findings also point to weak institutional capacity and limited coordination as persistent challenges. Although ministries are beginning to align around BOSCAP, coordination appears to be largely informal or personality-driven rather than structurally embedded. Without formal coordination mechanisms, leadership consistency, and inter-ministerial accountability frameworks, climate governance risks being undermined by bureaucratic inertia or changes in political leadership. Funding constraints are also implied, although less emphasized than insecurity. The scale and sustainability of initiatives such as renewable energy adoption or agricultural transformation depend heavily on external support. Yet without dedicated budget lines or strong resource mobilization strategies, Borno’s efforts are vulnerable to stalling.

Despite its many challenges, Borno is positioned to be a subnational leader in climate governance. The governor’s active interest in climate issues

evidenced by state-funded participation in COP 29 is a major enabler. Political leadership has been consistently identified as a key success factor in subnational climate governance across the Global South, and Borno appears to benefit from this advantage. The state's involvement in international forums also presents an opportunity to leverage global visibility into partnerships and funding. However, translating presence into progress will require a robust pipeline of well-developed, technically sound project proposals aligned with international climate finance mechanisms such as the Green Climate Fund, Adaptation Fund, and Loss and Damage Facility.

Conclusion

Borno State presents a dynamic case of climate governance that is simultaneously constrained by conflict and inspired by emerging political will. The state's awareness of climate change especially among policymakers is relatively high, and strategic instruments like BOSCAP are in place to drive multi-sectoral climate responses. Tangible steps such as low-emission transportation initiatives and climate-smart agriculture programs reflect a positive trajectory toward resilience. However, awareness and policy frameworks have yet to translate into widespread public engagement or impactful outcomes on the ground. Security issues, funding limitations, weak public communication, and institutional fragmentation continue to undermine implementation. Nevertheless, the state's participation in global forums and internal efforts to coordinate across ministries show that the foundation for progress exists.

To move from intent to impact, Borno must strengthen grassroots engagement, address structural barriers, and institutionalize mechanisms for long-term climate action. In doing so, the state can become a model for climate resilience in conflict-affected regions and contribute meaningfully to Nigeria's broader

climate objectives.

Recommendations

1. **Strengthen Public Awareness and Education:** Launch state-wide climate literacy campaigns, targeting rural areas and vulnerable populations using radio, local languages, schools, and traditional institutions; integrate climate education into school curricula at all levels; and support partnerships with civil society, and youth groups, and faith-based organizations for grassroots climate sensitization.
2. **Enhance Implementation of BOSCAP:** Allocate dedicated budget lines for climate action within each ministry's annual plan, conduct periodic reviews of BOSCAP with updates based on monitoring data and stakeholder feedback, and develop performance indicators to track progress on key interventions.
3. **Improve Inter-Ministerial Coordination:** Provide capacity-building programs for ministry staff on climate budgeting, adaptation planning, and data collection.
4. **Expand Access Through Innovative Outreach in Conflict Zones:** Partner with humanitarian organizations already working in hard-to-reach areas to integrate climate education and services, and develop remote and mobile outreach models for climate sensitization and project delivery in insecure regions.
5. **Mobilize Funding and Technical Support:** Develop partnerships with development organizations and the private sector for renewable energy, sustainable agriculture, and environmental restoration projects.

6. **Institutionalize Monitoring, Evaluation, and Learning (MEL):**

Establish a climate action dashboard to publicly report on the progress of state-led initiatives and conduct annual climate resilience audits to assess vulnerabilities and recommend adjustments.

KOGI STATE

Presentation of Survey Findings

In Kogi State, 40 respondents (77%) were male, while 12 respondents (23%) were female. This reflects a significant gender imbalance in survey participation, indicating that men may have greater involvement or interest in climate-related issues in Kogi State.

The survey showed a relatively balanced age distribution among respondents in Kogi State. The largest age group was 25 to 34 years, representing 13 respondents (25%). This was followed closely by the 18 to 24 age group, with 12 respondents (23%). The 45 - 54 age group accounted for 11 respondents (21%), the 35 - 44 accounted for 10 respondents (19%), while the smallest group, aged 55 and above, comprised 6 respondents (11%). This suggests that young and middle-aged adults are the most engaged demographic in climate-related issues in Kogi State.

A significant proportion of respondents (52%) had attained postgraduate education, while 38% reported having tertiary education qualifications. Only 10% of respondents had completed secondary school. This educational profile suggests that climate awareness efforts may have primarily reached more educated individuals, highlighting the need for targeted outreach to less-educated communities.

Civil servants made up the largest occupational group in Kogi State, representing 40% of the sample. Students accounted for 27%, followed by those in trading or business at 12%. The "others" category accounted for 21%, reflecting a diverse range of additional professions. The prominence of civil servants and students in the survey

suggests that climate awareness campaigns may be more effective in reaching government employees and younger populations.

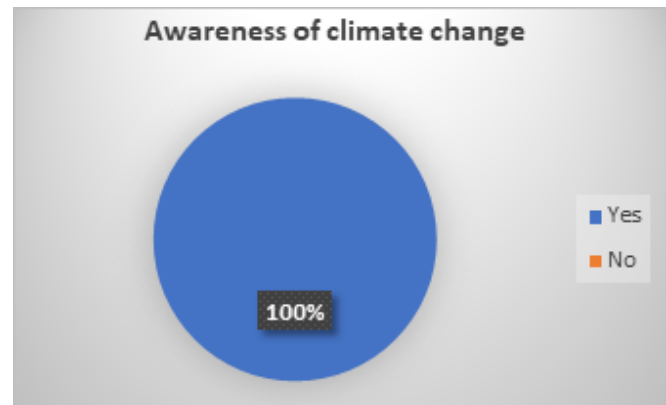


Figure 1. Awareness of climate change

All respondents (100%) reported that they had heard of climate change. This reflects a high level of general awareness of climate change in Kogi State.

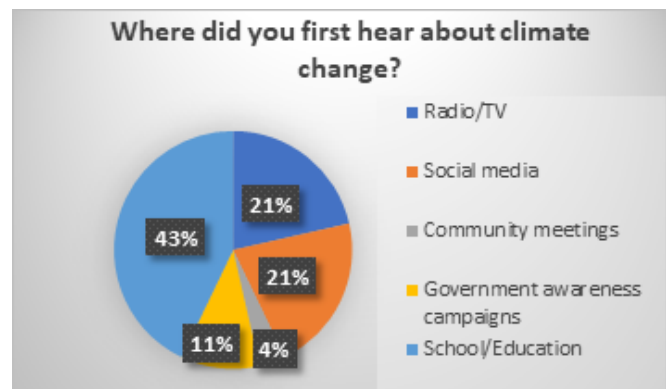


Figure 2. Source of climate change awareness

The most common source of information about climate change was schools and educational institutions, cited by 43% of respondents. Social media and radio/television each accounted for 21% of responses. Government awareness

campaigns were mentioned by 11%, while 4% of respondents credited community meetings as their first source of climate change information. This highlights the influential role of education and media in spreading climate awareness.

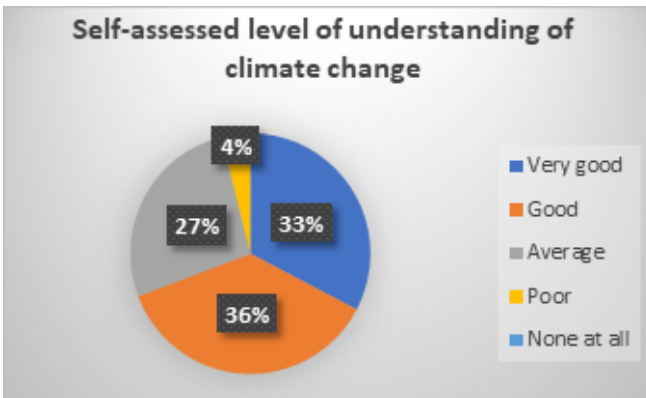


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 36% of respondents rated their knowledge as good, while 33% described it as very good. Meanwhile, 27% reported having an average understanding, and 4% admitted to having poor knowledge. No respondents indicated that they had no understanding of climate change. These results suggest that while many respondents have a solid grasp of climate change issues, there is room for deeper understanding.

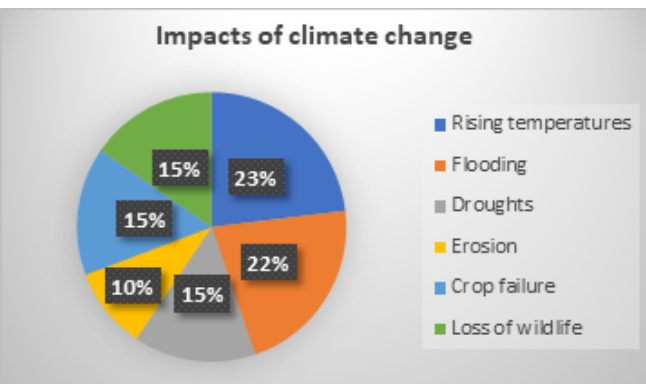


Figure 4. Perceived impacts of climate change

Respondents identified multiple consequences of climate change in Kogi State. Rising temperatures

were mentioned by 23% of participants, followed by flooding (22%). Droughts, crop failure, and loss of wildlife were each mentioned by 15% of respondents, while 10% identified erosion as a key consequence. These responses reflect the diverse environmental challenges posed by climate change in Kogi State.

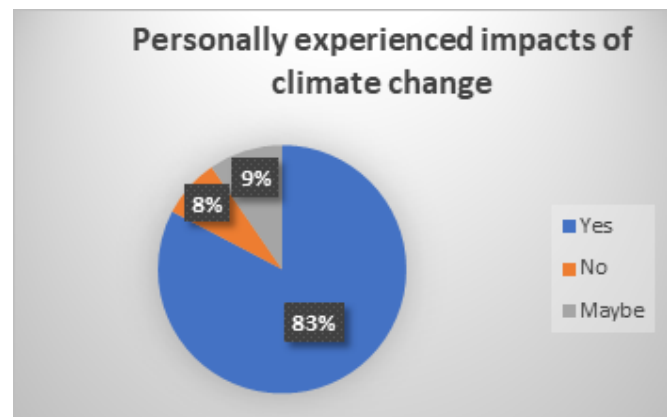


Figure 5. Direct experience with climate change

A significant majority (83%) of respondents reported that they had personally experienced the impacts of climate change. Meanwhile, 8% said they had not, and 9% were uncertain.

Respondents detailed a range of observed impacts, including flooding, rising temperatures, and droughts. Many reported reductions in annual rainfall, which have negatively affected farming activities and led to food scarcity and inflation. Other impacts included extreme heat, erosion, and increased health issues due to poor environmental conditions. Flooding was a recurrent issue, with respondents highlighting severe annual floods, particularly in Lokoja, that have damaged infrastructure and displaced communities.

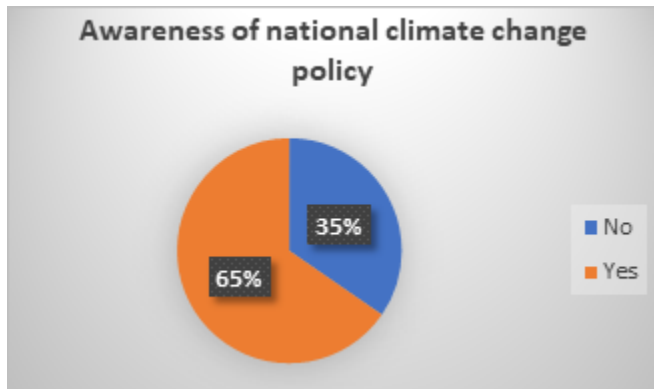


Figure 6. Awareness of national climate change policy

Awareness of Nigeria's National Climate Change Policy was relatively high, with 65% of respondents indicating they were aware of it, while 35% reported being unaware of the policy.

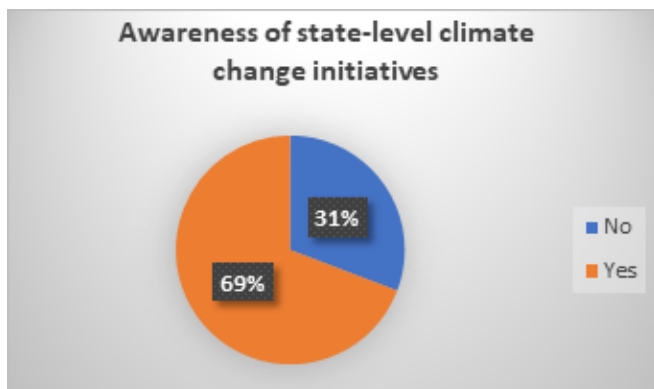


Figure 7. Awareness of state-led climate actions

A significant majority (69%) of respondents reported being aware of climate-related policies or initiatives in Kogi State, while 31% were unaware of any such initiatives.

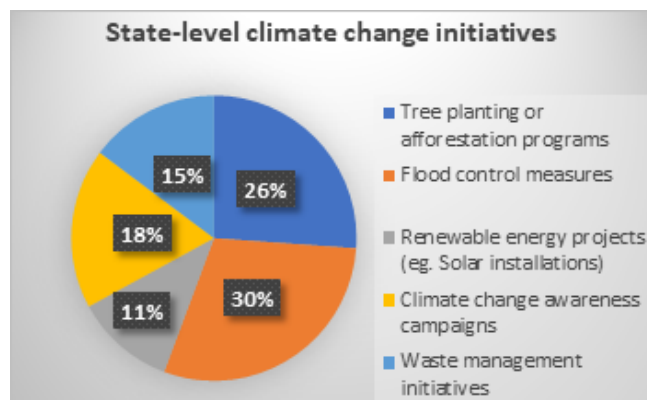


Figure 8. Types of climate change initiatives identified

Among those aware of state-led initiatives, 30% identified flood control measures as the most common action. Tree planting and afforestation programs accounted for 26%, while climate change awareness campaigns were mentioned by 18%. Waste management initiatives were cited by 15% of respondents and Renewable energy projects, such as solar installations by 11%.

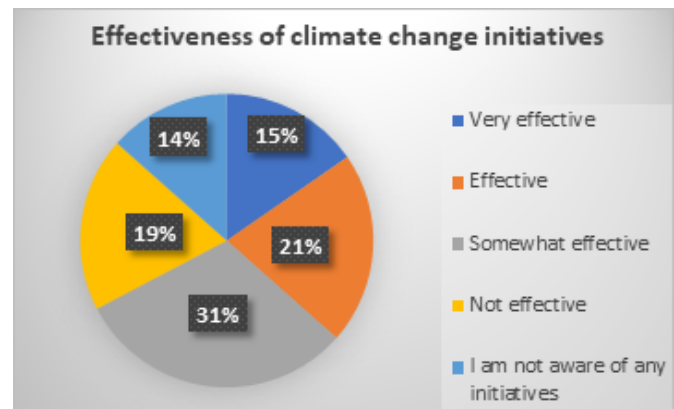


Figure 9. Perceived effectiveness of initiatives

Respondents had mixed views on the effectiveness of state-led initiatives. While 31% rated these initiatives as somewhat effective, 21% described them as effective. Meanwhile, 19% found them ineffective, and 15% rated them as very effective. Another 14% reported being unaware of any state-level initiatives.

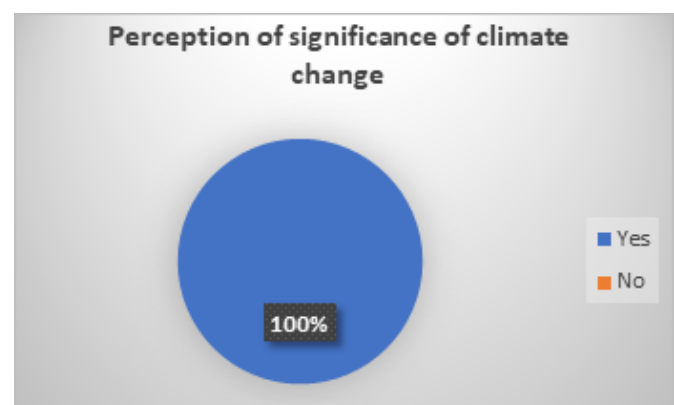


Figure 10. Perception of climate change urgency

All respondents (100%) agreed that climate change is a significant issue that needs to be addressed in Kogi State.

Respondents identified several barriers to effective climate action in Kogi State. Lack of funding and political will were the most frequently mentioned challenges. Poor governance, limited public awareness, and weak institutional capacity were also highlighted as significant barriers. Other challenges included poor enforcement of climate policies, inadequate public infrastructure, and corruption.

Respondents also proposed several measures for the state government, including increasing public awareness campaigns, investing in renewable energy, and improving flood control infrastructure. Many called for the construction of permanent housing for flood victims and stronger enforcement of environmental laws. Respondents also suggested investing in sustainable agriculture, promoting afforestation programs, and increasing government funding for climate adaptation projects.

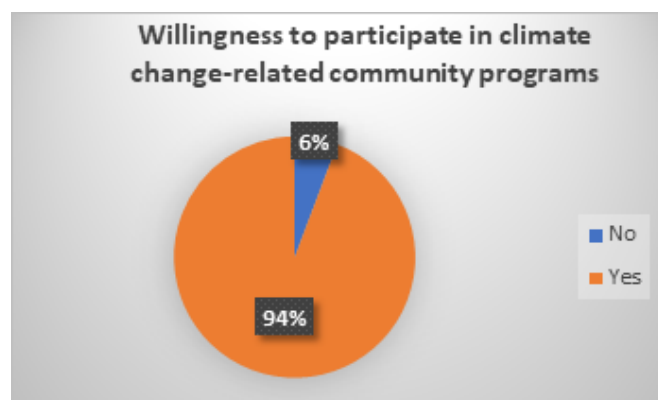


Figure 11. Willingness to participate in climate programs

A strong majority (94%) of respondents expressed willingness to participate in community programs related to climate change, while only 6% said they were not interested.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change

Policy

Participant 1 described awareness as “50-50,” emphasizing a divide where urban residents are increasingly informed, but rural populations remain largely uninformed. They remarked, “Those in urban areas are getting to know about climate change. And the other 50 goes to the rural areas, who are not privileged to even listen.” This framing highlights both a communication gap and the failure of outreach strategies to penetrate beyond urban centres. The participant also pointed to the lack of inclusive climate-related forums, indicating that discussions around climate change are often limited to siloed ministries. They stated, “I have never been called to any meeting on climate change. That resides with the Ministry of Environment,” which illustrates institutional fragmentation and a lack of multi-stakeholder dialogue. Participant 2 confirmed that some level of awareness exists, especially among stakeholders and through the Ministry of Empowerment. However, their response lacked detail, suggesting that while official recognition of climate change may be present, operational clarity and coordinated awareness efforts are minimal. They stated vaguely, “To some extent, the state government, through the Ministry of Empowerment, has tried its own best.”

Participant 3 provided a more structured perspective, acknowledging efforts at domestication of the national climate change policy at the government level but noted that community awareness remains low. They explained that the main form of public sensitization has been through radio jingles, which, though accessible, offer limited interactivity and depth. There were no reports of direct, sustained community engagement initiatives. The participant emphasized the need for such engagements, suggesting that interactive discussions and practical engagements are necessary to translate policy knowledge into action. Interestingly, while

Participant 1 cited community-level sensitization efforts during outreach activities, their statements suggested that these were incidental and lacked strategic planning. “Even when we go out for activities, we try to sensitize people in the community about climate change and how they should minimize things that will pollute the air,” they said. This points to well-meaning but informal efforts not tied to any broader framework or curriculum. Reinforcing this observation, Participant 3 criticized the lack of comprehensive public education, stating that mass media alone is insufficient. They proposed that the government needs to initiate *“community engagement programs that are interactive and tailored to local realities.”*

The familiarity with the National Climate Change Policy is similarly limited. While Participant 3 mentioned that some government stakeholders are aware of the NCCP, they acknowledged that its impact on shaping subnational strategies is minimal. Participant 2's comment that the Ministry had “tried its best” also hinted at a general awareness but not necessarily a deep or actionable understanding. Participant 1 was more explicit in expressing detachment from the policy, stating they had never been invited to any meetings related to climate change since assuming office, a reflection of weak interdepartmental collaboration.

Theme 2: Policy Integration and Implementation

Participant 3 offered the most direct insight into the integration of the National Climate Change Policy (NCCP) at the state level. They stated: “The state government is trying to domesticate the national climate change policy. And efforts are ongoing to integrate it into the development agenda of the state.” This response shows that while the NCCP is known and theoretically being adapted to local contexts, practical outcomes from these efforts are still limited. The phrase

“trying to domesticate” suggests the process is at an early or incomplete stage, with no clear evidence of finalized policy documents, legal frameworks, or operational strategies yet in place. The lack of clarity about institutional leadership on this issue further undermines integration. Participant 1, when asked about climate-related coordination, revealed a fundamental disconnect between climate policy and multi-sectoral governance:

“I have never been called to any meeting on climate change. That resides with the Ministry of Environment.” This indicates that climate governance in Kogi remains siloed, with little horizontal coordination between ministries. It also reflects a weak institutional arrangement where responsibilities are concentrated in one department rather than shared across the sectors most affected by or contributing to climate change, such as agriculture, water resources, health, or works and infrastructure.

Participant 2 mentioned that the Ministry of Empowerment is active in climate-related work, but their response was more general: “The state government through the Ministry of Empowerment has tried its best.” This suggests an individual ministry's involvement rather than a systemic integration of climate change considerations into state-level planning, programming, and budgeting. Participant 1's remarks point to a broader institutional culture that still treats climate change as a niche or peripheral issue: “Climate change issues are mostly being handled by the Ministry of Environment, and other ministries are not fully involved.” This lack of multi-sectoral collaboration weakens the potential for integrating climate action into broader development frameworks like agricultural extension services, disaster risk reduction, water management, and infrastructure planning.

Another revealing insight is the absence of a

formal climate change unit or multi-stakeholder body responsible for overseeing climate policy integration. Unlike some other states that have established climate change desks or steering committees, there is no indication from any of the participants that such a coordinating mechanism exists in Kogi. The lack of this kind of institutional anchor further explains the poor vertical and horizontal integration of climate policies. Additionally, the participants did not mention the inclusion of climate considerations in the state budget process, planning templates, or evaluation metrics. This omission is notable, as budgetary alignment is one of the most critical indicators of policy integration. The recurring theme in the responses is that while climate change is acknowledged at some administrative levels, there is little evidence of systematic planning, legislation, or resource allocation to support its integration.

Theme 3: State-Led Climate Actions

Participant 1 identified a few interventions linked to afforestation and erosion control, explaining: “There are some few state government projects... like the erosion control project. The Ministry of Environment is involved in planting trees and evacuating refuse.” These activities, while not labelled explicitly as climate change interventions, are relevant to climate mitigation and adaptation. The emphasis on tree planting suggests a recognition of the need to combat land degradation and deforestation, issues that have serious climate implications in Kogi due to increasing rainfall variability and gully erosion. However, the fact that these activities are “few” and seemingly implemented without a wider climate policy framework indicates a lack of strategic intent and scalability. Participant 3 echoed this emphasis on environmental initiatives, mentioning the government’s involvement in erosion management and waste disposal. They noted: “Some actions taken by the government include addressing erosion and

refusing evacuation, especially in flood-prone communities.” Here again, the motivation appears more aligned with disaster management than with structured climate policy, although the overlap between these domains is recognized. The interventions are mostly reactive, responding to existing problems rather than preemptively building climate resilience.

In terms of community outreach, Participant 1 mentioned that during some outreach programs, they engage in climate sensitization, albeit informally: “Even when we go out for activities, we try to sensitize people in the community about climate change and how they should minimize things that will pollute the air.” While commendable, this effort lacks formalization or consistent structure. It relies on individual initiative rather than being part of a sustained, well-resourced program. This also reflects the absence of dedicated climate communication strategies or partnerships with civil society organizations to scale awareness and action at the grassroots level. Notably, there were no references to renewable energy initiatives, clean technology promotion, or agricultural adaptation programs, which are often key components of subnational climate strategies. This absence suggests either a lack of such programs or that they are not sufficiently visible or recognized by the respondents. Furthermore, no participant cited the use of climate data or early warning systems—tools that are crucial for building long-term resilience in climate-vulnerable areas like Kogi.

Participant 2 simply stated that the government is “trying its best,” without providing specifics, which further underlines the fragmented and possibly underdeveloped nature of state-led climate initiatives. From the responses, it is also evident that there is no centralized climate action plan or institutional framework guiding or monitoring these actions. The activities seem to be ad hoc,

ministry-driven, and primarily responsive to immediate environmental challenges rather than framed within a broader adaptation or mitigation agenda.

Theme 4: Challenges in Climate Policy Implementation

A consistent issue raised by the participants is the low level of prioritization and political will. Participant 1 observed that climate change issues are handled almost exclusively by the Ministry of Environment, with other sectors remaining largely disengaged. They noted: “I have never been called to any meeting on climate change... that resides with the Ministry of Environment.” This illustrates a governance approach where climate action is siloed and not treated as a cross-cutting development priority. The lack of leadership from the executive level in mandating climate integration across ministries severely limits policy traction and cross-sectoral collaboration.

Another major constraint is the lack of adequate funding. While no participant provided figures or budgetary references, the absence of any mention of climate-specific budget lines suggests that there is little to no dedicated financing for climate programs at the state level. Participant 2’s vague comment that “the Ministry of Empowerment has tried its best” indirectly implies that resources are scarce, and ministries are doing what they can within limited capacities. There is also a clear gap in stakeholder coordination. Each participant seemed to reflect experiences from isolated ministry perspectives, and none referred to any inter-ministerial committees, working groups, or climate task forces. The absence of a central coordinating body or cross-sectoral platform reinforces fragmentation. As Participant 3 put it: “Climate change awareness is still limited, and implementation is even more disjointed.” Without formal structures for collaboration, efforts risk duplication, inefficiency, or falling through institutional cracks. Awareness and

education challenges were also strongly highlighted. While outreach happens during some field activities, it lacks scale and sustainability. Participant 1 explained: “We try to sensitize people... but it’s not systematic or wide-reaching.” This points to an implementation weakness where information does not reach the broader public, especially rural communities. The use of radio jingles, as mentioned by Participant 3, helps with basic exposure but lacks the depth and interactivity needed to inspire behavioural change or community-level adaptation.

Another recurring challenge is capacity gaps—both in terms of technical knowledge and human resources. None of the participants indicated that climate-specific training was available for staff or that technical tools (e.g., vulnerability assessments, data analytics, GIS mapping) were being applied in the design or evaluation of climate programs. As such, even where there is motivation, the institutional readiness to execute complex climate strategies is low. Moreover, the absence of a formalized state climate policy or legal framework was implied across all responses. There was no mention of existing legislation guiding climate action or of any attempts to enact a local climate change law. This lack of legal anchoring weakens accountability and allows ministries to treat climate-related work as optional or secondary. Finally, community engagement remains a challenge, both in terms of depth and design. While there are occasional efforts to inform the public, there appears to be no structured platform for citizens, traditional leaders, civil society organizations, or youth groups to contribute to policy design or program monitoring. This exclusion of grassroots stakeholders reduces local ownership and undermines the sustainability of interventions.

Theme 5: Opportunities and Recommendations

A primary opportunity lies in broadening institutional involvement. As it currently stands, the Ministry of Environment is perceived as the sole custodian of climate action in the state. However, Participant 1 pointed out that other ministries such as Health, Agriculture, and Works are affected by or contribute to climate-related issues but are not involved in climate planning. This creates an opening to build an inter-ministerial platform or steering committee to coordinate and mainstream climate considerations across all relevant sectors. Doing so would enhance efficiency, create synergy, and ensure climate action is not isolated but integrated into development planning. Another key opportunity is in community sensitization and grassroots engagement, which, though currently limited, could be significantly expanded with modest investments. Participant 3 suggested moving beyond radio jingles to direct and interactive community outreach: “There is a need to engage with people directly and ensure they understand climate change in ways that affect their daily lives.” Structured community forums, traditional leader engagement, and school-based programs could all be deployed to deepen understanding and encourage climate-friendly practices. Participants also hinted at the state's untapped potential in environmental sectors like afforestation and erosion control. Participant 1 noted that the Ministry of Environment already handles tree planting and erosion projects. These initiatives, if scaled and better coordinated, could form the basis for a state-led climate adaptation strategy, particularly in a state where land degradation and flooding are recurring issues. Introducing monitoring and evaluation frameworks would help assess these efforts and position the state to attract external funding and technical support.

On the policy front, the process of domesticating the National Climate Change Policy presents a vital opportunity for legal and strategic

advancement. Participant 3 mentioned ongoing efforts in this area, which, if supported with technical guidance and public consultation, could result in a state-level climate policy tailored to Kogi's unique ecological and socioeconomic realities. A formal law or framework would also strengthen accountability, define roles, and ensure climate responsibilities are embedded in the mandates of various ministries and local governments. Another area of opportunity is the mobilization of non-governmental actors and civil society, who are largely absent from the current structure but have the potential to drive awareness, mobilize communities, and pilot low-cost adaptation models. Creating platforms for civil society engagement through climate forums or local action groups could dramatically increase coverage, responsiveness, and innovation in the state's climate efforts.

Participant 2 referenced that the Ministry of Empowerment had been active in climate-related programming, albeit without specifics. This signals a broader possibility to integrate climate action into livelihoods, youth development, and empowerment programs. Projects that combine skills training, environmental stewardship, and green job creation would not only address climate goals but also contribute to employment and social development. Finally, there is significant room for external collaboration. While none of the participants mentioned active partnerships with donor agencies or climate funds, the state could begin engaging with national platforms and international partners such as the Green Climate Fund, the Nigeria Climate Innovation Centre, or development agencies involved in climate resilience. Improved documentation of climate-related needs, activities, and plans could support such engagement.

Discussion

The survey results indicate a high level of general awareness of climate change among the

respondents (100%), with a majority reporting a “good” to “very good” understanding. This awareness is primarily driven by formal education and mass media. The high educational attainment of respondents likely contributes to this level of awareness, but it also signals a critical gap: outreach efforts may not be reaching less-educated or rural populations. This gap is reinforced by qualitative interviews, which reveal a distinct urban-rural divide in awareness levels. Participants highlighted that rural communities are often excluded from climate discourse due to limited access to information, infrastructure, and platforms for engagement. Notably, awareness of the National Climate Change Policy (NCCP) was at 65%, indicating moderate policy penetration but also a significant knowledge gap among over a third of respondents. While this policy exists as a national framework, its visibility and relevance at the state level remain inconsistent. Although there is evidence of attempts to localise the NCCP, as mentioned by some interviewees, these efforts appear nascent and largely undeveloped. The language used “trying to domesticate” suggests an aspirational rather than operational status. There is currently no formal climate change law or framework at the state level to institutionalize climate action. Moreover, no participant could cite specific budgetary provisions or legislative instruments supporting climate policy, which reflects the weak policy integration across governance systems.

Climate change in Kogi is still largely perceived as the purview of the Ministry of Environment. Other key ministries such as Agriculture, Health, and Infrastructure, are minimally engaged, if at all. This siloed approach undermines the cross-sectoral nature of climate challenges and limits the integration of climate concerns into broader development planning. This is particularly troubling given Kogi's vulnerability to flooding, erosion, and other climate risks that cut across multiple sectors. Furthermore, the absence of an

inter-ministerial committee or climate change coordination unit means there is no central mechanism to facilitate dialogue, pool resources, or ensure accountability. This governance vacuum is reflected in participant feedback pointing to a lack of coordination, poor communication among ministries, and minimal stakeholder involvement in climate decision-making. While 69% of respondents reported awareness of state-level climate initiatives, the types of initiatives identified: flood control (30%), afforestation (26%), awareness campaigns (18%), waste management (15%), and renewable energy (11%), suggest that Kogi State has implemented some environment-focused programs that overlap with climate adaptation or mitigation goals. However, these actions are often reactive (e.g., flood control) and implemented in isolation without being situated within a broader strategic framework. From the interviews, it's clear that many interventions, such as tree planting and refuse evacuation, are not formally recognized as part of a climate strategy. They are described in general environmental terms, further indicating a lack of technical framing and long-term planning. Moreover, the relatively low percentage of respondents who rated these initiatives as “very effective” (15%) or “effective” (21%) reflects scepticism about their impact, likely due to limited visibility, poor implementation, or inadequate communication.

Critically, no participant mentioned any use of early warning systems, climate risk assessments, or climate-resilient infrastructure. Likewise, there was little reference to renewable energy, sustainable agriculture, or green job initiatives which are tools that are increasingly being adopted in climate-vulnerable contexts. This absence highlights a strategic gap in leveraging climate action for co-benefits such as employment, health, and food security. Several systemic barriers emerged from both survey and interview data. Funding constraints were

frequently cited as a limiting factor, with respondents calling for dedicated budget lines and improved financial planning. Lack of political will and leadership was also highlighted, especially regarding the failure to treat climate change as a high-priority, cross-cutting development issue. Institutional capacity gaps were another recurring theme. There is little evidence of ongoing training, technical tools (e.g., GIS, vulnerability mapping), or performance indicators being used to guide climate programs. This lack of technical depth compromises the ability of state actors to design, implement, and evaluate complex interventions.

Public engagement and education remain limited. While radio jingles and occasional sensitization during outreach activities have been used, these efforts are uncoordinated, shallow in content, and rarely followed up with action. The absence of structured community education, particularly in rural areas, weakens public buy-in and limits the development of localized adaptation practices. Lastly, the lack of civil society and private sector involvement represents a missed opportunity. Respondents and participants made little to no reference to collaboration with NGOs, academia, or local businesses—stakeholders that can play a critical role in innovation, accountability, and community mobilization.

Despite the many challenges, several opportunities can be harnessed. The widespread willingness (94%) of respondents to participate in community climate programs suggests that there is a reservoir of civic energy that can be mobilized. This aligns with the idea of leveraging community-based adaptation as a key pillar of local climate resilience. Moreover, the existence of some ongoing environmental initiatives, particularly in erosion control and afforestation, offers a base for building more structured climate programs. These could be scaled and restructured under a formal climate action plan, with built-in

mechanisms for monitoring, evaluation, and stakeholder feedback. Efforts to localise the NCCP, if followed through with technical assistance, public consultation, and legislative support, could provide the legal foundation for sustained climate action. There is also potential to tap into national and international climate finance, especially through clearer documentation of needs, partnerships with technical agencies, and the establishment of a climate change office or focal point. Finally, by establishing multi-stakeholder platforms, the state can enhance coordination, build capacity, and create more inclusive and impactful climate responses that cut across gender, geography, and institutional roles.

Conclusion

Kogi State, like many subnational entities in Nigeria, demonstrates a growing awareness of climate change but lacks the institutional infrastructure, financial resources, and policy integration required for a coherent and impactful climate response. The state's climate initiatives, while commendable, are limited in scope and fragmented in implementation.

Efforts to localise the National Climate Change Policy remain in the early stages, hindered by limited inter-ministerial collaboration and the absence of a formalized state climate policy or coordinating mechanism. Public engagement remains shallow, especially among rural populations, and the lack of technical capacity further constrains effective implementation.

Nonetheless, the foundational awareness, existing environmental efforts, and expressed public willingness to participate in climate initiatives provide a strategic opening. With targeted reforms and increased coordination, Kogi State can transition from fragmented responses to a more holistic and sustainable climate action model.

Recommendations

1. **Establish a Multi-Sectoral Climate Steering Committee:** Create an inter-ministerial platform involving key MDAs (Environment, Agriculture, Health, Works, Empowerment) to coordinate climate policy design, implementation, and monitoring.
2. **Develop and Enact a State Climate Change Policy or Legal Framework:** Domesticate the National Climate Change Policy through a legally binding state-level policy that assigns roles, sets targets and integrates climate action into planning and budgeting systems.
3. **Allocate Dedicated Climate Budget Lines:** Introduce specific budget provisions for climate initiatives across key ministries and ensure alignment with the state's development agenda.
4. **Enhance Community Engagement and Awareness:** Expand climate education beyond radio jingles through community forums, school-based programs, traditional leader involvement, and partnerships with civil society organizations.
5. **Build Institutional and Technical Capacity:** Train government staff on climate risk assessment, data analytics, project monitoring, and reporting to support evidence-based decision-making and attract climate finance.
6. **Document and Scale Successful Projects:** Systematically track ongoing efforts in afforestation and erosion control, and develop mechanisms to scale these projects while aligning them with broader adaptation strategies.
7. **Promote Renewable Energy and Climate-Smart Agriculture:** Invest in renewable energy installations and agricultural adaptation programs to address energy poverty, promote sustainable livelihoods, and build resilience to changing weather patterns.
8. **Engage External Partners and Climate Funds:** Position the state to attract national and international climate finance by developing credible project proposals, documenting needs, and participating in regional climate networks.
9. **Create Climate Action Monitoring and Evaluation Tools:** Develop an M&E framework to assess climate program effectiveness, ensure transparency, and enable evidence-based scaling and learning.

LAGOS STATE

Presentation of Survey Findings

In Lagos State, 28 respondents (64%) were male, while 16 respondents (36%) were female. This indicates a relatively balanced gender participation, suggesting that both men and women are actively engaged in climate-related discussions.

The age distribution of respondents in Lagos State revealed that the majority (34 respondents, 77%) were between 25 and 34 years old. This was followed by the 18 to 24 age group, which accounted for 8 respondents (18%). The 35 to 44 age group represented 2 respondents (5%). These results suggest that young adults form the most engaged demographic in climate-related issues in Lagos State.

A large proportion of respondents (73%) had attained tertiary education, while 23% reported having postgraduate qualifications. Only 4% had completed secondary school. This suggests that climate awareness efforts in Lagos State have been more successful in reaching educated individuals. Respondents in Lagos State reported a variety of occupations. Trading and business made up 14% of the sample. Civil servants accounted for 13%, while students comprised 14%. Banking and legal professions each represented 7% of respondents, and the “others” category accounted for 43%, reflecting a diverse range of professional backgrounds. This occupational diversity indicates that climate change awareness is relevant across different sectors in Lagos State.

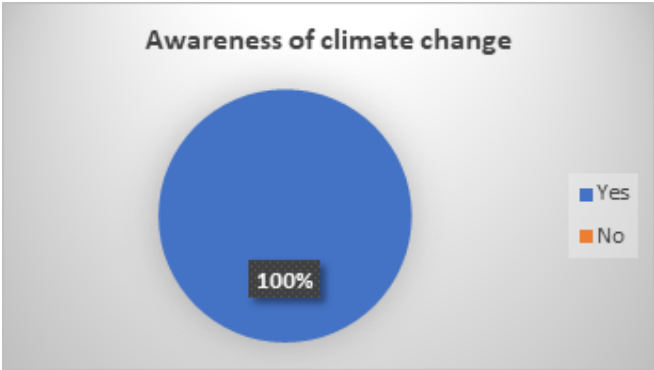


Figure 1. Awareness of climate change

All respondents (100%) reported that they had heard of climate change, reflecting a high level of general awareness among Lagos State residents.

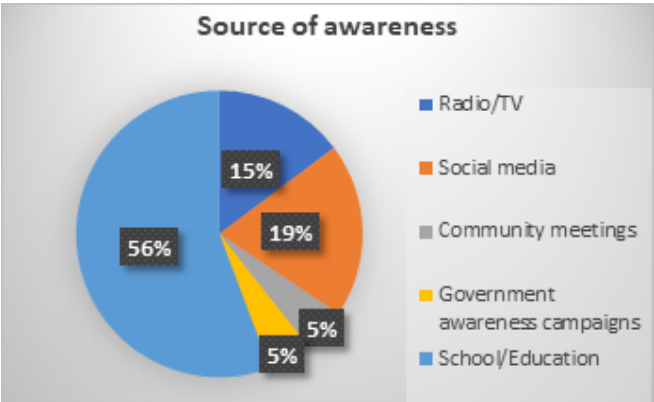


Figure 2. Source of climate change awareness

Schools and educational institutions were the most frequently cited sources of information about climate change, mentioned by 56% of respondents. Social media followed at 19%, while 15% of respondents first learned about climate change from radio and television programs. Community meetings and government awareness campaigns each accounted for 5% of responses. This reflects the influential role of educational institutions and digital platforms in spreading climate awareness.

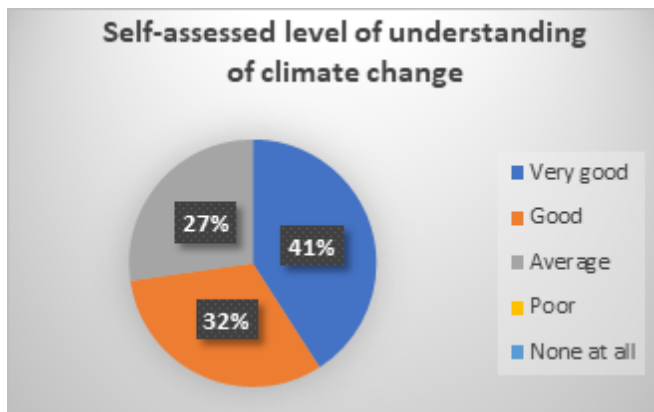


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 41% of respondents rated their knowledge as very good, while 32% described it as good. Meanwhile, 27% reported having an average understanding. No respondents rated their understanding as poor or indicated that they did not know about climate change. These results suggest that most respondents have a strong grasp of climate change issues.

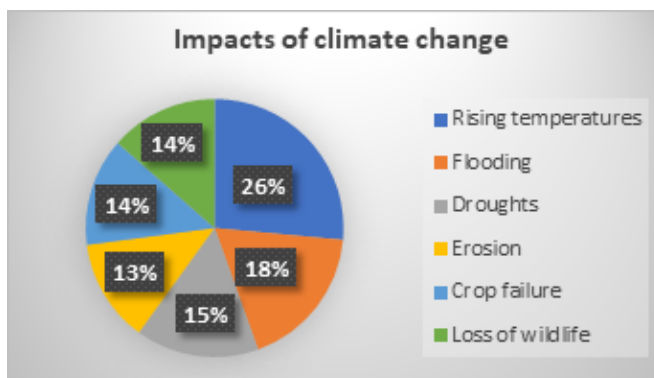


Figure 4. Perceived impacts of climate change

Respondents identified multiple consequences of climate change in Lagos State. Rising temperatures were cited by 26% of participants, while flooding was mentioned by 18%. Droughts was identified by 15% of respondents, followed by Crop failure (14%), loss of wildlife (14%), and erosion (13%). These findings reflect the diverse environmental challenges posed by climate change in Lagos State

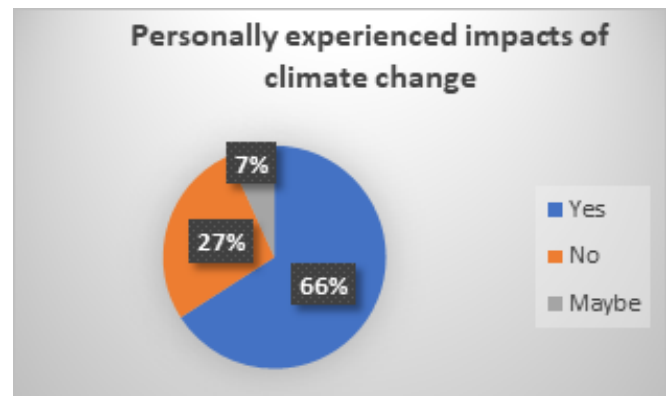


Figure 5. Direct experience with climate change

A significant majority (66%) of respondents reported that they had personally experienced the impacts of climate change. Meanwhile, 27% said they had not, and 7% were uncertain.

Respondents detailed a range of observed impacts, including flooding, rising temperatures, and increased heat levels. Many noted that seasonal patterns have become more unpredictable, with heavy rainfall occurring earlier or later than usual. Other respondents mentioned black mist in the atmosphere, air pollution from industrial activity, and humid weather conditions. Health issues such as heat exhaustion and respiratory problems due to poor air quality were also reported..

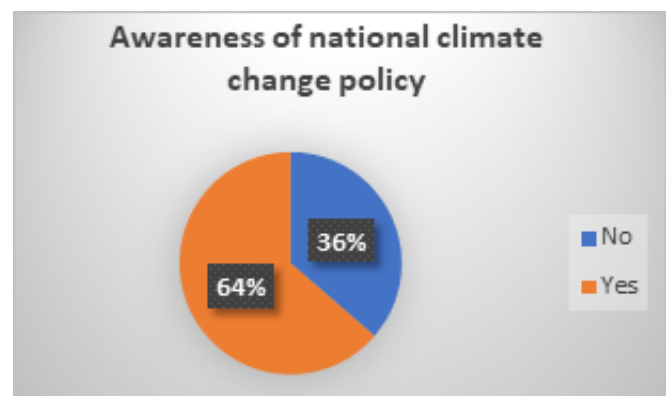


Figure 6. Awareness of national climate change policy

Awareness of Nigeria's National Climate Change Policy was moderate, with 64% of respondents

indicating they were aware of it, while 36% stated they were not. This reflects a need for greater public engagement with national climate policies.

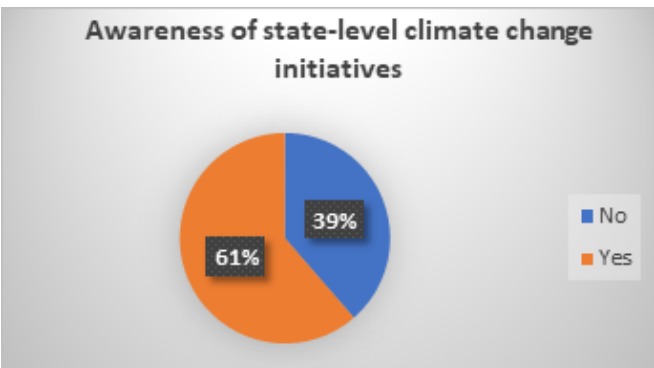


Figure 7. Awareness of state-led climate actions

Awareness of state-level climate initiatives was relatively high, with 61% of respondents stating they were aware of such policies, while 39% were not.

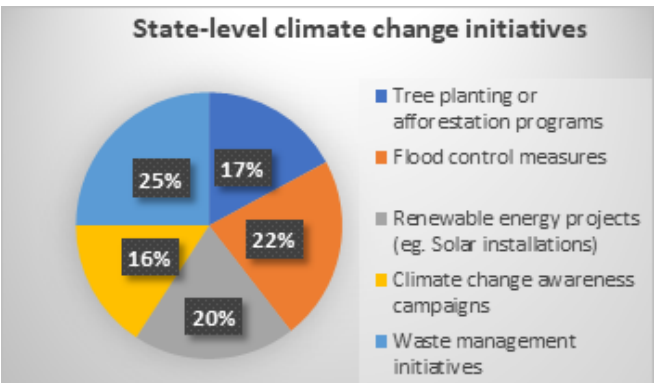


Figure 8. Types of climate change initiatives identified

Among those aware of state-led initiatives, 25% identified waste management initiatives as the most recognized action. Flood control measures were mentioned by 22%, while renewable energy projects such as solar installations were noted by 20%. Tree planting and afforestation programs accounted for 17%, while climate change awareness campaigns were cited by 16% of respondents

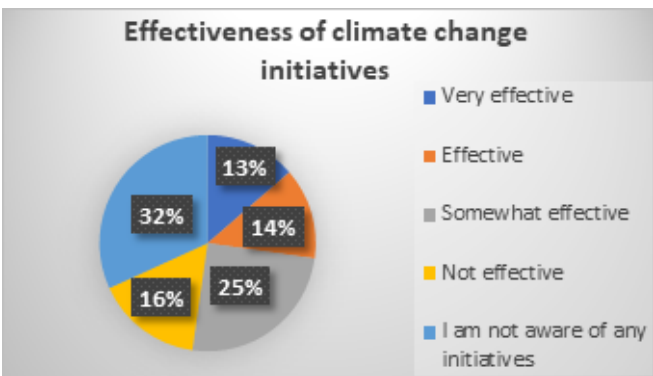


Figure 9. Perceived effectiveness of initiatives

Respondents had mixed views on the effectiveness of climate change initiatives in Lagos State. While 25% rated these initiatives as somewhat effective, 16% described them as not effective. Meanwhile, 14% believed the initiatives were effective, and 13% rated them as very effective. A significant 32% reported being unaware of any state-level initiatives..

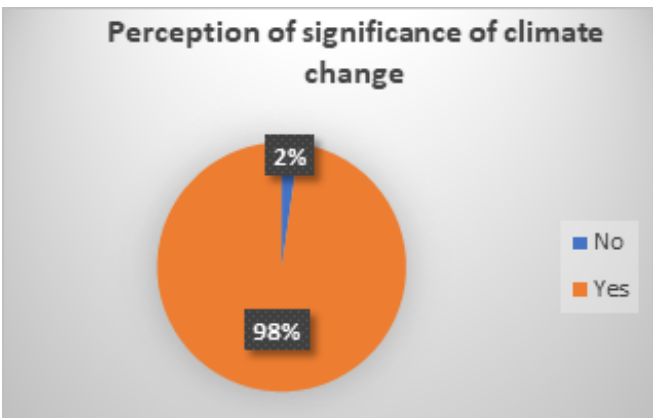


Figure 10. Perception of climate change urgency

An overwhelming 98% of respondents agreed that climate change is a significant issue that needs to be addressed in Lagos State, while only 2% did not see it as a pressing concern.

Respondents identified several barriers to effective climate action in Lagos State. Corruption, poor governance, and lack of public awareness were the most frequently mentioned challenges. Other barriers included poor infrastructure, inadequate waste management systems, and lack

of enforcement of climate policies. Limited funding, poor planning, and weak political will were also cited as major obstacles.

Respondents also proposed several measures for the state government, including increasing public awareness campaigns, improving waste management, and investing in renewable energy. Many called for better drainage systems to prevent flooding, stricter enforcement of environmental regulations, and increased funding for climate initiatives. Other suggestions included promoting tree planting programs, improving air quality through industrial regulation, and expanding public education on climate change.

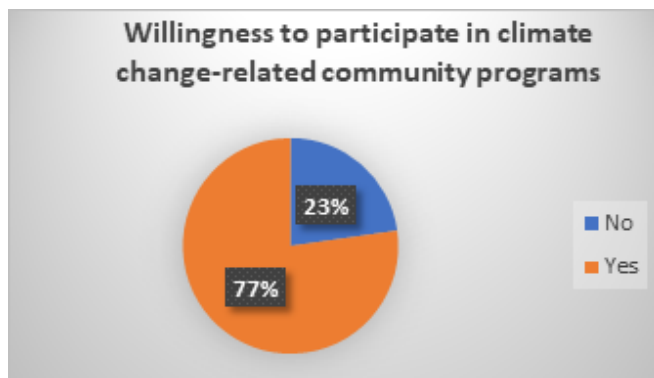


Figure 11. Willingness to participate in climate programs

A strong majority (77%) of respondents expressed willingness to participate in community programs related to climate change, while 23% stated they were not interested.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 stated that awareness has grown significantly across sectors, noting: *“Awareness of climate change has increased significantly, especially among formally educated individuals.”* They explained that while knowledge

was previously confined to those in environmental or science-related fields, professionals from diverse vocations now understand climate change as a lived reality partly due to extreme weather events such as erratic rainfall and heat waves. However, they also acknowledged that people with lower levels of formal education still have limited awareness, even though they experience the impacts firsthand. Participant 2 reinforced this by asserting: *“Awareness is very, very high,”* particularly in urban areas. They estimated that around 75% of Lagosians are aware of climate change, although at the local level, awareness drops to about 50%, highlighting a significant urban-rural knowledge gap. This underscores the need for differentiated awareness strategies that reach underserved communities more effectively. Both participants confirmed that state-led programs have played a critical role in promoting awareness, particularly among young people and public officials. For instance, Lagos has established the Greenhouse Club in public schools to teach students about environmental sustainability, biodiversity, and climate change. Participant 2 added: *“We have the Environmental Education Unit in the ministry, which goes from one school to another across the six districts in Lagos State.”* This indicates a deliberate and wide-reaching campaign targeting the next generation of climate actors.

Awareness efforts also extend to civil servants, with training programs organized for public servants to equip them with sustainability knowledge. These efforts contribute to the mainstreaming of climate discourse across governance systems, ensuring that decision-makers understand the stakes involved. In addition, both participants noted the role of NGOs and community-based organizations in raising awareness, especially at the grassroots level. Through school outreach, public campaigns, and women-focused adaptation programs, these

organizations help close the awareness gap that formal education channels do not reach.

In terms of familiarity with the Nigerian Climate Change Policy, both participants acknowledged that awareness is concentrated among stakeholders directly involved in the climate space. As Participant 2 explained: “Familiarity with the National Climate Change Policy is primarily among government agencies, environmental professionals, and NGOs rather than the general populace.” This statement reveals a clear need to democratize access to policy knowledge so that the policy is not only recognized by institutional actors but also by citizens who are expected to participate in its implementation and enforcement. Nonetheless, Participant 1 noted that Lagos is actively aligning with national frameworks, including the Nationally Determined Contributions (NDCs), and that “climate change is being mainstreamed into Lagos State policies.” Events such as sustainability forums and stakeholder engagements have contributed to a culture of climate consciousness among government officials and some members of the public.

Theme 2: Policy Integration and Implementation

Participant 1 highlighted that Lagos is actively aligning its environmental and climate initiatives with both the National Climate Change Policy (NCCP) and international goals like the Nationally Determined Contributions (NDCs). They noted: “Lagos State has a climate action plan... we’re also aligning with the national NDCs.” This suggests a deliberate effort to localize international and federal climate objectives, embedding them into state-specific strategies that guide sectoral and inter-agency implementation. A significant milestone in this regard is the Lagos State Climate Action Plan (CAP), which serves as a strategic framework for addressing mitigation, adaptation, and sustainable development. According to

Participant 2, the CAP is a central policy tool that is not just theoretical, but “being implemented in stages, with short-, medium-, and long-term targets.” This staged approach illustrates a commitment to long-term planning while allowing for periodic evaluation and adjustment based on performance and available resources. Both participants emphasized that policy integration is not limited to the Ministry of Environment but spans several critical MDAs (ministries, departments, and agencies), including those responsible for education, transportation, health, and urban planning. Participant 2 stated: “We’re mainstreaming climate change into state policies... all MDAs are aware of their responsibilities and roles.” This points to a well-structured system of climate governance where climate action is seen as a shared responsibility rather than the exclusive domain of the environment ministry.

Moreover, the interviews revealed that Lagos has established institutional mechanisms to facilitate this integration. For example, inter-ministerial committees and working groups have been set up to ensure that climate considerations are embedded in various sectoral plans and initiatives. Participant 1 noted that “each ministry has its implementation plan that aligns with the climate action agenda.” This reflects vertical integration (linking policy to practice within agencies) and horizontal integration (cooperation across sectors), both of which are essential for climate mainstreaming. Importantly, the responses also emphasized the state’s focus on monitoring and evaluation (M&E) as a way to track policy integration. Tools and systems are in place to measure progress toward climate targets, although challenges such as data quality and consistency remain. Nonetheless, the existence of such mechanisms shows a maturity in governance and a shift toward evidence-based implementation.

However, the participants acknowledged that implementation is ongoing and not without its limitations. Participant 2 observed that while policies have been adopted and integration efforts are active, the level of implementation varies by sector and agency capacity. This variation is partly due to differences in technical expertise, access to funding, and internal leadership within MDAs. For example, while some agencies have fully embraced climate-responsive planning, others are still adjusting to the expectations and responsibilities outlined in the state's action plan. In addition, while policy frameworks and strategies are in place, budgeting for climate activities remains a challenge. Funding is often tied to external donors or restricted to pilot programs, and there's a need to integrate climate action more thoroughly into the core budgetary processes of the state.

Theme 3: State-Led Climate Actions

One of the major pillars of Lagos State's climate response is the implementation of sector-specific climate actions, especially in waste management, transport, energy, education, and coastal resilience. According to Participant 2, Lagos has initiated climate-responsive interventions that are aligned with short-, medium-, and long-term goals. They stated: "The Climate Action Plan is guiding various MDAs. Each ministry knows what is expected and contributes accordingly." This organized structure allows different arms of government to own their roles and responsibilities, moving beyond isolated projects to system-wide implementation. A standout example cited by Participant 1 is the reduction of methane emissions through waste management reforms. They explained that Lagos has invested in the segregation of waste at source, with a focus on recycling and diverting organic waste from landfills. The participant remarked: "One of the key mitigation strategies we are pursuing is methane reduction. We're encouraging waste segregation, composting, and cleaner waste transport

systems." This reflects the integration of climate mitigation into essential urban systems which is a proactive measure in a densely populated and highly urbanized state.

Another significant initiative is the promotion of green transportation. Participant 2 highlighted Lagos State's efforts to introduce low-emission buses and encourage non-motorized transport infrastructure, including walkways and cycling paths. These investments aim to reduce vehicular emissions while promoting more sustainable urban mobility solutions. "We're phasing in eco-friendly transport systems. It's not perfect, but progress is visible," they noted. Lagos has also prioritized renewable energy adoption, particularly in the public sector. Both participants referenced the installation of solar power systems in schools, hospitals, and government facilities. These actions support energy access and reduce reliance on diesel generators, helping to cut emissions and improve resilience during grid failures.

On the adaptation front, coastal and flood resilience remains a central focus due to Lagos's vulnerability to sea-level rise, coastal erosion, and flash flooding. According to Participant 1, the state has invested in drainage infrastructure, embankment reinforcement, and urban planning reforms to address these risks. They explained: "We are improving infrastructure to manage flooding, especially in low-lying coastal communities. It's one of our biggest climate challenges." Lagos also recognizes the importance of climate education and public engagement. The Greenhouse Club mentioned previously is one example of school-based environmental learning, while ministries conduct regular community awareness campaigns. Participant 2 emphasized that: "*We don't just implement; we also educate. People need to understand why these changes are happening and how they can be part of the solution.*"

Importantly, the state engages regularly with non-governmental organizations and the private sector, supporting initiatives in climate-smart agriculture, water conservation, and ecosystem protection. While specific projects were not detailed in the interviews, both participants noted that public-private partnerships are encouraged and seen as key to scaling up action. However, implementation challenges still exist. Participant 1 acknowledged that while many programs have been launched, monitoring and evaluation systems need strengthening, and not all ministries progress at the same pace. “Some MDAs are faster than others. Capacity and funding are not equal across the board,” they said.

Theme 4: Challenges in Climate Policy Implementation

A central issue raised by both participants is the uneven capacity across government ministries and departments. While Lagos has structured its Climate Action Plan to assign responsibilities across MDAs, the level of preparedness and technical expertise varies. Participant 2 noted: “Not all MDAs are moving at the same pace. Some are faster, some are struggling. Capacity is not equal.” This lack of uniform technical capacity affects the consistency and efficiency of policy implementation, especially in sectors less historically engaged in environmental or sustainability-related programming. Another significant constraint is the availability of funding and resource allocation. Although Lagos has greater revenue-generating capacity than most Nigerian states, climate financing remains a challenge. Participant 1 explained that many of the state’s initiatives are donor-supported or depend on public-private partnerships, adding: “There are budgetary constraints. Sometimes plans are ready, but funding delays the roll-out.” This indicates that while political will may be present, financial limitations particularly around capital-intensive projects like renewable energy installations or large-scale waste infrastructure

can stall or dilute implementation.

The issue of data access and monitoring systems also came up as a barrier. Participant 1 acknowledged that while there are mechanisms to evaluate performance, comprehensive data systems are still under development: “Monitoring is improving, but it’s still hard to get real-time data or compare impacts across sectors.” This data gap makes it difficult to conduct risk assessments, set baselines, or measure impact consistently, which are all essential for iterative climate governance. Cross-sectoral coordination, though actively pursued in Lagos, still faces operational bottlenecks. Participant 2 pointed out that while ministries understand their roles, joint implementation remains inconsistent due to differences in internal priorities, resource levels, and sometimes overlapping mandates. “We’re working together, but it’s not always seamless. Inter-agency coordination is a work in progress.”

The urban complexity of Lagos itself also presents unique challenges. With over 20 million residents and high population density, implementing climate programs at scale can be logistically and socially difficult. For example, Participant 1 mentioned that engaging informal settlements and slum areas in climate programs is especially hard due to issues of access, land tenure, and infrastructure gaps: “You can’t do drainage or energy projects in places where there’s no structure or where land issues are unresolved.” Another challenge is public perception and behaviour change. While awareness is generally high, not all citizens see climate change as a priority. Participant 2 explained that behaviour change in waste disposal, energy use, and transport habits is still slow, despite education efforts: “People know, but they don’t always act. It takes time to shift culture.” This reflects a challenge common in urban governance: converting awareness into consistent, collective action at the community level. In addition, bureaucratic

processes and procurement regulations were cited as impediments. According to Participant 1, project approvals, procurement, and fund disbursement procedures can delay the implementation timeline for key climate interventions, particularly when external partners are involved.

Theme 5: Opportunities and Recommendations

A major opportunity lies in Lagos State's established institutional framework, particularly the operational Climate Action Plan (CAP) and the active involvement of MDAs. As Participant 2 noted: "We have targets and timelines. Each MDA knows what is expected and contributes accordingly." This clarity of structure creates a strong foundation for advancing implementation, and the existence of formal mandates means new programs can be more easily absorbed and aligned with broader sustainability goals. Lagos's high public awareness also presents an opportunity to build momentum through more targeted, behavior-focused campaigns. Participant 1 emphasized that climate change is now a well-known issue across most urban communities, and even schoolchildren are being sensitized through platforms like the Greenhouse Club. Expanding this engagement further into informal settlements and rural fringes of the state through multilingual, culturally relevant programs would help bridge the awareness-action gap. Another significant opportunity is the youth demographic and educational infrastructure. The state's investment in environmental education through ministries and school programs can serve as a launching point for youth-led innovation in clean energy, waste reduction, urban farming, and more. Participant 2 mentioned that: *"Young people are involved and interested. They just need more opportunities to participate actively."*

Lagos's existing partnerships with the private

sector are another area ripe for expansion. Both participants referenced collaborations on waste-to-energy, green transport, and renewable energy projects. Strengthening these public-private partnerships through clear regulatory frameworks, incentives, and co-investment schemes can unlock financing and technical expertise for large-scale climate infrastructure. The state also has a growing platform for donor engagement, supported by its visibility and participation in national and international climate platforms. Lagos is well-positioned to leverage funds from global climate finance mechanisms, including the Green Climate Fund, Adaptation Fund, and bilateral aid organizations. The development of well-documented proposals, real-time data systems, and measurable outcomes will improve the state's capacity to attract and sustain external funding. In terms of governance, the opportunity exists to enhance cross-sectoral synergy and strengthen monitoring and evaluation (M&E) systems. As Participant 1 mentioned: "Monitoring is improving, but we need better data systems to track performance across agencies." By investing in integrated digital M&E platforms and standardized reporting protocols, the state can better track progress, share lessons, and adjust its strategies based on real-time feedback.

Discussion

The findings from Lagos State reveal a high level of awareness, proactive policy integration, and significant engagement in state-led climate initiatives. However, several structural and operational challenges remain, especially in scaling up and deepening implementation across all sectors and demographics. The data confirms a robust level of general awareness regarding climate change in Lagos State. All survey respondents (100%) had heard of climate change, and a substantial majority rated their understanding as good or very good. Educational institutions and digital platforms such as social

media emerged as key sources of information, highlighting the importance of formal and informal learning channels in shaping public discourse on climate issues. Nevertheless, both the survey and interviews expose disparities in the depth of awareness. While urban and educated populations are well-informed, rural residents and individuals with lower formal education levels remain less engaged. This urban-rural awareness gap was reinforced by key informants, who noted that while awareness may exceed 75% in metropolitan areas, it drops to nearly half in less accessible localities. The implications are twofold: there is a strong foundation for policy support among key stakeholders, but efforts must be intensified to democratize climate knowledge and reach marginalized communities.

Awareness of Nigeria's National Climate Change Policy was moderate (64%), reflecting a critical gap between general climate consciousness and knowledge of specific policy frameworks. The interviews revealed that policy familiarity is concentrated among professionals, government officials, and NGOs. While this may ensure technical alignment within official circles, it risks excluding broader citizen engagement in policy implementation and accountability. This knowledge concentration suggests the need for more inclusive public education about the policy landscape, ensuring that climate change is not just understood as an environmental issue, but also as a structured governance priority with actionable policy components.

Lagos stands out for its deliberate efforts to align with both national and global climate frameworks, including the National Climate Change Policy and Nigeria's Nationally Determined Contributions (NDCs). The Lagos State Climate Action Plan (CAP) serves as a central organizing tool, providing a phased implementation approach with clear roles assigned to ministries, departments, and agencies (MDAs). Interviews indicated that climate action is

not confined to the Ministry of Environment, but is embedded across sectors such as health, transport, and education. Institutional mechanisms like inter-ministerial working groups, monitoring systems, and climate-responsive budgeting signal a mature and systemic approach to climate governance. However, implementation capacity remains uneven across MDAs, with differences in technical readiness, leadership, and funding availability hampering uniform progress. Lagos State's climate action portfolio spans mitigation and adaptation strategies. On the mitigation front, the state is actively pursuing renewable energy initiatives, waste-to-energy projects, and green transportation reforms. Adaptation efforts are equally prominent, with large investments in flood control, drainage infrastructure, and coastal resilience which are all critical given Lagos's geographic vulnerability to sea-level rise and extreme weather events. Survey respondents acknowledged various state initiatives, with waste management (25%), flood control (22%), and renewable energy (20%) being most frequently identified. However, only 13% of respondents rated these initiatives as "very effective," while 32% were unaware of any state-led action. This disconnect suggests a need for more visible, community-oriented project delivery and a communication strategy that closes the feedback loop between government and citizens.

Despite strong policy foundations, Lagos faces several barriers in translating climate strategies into fully realized outcomes. Funding limitations persist, especially for large-scale or capital-intensive projects. While donor support and public-private partnerships exist, they are insufficient to meet the breadth of needs. Climate budgeting is still emerging, and many initiatives depend on external support or are limited to pilot scales. Capacity challenges, particularly in technical areas like emissions monitoring and data analytics, affect the consistency and pace of

implementation. Data limitations hinder robust monitoring and evaluation, making it difficult to measure impact or adjust strategies dynamically. Furthermore, inter-agency coordination though institutionalized still experiences friction due to overlapping mandates and varying internal priorities. Lagos's dense population and spreading informal settlements pose additional challenges. Infrastructure gaps, land tenure issues, and social complexity make it difficult to deliver projects uniformly. Changing public behaviour around waste, energy, and transport remains a slow process despite widespread awareness. As the interviews suggested, "People know, but they don't always act," underscoring the challenge of converting knowledge into sustained community action.

Several unique opportunities position Lagos to enhance its climate response. The state's operational Climate Action Plan provides a structured roadmap with clearly defined roles and targets. High levels of youth engagement and educational infrastructure offer platforms for cultivating a generation of climate-conscious citizens and entrepreneurs. Public-private partnerships can be expanded with better regulation and incentives to attract green investments. Moreover, Lagos is well-placed to access international climate finance due to its policy maturity, visibility, and existing collaborations. Strengthening data systems, institutionalizing climate funds, and improving cross-sectoral collaboration can unlock new resources and optimize implementation.

Conclusion

The Lagos State case study highlights a relatively advanced climate governance framework within Nigeria, driven by high public awareness, structured institutional mechanisms, and proactive policy alignment with national and international climate objectives. Survey results highlight a strong base of general climate

awareness, especially among the educated and youth demographics. However, knowledge of national policy frameworks such as the Nigerian Climate Change Policy remains moderate and largely confined to professional and governmental circles. This points to an awareness-policy literacy gap that limits broader societal participation in climate governance. Lagos has made commendable strides in integrating climate policy across key sectors through multisectoral approaches and inter-agency collaboration. State-led initiatives, particularly in renewable energy adoption, flood control, and environmental education, are notable for their ambition and scale. Importantly, there is a clear institutional structure with MDAs operating under shared mandates, timelines, and performance expectations.

Nevertheless, implementation challenges persist such as limited technical capacity, disparities across agencies, and funding constraints that affect the pace and consistency of climate action. Despite these challenges, Lagos holds significant potential to lead subnational climate action in Nigeria. The state's demographic advantage, policy infrastructure, and openness to innovation position it well to scale up its efforts. By addressing current barriers and capitalizing on existing momentum, Lagos can serve as a model for other states in implementing effective, inclusive, and sustainable climate responses.

Recommendations

1. **Strengthen Technical Capacity Across MDAs:** Provide regular training and capacity-building programs to enhance technical knowledge on emissions tracking, climate budgeting, project monitoring, and sustainable infrastructure planning across all relevant ministries and departments.
2. **Deepen Public Awareness and**

- Policy Literacy:** Expand public education campaigns beyond urban centres using local languages, community-based platforms, and culturally relevant messaging to improve both awareness and understanding of the Nigerian Climate Change Policy and state-level strategies.
3. **Enhance Community Engagement in Informal Settlements:** Implement place-based, participatory approaches to climate initiatives in underserved communities, addressing barriers like land tenure and infrastructure limitations through inclusive planning and localized interventions.
4. **Institutionalize Climate Finance Mechanisms:** Establish a dedicated state climate fund or green bond program integrated into the budget to ensure sustainable financing for climate initiatives, reducing overreliance on donor funding and pilot projects.
5. **Expand Youth and School-Based Environmental Programs:** Scale up initiatives like the Greenhouse Club, linking them with green innovation hubs, vocational training, and entrepreneurship pathways to empower youth as climate solution drivers.
6. **Improve Monitoring, Evaluation, and Data Systems:** Develop integrated digital platforms and standard reporting tools to collect, track, and analyze climate action data across agencies, enabling evidence-based decision-making and impact assessment.
7. **Scale Up Public-Private Partnerships (PPPs):** Create enabling policies and investment incentives to attract private sector participation in renewable energy, green transport, waste-to-energy, and climate-smart agriculture projects.
8. **Establish a High-Level Climate Coordination Task Force:** Form a multi-sectoral task force chaired by a senior executive (e.g., the Governor's office) to oversee inter-agency coordination, monitor implementation, and fast-track decision-making across climate-related initiatives.
9. **Incentivize Sustainable Behaviour Change:** Introduce reward-based programs, subsidies, or recognition schemes that encourage residents and businesses to adopt sustainable practices in waste management, energy use, and transportation.
10. **Leverage International Climate Finance Opportunities:** Build capacity for proposal development and reporting to access global climate funds such as the Green Climate Fund and Adaptation Fund, leveraging Lagos's visibility and governance maturity to secure long-term funding.

OGUN STATE

Presentation of Survey Findings

Out of 33 respondents in Ogun State, 61% were female and 39% male. This gender distribution shows slightly higher female participation in the survey, suggesting that climate awareness efforts may benefit from being gender-sensitive and inclusive, especially considering women's role in environmental stewardship.

The majority of respondents (70%) were aged 18–24, with 15% aged 25–34, and the rest falling into older brackets. This indicates that the sample is predominantly youth-driven, reflecting a potentially high level of digital engagement and openness to environmental education and activism among young people.

In terms of educational attainment, 76% had tertiary education, 15% held postgraduate degrees, and only 6% and 3% had secondary and primary education, respectively. This high level of formal education among respondents may be positively correlated with awareness and understanding of complex issues like climate change.

Occupationally, 61% of respondents were students, followed by business/trading (21%), civil servants (12%), and other professions (6%). The large student representation underscores the need to leverage educational institutions for climate literacy campaigns, while also highlighting the importance of engaging other sectors more robustly.

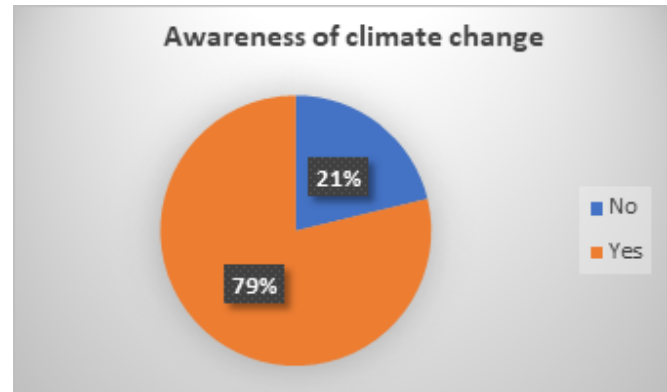


Figure 1. Awareness of climate change

A substantial 79% of respondents reported being aware of climate change, while 21% were not. This high awareness level reflects positively on the reach of climate discourse but also points to a remaining gap among a fifth of the population that still needs to be reached through targeted communication.

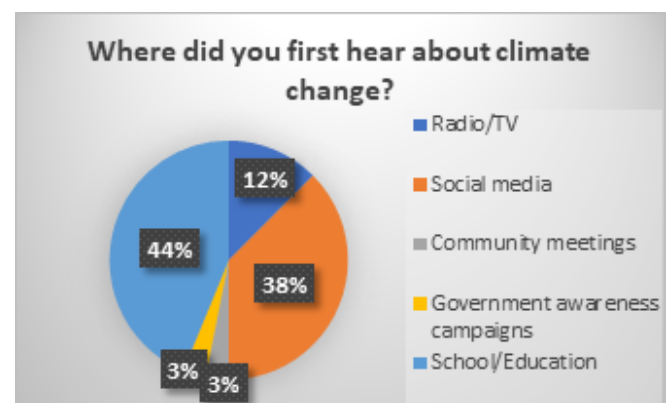


Figure 2. Source of climate change awareness

Respondents cited diverse sources of their first exposure to the term “climate change,” with school/education leading at 44%, social media accounting for 38%, and radio/TV accounting for 12%. This confirms the critical role of educational curricula and digital platforms in shaping

environmental knowledge and awareness. Community meetings and Government awareness campaigns were cited by just 3% each which indicates the need to invest more efforts into these awareness channels.

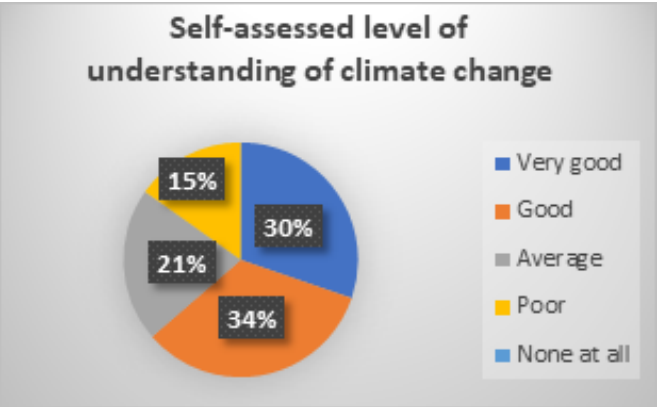


Figure 3. Understanding of climate change

When asked to rate their understanding of climate change, 30% described their knowledge as very good, 34% as good, and 21% as average. However, 15% felt their understanding was poor. While the majority rate their knowledge positively, this 15% points to the need for clearer and more inclusive information dissemination.

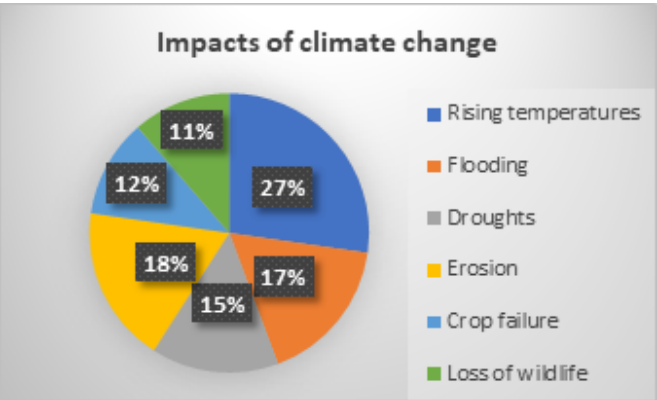


Figure 4. Perceived impacts of climate change

In identifying the effects of climate change, 27% pointed to rising temperatures, 18% to erosion, 17% to flooding, and 15% to droughts. Crop failure and wildlife loss were also mentioned by 12% and 11%, respectively. These responses show that climate impacts are being recognized across

environmental and agricultural sectors, with a slightly stronger focus on temperature and erosion-related effects in the region.

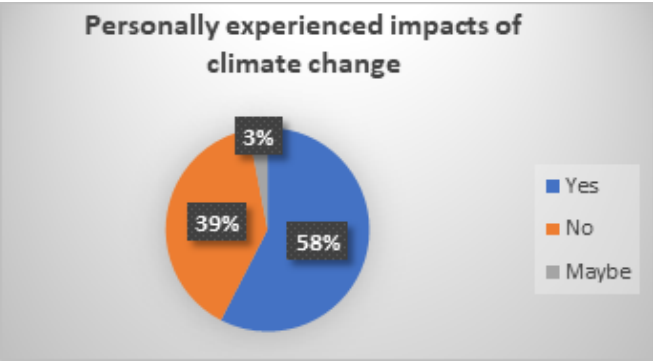


Figure 5. Direct experience with climate change

Direct personal experience of climate change impacts was reported by 58% of respondents, while 39% had not experienced such impacts, and 3% were unsure. This suggests that climate change is increasingly becoming a felt reality, even though a significant minority may not yet perceive or recognize its manifestations in their daily lives.

Among those who had experienced climate impacts, specific examples included extreme heat, delayed rainfall, and erosion. A few responses were unclear or unrelated, indicating some confusion about what constitutes a climate impact. This underscores the need for clearer communication and education to improve environmental literacy.

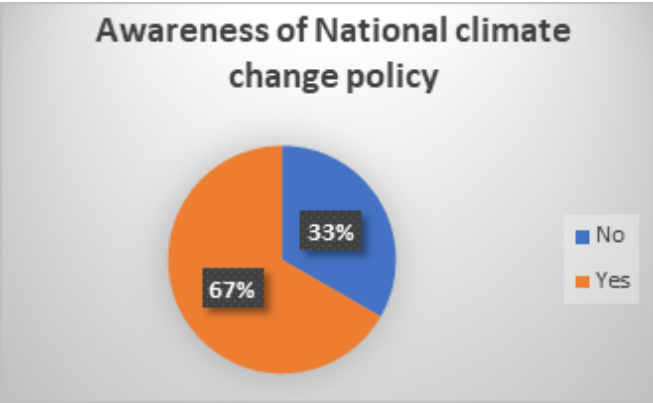


Figure 6. Awareness of national climate change policy

Approximately 67% of respondents indicated awareness of Nigeria's National Climate Change Policy, while 33% were unaware. This suggests that while a majority have heard of the policy, there is still a notable portion of the population yet to be reached, especially at the grassroots level.

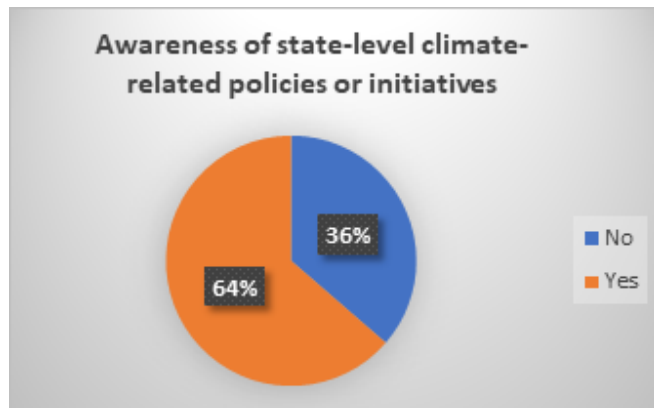


Figure 7. Awareness of state-led climate actions

Awareness of climate-related policies or initiatives within Ogun State was reported by 64% of respondents. This relatively high awareness suggests that state-level climate communication is making some headway, although continued efforts are needed to increase public visibility of government actions.

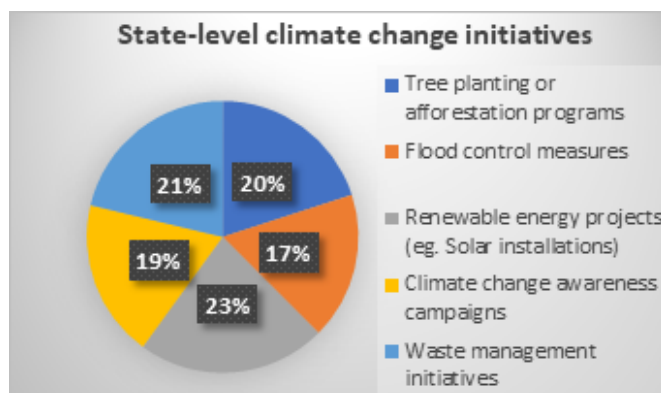


Figure 8. Types of climate change initiatives identified

When asked about specific climate actions in the state, 23% of respondents identified renewable energy projects, 21% cited waste management, 20% mentioned afforestation, 19% pointed to awareness campaigns, and 17% referred to flood control. The range of responses indicates an

awareness of diverse interventions, with a stronger recall for energy and waste-focused programs.

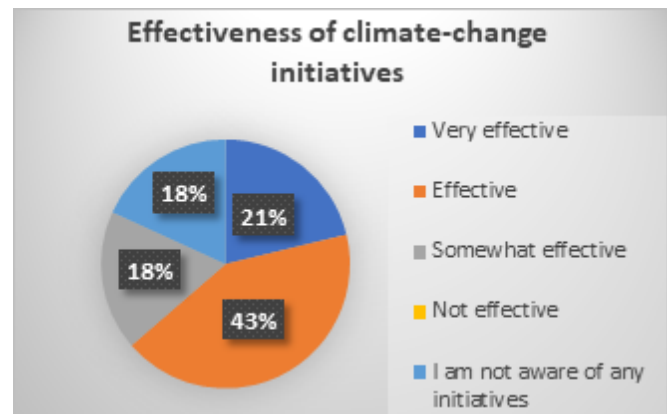


Figure 9. Perceived effectiveness of initiatives

In assessing the effectiveness of these initiatives, 43% rated them as effective, 21% as very effective, 18% as somewhat effective, and another 18% as not effective. While the majority view the initiatives positively, the existence of divided opinions suggests that government efforts need to be more inclusive, impactful, and better communicated.

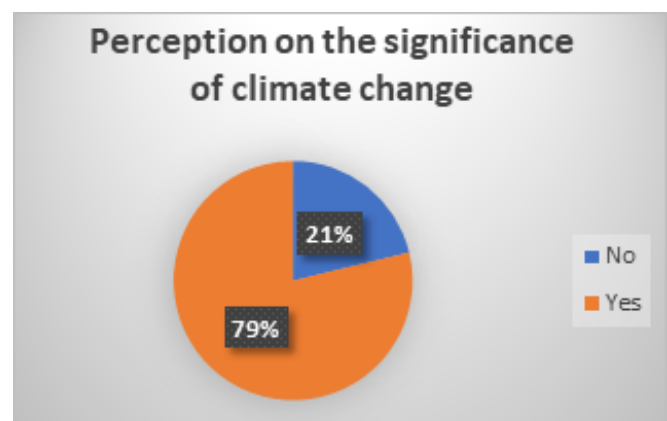


Figure 10. Perception of climate change urgency

A significant 79% of respondents agreed that climate change is a major issue that must be urgently addressed in their community, while 21% disagreed. This dominant concern indicates public readiness for stronger climate action and presents an opportunity for policy alignment with community priorities.

Respondents identified several obstacles to climate action in Ogun State, including poor public awareness, corruption, inadequate funding, limited education, and weak infrastructure. Some also highlighted enforcement failures and a lack of media engagement. These perceived barriers reflect systemic issues that can hinder climate resilience unless addressed through targeted reforms and increased accountability. Respondents also emphasized the need for climate education and awareness, enforcement of environmental laws, afforestation, sustainable land use, and improvement of public infrastructure. Some responses also connected climate action to broader development goals, suggesting a holistic approach to sustainability.

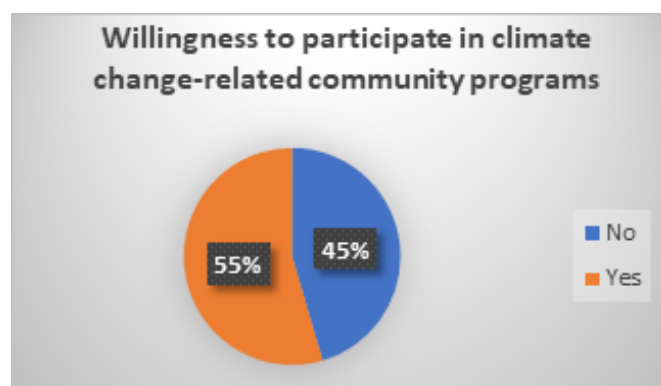


Figure 11. Willingness to participate in climate programs

On community participation, 55% of respondents expressed a willingness to engage in local climate initiatives, while 45% were unwilling. While over half of respondents are open to participation, the relatively high share of disinterest implies the need for more inclusive, accessible, and incentive-driven programs to foster active public involvement.

Presentation of Interview findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

According to the participant, public awareness of climate change is "very poor", with most people more attuned to political or immediate social issues than environmental ones. As they put it: "People in Ogun State are only aware of what affects them directly. They know about political elections, but very few people can relate to climate change, even though they experience it daily." This highlights a significant disconnect between lived experiences such as increased flooding, extreme heat, and power outages caused by rainfall and the conceptual understanding that these phenomena are linked to broader climate change. The participant further explained that even when people encounter clear environmental disruptions, they fail to associate them with climate change, saying: "They experience flood, extreme heat, power outage due to rainfall, but they don't connect it to climate change." This disconnect suggests a missed opportunity to translate observable environmental shifts into climate education and action at the community level.

With respect to awareness of the National Climate Change Policy (NCCP), the participant reported that even among stakeholders, knowledge of the policy is extremely limited: "Even among stakeholders, only very few know about the policy. And it's not being implemented here in Ogun." This indicates that the NCCP has not been adequately communicated or localized for state-level adoption. The policy remains abstract to most, lacking visibility and contextual relevance for implementation within the state. Moreover, the interviewee revealed a complete absence of awareness regarding the Climate Change Act and the National Council on Climate Change, stating:

"Nobody talks about that here. I doubt if most government officials are even aware of it." This signals a breakdown in the transmission of national-level developments to subnational actors, which is crucial for coordinated and cascading climate governance.

In terms of what the state government and regulators are doing, the picture is equally bleak. The participant criticized the performance of environmental oversight agencies, specifically naming NESREA (National Environmental Standards and Regulations Enforcement Agency) as inactive: "NESREA is sleeping. They should be enforcing rules against these polluting industries, but nothing is happening." This lack of enforcement not only contributes to environmental degradation but also reinforces public apathy and the perception that climate issues are not urgent or actionable. However, in the absence of formal structures, community-level advocacy and individual initiative have emerged as key drivers of awareness. The participant noted their personal efforts to conduct school visits, organize clean-ups, and run informal climate education campaigns: "I personally go to schools to talk to students about climate change and waste recycling. We also do clean-ups and community campaigns." These efforts, while commendable, are ad hoc and severely limited in scale and sustainability without institutional backing or coordinated support.

Theme 2: Policy Integration and Implementation

According to the participant, the state has not adopted or embedded the National Climate Change Policy (NCCP) into any sector of its development plans or budgeting system. The response was unambiguous: "No. Ogun State has not adopted the National Climate Change Policy in any real sense." This lack of integration highlights a critical policy gap. The NCCP, which

serves as the country's strategic framework for responding to climate change, is intended to guide action at both the national and subnational levels. However, in Ogun State, it appears that the policy exists merely on paper, without practical steps taken to translate it into sectoral action or legislative instruments that would mandate compliance or adaptation at the state level. The participant further explained that there are no visible sectoral alignments with national climate targets in areas such as energy, transportation, or manufacturing. For instance, in the agriculture sector, while there are conflict resolution mechanisms such as farmer-herder forums, these are not framed or understood within a climate context: "There's a committee that includes farmers and herders to reduce conflicts, but that's not about climate action directly." This reflects the tendency for existing state actions, which could have climate co-benefits, to proceed without any policy linkage or strategic alignment with national climate goals.

In the energy and transportation sectors, the state remains heavily reliant on private, gas-powered systems, which operate without any climate-oriented regulation or incentive structure. As the participant stated: "Private companies supply power through gas. No climate focus there." This underscores the absence of clean energy policies or public investment in renewable energy or low-carbon transit systems, despite the sector's critical role in reducing emissions and enhancing resilience. The situation in the industrial and manufacturing sectors is equally disconnected from climate discourse. The Manufacturers Association of Nigeria (MAN), which could play a significant role in driving cleaner production or sustainable resource use, is reportedly disengaged from any climate-related efforts. As the participant noted:

"MAN is more interested in business. They are not involved in climate policies." This detachment reflects a wider problem of

policy silos, where economic growth is pursued without consideration for environmental consequences, and without regulatory frameworks that encourage or enforce green business practices. Moreover, there is no mention of budget allocations, legislative reforms, or institutional frameworks aimed at domesticating the NCCP in Ogun. The absence of such mechanisms indicates a profound disconnect between federal climate policy and state-level governance, which is compounded by limited political prioritization and institutional inertia.

Theme 3: State-Led Climate Actions

According to The participant, there is very little active involvement by the state government in addressing climate change, either through policy-driven interventions or public programming. The sole climate-related initiative identified was the Ecosystem-Based Adaptation (EbA) project under the Ministry of Forestry. As noted by the participant: “The Ministry of Forestry is doing something with EbA, that’s the only thing I can remember.” While EbA is a globally recognized strategy for strengthening climate resilience by restoring and managing ecosystems, the fact that it is the only active government-led project mentioned and without detail on its scale or impact reflects a very narrow scope of climate engagement. Beyond this, the participant pointed to the discontinuation of past initiatives, particularly an emissions permit and air pollution monitoring program that existed over a decade ago: “There was a time we used to issue emission permits and monitor air pollution, since then, I don’t think they have continued. I’ve not seen it working.” This statement reveals that Ogun State has regressed in its climate action history, moving from a phase where environmental regulation was present, albeit modestly, to one where such efforts have lapsed completely. The poor continuation of emissions monitoring not only weakens mitigation efforts but also reflects

institutional decay in environmental oversight and enforcement.

When asked about climate-relevant actions across other sectors, there were no references to interventions in transportation, energy, waste management, urban planning, or climate-smart agriculture, all of which are commonly pursued by subnational governments elsewhere to support climate resilience and sustainability. However, the participant did acknowledge that some traditional knowledge and informal practices exist within communities, particularly in agriculture. These practices involve using local knowledge to protect crops and adapt to changing weather patterns. Yet, they remain disconnected from government support or formal climate programs: “People use old methods to protect their crops, but nothing coordinated or connected to government support.” This points to an underutilized opportunity—where indigenous knowledge systems could be integrated into broader adaptation strategies, provided there is institutional recognition and support.

Theme 4: Challenges in Climate Policy Implementation

The participant identified three principal barriers to implementation namely Lack of technical capacity, Insufficient funding, and Low political prioritization of environmental issues. In their words: “There’s no money, no manpower, and no interest from the government. Climate change is not their concern.” This encapsulates the core problem facing climate governance in Ogun State as climate change is neither understood as an urgent development issue nor treated as a priority in state planning or political discourse. The lack of political will trickles down into low resource allocation, weak policy formulation, and absent implementation. The capacity constraint is particularly significant. The participant noted that there are no dedicated teams or trained staff

within ministries to handle climate policy, and the collapse of previously existing regulatory tools (such as emissions monitoring) reflects this vacuum. Without a skilled workforce and institutional knowledge, even well-designed policies would struggle to gain traction.

Compounding these internal issues is the problem of non-functioning regulatory bodies, especially at the federal level. The participant was especially critical of NESREA (National Environmental Standards and Regulations Enforcement Agency), stating: “NESREA is not doing anything. Ogun State needs its strategy and capacity to act.” This suggests not only weak enforcement from national institutions within the state but also a vacuum in localized regulatory authority. NESREA’s inactivity effectively removes any meaningful oversight on pollution, emissions, or compliance with environmental standards, leaving the private sector largely unregulated in its environmental practices. Moreover, there are clear gaps in the design and localization of national climate policies. The participant observed that policies such as the Climate Change Act or the National Climate Change Policy often lack practical relevance at the subnational level due to their abstract nature and absence of supporting frameworks. “There is nothing like carbon credits or incentives in the policy. How can farmers or businesses change behaviour without motivation?” This illustrates a critical disconnect: national policies often emphasize broad strategic targets but fail to provide subnational governments with actionable tools, localized frameworks, or incentive structures such as climate financing, carbon markets, or sectoral toolkits to facilitate implementation. There is also a lack of horizontal coordination across ministries, as well as vertical coordination between federal, state, and local governments. Ogun State does not appear to have an inter-ministerial climate change committee, working group, or platform for collaboration. This leads to fragmented and

disjointed efforts, with ministries acting in isolation and often without any guidance or alignment to broader policy goals.

Theme 5: Opportunities and Recommendations

One of the clearest areas of potential is the integration of climate change into the education system. The participant emphasized the importance of embedding climate literacy early in life, suggesting that schools can serve as key platforms for raising awareness and cultivating future environmental stewards. They stated: “Young people should be trained and funded. Let’s put climate change in secondary school syllabuses.” This recommendation highlights the role of education not just in awareness-raising, but also as a long-term investment in climate leadership, technical expertise, and innovation. Climate education could also create new career pathways in sustainability, research, and environmental management. Closely related is the opportunity to engage youth in green jobs and climate entrepreneurship, particularly in agriculture and environmental services. The participant noted that empowering agricultural graduates and linking them to climate-smart practices could drive both employment and resilience: “Young people should be trained and funded.” Such efforts could include training in agroecology, composting, renewable energy installation, and eco-friendly waste management, sectors that are currently underserved but essential to Ogun’s sustainability future. Local governments were also identified as an untapped but potentially powerful lever for implementation. The participant recommended empowering local governments to enforce climate-related actions and bylaws, especially in areas like waste management, reforestation, and urban planning. Decentralizing climate action could increase responsiveness, accountability, and alignment with local realities.

Discussion

The survey revealed that 79% of respondents were aware of climate change, with education and social media serving as the primary sources of information. This relatively high level of awareness particularly among youth aged 18–24 and those with tertiary education indicates that the educational system and digital platforms are effective channels for climate knowledge. However, this awareness is not uniformly distributed, with 21% of respondents unaware of climate change and 15% rating their understanding as poor. The interview findings help contextualize this disparity. People often experience environmental disruptions such as extreme heat or flooding but fail to associate them with climate change. This disconnect between lived experiences and conceptual understanding is critical. The interviewee's observation that citizens can describe climate impacts but lack the vocabulary or framework to connect them to broader climate dynamics highlights a missed opportunity for community-based education and engagement. Moreover, the lack of widespread awareness of the National Climate Change Policy (NCCP), as affirmed by both surveys (where 33% were unaware) and interview findings, reflects the failure of federal frameworks to reach and resonate with sub-national stakeholders. One of the most significant issues emerging from the data is the near-total absence of policy integration at the state level. The interviewee's assertion that "Ogun State has not adopted the National Climate Change Policy in any real sense" was reinforced by survey responses showing limited awareness of state-led climate action (64%) and fragmented perceptions of government initiatives. Despite some knowledge of actions such as renewable energy and waste management, survey and interview responses identified these as isolated, uncoordinated, or in some cases, defunct.

The failure to mainstream climate policy into

sectoral governance is particularly evident. Key sectors such as agriculture, energy, and transportation operate without reference to climate goals. For instance, the interview highlighted that while conflict resolution platforms exist in agriculture (e.g., herder-farmer forums), they are not designed through a climate lens. Similarly, energy remains dominated by private gas suppliers without incentives or regulations to support renewable transitions. This lack of institutional coordination and alignment with national targets mirrors the broader absence of technical capacity, legislative mandates, and budgetary provisions for climate action. Without trained personnel or institutional frameworks, the NCCP remains abstract and detached from local realities. Although the survey suggested some public knowledge of initiatives like renewable energy (23%) and afforestation (20%), the interviewee's perspective complicates this view. According to them, the only ongoing government-linked initiative is the Ecosystem-based Adaptation (EbA) project under the Ministry of Forestry, an effort mentioned without detail or measurable impact. Past initiatives, such as emissions permits and pollution monitoring, have not been effectively continued, revealing not only a lack of progress but also regression in environmental governance. This disconnection between public perception and actual policy activity suggests either poor communication of existing initiatives or an overestimation of state involvement by respondents. It also signals a broader institutional failure to create visibility and legitimacy for climate programs. Importantly, while communities continue to rely on traditional ecological knowledge, these practices remain informal and unsupported by government structures, indicating an opportunity for more inclusive and culturally embedded climate programming.

Encouragingly, the majority of respondents (79%) agreed that climate change is a major issue requiring urgent attention, and 55% expressed

willingness to participate in local initiatives. This public readiness contrasts sharply with the reported apathy and lack of prioritization at the governmental level. The significant proportion of individuals unwilling to participate (45%) also deserves attention. This figure, when juxtaposed with the lack of sustained programs and poor enforcement of environmental laws, suggests that public apathy is partly a response to perceived governmental inaction. Without inclusive, participatory structures, and without evidence that citizen input leads to meaningful change, trust and engagement are likely to remain low.

Survey respondents and the interviewee identified similar barriers to effective climate action: poor awareness, corruption, inadequate funding, limited education, and infrastructural deficits. The interview added critical insights into institutional constraints, emphasizing the absence of technical expertise, the failure of federal oversight bodies like NESREA, and the lack of inter-ministerial and intergovernmental coordination. Additionally, the top-down design of national policies without mechanisms for localization, incentives, or capacity-building has left states like Ogun ill-equipped to act. The absence of policy instruments like carbon credits, green financing schemes, or actionable toolkits for sectors like agriculture and industry demonstrates a misalignment between national ambition and subnational reality.

Despite these challenges, the findings highlight key areas of potential. Both survey and interview responses point to education as a transformative tool. Embedding climate change into secondary school curricula, as the interviewee suggested, would not only raise awareness but also cultivate long-term climate leadership. Similarly, creating green job pathways for youth in agriculture, energy, and environmental services could align climate resilience with economic empowerment. The empowerment of local governments also

emerged as a strategic opportunity. Decentralized climate action, anchored in community realities and enforced through bylaws, could create more responsive and accountable governance. However, this will require structural reforms, capacity-building, and sustained political will.

Conclusion

Ogun state benefits from a youthful, educated population that is increasingly aware of climate change, particularly through education and digital media. A significant portion of the population recognizes the urgency of climate action and expresses a willingness to participate in local initiatives. These findings point to a latent potential for community engagement and grassroots mobilization that could serve as a foundation for broader environmental resilience efforts.

However, this potential remains largely untapped due to critical gaps in governance, policy integration, and institutional capacity. At the same time, isolated efforts such as informal environmental education by committed individuals and the underpublicized Ecosystem-based Adaptation (EbA) initiative highlight the presence of commitment and innovation, albeit lacking scale and institutional support. Community knowledge and traditional practices continue to play a role in climate adaptation, but these remain disconnected from formal planning or government support.

Recommendations

1. **Integrate Climate Change into State Development Planning:** Ogun State should formally localize the National Climate Change Policy by embedding climate priorities into state development plans, sectoral policies, and budgeting frameworks.
2. **Strengthen Institutional**

Capacity and Coordination:

Establish an inter-ministerial climate change working group to promote coordination across sectors and ensure consistent policy implementation and build technical capacity within ministries through training and recruitment of climate professionals.

3. **Enhance Climate Education and Public Awareness:** Integrate climate change into school curricula at secondary and tertiary levels to build long-term awareness and capacity. Expand the use of digital and traditional media to engage communities and raise awareness of climate risks and adaptive practices.
4. **Reform Regulatory Oversight:** National empowerment of NESREA for effective federal regulatory oversight or creating a state equivalent to enforce environmental standards.
5. **Empower Local Governments:** Delegate specific climate responsibilities to local councils, including tree planting, waste management, and community-based adaptation planning.
6. **Mobilize Youth for Green Jobs and Innovation:** Launch youth-oriented climate entrepreneurship programs focused on sustainable agriculture and renewable energy.

PLATEAU STATE

Presentation of Survey Findings

The gender distribution among respondents from Plateau State shows a nearly balanced representation, with 27 respondents (54%) identifying as male and 23 respondents (46%) identifying as female. This indicates a commendable gender diversity in participation, suggesting that both men and women are equally engaged in climate-related discussions.

The age distribution revealed that the majority of respondents (28 individuals, 56%) were between 25 and 34 years old, making this the most represented age group. This was followed by the 18 to 24 age group, with 11 respondents (22%). Respondents aged 35 to 44 years accounted for 10 individuals (20%), while only 2% of the participants were 55 years and above. These results highlight that young and middle-aged adults are the most engaged demographic in climate-related issues in Plateau State.

A significant proportion of respondents (60%) had tertiary education, while 36% reported having postgraduate education. Only 4% of respondents had completed secondary school. This educational profile suggests that climate awareness and participation in the survey were predominantly among well-educated individuals, potentially reflecting a knowledge gap among less-educated communities.

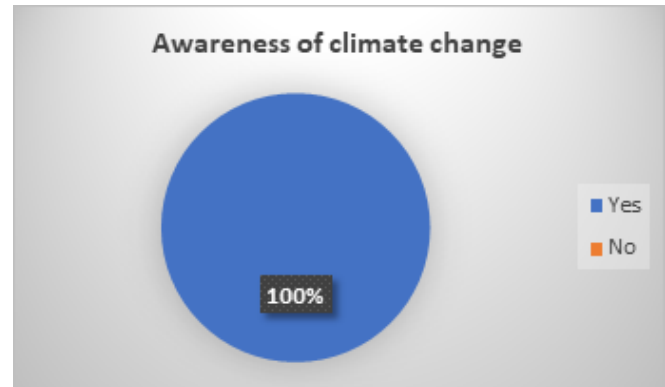


Figure 1. Awareness of climate change

All respondents (100%) confirmed that they had heard of the term “climate change,” indicating widespread awareness among survey participants in Plateau State.

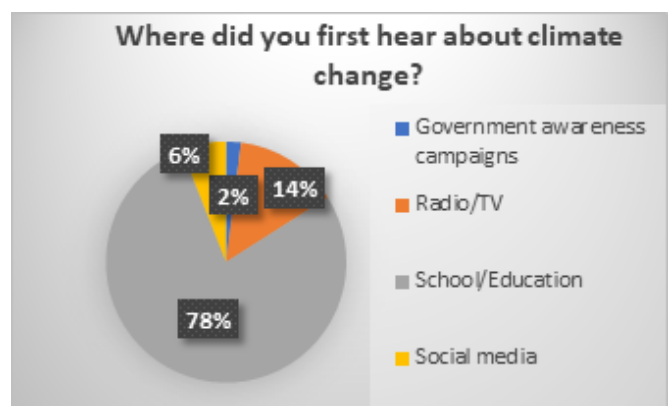


Figure 2. Source of climate change awareness

Most respondents (78%) indicated that they first heard about climate change in school or through educational programs. Radio/TV was the second most common source of information, with 14% of respondents citing it as their initial exposure. Social media accounted for 6%, while Government awareness campaigns were mentioned by 2% of respondents. These results emphasize the importance of formal education, mainstream

media, and digital platforms in promoting climate change awareness.

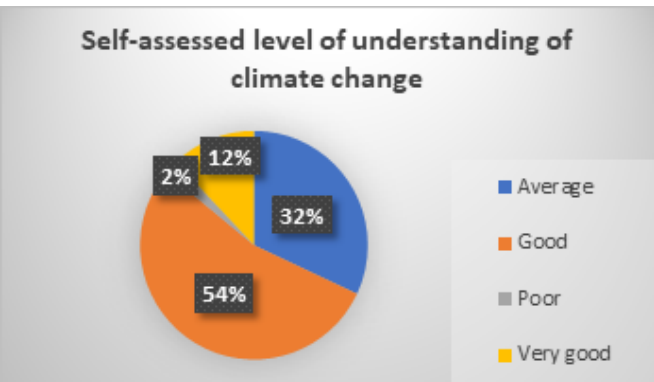


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 54% of respondents rated their knowledge as good, while 32% described it as average. Meanwhile, 12% considered their understanding very good, and 2% rated it as poor. These findings indicate a generally high level of self-reported understanding, although a small percentage may require more targeted education efforts.

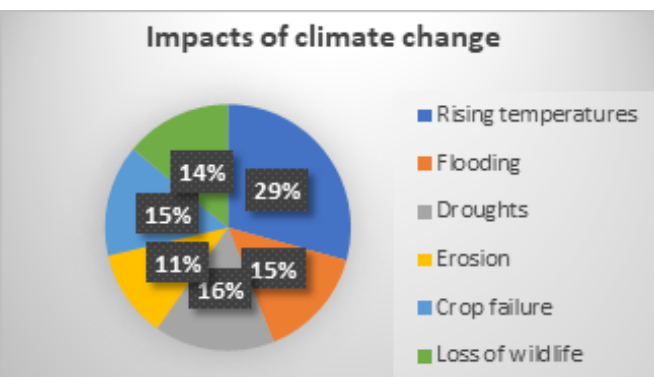


Figure 4. Perceived impacts of climate change

Respondents identified a range of climate change impacts affecting Plateau State. Rising temperatures were mentioned by 29% of participants, followed by crop failure (15%) and droughts (16%). Other notable impacts included erosion (11%), flooding (15%), and the loss of wildlife (14%). These responses reflect the diverse

and significant environmental challenges faced by the state.

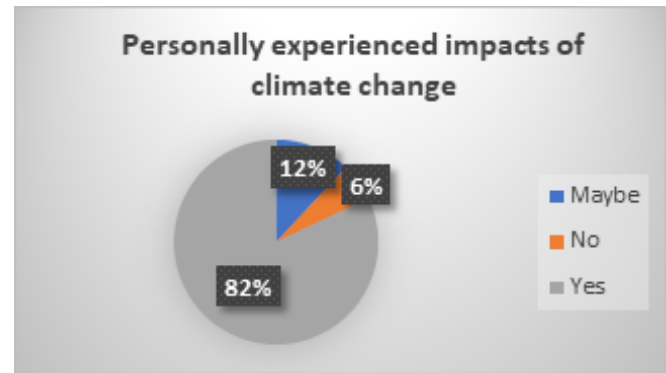


Figure 5. Direct experience with climate change

A large majority (82%) of respondents confirmed that they had personally experienced climate change impacts in their community. Meanwhile, 12% said they were unsure, and 6% indicated they had not experienced any direct effects.

Respondents reported various observed impacts, including prolonged droughts, rising temperatures, and crop failures. Many described changes in seasonal patterns, such as longer and more intense harmattan periods, leading to colder temperatures and dustier conditions. Increased flooding and heavy rainfall events were also mentioned, along with weather instability and prolonged dry seasons, resulting in reduced crop yields and harsh environmental conditions.

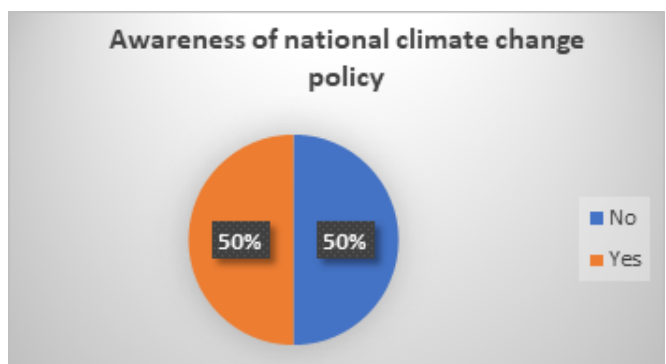


Figure 6. Awareness of national climate change policy.

The survey revealed an equal split in awareness of Nigeria's National Climate Change Policy, with 50% of respondents indicating they were aware of

it and 50% stating they were not.

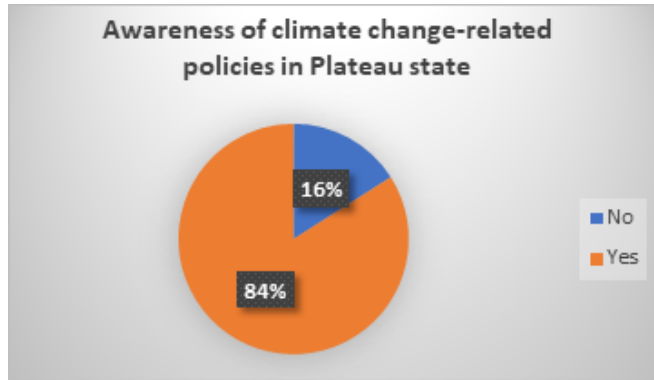


Figure 7. Awareness of state-led climate actions

A significant majority (84%) of respondents reported that they were aware of climate-related policies or initiatives in Plateau State. However, 16% said they were unaware of any such programs.

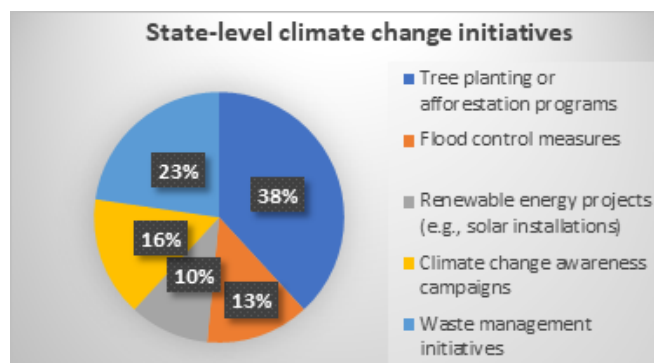


Figure 8. Types of climate change initiatives identified

Among respondents who were aware of state-level initiatives, 38% identified tree planting and afforestation programs as the most common action. Waste management initiatives were mentioned by 23%, while 16% noted Climate change awareness campaigns. Flood control measures accounted for 13% of responses, and renewable energy projects, such as solar installations, were cited by 10%

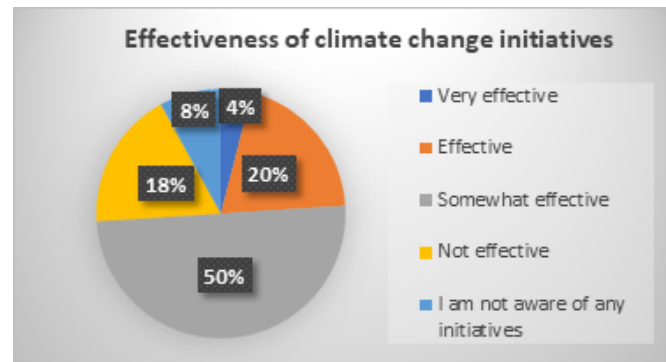


Figure 9. Perceived effectiveness of initiatives

Respondents had mixed views on the effectiveness of climate change initiatives in Plateau State. While 50% rated these initiatives as somewhat effective, 20% described them as effective. 18% described them as not effective, 8% were unaware of any initiatives, and just 4% believed climate change initiatives to be very effective..

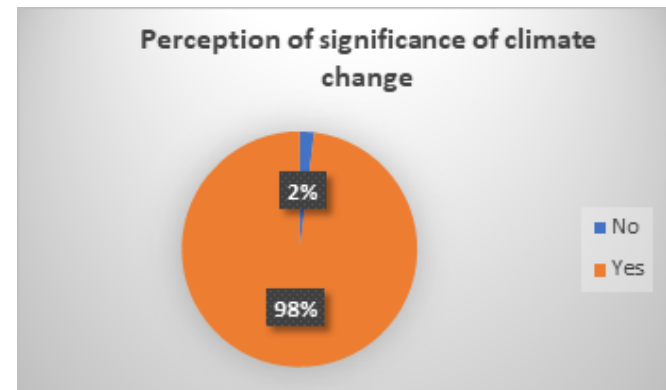


Figure 10. Perception of climate change urgency

An overwhelming 98% of respondents agreed that climate change is a significant issue that needs urgent attention in their community, while only 2% believed it was not a pressing concern.

Respondents identified several challenges hindering climate action in Plateau State. Lack of awareness and funding were the most frequently mentioned obstacles. Poor policy implementation, corruption, and limited public engagement were also highlighted as significant barriers. Additionally, respondents pointed to

inadequate resources, poor leadership, and institutional weaknesses as factors preventing effective climate change response.

Respondents also proposed several actions for the state government, emphasizing the importance of public awareness campaigns and community education. Many suggested increasing funding for climate initiatives, promoting afforestation, and improving policy enforcement. Other recommendations included developing renewable energy projects, creating proper waste disposal systems, proper drainage systems, and enhancing flood control measures. Respondents also called for more collaboration with relevant stakeholders and experts.

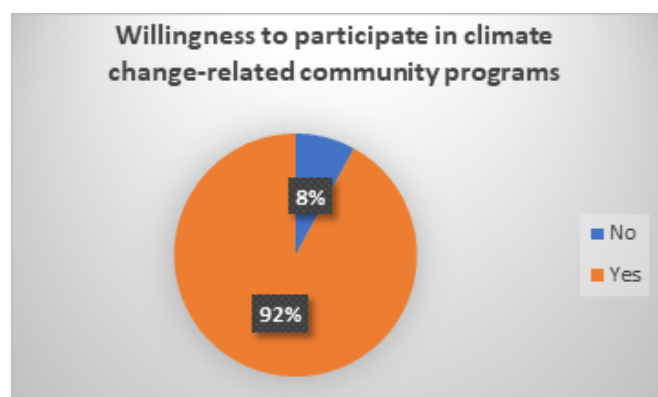


Figure 10. Perception of climate change urgency

A strong majority (92%) of respondents expressed willingness to participate in community programs related to climate change, indicating a high level of interest in grassroots involvement. Only 8% stated that they were not interested in participating.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 described the general level of awareness as “medium to low,” emphasizing that

awareness campaigns are mostly concentrated in the northern senatorial zone, where the state capital is located. Limited funding has made it difficult to extend outreach efforts to the central and southern zones, creating regional disparities in knowledge and engagement. The participant explained: “We’ve tried our best to extend our awareness campaign outside the state capital... but funding doesn’t usually come for us to roll them out.” This reflects the common issue of urban-centric programming, where outreach is often dependent on proximity to political and administrative centres. Among stakeholders especially government departments and NGOs, awareness of climate change and the National Climate Change Policy (NCCP) is relatively high. According to Participant 1: “Our stakeholders are very, very highly informed... but the problem is the people at the grassroots.” This disconnect between policy knowledge at the top and awareness at the community level is a recurring theme. While institutional actors may have access to training, policy documents, and intergovernmental engagements, ordinary citizens often remain unaware of the causes and consequences of climate change, or their role in addressing it. To bridge this gap, the state government has partnered with NGOs and community leaders, including religious leaders, to help spread climate messages. The participant shared: “We also try to inform [religious leaders] about how climate change is affecting us so they can incorporate it into their preaching.” This indicates a culturally grounded strategy that leverages trusted voices within society, a potentially powerful tool in awareness-raising, especially in areas where traditional communication channels are more effective than formal media.

The state also supports environmental awareness through tree planting campaigns, anti-deforestation efforts, and sustainable agriculture initiatives, in collaboration with NGOs. These

initiatives provide indirect education about climate risks and mitigation, although they may not always be framed explicitly as part of a climate change agenda for rural beneficiaries. However, despite these efforts, the participant acknowledged that more needs to be done to expand awareness beyond urban areas. Current campaigns are underfunded, and the absence of a robust, statewide communication strategy limits the effectiveness of outreach. There was no indication of climate change being integrated into the education system, nor widespread public sensitization beyond NGO-supported efforts.

Theme 2: Policy Integration and Implementation

Participant 1 explained that Plateau State has aligned with the National Climate Change Policy (NCCP) and is taking actions that reflect climate considerations. However, the participant made it clear that this integration is not yet comprehensive: “Climate change issues are part of our development strategies, especially through the Plateau State Environmental Protection and Sanitation Agency (PEPSA)... but we are still working to mainstream it across other MDAs.” This suggests that integration is ministry-specific and has not yet reached the broader spectrum of government functions such as agriculture, water resources, transport, or education. The participant acknowledged that while the Ministry of Environment and PEPSA are directly involved in climate-focused activities, other ministries still need support and coordination to align their mandates with climate goals. There appears to be no formal mandate or cross-sectoral directive requiring MDAs to incorporate climate change into their operations, which weakens the mainstreaming effort. As the participant noted: *“Some ministries have started considering it, but many still don’t see it as part of their responsibility.”*

In terms of institutional mechanisms, the participant referenced ongoing efforts to create a

state-level climate change policy, suggesting the groundwork for integration is being laid. The participant mentioned that Plateau is: “Planning to develop a Plateau-specific climate policy that aligns with the national framework.” This indicates intent but also highlights a current policy vacuum at the state level. Without a domesticated climate policy, integration depends on the motivation of individual ministries rather than coordinated policy direction. Financial integration is also lacking. There was no mention of a climate-responsive budgeting process or allocation of climate finance within the state budget. Climate action is currently project-based, with many initiatives dependent on NGO funding or federal programs, which limits scale and sustainability. The absence of budget lines or cross-sectoral financial planning further constrains institutional commitment and implementation. The participant did, however, emphasize the strong role of NGOs and civil society in pushing climate integration. These organizations have been active in sectors such as agriculture, water, and energy, often working with ministries to introduce climate-smart practices. Still, these collaborations remain largely donor-driven and externally initiated, with limited internalization by state institutions. There was no direct reference to performance monitoring, sectoral reporting on climate goals, or coordination through a climate change council or steering committee. This absence suggests that integration is still in an early, informal phase, guided by broad understanding but lacking in technical structure, accountability, and systemic uptake.

Theme 3: State-Led Climate Actions

According to Participant 1, one of the key initiatives led by the state government is the promotion of afforestation and tree planting, especially in urban and peri-urban areas. This activity is coordinated by the Plateau State Environmental Protection and Sanitation Agency (PEPSA), which has worked in partnership with

non-governmental organizations (NGOs) and schools to raise awareness and promote environmental responsibility. The participant described it as a form of indirect climate action: “We are doing a lot in terms of tree planting campaigns and anti-deforestation... especially in schools and communities.” These campaigns serve both mitigation (through carbon sequestration) and awareness-raising functions, helping to instill environmental consciousness in young people. The participant also highlighted the state's work in sanitation and waste management, noting that PEPSA has been central to mobilizing communities to engage in clean-up campaigns and sustainable waste disposal practices. While not explicitly framed as climate action, these initiatives have co-benefits for climate adaptation and resilience, particularly in reducing urban flood risks and improving environmental health. *“We are mobilizing people, especially during environmental sanitation days... it's part of our efforts to keep the environment clean and safe.”*

Sustainable agriculture is another area where the state has supported climate-relevant initiatives. In collaboration with NGOs and community groups, some farmers have been introduced to climate-smart techniques, such as organic composting and drought-resistant crops. However, the participant emphasized that such efforts are localized and small-scale, often initiated by development partners rather than the state itself: “Some NGOs have helped farmers adopt new techniques... but we need to scale these efforts across the state.” This suggests that while pilot programs exist, they lack the structural and financial support needed to expand their reach or become standard practice. In terms of formal state programming, the participant mentioned that the government has not yet developed a state-level climate action plan, although there are ongoing discussions about creating one. The current activities are not monitored or tracked under a unified climate strategy, which makes it difficult to

measure progress or ensure coherence across sectors. The role of religious leaders and community institutions has also been emphasized as a conduit for informal climate messaging. The participant explained that environmental messages are sometimes embedded into sermons or community meetings to reinforce responsible behaviour. “We talk to religious leaders so they can help spread the message. People listen to them more than officials.” This culturally rooted approach to behaviour change is effective in building trust and relevance at the grassroots level, especially where formal state engagement is minimal.

Theme 4: Challenges in Climate Policy Implementation

One of the primary challenges, as highlighted by Participant 1, is funding. The participant pointed out that many climate-related programs especially those designed for awareness and outreach are limited by insufficient financial support. “We've tried our best to extend our awareness campaign outside the state capital... but funding doesn't usually come for us to roll them out.” This funding gap not only restricts public education efforts but also hampers project implementation in critical sectors such as agriculture, forestry, and infrastructure. A related issue is the urban-centric nature of climate programming. While some climate initiatives are underway in the northern senatorial zone (where the state capital is located), rural areas in the central and southern zones remain largely underserved. This geographic imbalance reinforces vulnerability and reduces equity in access to climate adaptation resources.

Institutional coordination is another major concern. While ministries like Environment and agencies such as PEPSA are leading some climate-relevant activities, other ministries are yet to fully understand or accept climate change as part of their mandate. “Some ministries have started

considering it, but many still don't see it as part of their responsibility." This indicates that climate change is still treated as a sector-specific concern, rather than a cross-cutting development issue. The absence of a central coordinating body such as a state climate council or task force means that climate governance remains fragmented, without mechanisms for policy coherence, shared accountability, or integrated planning.

The state also lacks a formal climate policy or legal framework, making implementation largely discretionary. While there are intentions to develop a Plateau-specific climate policy, this process is still underway and has not yet been translated into enforceable guidelines or standardized practices. As such, ministries and agencies are left to act independently, often without technical guidance or performance metrics. The overreliance on NGOs and donor projects further complicates implementation. Many climate-smart initiatives especially in agriculture and community engagement are driven by external partners rather than being initiated or scaled by the state government. While helpful, this dependence limits the sustainability of such efforts and prevents the establishment of durable institutional ownership.

Public engagement remains inconsistent. While efforts are being made to engage religious leaders and community institutions, awareness remains low in many rural communities, and climate literacy is not systematically integrated into public education or local government processes. As a result, behavioural change is difficult to achieve, and citizen participation in climate action remains low. Finally, there is no dedicated monitoring and evaluation (M&E) system in place to track the effectiveness of existing climate-related projects or to guide future decision-making. This lack of data infrastructure hinders adaptive management and makes it difficult to report on progress or attract additional funding.

Theme 5: Opportunities and Recommendations

A clear opportunity lies in the state's existing environmental institutions, particularly the Plateau State Environmental Protection and Sanitation Agency (PEPSA), which is already spearheading many of the state's afforestation and environmental sanitation programs. According to Participant 1, PEPSA has become a functional platform for mobilizing schools, community groups, and religious leaders for grassroots environmental action. Expanding its mandate and funding could enable it to become a central coordination hub for climate policy implementation. Another opportunity is the growing awareness among policymakers and stakeholders in the Ministry of Environment and allied sectors. The participant indicated that key actors are informed and engaged, even though climate action hasn't yet been fully mainstreamed across all ministries. This institutional foundation can serve as a launchpad for deeper policy integration especially if supported by a state-specific climate policy that defines roles, responsibilities, and reporting structures.

There is also potential in the community and cultural infrastructure already being used for awareness-building. The involvement of religious leaders in communicating climate-related messages during sermons and gatherings offers a culturally sensitive and trusted communication channel. As the participant mentioned: "We talk to religious leaders so they can help spread the message. People listen to them more than officials." Formalizing these partnerships through environmental fellowships, training programs, or community climate champions could significantly broaden the reach of awareness and behavioural change campaigns. Youth engagement and education is another area of promise. Tree planting and school-based environmental programs are already in motion, offering a strong entry point to build a new generation of climate-

aware citizens. Embedding climate education in the state curriculum and encouraging youth-led green initiatives could yield both awareness and workforce development benefits, especially in sectors such as agriculture, renewable energy, and waste recycling.

Plateau State also has a vibrant civil society presence, with NGOs playing a central role in advancing sustainable agriculture and promoting environmental best practices. These organizations can serve as partners for both policy development and implementation, especially if the state government formalizes collaboration frameworks and provides institutional support or co-financing models. At the policy level, the state's expressed intention to develop a Plateau-specific climate change policy provides a strategic opening. A localized framework would allow the state to tailor national directives to its unique ecological and socio-political context, enabling greater relevance and practical uptake across ministries and communities. To unlock financing, the state can also begin engaging national and international climate finance opportunities, including tapping into mechanisms such as the Green Climate Fund, Adaptation Fund, and the Nigeria Climate Innovation Center. However, this will require stronger monitoring and evaluation systems, transparent governance processes, and capacity-building around proposal development and fiduciary compliance.

Discussion

Survey data revealed that awareness of the term “climate change” is universal among respondents in Plateau State (100%), with a majority attributing their knowledge to formal education. This indicates a strong correlation between educational attainment and climate change awareness, supported by the finding that 96% of respondents had tertiary or postgraduate education. These statistics point to a relatively informed population sample, but they also reveal

a social and educational gap: those with lower educational levels may be underrepresented in climate dialogues. According to key informants, awareness campaigns are disproportionately concentrated in the state capital and surrounding the northern senatorial zone, with rural communities in central and southern regions receiving little to no climate education. This urban bias in climate outreach is a recurring pattern in many Nigerian states and reflects the logistical and financial constraints of extending programming to less accessible areas. It also illustrates the risk of overlooking rural populations, who are often the most vulnerable to climate change impacts such as drought, soil degradation, and unreliable rainfall.

Despite this, Plateau State has demonstrated culturally sensitive efforts by engaging religious leaders to disseminate climate messages. This strategy has significant potential, particularly in traditional communities where clergy and local elders command high levels of trust. By leveraging such community gatekeepers, the state taps into informal but influential channels of behavior change though the current lack of scale and formal support limits impact. Plateau residents are not only aware of climate change conceptually, but most have also experienced its consequences firsthand. A significant 82% of survey respondents reported direct experience with climate-related impacts, with key issues including prolonged droughts, crop failures, erratic rainfall, flooding, and rising temperatures. This lived reality reinforces the urgency of local action, especially as nearly all respondents (98%) agreed that climate change is a pressing issue in their communities.

In terms of policy alignment, Plateau State has made partial progress in integrating climate change into its governance framework, particularly through PEPSA and the Ministry of Environment. However, integration remains fragmented and largely informal. Climate action is

currently viewed as the responsibility of environmental agencies alone, rather than a cross-sectoral issue requiring multi-ministerial collaboration. Key informant interviews revealed that while the state is planning to develop a Plateau-specific climate change policy, such a framework does not yet exist. Without a binding document to mandate responsibilities, performance indicators, and budgetary allocations, current efforts are piecemeal and unsystematic. Ministries of Agriculture, Education, Water Resources, and others have not fully incorporated climate resilience into their strategic planning, leaving opportunities for synergies untapped. The absence of institutional coordination mechanisms, such as a state climate council or inter-ministerial task force, further weakens integration. Climate action thus depends on the motivation and awareness of individual agencies rather than being part of a coordinated, state-led strategy. This results in duplications, inefficiencies, and gaps in implementation especially when donor-driven initiatives are not embedded into state systems for long-term sustainability.

While formal policy integration is limited, several state-led initiatives offer glimpses of practical engagement. These include afforestation campaigns, tree planting in schools, waste management programs, and public sanitation drives. PEPSA has emerged as a key actor, coordinating environmental awareness campaigns and collaborating with schools and NGOs. However, most of these efforts are not explicitly branded or monitored as climate change initiatives, which dilutes their strategic visibility and evaluation. NGOs have been instrumental in piloting climate-smart agriculture, promoting drought-resistant crops, and introducing sustainable farming techniques. Yet, these interventions are localized and largely dependent on external funding. Without state investment and upscaling, such promising

models remain isolated pockets of innovation rather than systemic solutions.

One of the most pervasive barriers to effective climate action in Plateau State is chronic underfunding. As mentioned earlier, climate initiatives often rely on ad hoc funding from NGOs or federal programs, and there is no evidence of climate-responsive budgeting at the state level. This financial vacuum has direct consequences: awareness programs are geographically limited, projects cannot be scaled, and agencies lack the resources to operationalize climate mandates. Furthermore, ministries operate in silos, and many are yet to recognize climate change as part of their mandate. The lack of a centralized body or technical steering committee makes policy harmonization difficult and reduces the potential for multi-sectoral synergies. This is further compounded by capacity limitations as ministries and local governments often lack the technical knowledge, planning tools, and staffing to design or implement climate-relevant interventions.

Despite these challenges, several opportunities exist to strengthen Plateau State's climate response. Harnessing the existing public interest through community-based adaptation programs, school initiatives, and volunteerism could create a strong bottom-up movement for climate resilience. Also, PEPSA's existing work provides a functional platform to build upon. Expanding its mandate, funding, and staffing could allow it to coordinate cross-sectoral climate activities and serve as the institutional hub for Plateau's climate strategy. The intention to develop a state-level climate policy is also a promising step toward systemic change, especially if it includes provisions for inter-ministerial coordination, grassroots engagement, climate budgeting, and sectoral targets. Lastly, Plateau's partnerships with NGOs and community leaders offer a valuable social infrastructure for co-delivering climate interventions. Formalizing these

relationships through memoranda of understanding (MoUs), joint planning mechanisms, and capacity-building initiatives could enhance sustainability, local ownership, and policy coherence.

Conclusion

The research revealed that while awareness of climate change among educated residents is high, significant disparities persist across regions and social groups, especially in rural communities. Government stakeholders and civil society actors demonstrate commendable knowledge and engagement, but this has not fully translated into widespread public understanding or comprehensive grassroots mobilization. Although Plateau State has made initial strides in integrating climate considerations into its environmental programming, climate action remains narrowly institutionalized within the Ministry of Environment and PEPSA. Other critical ministries, such as agriculture, education, and water resources, have yet to mainstream climate change into their operations. The absence of a dedicated climate policy, formal coordination mechanisms, and climate-responsive budgeting further undermines the state's ability to institutionalize and scale climate initiatives.

While the state has supported a range of initiatives, these actions, while beneficial, are largely project-based, donor-driven, and not framed within a broader, strategic climate agenda. However, the expressed willingness of citizens to engage in climate programs, the active involvement of NGOs, and the use of culturally rooted awareness strategies provide a strong foundation for progress.

Recommendations

1. **Develop a State-Specific Climate Change Policy:** Create a Plateau Climate Policy aligned with the NCCP to

guide coordinated, cross-sectoral action and define roles for all MDAs.

2. **Strengthen PEPSA's Mandate and Resources:** Expand PEPSA's funding and legal authority to serve as the central hub for climate implementation and inter-agency coordination.
3. **Institutionalize Climate-Sensitive Budgeting:** Introduce climate budget tagging to allocate dedicated resources within the state budget for climate programs and integrate climate considerations into all development planning.
4. **Scale Awareness Campaigns Beyond Urban Centers:** Expand outreach using local languages, religious institutions, and traditional authorities to bridge the awareness gap in rural zones.
5. **Leverage Education and Youth Engagement:** Integrate climate change into school curricula and support youth-led initiatives such as green clubs and climate innovation hubs.
6. **Formalize NGO and Donor Partnerships:** Develop partnership frameworks that encourage co-financing, knowledge-sharing, and sustainable program transfer from NGOs to state institutions.
7. **Build a Climate Monitoring and Evaluation System:** Design a centralized M&E system to track climate actions, evaluate impact, and provide data for evidence-based decision-making.
8. **Mainstream Climate into Rural Development:** Ensure that agriculture, water, and local infrastructure programs integrate climate adaptation measures, especially for vulnerable rural areas.

RIVERS STATE

Presentation of Survey Findings

In Rivers State, 36 respondents (62%) were male, while 22 respondents (38%) were female. This indicates a relatively balanced gender participation, suggesting that both men and women are actively engaged in climate-related discussions.

The age distribution of respondents in Rivers State revealed that the majority (26 respondents, 46%) were between 18 and 24 years old. This was followed by the 25 to 34 age group, which accounted for 21 respondents (37%). The 35 to 44 age group represented 11 respondents (17%), indicating that young adults form the most engaged demographic in climate-related issues in Rivers State.

A large proportion of respondents (66%) had attained tertiary education, while 17% reported having postgraduate qualifications. Another 17% had completed secondary school education. This suggests that climate awareness efforts in Rivers State may have been more successful in reaching educated individuals.

Respondents in Rivers State reported a variety of occupations. Students made up the largest group, representing 40% of the sample. Civil servants accounted for 26%, while those in trading or business comprised 14%. The “others” category accounted for 20%, reflecting a range of additional professional backgrounds. This occupational diversity indicates that climate change awareness is relevant across different sectors. The gap among less-educated communities.

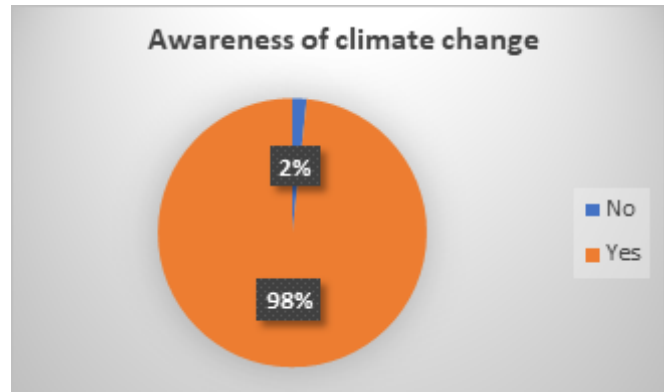


Figure 1. Awareness of climate change

A large majority (98%) of respondents indicated that they had heard of climate change, while only 2% said they were unfamiliar with the term. This suggests a strong baseline awareness of climate change among Rivers State residents.

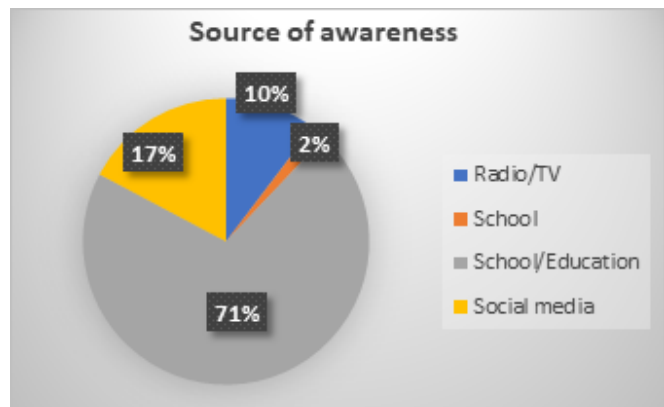


Figure 2. Source of climate change awareness

Schools and educational institutions were the most frequently cited sources of information about climate change, mentioned by 71% of respondents. Social media followed at 17%, while 10% of respondents first learned about climate change from radio and television programs. Only 2% credited government awareness campaigns as their initial source of information. This reflects the

significant role of educational institutions and digital platforms in spreading climate awareness.

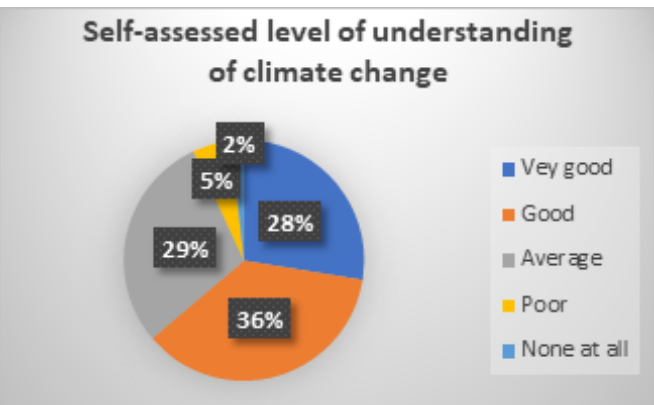


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 36% of respondents rated their knowledge as good, while 29% described it as average. Meanwhile, 28% reported a very good understanding, and 5% said their knowledge was poor. Only 2% admitted to having no understanding at all. These results indicate that while most respondents feel confident in their understanding of climate change, there is still room for improvement.

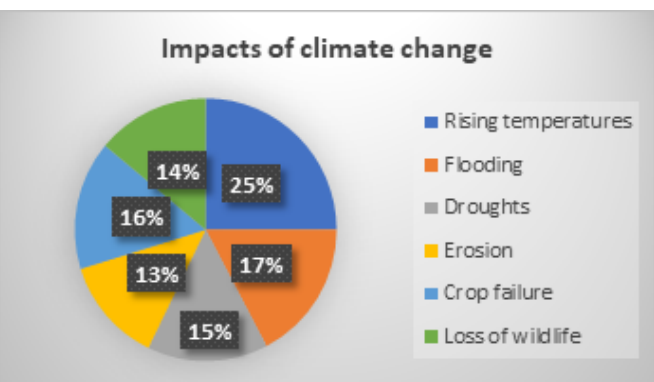


Figure 4. Perceived impacts of climate change

Respondents identified multiple consequences of climate change in Rivers State. Rising temperatures were cited by 25% of participants, while flooding was mentioned by 17%. Crop failure was identified by 16% of respondents, followed by droughts (15%), loss of wildlife (14%),

and erosion (13%). These findings reflect the diverse environmental challenges posed by climate change in Rivers State.

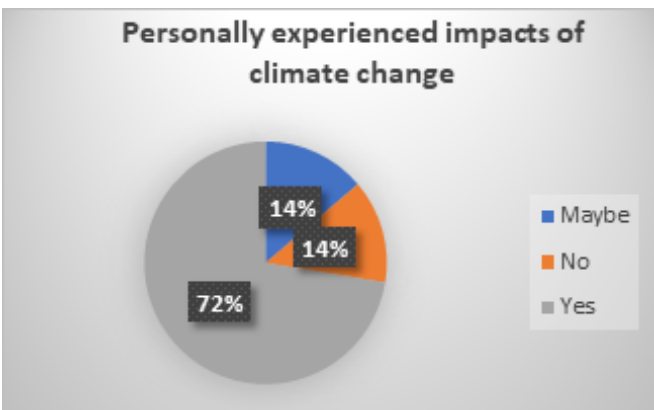


Figure 5. Direct experience with climate change

A significant majority (72%) of respondents reported that they had personally experienced the impacts of climate change. Meanwhile, 14% stated they had not, and another 14% were uncertain.

Respondents detailed various impacts of climate change, including increased temperatures, flooding, and crop failure due to reduced rainfall. Many noted that the weather had become more unpredictable, with irregular seasonal changes and increased heat levels. Other observations included environmental health issues such as air pollution from soot, water scarcity, and vector-borne diseases.

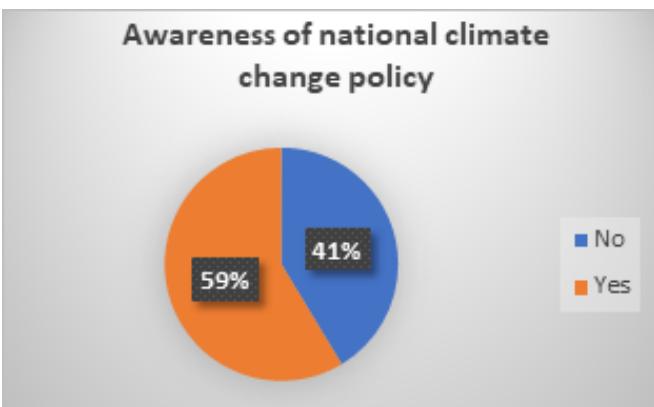


Figure 6. Awareness of national climate change policy

Awareness of Nigeria's National Climate Change Policy was moderate, with 59% of respondents indicating they were aware of it, while 41% stated they were not. This reflects a need for greater public engagement with national climate policies.

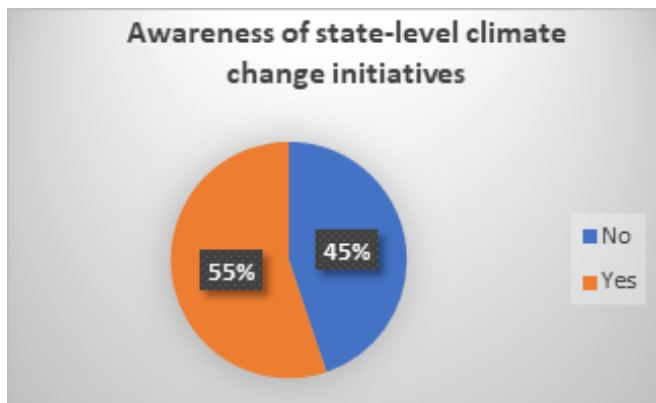


Figure 7. Awareness of state-led climate actions

Awareness of state-level climate initiatives was also moderate, with 55% of respondents stating they were aware of such policies, while 45% were not.

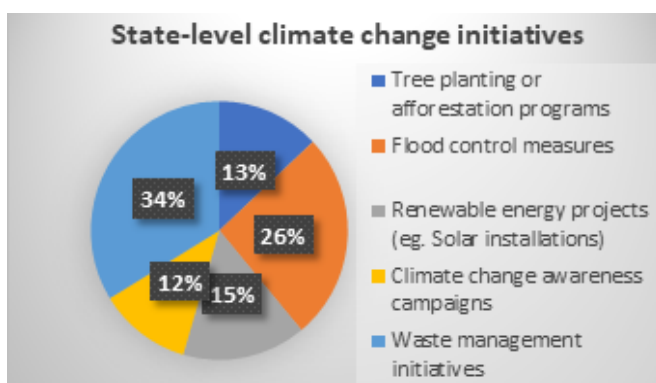


Figure 8. Types of climate change initiatives identified

Among those aware of state-led initiatives, 34% identified waste management initiatives as the most recognized action. Flood control measures were cited by 26%, while tree planting and afforestation programs accounted for 13%. Renewable energy projects, such as solar installations, were mentioned by 15%, and climate change awareness campaigns were noted by 12%

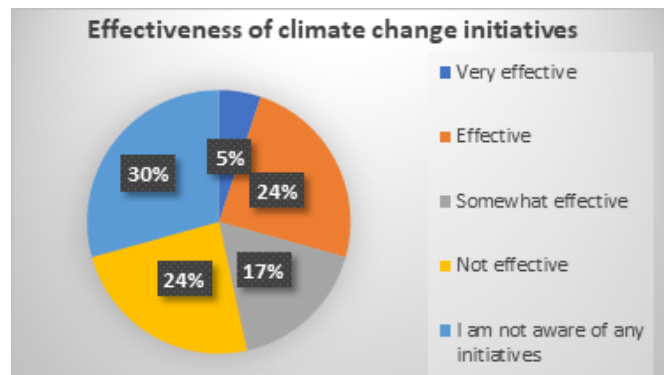


Figure 9. Perceived effectiveness of initiatives

Respondents expressed mixed views on the effectiveness of state-level initiatives. While a small percentage, 5% rated them as very effective, 24% found them effective. Another 24% described them as not effective, while 17% believed they were somewhat effective. A significant percentage (30%) reported being unaware of any initiatives..

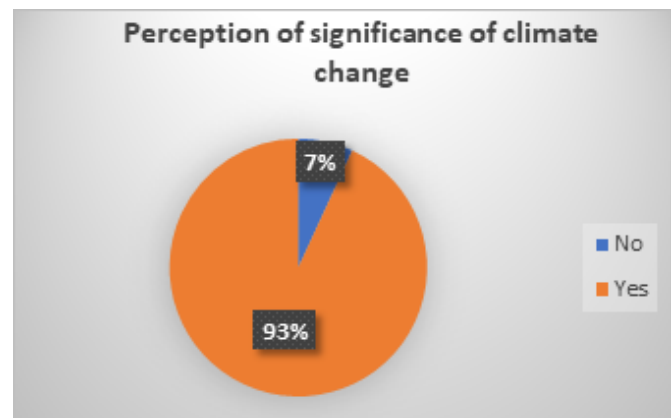


Figure 10. Perception of climate change urgency

An overwhelming 93% of respondents agreed that climate change is a significant issue that needs to be addressed in Rivers State, while only 7% did not see it as a pressing concern.

Respondents identified several barriers to climate action in Rivers State. Poor governance, corruption, and lack of public awareness were the most frequently mentioned challenges. Other barriers included inadequate funding, lack of technical expertise, and limited government commitment to implementing climate policies.

Economic challenges, political interference, and weak institutional capacity were also cited as major obstacles.

Respondents also proposed several measures for the state government, including increasing public awareness campaigns, investing in renewable energy, and promoting sustainable agriculture. Many suggested creating a climate change agency, improving waste management, and establishing stricter regulations on deforestation and environmental pollution. Others called for better flood control measures, increased funding for climate adaptation projects, and greater collaboration with international organizations and civil society groups.

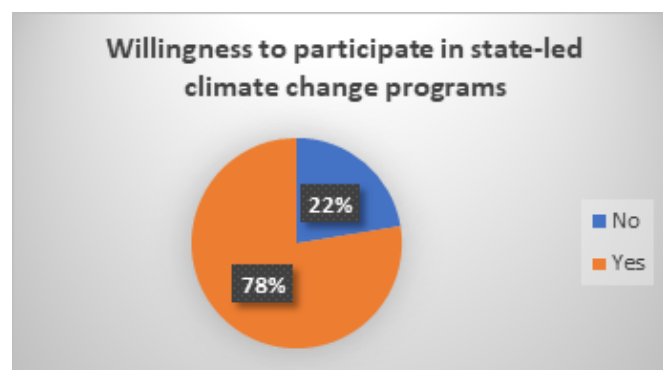


Figure 11. Willingness to participate in climate programs

78% of respondents expressed a willingness to participate in community programs related to climate change, while 22% indicated they were not interested.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 emphasized that while most people may not be familiar with the technical definitions of climate change, many recognize and experience its impacts firsthand. They noted: "People recognize flooding, heat, and air pollution

but may not understand these as outcomes of climate change." This distinction between lived experience and conceptual understanding is central to the awareness challenge in Rivers. While extreme weather events and pollution especially the well-known black soot crisis have triggered public concern, they are not always linked to broader environmental causes in public discourse. Both participants acknowledged that awareness is significantly stronger among government agencies, NGOs, and large private sector actors, especially multinational companies. Participant 1 stated: "Government and CSOs are well-informed and actively engage in discussions and implementation." However, Participant 2 pointed out that smaller businesses and vulnerable communities are largely unaware of climate policy frameworks, and may interpret climate impacts as natural or isolated incidents. "Rural communities still see climate impacts as natural phenomena, not necessarily connected to human activity," they noted.

When it comes to the National Climate Change Policy (NCCP), awareness levels vary widely. Government agencies and NGOs are generally familiar with the policy and reference it in campaigns and stakeholder meetings, but implementation is inconsistent and often underfunded. Participant 2 added: "The policy has influenced some awareness campaigns, but state-level action remains fragmented." To bridge these gaps, both government and civil society actors have initiated awareness efforts. Participant 1 listed several approaches: eco-clubs in schools, peaceful protests and stakeholder meetings, media campaigns, petitions, and letters to government agencies. They also cited the state's crackdown on illegal refining activities, particularly in response to air pollution and black soot, as an example of growing environmental accountability.

Despite these actions, both participants

emphasized the inconsistency and short-term nature of many campaigns. Participant 2 explained: “Workshops, media campaigns, and outreach programs happen, but they're dependent on external funding and not sustained.” This reliance on donor-supported projects creates a stop-start pattern that limits deeper public engagement and fails to produce lasting behavioural change. Importantly, there is a recognized need for long-term, structured, and inclusive awareness programs, particularly those that reach rural communities, farmers, and informal urban settlements. Participant 2 also emphasized that current strategies often fail to integrate local knowledge systems or cultural narratives, reducing their relevance and effectiveness.

Theme 2: Policy Integration and Implementation

Participant 1 acknowledged that the National Climate Change Policy (NCCP) has informed some policy discussions at the state level. There is the Climate Change Adaptation and Mitigation Plan for Rivers State developed by the National Coalition on Gas Flaring and Oil Spills in the Niger Delta (NACGOND).

The Ministry of Environment and affiliated agencies appear to be the primary drivers of any climate-relevant policy engagement. According to Participant 2, the ministry coordinates occasional multi-stakeholder meetings and trainings that reference national frameworks. Yet, these are often project-based and externally funded, and not embedded in the internal mechanisms of governance: “Efforts exist, but they are scattered...driven more by CSOs and international partners than state policy.” Participant 1 also highlighted a disconnect between environmental policies and other key sectors such as energy, transport, housing, and industry. They noted: “The Ministry of

Environment may act, but other ministries still operate in silos.” This lack of horizontal integration across government departments results in fragmented planning and undermines the potential for climate-responsive development. For example, while energy and infrastructure projects are ongoing in the state, there is little evidence of climate risk assessments, sustainability targets, or emissions reduction goals being built into their design or implementation.

There was no indication of climate budgeting or allocation of specific funds for climate programs. This implies that climate action is not yet considered a budgetary priority. Projects that do occur such as awareness campaigns or environmental remediation are usually funded through donor grants or emergency funds, rather than as part of a long-term strategic plan. Another issue raised is limited coordination with the private sector, particularly the oil and gas industry, which is a major player in the state's economy and a significant contributor to environmental degradation. Despite widespread public concern over pollution and flaring, the participant noted that regulation is weak, and environmental concerns are often sidelined in favour of economic priorities.

Theme 3: State-Led Climate Actions

A central area of state intervention highlighted by both participants is the crackdown on illegal oil refining and associated pollution, especially the notorious black soot crisis. Participant 1 described the government's efforts to address this as a key environmental and public health response, explaining: “Government intervened on black soot, banning open burning and engaging law enforcement to shut down illegal refining sites.” While not explicitly framed as climate mitigation, this effort targets a major source of air pollution and carbon emissions, making it indirectly aligned with broader environmental and climate

objectives. Both participants noted that the state government and civil society organizations have worked together to address community-level environmental degradation, particularly in the Niger Delta's heavily impacted oil-producing areas. These include public awareness campaigns, cleanup drives, and health advocacy related to pollution. However, Participant 2 noted that these actions are primarily health-driven and localized, not embedded within a climate resilience framework: *"These actions respond to symptoms, like pollution and flooding, not long-term climate resilience."*

There have also been ad hoc interventions in flood-prone communities, such as the desilting of canals and drainage systems, aimed at reducing the impact of urban flooding. While these are adaptation-relevant, they are generally conducted as reactive measures, often following a disaster event or seasonal flooding cycle. Participant 1 referenced eco-clubs in schools and CSO-led advocacy as examples of community-focused interventions. These programs focus on tree planting, waste reduction, and environmental hygiene. While small in scale, they help build early awareness and cultivate a culture of environmental responsibility among young people. The participant described these as "positive sparks," but emphasized the need for greater state ownership: "Much of this is being done by NGOs or individuals. Government support is limited." Importantly, there was no mention of renewable energy projects, climate-smart agriculture, green transport, or long-term infrastructure planning linked to climate adaptation or mitigation. This absence suggests that Rivers State's climate action is currently limited in thematic scope, missing several high-impact areas that could significantly reduce emissions and build resilience. Additionally, both participants underscored the dominance of donor and CSO-driven projects, with the state playing more of a supporting or regulatory role than a

proactive leadership role. As Participant 2 put it: *"We need the government to lead, not just wait for CSOs or crises to act."*

Theme 4: Challenges in Climate Policy Implementation

A core challenge is the lack of inter-ministerial coordination. Participant 2 explained that climate-related efforts are mainly undertaken by the Ministry of Environment, while other ministries continue to operate in silos, often unaware of or uninvested in climate goals. "It's still seen as an environmental issue, not something that affects planning, agriculture, or infrastructure." This siloed approach limits mainstreaming and prevents the design of multi-sectoral responses, particularly in sectors such as housing, transport, and agriculture, where climate integration is critical. Funding constraints were also mentioned, with both participants emphasizing the dependence on donor funding or CSO-led projects. Participant 2 stated: "Government funding for climate work is almost nonexistent unless there's donor involvement." This reliance makes climate action vulnerable to the changing priorities of external partners and inhibits continuity and sustainability. Moreover, there is no climate budget line, and climate initiatives are not included in mainstream development budgeting or planning processes.

The state's economic reliance on oil and gas presents a deeper structural challenge. Participant 1 highlighted the tension between environmental priorities and political-economic interests, noting that actions against pollution or illegal refining are often politically sensitive and inconsistent: "There are efforts to shut down illegal refining, but enforcement is inconsistent. It's hard to act when livelihoods and politics are involved." This underscores the complex political economy of climate governance in the region, where short-term economic benefits and elite interests can override environmental concerns. Public

engagement also remains weak in many parts of the state, particularly rural areas and marginalized urban communities. While awareness is increasing in urban centres, many citizens still lack the tools or platforms to participate in climate planning or policy monitoring. Participant 2 noted that community voices are not adequately included in decision-making, and engagement often ends with one-off awareness campaigns or workshops.

Theme 5: Opportunities and Recommendations

One of the most promising opportunities lies in the state's existing public awareness of environmental issues, particularly those related to air and water pollution. The widespread concern over black soot and oil spills has elevated environmental discussions into mainstream discourse, offering a critical platform upon which climate action could be built. As Participant 1 observed: "People now care when pollution affects their health. This is a good time to link it to bigger climate conversations." By framing climate change within the context of health, livelihoods, and security, the government can build public support for broader policy interventions. Another area of opportunity is the active presence of civil society organizations (CSOs). Both participants noted that CSOs in Rivers have been instrumental in driving community sensitization, stakeholder forums, school outreach, and policy advocacy. These organizations represent a ready network for scaling up action, especially if better supported by the government. "CSOs are already on the ground doing the work. The government should empower them, not just observe," said Participant 2.

There is a strong potential to expand the use of schools and youth clubs (such as eco-clubs) to promote environmental consciousness and climate education. These platforms can become

hubs for building a new generation of climate-informed citizens. With Rivers' large youth population, this presents a long-term strategy to drive behavioural change and environmental leadership. There is also room for inter-ministerial collaboration. Several ministries, including Environment, Health, Transport, Agriculture, and Urban Planning, could benefit from aligning their projects around shared climate goals. The creation of a multi-sectoral climate coordination task force, reporting directly to the governor, would ensure better synergy and higher-level accountability.

The economic structure of the state also presents an opportunity, albeit a complex one. Rivers is home to major oil and gas corporations, some of which are under growing pressure to adopt ESG (environmental, social, governance) standards. With the right policies and incentives, the state could engage these corporations in clean-up programs, renewable energy pilots, and just transition strategies, potentially unlocking corporate social responsibility (CSR) funds for climate-aligned projects. In terms of finance, both participants hinted at the possibility of accessing climate finance from international sources, such as the Green Climate Fund or bilateral development agencies. However, this will require institutional readiness, including transparency, monitoring systems, and proposal-writing capacity. "The money is there, but we need systems in place to qualify for it," Participant 1 noted.

Discussion

The survey results reflect a commendable level of general awareness about climate change in Rivers State, with 98% of respondents indicating familiarity with the term. This level of awareness suggests that climate discourse has penetrated public consciousness, particularly among educated and younger demographics. The dominance of schools and educational

institutions (71%) as sources of information confirms the success of academic outreach, and the growing role of digital media (17%) demonstrates a modern, decentralized information ecosystem. However, while many residents recognize the symptoms of climate change such as increased heat, flooding, and pollution, there is a disconnect between these lived experiences and an understanding of climate change as a systemic and anthropogenic problem. Participants in the interviews highlighted that rural and marginalized urban communities often interpret climate impacts as isolated or natural events, rather than consequences of broader environmental or policy failures. This observation highlights the limits of surface-level awareness and calls for more strategic educational interventions that connect personal experiences with global climate narratives and national policy frameworks like the Nigerian Climate Change Policy (NCCP). Awareness of the NCCP itself remains moderate (59%), with even lower recognition of state-led climate policies (55%). These numbers reflect a critical gap in policy communication and citizen engagement, suggesting that existing climate frameworks are not sufficiently localized or contextualized for widespread understanding and uptake.

Findings indicate that while Rivers State has made some reference to the NCCP such as through the Climate Change Adaptation and Mitigation Plan spearheaded by CSOs like NACGOND, true policy integration into state governance remains limited. Climate change is largely treated as an environmental issue confined to the Ministry of Environment, rather than a cross-cutting development challenge requiring coordination across health, agriculture, energy, urban planning, and finance. This fragmented approach results in piecemeal initiatives with minimal institutional memory or sustainability. For example, while the Ministry of Environment conducts occasional

trainings and stakeholder meetings, these are often project-based and externally funded. There is a lack of institutionalized climate mainstreaming within budgeting processes, infrastructure planning, or sectoral strategies, and no evidence of a dedicated climate budget line within the state's fiscal policy. Interviewees also pointed to the lack of inter-ministerial synergy as a major hurdle. Ministries often operate in silos, with little or no coordination on climate goals. This structural disintegration impedes the development of holistic and resilient policies, especially in sectors like agriculture, where climate risks are high, and opportunities for adaptation (e.g., climate-smart agriculture) remain underutilized.

On-the-ground climate actions in Rivers State are characterized more by responses to environmental crises than by proactive, long-term planning. For instance, the state's crackdown on illegal refining and efforts to reduce black soot pollution represent significant interventions. While these actions are aligned with climate mitigation and environmental health goals, they are not typically framed within the context of climate change or emissions reduction. Other initiatives such as canal desilting, afforestation efforts through school eco-clubs, and public health campaigns are largely reactive, community-driven, or CSO-led. These activities tend to be local in scope and short-lived, often lacking the strategic planning and government backing required to produce systemic impact. Renewable energy, green infrastructure, and sustainable transportation which are critical areas for both mitigation and adaptation are notably absent from current state-level initiatives. The absence of a comprehensive climate action plan or emissions inventory highlights the early stage of institutional maturity regarding climate governance in Rivers.

Numerous structural and institutional barriers

hinder climate action in Rivers State. Foremost among these is the lack of consistent government funding and political will. Interview data revealed that many climate projects depend on donor grants or emergency allocations, making them vulnerable to shifting priorities and donor fatigue. Governance issues such as corruption, weak enforcement mechanisms, and political interference were cited repeatedly by respondents as obstacles. Notably, the economic and political dominance of the oil and gas sector creates a major conflict of interest. As a primary source of state revenue and employment, oil refining (both legal and illegal) often takes precedence over environmental protection. Attempts to regulate pollution or shut down illegal refineries, while commendable, are often inconsistent due to political pressures and the entanglement of economic livelihoods with polluting industries. Additionally, community participation remains limited. Although 78% of survey respondents expressed willingness to engage in climate-related programs, few institutional platforms facilitate grassroots involvement in decision-making or policy monitoring. Engagement often ends with workshops or public awareness campaigns, without deeper inclusion in planning, budgeting, or evaluation processes.

Despite these challenges, Rivers State presents several strategic entry points for improving climate governance. First, there is a strong baseline of environmental awareness especially in relation to air pollution, health, and flooding that can serve as a platform for framing broader climate issues. By linking climate change to everyday concerns such as health, economic security, and livelihoods, the government can build wider public support for ambitious policy measures. Second, civil society organizations (CSOs) are already playing a significant role in filling institutional gaps through advocacy, education, and community mobilization. This

existing network represents a ready infrastructure that could be scaled up through technical and financial support from the state. A more collaborative model of governance where CSOs are treated as strategic partners rather than project implementers could greatly enhance implementation capacity. Third, youth engagement through educational platforms like eco-clubs shows promising potential. Given the youthful demographic in Rivers State, sustained investment in environmental education could yield long-term gains in climate literacy and behavioural change. Finally, Rivers' economic significance and the presence of multinational oil companies offer a unique opportunity to develop public-private partnerships (PPPs) for climate action. By leveraging Environmental, Social, and Governance (ESG) standards and corporate social responsibility (CSR) funding, the state can engage the private sector in supporting environmental cleanup, renewable energy pilots, and just transition initiatives.

Conclusion

The case study of Rivers State shows that while climate change is widely recognized as a pressing issue by citizens and institutions alike, the state's response remains fragmented and reactive. Policy awareness exists but is uneven across different sectors and communities. Implementation of national frameworks such as the NCCP is limited by weak governance structures, insufficient funding, and a lack of multi-sectoral integration.

Nonetheless, the presence of strong civil society engagement, youth mobilization through education, and public concern over pollution-related health issues suggests that Rivers State possesses both the social capital and institutional base necessary for more ambitious climate action. Leveraging these assets, coupled with improved coordination and strategic planning, could significantly enhance the state's capacity to meet

both national and global climate targets.

Recommendations

1. **Integrate Climate Action into Development Planning:** Embed climate resilience and sustainability goals into the state's development plans, infrastructure projects, and budget frameworks to ensure long-term commitment and coherence.
2. **Institutionalize Climate Education and Youth Engagement:** Expand climate-focused curricula in schools and support eco-clubs as platforms for building environmental consciousness and leadership among young people.
3. **Scale Up Public Awareness Campaigns:** Launch sustained, locally relevant media campaigns, especially in indigenous languages that link climate change to health, livelihoods, and daily life, particularly in rural and vulnerable communities.
4. **Support and Partner with Civil Society Organizations (CSOs):** Provide technical and financial support to CSOs that are already active in climate education, advocacy, and community mobilization to enhance reach and impact.
5. **Introduce Climate Budgeting:** Create dedicated budget lines for climate adaptation and mitigation within state finances to reduce reliance on donor funding and ensure the continuity of programs.
6. **Foster Inter-Ministerial Collaboration:** Encourage horizontal collaboration across key ministries such as Environment, Health, Agriculture, and Urban Planning through joint projects and

shared climate goals.

7. **Engage the Private Sector and Promote Green Investment:** Incentivize oil and gas companies and other private sector actors to invest in renewable energy, pollution control, and climate-smart innovations through tax breaks, ESG frameworks, and public-private partnerships.

SOKOTO STATE

Presentation of Survey Findings

In Sokoto State, 40 respondents (80%) were male, while 10 respondents (20%) were female. This shows a significant gender imbalance in survey participation, suggesting that men may have greater involvement or interest in climate-related issues in the state.

The majority of respondents (20 individuals, 40%) were aged 25 to 34 years, followed by the 35 to 44 age group, which accounted for 18 respondents (36%). Nine respondents (18%) were aged 45 to 54 years, while two respondents (4%) were aged 18 to 24 years. Only one respondent (2%) was aged 55 and above. These results suggest that middle-aged adults are the most actively engaged demographic in climate-related discussions in Sokoto State.

Most respondents (56%) had attained tertiary education, while 42% held postgraduate qualifications. Only 2% of respondents reported having a secondary school education. This suggests that climate awareness efforts may have primarily reached more educated individuals, highlighting a need for targeted outreach to less-educated communities.

Civil service was the most common occupation among respondents, representing 52% of the sample. Students accounted for 12%, followed by trading/business at 10%, and farming at 8%. The "others" category made up 18%, reflecting a range of additional occupations. The dominance of civil servants in the survey suggests that government workers may have greater exposure to climate awareness campaigns and initiatives.

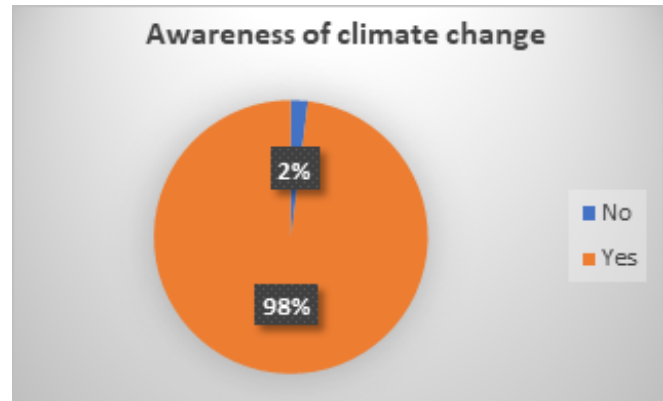


Figure 1. Awareness of climate change

A high percentage (98%) of respondents stated that they had heard of climate change, while only 2% reported being unfamiliar with the term. This suggests a strong baseline awareness of climate change among Sokoto State residents.

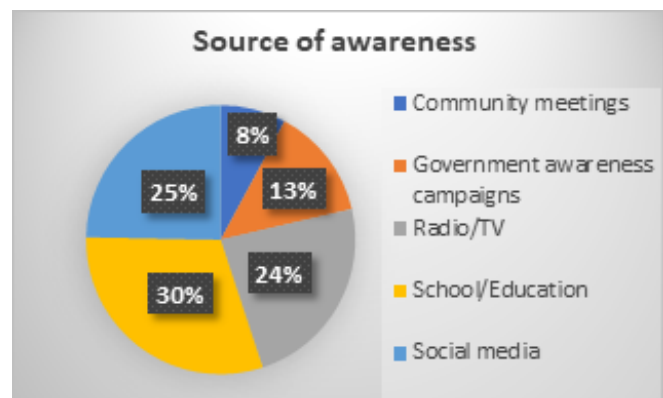


Figure 2. Source of climate change awareness

Schools and educational institutions were the most common sources of information about climate change, cited by 30% of respondents. Social media followed closely at 25%, while 24% credited radio and television broadcasts as their source of awareness. Government campaigns accounted for 13%, and 8% mentioned community meetings. This reflects the influential

role of both formal education and media in spreading climate change awareness.

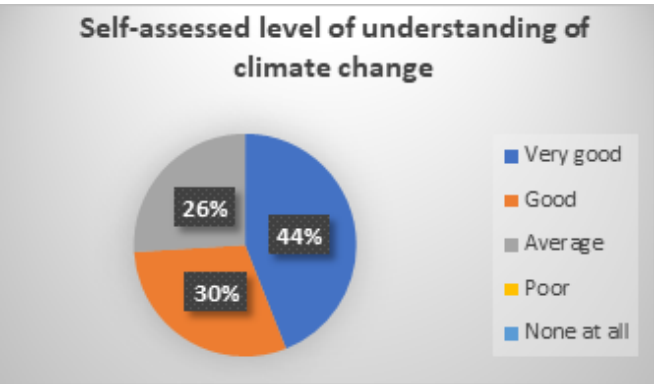


Figure 3. Understanding of climate change

When asked to assess their understanding of climate change, 44% of respondents described their knowledge as very good, while 30% rated it as good. Meanwhile, 26% believed their understanding was average, with no respondents describing their understanding as poor or non-existent. These results reflect a relatively high level of self-reported understanding of climate change in Sokoto State.

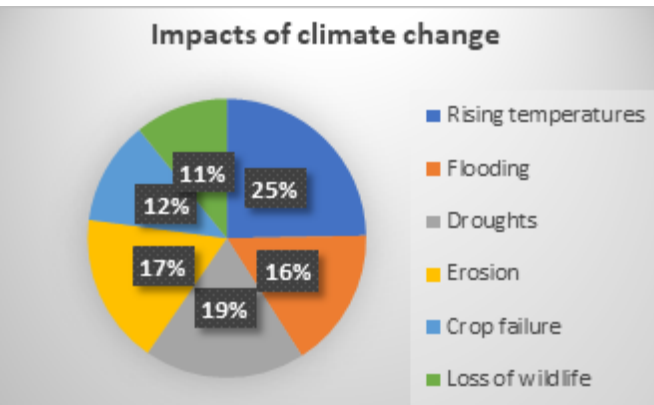


Figure 4. Perceived impacts of climate change

Respondents identified multiple consequences of climate change. Rising temperatures were mentioned by 25% of participants, followed by droughts (19%) and erosion (17%). Flooding was noted by 16% of respondents, while crop failure and loss of wildlife were each mentioned by 12% and 11%, respectively. These findings align with

broader climate challenges faced in the northern regions of Nigeria.

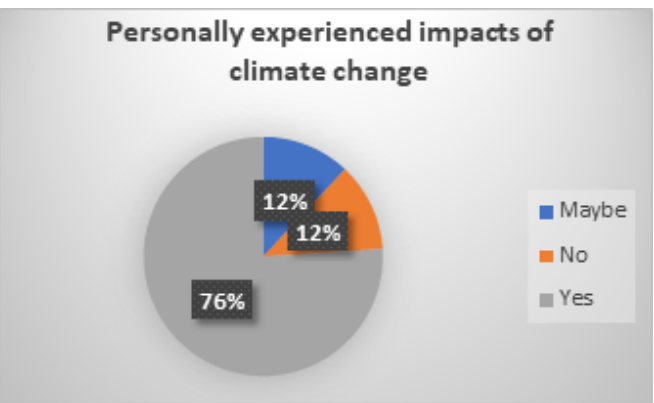


Figure 5. Direct experience with climate change

A significant majority (76%) of respondents reported that they had personally experienced climate change impacts. Meanwhile, 12% said they had not, and another 12% were uncertain.

Respondents cited various climate change impacts, including rising temperatures, droughts, and flooding. Several participants noted desert encroachment and increased pest and disease outbreaks. Others highlighted extreme heat and unpredictable rainfall patterns, which have negatively affected agriculture and livestock production. Respondents also mentioned water scarcity and infrastructure damage caused by flooding and erosion.

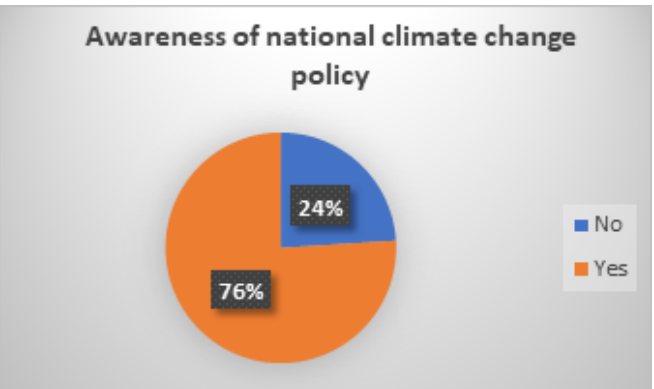


Figure 6. Awareness of national climate change policy

A majority of respondents (76%) indicated that they were aware of Nigeria's National Climate

Change Policy, while 24% reported being unaware of it. This suggests that the national policy is relatively well-known among Sokoto State residents.

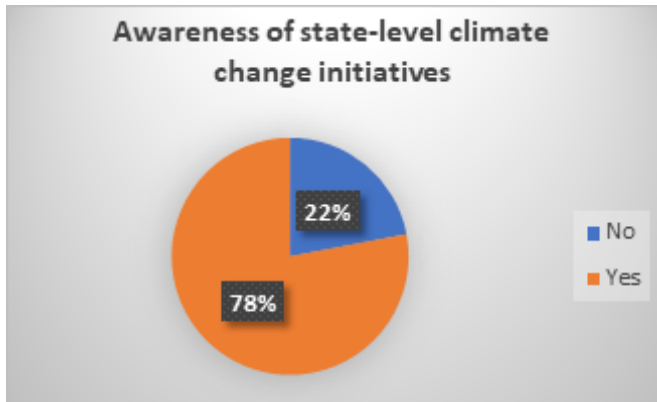


Figure 7. Awareness of state-led climate actions

A high percentage (78%) of respondents reported being aware of climate-related policies or initiatives in Sokoto State, while 22% said they were unaware of any such programs. This reflects relatively strong public engagement with state-led climate action.

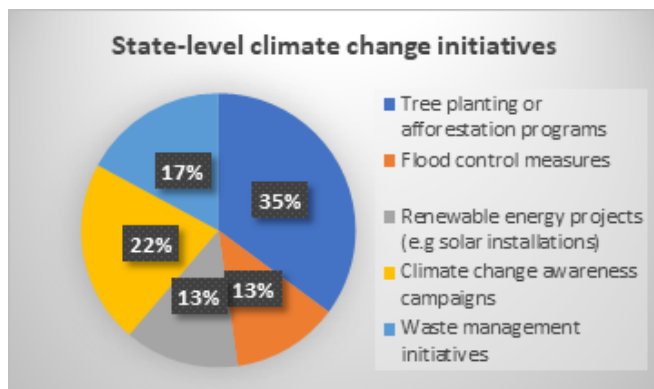


Figure 8. Types of climate change initiatives identified

Among those who were aware of state-level initiatives, 35% identified tree planting and afforestation programs as the most common action. Climate change awareness campaigns accounted for 22%, waste management initiatives were cited by 17% of respondents, flood control measures were noted by 13%, while Renewable energy projects, such as solar installations, were

mentioned by another 13%.

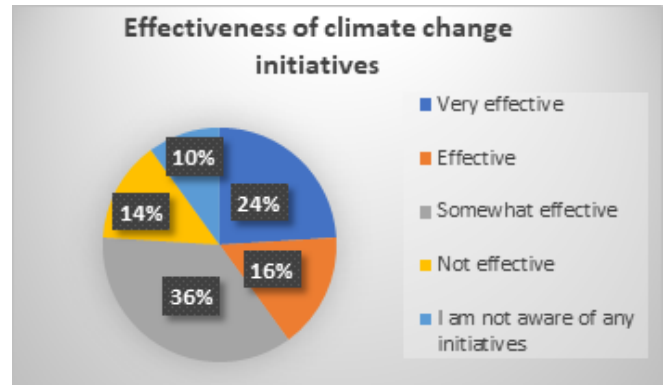


Figure 9. Perceived effectiveness of initiative

Respondents had mixed views on the effectiveness of state-level initiatives. While 24% rated them as very effective, 16% considered them effective. Meanwhile, 36% described them as somewhat effective, and 14% found them ineffective. Another 10% of respondents were unaware of any climate change initiatives in the state.

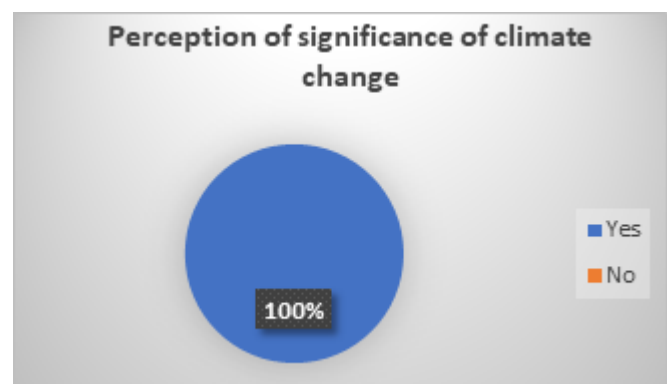


Figure 10. Perception of climate change urgency

All respondents (100%) agreed that climate change is a significant issue that needs to be addressed in Sokoto State.

Respondents identified several challenges to effective climate action in Sokoto State. Lack of awareness and education were the most frequently mentioned barriers. Poor policy enforcement, lack of funding, and weak political

will were also highlighted. Other challenges included corruption, inadequate infrastructure, reliance on traditional practices like deforestation for firewood, and insufficient government engagement with local communities.

Respondents also proposed various actions for the state government, including increasing public awareness campaigns and investing in renewable energy. Tree planting and afforestation programs were frequently mentioned, along with improved enforcement of environmental policies and better water resource management. Other recommendations included promoting sustainable agriculture, strengthening early warning systems for extreme weather, and improving infrastructure to withstand flooding and drought.



Figure 11. Willingness to participate in climate programs

An overwhelming 98% of respondents expressed willingness to participate in community programs related to climate change, indicating a strong interest in grassroots involvement. Only 2% said they were not interested.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 stated that climate change

awareness in Sokoto State has increased over the years, largely due to sensitization efforts by climate change action groups targeting rural areas and schools. According to the participant, these efforts have led to "considerable awareness of climate change and sustainability across the state." This suggests that while awareness is improving, it remains uneven across different demographic groups. Participant 2 reinforced this observation, explaining that "there is some appreciation and level of understanding about climate change, especially among government agencies and some elites within rural areas." However, they added that "at the community level, awareness is very low." Similarly, Participant 3 described awareness levels in communities as inadequate, emphasizing that "mass media alone is ineffective" due to limited access to communication channels such as radio and television.

Regarding familiarity with the National Climate Change Policy, the responses suggest that stakeholders at the government and institutional levels are aware of the policy, but this awareness does not translate into meaningful action or broad understanding at the grassroots level. Participant 1 noted that stakeholders are "actively involved in sensitization campaigns and promoting climate-smart agriculture." Similarly, Participant 2 stated that "government officials and academicians are aware of the National Climate Change Policy since it deals with literature." However, they added that "at the local level and even within the private sector, awareness is quite low." Participant 3 reinforced this, explaining that "there is no direct interface between the government and the community to discuss the policy."

The state government's efforts to raise awareness through formal education and mass media campaigns represent a positive step toward increasing knowledge about climate change. Participant 1 highlighted that "climate change

education has been integrated into primary and secondary school curricula." In addition, the state government reportedly uses mass media (TV and radio) to spread awareness across the state. However, Participant 3 noted that these efforts are limited in their reach due to restricted media access in rural communities: *"The government relies primarily on radio jingles to raise awareness, but this is insufficient as many communities lack access to mass media."*

Participant 2 similarly pointed out that while the state government conducts tree-planting campaigns and organizes workshops to educate the public, these efforts have not substantially improved understanding at the community level. They noted: *"There are radio jingles and public enlightenment programs educating people about climate change... but the impact is limited."*

The role of non-governmental organizations (NGOs) in raising awareness and promoting grassroots engagement was highlighted by all three participants. Participant 1 noted that NGOs lead sensitization and tree-planting activities in schools, universities, religious centres, and roadside areas. Participant 2 emphasized that NGOs collaborate with the government to support afforestation programs and provide seedlings to farmers. Participant 3, however, noted that these efforts are constrained by limited funding and weak institutional support, stating that *"NGOs rely on small private donations (1,000– 5,000) to sustain activities."*

Theme 2: Policy Integration and Implementation

Participant 1 indicated that the state has incorporated the policy into its governance structures, particularly in the areas of mitigation and adaptation. They cited specific initiatives such as tree-planting programs and climate-smart agriculture, which gained momentum during Governor Aminu Tambuwal's administration. This

suggests a degree of alignment between national policy goals and state-level actions, consistent with recommendations from the Nigerian National Climate Change Policy (NCCP), which encourages state governments to adapt national strategies to local conditions. However, the extent of this integration is unclear. Participant 2 noted that while the government addresses desertification and drought mitigation through afforestation and irrigation programs, they were not aware of a structured framework to align these efforts with the national policy. They stated: "I know the government discusses desertification and drought mitigation, but I am not aware of how far the state has integrated the National Climate Change Policy into its governance framework." This suggests that policy alignment remains superficial, with limited evidence of concrete governance structures or regulatory mechanisms to institutionalize climate action at the state level.

Participant 3 reinforced this observation, highlighting that while some climate-related programs exist, their implementation is inconsistent and poorly coordinated. They stated: "There have been some policies and programs initiated by the government, but the problem is always follow-up and execution." The lack of structured monitoring and evaluation systems further weakens the ability to translate policy intentions into meaningful outcomes at the state level.

Sokoto State has made modest attempts to promote adaptation and mitigation in the agricultural sector, but efforts in other key sectors such as energy and transport remain minimal. Participant 1 highlighted the promotion of drought-resistant crops and training for farmers on climate-smart agricultural practices as key adaptation strategies. Participant 2 noted that the state government supports the use of irrigation to address erratic rainfall and promote agricultural resilience. They stated: "In agriculture, the

government promotes the use of dams for irrigation to address erratic rainfall." However, there was no mention of targeted adaptation or mitigation measures in the energy and transport sectors. This indicates a narrow focus on agriculture, with limited recognition of the broader systemic changes needed to address climate risks across different sectors. Participant 3 confirmed the lack of meaningful sectoral adaptation in energy and transport, noting that most government actions are limited to agriculture and emergency flood response. They stated: "The Ministry of Agriculture took data of farmers affected by climate change, but we have not heard of what they have done." This suggests that even within the agricultural sector, the translation of policy into actionable support remains weak, with farmers still facing challenges related to climate variability.

Theme 3: State-led climate actions

Participant 1 highlighted that Sokoto is part of the Nigeria Erosion and Watershed Management Program (NEWMAP), a World Bank-supported initiative aimed at addressing land degradation and enhancing watershed management. They stated: "The Nigeria Erosion and Watershed Management Program (NEWMAP) is active in the state." This suggests that Sokoto is benefiting from federal and international support in addressing climate-related environmental challenges. Tree planting and afforestation programs represent a key focus of Sokoto's state-led adaptation efforts. Participant 1 noted that the government provides drought-resistant seedlings and trains farmers on climate-smart agricultural practices. Similarly, Participant 2 described tree-planting campaigns as a central government strategy to combat desertification: "The government campaigns that if a farmer cuts down a tree, they should plant two in return." Participant 3 also acknowledged afforestation programs under the Ministry of Environment, citing a tree plantation project in one of the local governments. However, they

noted that these programs are poorly executed and lack follow-through: "There have been some policies and programs initiated by the government, but the problem is always follow-up and execution." Irrigation technology has emerged as another key adaptation strategy in Sokoto, aimed at addressing the region's vulnerability to drought and erratic rainfall patterns. Participant 2 explained that the government promotes the use of dams for irrigation to support agricultural resilience: "In agriculture, the government promotes the use of dams for irrigation to address erratic rainfall." However, the participant noted that the scale and reach of these interventions remain limited, with many farmers still lacking access to irrigation infrastructure.

While Sokoto's adaptation measures are focused primarily on agriculture and afforestation, mitigation efforts are more limited. Participant 3 stated: "I can't remember any mitigation policies from the state government." This suggests that Sokoto has not yet developed a coherent strategy for reducing greenhouse gas emissions or transitioning to low-carbon energy systems. Participant 3 further noted the absence of environmental regulations to control emissions from industries and mining activities: "I can't remember whether the government has issued laws to regulate companies emitting gas." Flood response measures were also identified as a key component of Sokoto's climate action strategy. Participant 3 mentioned that the government develops temporary shelters for displaced people during floods: "During floods, they usually develop temporary camps for people to stay until the flood reverses." While these actions reflect the state's commitment to disaster response, they highlight the reactive nature of Sokoto's climate governance.

The findings indicate that NGOs play a critical role in supporting state-led climate initiatives in

Sokoto, particularly in the areas of awareness creation and tree planting. Participant 1 highlighted that NGOs lead sensitization campaigns in schools, universities, religious centres, and roadside areas, often distributing seedlings and conducting follow-ups to ensure plant survival. They stated: "NGOs distribute seedlings to motorists and passersby and conduct follow-ups to ensure plant survival." Participant 2 confirmed the supportive role of NGOs in afforestation and community education, explaining that they collaborate with the government on tree planting and environmental awareness programs. However, they noted that financial constraints limit the scale and impact of NGO-led initiatives. Community involvement in Sokoto's climate actions is relatively strong, particularly in afforestation and sensitization campaigns. Participant 1 noted that community leaders actively mobilize residents to participate in tree planting and environmental monitoring. They stated: *"Community leaders play a key role in mobilizing people and supporting NGOs in monitoring implementation."*

However, private sector engagement in climate action remains weak. Participant 1 noted that some private individuals make small financial donations to support NGO activities, but corporate engagement is minimal. Participant 2 echoed this observation, explaining that private organizations have not been sensitized or incentivized to participate in climate initiatives: *"There is a need to sensitize private organizations to encourage their participation."*

Theme 4: Challenges in Climate Policy Implementation

Participant 2 noted that while the state government has introduced climate initiatives such as afforestation and irrigation, the integration of these efforts into broader governance frameworks remains weak. They stated: "I know the government discusses

desertification and drought mitigation, but I am not aware of how far the state has integrated the National Climate Change Policy into its governance framework." Participant 3 highlighted the lack of technical expertise within government institutions as a major barrier to implementation. They stated: "Most of the people assigned to implement these policies are not even educated about climate change... they are government appointees." This suggests that political appointments often take precedence over technical qualifications, limiting the state's ability to design and implement effective climate interventions. The absence of a dedicated climate governance structure further weakens Sokoto's institutional capacity to implement climate policies. Participant 3 noted that while programs such as tree planting and irrigation exist, they are not backed by formal regulatory mechanisms or monitoring systems: *"There have been some policies and programs initiated by the government, but the problem is always follow-up and execution."*

Limited financial resources emerged as one of the most significant barriers to climate policy implementation in Sokoto. Participant 2 noted that state governments rely heavily on international donors and federal ecological funds to finance climate-related programs: "There is limited funding, as state governments mostly depend on international donors." Participant 3 confirmed that financial constraints often delay or weaken climate projects: "They always put pressures on financial difficulties... they are unable to source climate finance." This highlights the vulnerability of Sokoto's climate programs to fluctuations in donor funding and federal budget allocations. Participant 1 reinforced the financial limitations faced by NGOs, noting that many rely on small private donations to sustain activities such as tree planting and sensitization campaigns. The limited involvement of local communities in climate policy formulation and implementation presents a significant challenge to effective

climate action in Sokoto. Participant 3 noted that most policies are designed and implemented at the state level without input from local communities: *“Most of the people exposed to climate change are not incorporated into the policies.”*

Participant 2 added that awareness levels remain low in rural areas, limiting community engagement in climate initiatives: *“At the community level, awareness is very low.”* This suggests that even when government-led programs such as tree planting and irrigation are introduced, their long-term success is undermined by the lack of grassroots participation. Participant 3 further highlighted the challenge of engaging communities through mass media, noting that many rural areas lack access to radio and television: *“The government relies primarily on radio jingles to raise awareness, but this is insufficient as many communities lack access to mass media.”* The lack of technical infrastructure and logistical support further constrains climate policy implementation in Sokoto. Participant 2 noted that while the state government promotes irrigation and afforestation, the scale and reach of these interventions remain limited due to poor infrastructure and logistical challenges: *“The government promotes the use of dams for irrigation to address erratic rainfall, but many farmers still lack access.”*

Participant 3 also noted the absence of environmental regulations to control emissions and industrial pollution, stating: *“I can’t remember whether the government has issued laws to regulate companies emitting gas.”* This suggests that Sokoto has not yet established a regulatory framework to monitor and reduce greenhouse gas emissions.

The lack of follow-through on government-led climate programs was also identified as a logistical

challenge. Participant 3 cited the example of a tree plantation project initiated by the Ministry of Environment, noting that the project lacked sufficient resources and follow-up: *“There have been some policies and programs initiated by the government, but the problem is always follow-up and execution.”* The structural disconnect between national climate policies and local realities presents another significant challenge to implementation in Sokoto. Participant 3 noted that Nigeria’s climate policies are often shaped by international frameworks rather than local needs: *“The policy is more of an international initiative... we need to domesticate it to reflect local realities.”* Participant 2 added that Sokoto lacks a clear framework for adapting national climate policies to local conditions: *“There might also be a need for mechanisms that allow state governments to integrate the policy into their environmental frameworks.”*

Theme 5: Opportunities and Recommendations

A key opportunity lies in the growing interest and commitment of young people to climate action. Participant 1 noted that Sokoto has a large pool of passionate young people willing to contribute to climate initiatives but lacking institutional support and engagement opportunities. They stated: *“Passionate young people are willing to drive climate action in Sokoto, but they are not being engaged at the policy level.”* Expanding the role of non-governmental organizations (NGOs) and strengthening partnerships with community-based groups represent another significant opportunity. Participant 1 highlighted the active role of NGOs in sensitization campaigns and tree planting, stating: *“NGOs distribute seedlings to motorists and passersby and conduct follow-ups to ensure plant survival.”* Expanding the scope of NGO-led programs and providing financial and logistical support could enhance their impact. Strengthening partnerships between state agencies and NGOs can help fill capacity gaps and

enhance program delivery.

The involvement of the private sector also presents a promising opportunity for expanding climate action in Sokoto. While private sector engagement is currently minimal, Participant 1 noted that some private individuals have made small financial contributions to support tree-planting campaigns. Participant 2 suggested that greater sensitization and targeted incentives could encourage more private sector involvement, stating: “There is a need to sensitize private organizations to encourage their participation.” Leveraging Sokoto's participation in national and international climate programs also presents an opportunity to enhance state-level climate action. Participant 1 highlighted the state's involvement in the Nigeria Erosion and Watershed Management Program (NEWMAP), which provides technical and financial support for erosion control and watershed management. Expanding Sokoto's participation in similar national and international programs can provide additional resources and technical expertise for climate adaptation and mitigation.

Improving access to climate finance is another critical opportunity. Participant 2 emphasized the need to explore funding opportunities from international sources and donor organizations, stating: “The state government can leverage funding opportunities from international and national sources.” Similarly, Participant 3 suggested that Sokoto should increase its participation in global climate forums such as COP to strengthen its international partnerships and funding opportunities: “The state government should always participate in COP conferences to discuss with stakeholders.” Strengthening Sokoto's institutional capacity to implement climate policies also represents a major opportunity. Participant 3 suggested that the state government should partner with universities and research institutions to build technical

expertise and enhance data collection for climate planning. They stated: “The government can partner with universities... to learn more about climate change and its consequences.” Expanding training programs for government officials and integrating research into policy formulation can enhance Sokoto's ability to design and implement effective climate interventions.

The findings suggest several strategic recommendations for improving Sokoto's capacity to implement climate policies and strengthen its resilience to climate change. A key recommendation is to develop a state-specific climate action plan aligned with national goals but tailored to local realities. Participant 2 emphasized the need for localized policy frameworks, stating: “There might also be a need for mechanisms that allow state governments to integrate the policy into their environmental frameworks.” Developing a Sokoto-specific climate policy would allow the state to address its unique climate challenges, including desertification, drought, and limited water access while aligning with national and international climate commitments. Expanding financial support for climate action is another critical recommendation. Participant 2 highlighted the need for dedicated funding to support climate programs, stating: “Funding is crucial, particularly for training government personnel and conducting awareness campaigns in rural areas.” Establishing a state-level climate fund and engaging with multilateral financial institutions such as the Green Climate Fund (GCF) and the Global Environment Facility (GEF) could provide sustainable financing for climate programs.

Strengthening intergovernmental collaboration is also essential for improving climate governance in Sokoto. Participant 3 suggested the creation of joint steering committees and task forces to enhance coordination between the state and federal governments: “Joint task forces would

ensure inclusivity at federal, state, and local levels.” Establishing regular forums for information-sharing and policy alignment could reduce duplication of efforts and improve the efficiency of state-level climate programs. Building technical capacity within state institutions is another key recommendation. Participant 3 emphasized the need for structured training programs to enhance the expertise of government officials responsible for climate policy implementation: “Capacity building must be structured to accommodate new leadership cycles.” Establishing partnerships with universities and research institutions can also improve data collection, modelling, and monitoring to support evidence-based decision-making. Enhancing community engagement is critical for building long-term resilience and local ownership of climate programs. Participant 3 suggested using direct community engagement strategies such as town halls and community dialogues to increase grassroots participation: “The community and the government can have a kind of direct interface to discuss the policy.” Similarly, Participant 1 recommended expanding youth engagement through targeted outreach programs and training opportunities: *“Young people should be engaged at all levels of climate action.”*

Finally, increasing the role of the private sector in Sokoto's climate action represents a key recommendation. Participant 2 suggested offering tax incentives and regulatory support to encourage private sector investment in renewable energy, sustainable agriculture, and environmental restoration projects: “The government should provide incentives to encourage private organizations to engage in climate initiatives.” Mobilizing private sector resources can enhance the scale and efficiency of climate programs in Nigerian states.

Discussion

A significant proportion of respondents (98%)

reported awareness of climate change, with a majority rating their understanding as good or very good. This suggests that awareness campaigns, particularly those targeting urban and semi-urban populations, have been relatively successful. The prominence of schools, social media, and mass media as key sources of information highlights the role of formal education and digital platforms in spreading environmental literacy. However, qualitative data from interviews reveal that this awareness is highly uneven. While government officials and educated individuals especially those in civil service exhibit familiarity with climate issues and policies, rural communities remain largely uninformed. Limited access to communication infrastructure (radio, TV, internet) and reliance on mass media “jingles” have proven insufficient for reaching the grassroots. This discrepancy underlines a systemic flaw in the state's communication strategy: an overreliance on centralized, top-down awareness campaigns with limited localization or community engagement. Moreover, while 76% of survey respondents claimed awareness of the Nigerian National Climate Change Policy (NCCP), interviews suggest that this familiarity is often superficial, and confined to public sector elites and academic circles. Among local communities and even within the private sector, knowledge of national policy objectives, mandates, and their relevance to local practices is scarce. This gap indicates a failure to domesticate and operationalize national policy at the subnational and community levels which is a core requirement for effective federalism in climate governance.

There is evidence that Sokoto State has begun integrating elements of the NCCP into its governance structures, particularly in agriculture and afforestation. Tree-planting campaigns, promotion of climate-smart agriculture, and participation in federally sponsored programs like NEWMAP reflect some alignment with national

adaptation goals. Yet, this integration appears largely symbolic or project-based rather than systemic. None of the interviewees could identify a coherent policy framework or governance structure through which the NCCP has been adapted and institutionalized in Sokoto's development agenda. Programs tend to be ad hoc, poorly coordinated, and lacking in continuity or long-term planning. Respondents pointed to issues of poor follow-up and the absence of clear monitoring and evaluation mechanisms. Importantly, key sectors such as energy, transport, and urban development are almost entirely excluded from state-led climate action. This narrow sectoral focus reflects a limited understanding of the multifaceted nature of climate change and its implications across the economy. It also exposes Sokoto to cascading vulnerabilities, especially as urbanization accelerates and climate-related shocks intensify.

Sokoto's initiatives most notably afforestation, irrigation, and climate awareness have garnered public recognition, as reflected in the 78% of respondents aware of state-led climate actions. However, perceptions of effectiveness were mixed, with only 24% rating them as "very effective." The majority (36%) saw them as only "somewhat effective," while others pointed to outright ineffectiveness. These assessments reflect public scepticism, often grounded in lived experiences of environmental degradation, persistent droughts, and inadequate flood control measures. A recurring theme across interviews was the lack of technical expertise and institutional capacity to implement policies effectively. Government officials responsible for policy execution are often appointed for political reasons rather than technical competence. This undermines program design, weakens accountability, and results in poor coordination across ministries. Moreover, the role of NGOs and community leaders, though impactful, is constrained by limited resources and insufficient

institutional backing. While NGOs spearhead many grassroots interventions, such as seedling distribution and public sensitization, they are heavily reliant on private donations and lack access to sustainable funding streams or strategic partnerships with the state government.

Institutional constraints remain one of the most significant barriers to effective climate action in Sokoto. Several interviewees emphasized that government appointments to key climate-related roles are often made on political grounds rather than technical merit. This practice has resulted in a mismatch between policy ambitions and implementation capacity. The lack of a dedicated climate agency or regulatory framework further exacerbates this issue, leading to policy fragmentation and inefficiency. Without institutional structures to enforce environmental regulations, oversee program delivery, and ensure accountability, the state is limited in its ability to execute climate interventions at scale. Financial limitations also represent a critical challenge. Most climate projects in Sokoto depend heavily on federal allocations, ecological funds, and international donor support. While programs such as the Nigeria Erosion and Watershed Management Program (NEWMAP) have provided important resources and technical assistance, they have not addressed the underlying issue of financial sustainability. NGOs operating in the climate space face similar constraints, often relying on small private donations to carry out their work. As a result, both government and civil society actors struggle to sustain long-term initiatives or scale up successful models of intervention. Another significant limitation identified in the study is the limited involvement of local communities in climate policy formulation and implementation. Respondents emphasized that many climate policies are designed in isolation from the communities they are intended to serve. This top-down approach not only reduces local ownership of climate initiatives but also undermines their effectiveness. A policy

cannot succeed if the people it affects are unaware of its objectives or unengaged in its implementation. This issue is compounded by the limited reach of mass media and the general lack of face-to-face engagement strategies such as town hall meetings or community dialogues.

Despite these challenges, the study also highlights several important opportunities for improving state-level climate action in Sokoto. One such opportunity lies in the enthusiasm and commitment of young people, many of whom have expressed a willingness to engage in climate programs. This demographic represents a largely untapped resource that could be mobilized through education, training, and employment in environmental sectors. Furthermore, while NGO-led initiatives remain modest in scale, they provide a functional model for grassroots engagement and could be significantly expanded with greater institutional support and funding. There is also potential to improve Sokoto's participation in national and international climate platforms, which could provide both financial resources and technical expertise. Expanding the state's involvement in global forums such as the UNFCCC Conferences of the Parties (COP) could facilitate knowledge exchange and strengthen partnerships with donor agencies and development institutions. The engagement of academia and research institutions also presents an important opportunity. Universities can play a key role in data collection, policy evaluation, and the development of localized climate models, thereby enhancing the evidence base for policy decisions. Finally, although current engagement from the private sector is minimal, the potential for private investment in climate-related sectors remains high. With the right policy incentives such as tax breaks, subsidies, and regulatory reforms, the state could attract private sector participation in renewable energy, sustainable agriculture, and ecosystem restoration projects.

Conclusion

In Sokoto state, while awareness of climate change is growing, particularly among educated populations, policy implementation remains hindered by weak institutional frameworks, limited resources, and inadequate grassroots engagement. State-led climate initiatives are commendable but lack scale, coordination, and long-term vision. The state's approach is predominantly reactive and sector-specific, with most initiatives focused on agricultural adaptation and environmental restoration. Without integrated strategies that cut across sectors and governance levels, efforts remain fragmented and insufficient to meet the growing climate challenges facing the region.

Despite these challenges, Sokoto has strong foundations to build upon, including existing public interest, NGO involvement, and participation in national and international climate programs. These assets present significant opportunities for institutional reform, multi-stakeholder collaboration, and investment in long-term resilience strategies.

Recommendations

1. **Develop a localized climate action plan:** Sokoto should formulate a comprehensive state-level climate policy tailored to its environmental challenges, including desertification, drought, and erratic rainfall. This plan should adapt the Nigerian National Climate Change Policy (NCCP) to local realities and set clear implementation targets across key sectors.
2. **Invest in institutional capacity building:** Regular training programs should be introduced for public officials and field staff to build technical knowledge on climate adaptation, mitigation, and policy implementation. Partnerships with universities and

research institutes can provide technical support and data for informed decision-making.

3. **Expand grassroots engagement:** The government should use direct engagement methods such as town hall meetings, community dialogues, and local sensitization drives to ensure policies reflect community needs and increase local ownership.
4. **Increase climate finance access:** To reduce reliance on federal and donor support, Sokoto should establish a climate fund and explore opportunities through international financial mechanisms such as the Green Climate Fund (GCF). Clear strategies should be developed for resource mobilization and budget allocation.
5. **Strengthen partnerships with NGOs and civil society:** NGOs are already playing a vital role in awareness and afforestation efforts. The state should formalize partnerships, offer co-funding arrangements, and provide logistical support to scale up community-based climate actions.
6. **Encourage private sector involvement:** The state government should introduce incentives such as tax reliefs or public-private partnership models to encourage businesses to invest in renewable energy, sustainable farming, and green infrastructure.
7. **Expand sectoral focus beyond agriculture:** While agriculture remains a key area, Sokoto should also prioritize climate interventions in energy, transport, waste management, and urban planning to promote long-term resilience.
8. **Improve monitoring and evaluation systems:** To ensure

effective implementation, the state should introduce a robust monitoring and evaluation framework with performance indicators, timelines, and feedback loops. This will enhance transparency and help identify gaps for timely policy adjustments.

ZAMFARA STATE

Presentation of Survey Findings

The survey captured responses from individuals across different demographic categories in Zamfara State. The gender distribution among respondents showed that 50 individuals, representing 89% of the total participants, were male, while only 6 individuals, making up 11%, were female. This significant gender disparity suggests that men were more actively engaged in the survey, possibly indicating lower participation levels of women in climate-related discussions or decision-making processes.

The age distribution of respondents varied, with the largest group consisting of individuals aged between 25 and 34 years, comprising 44% of the total participants. This was closely followed by those aged between 35 and 44 years, who made up 40%. Participants aged between 45 and 54 years accounted for 11%, while the youngest category, aged between 18 and 24 years, represented only 4% of respondents. These findings suggest that middle-aged adults are more engaged in climate awareness activities and are likely to be key stakeholders in addressing climate challenges in Zamfara State.

In terms of education level, the survey revealed that 3% of respondents had completed secondary school, while a significant proportion, 70%, had attained tertiary education. Additionally, 27% of participants reported having postgraduate qualifications. The predominance of tertiary and postgraduate education among respondents indicates that awareness and engagement in climate change discussions may be more concentrated among the educated population, which raises concerns about outreach to less-

educated groups who may be equally affected by climate change.

When asked about their primary occupation, respondents indicated a variety of professions. Business was the most common occupation, with 44% of respondents engaged in entrepreneurial activities. Civil servants accounted for 16% of participants, while students represented 25% of the survey population. Farmers, a group significantly impacted by climate change, constituted only 2% of respondents, suggesting that agricultural stakeholders may not have been adequately represented in the survey. Additionally, individuals working in non-governmental organizations (NGOs) made up 11% of the total respondents.

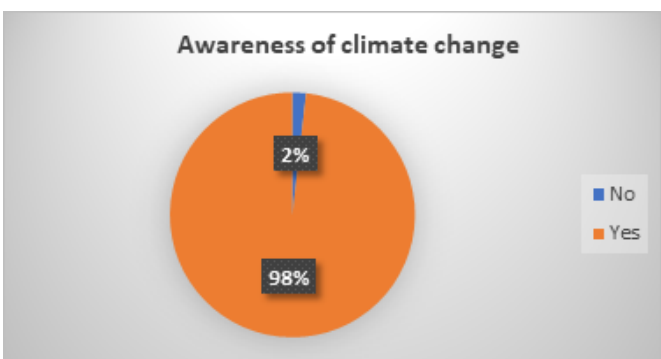


Figure 1. Awareness of climate change

The survey assessed the level of awareness of climate change among respondents. When asked whether they had heard of climate change, an overwhelming 98% of respondents answered in the affirmative, while only 2% indicated that they had not heard of the term. This high level of awareness suggests that climate change is widely recognized among residents of Zamfara State.

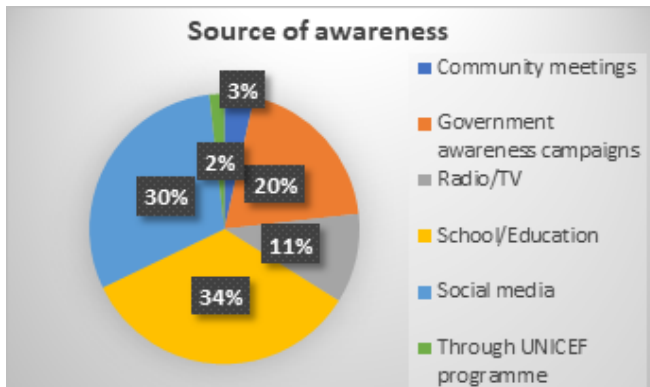


Figure 2. Source of climate change awareness

Participants were also asked where they first heard about climate change. Schools and educational institutions emerged as the most common source, with 34% of respondents stating that they first learned about climate change in school. Social media followed closely, with 30% of respondents attributing their knowledge to online platforms. Government awareness campaigns played a role in informing 20% of participants, while radio and television broadcasts accounted for 11%. Additionally, community meetings were identified as a source of climate change information by 3% of respondents, while 2% mentioned learning about it through UNICEF programs. These findings highlight the crucial role of education and digital platforms in spreading awareness about climate change.

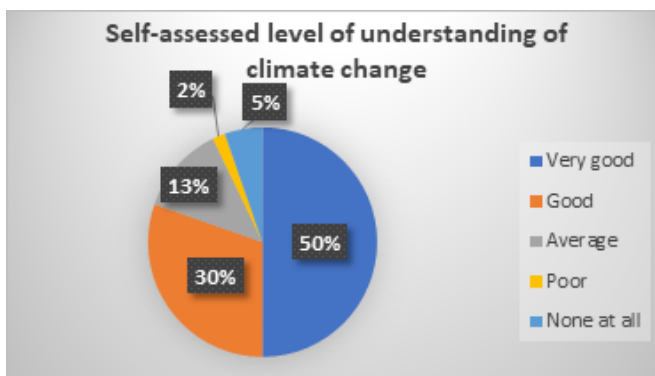


Figure 3. Understanding of climate change

Respondents were also asked to rate their understanding of climate change. Half of the participants (50%) described their understanding

as very good, while 30% considered their knowledge to be good. Meanwhile, 13% rated their understanding as average, 2% as poor, and 5% admitted to having no understanding at all. These results indicate that while many individuals have a strong grasp of climate change concepts, there is still a need to improve understanding among those with limited knowledge.

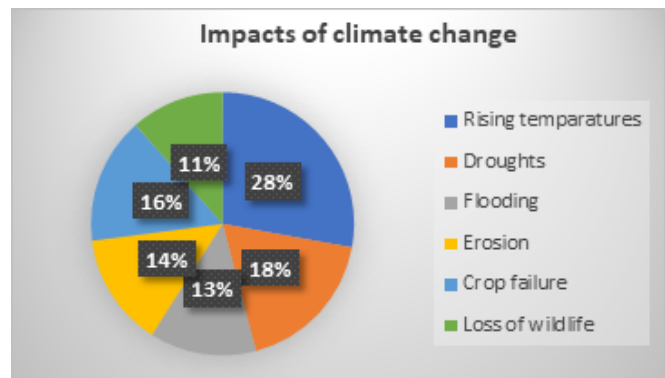


Figure 4. Perceived impacts of climate change

When asked about the perceived impacts of climate change, respondents identified multiple consequences. Rising temperatures were cited as a major impact by 28% of participants, while 18% mentioned droughts as a significant issue. Flooding was recognized by 13% of respondents, and 14% highlighted erosion as a major consequence of climate change. Crop failure, which directly affects food security and livelihoods, was identified by 16% of respondents, while 11% pointed to the loss of wildlife as an alarming effect. These findings indicate that climate change is already having tangible impacts in Zamfara State, affecting both the environment and the livelihoods of residents.

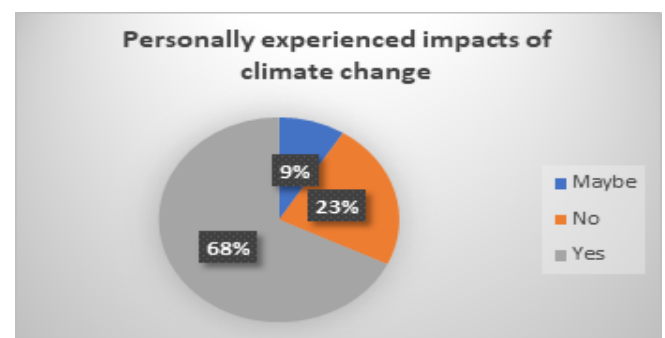


Figure 5. Direct experience with climate change

The survey sought to understand whether respondents had personally experienced the effects of climate change in their communities. A majority of respondents, 68%, reported having experienced climate change impacts firsthand. Meanwhile, 23% of participants stated that they had not observed any climate-related effects, and 9% were uncertain about their experiences.

Among those who reported experiencing climate change, several impacts were identified. Respondents noted an increase in erratic rainfall patterns, making it difficult to predict seasonal weather changes. Some observed desert encroachment, leading to the loss of arable land and reduced agricultural productivity. Flooding and soil erosion were also commonly reported, with many individuals highlighting the damage these phenomena have caused to infrastructure and farmland. Other concerns included excessive heat, increased temperature variability, and declining crop yields, which have negatively impacted food production. These observations align with broader climate trends affecting Nigeria and highlight the urgency of implementing adaptation measures.

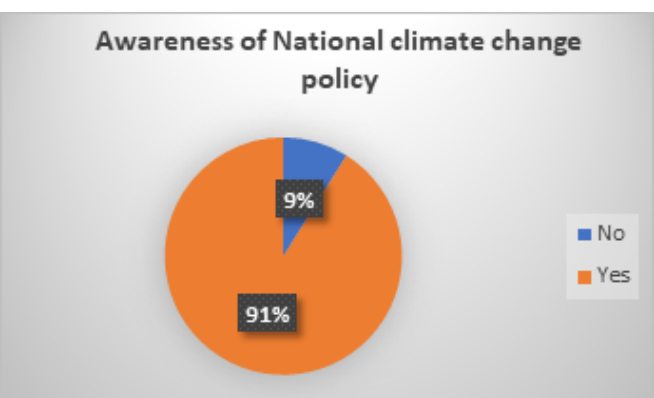


Figure 6. Awareness of national climate change policy

The survey assessed knowledge of national and state-level climate policies. When asked about awareness of Nigeria's National Climate Change Policy, 91% of respondents indicated that they were familiar with it, while only 9% had never

heard of it. This suggests that there is a relatively high level of awareness regarding the national policy in Zamfara State.

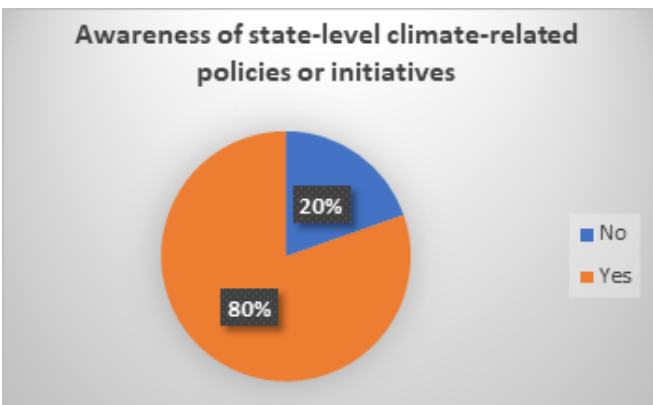


Figure 7. Awareness of state-led climate actions

Similarly, when respondents were asked whether they had heard of any climate-related policies or initiatives in Zamfara State, 80% answered yes, while only 20% stated that they were unaware of any such programs. This indicates that state-led climate actions are relatively well-known among residents.

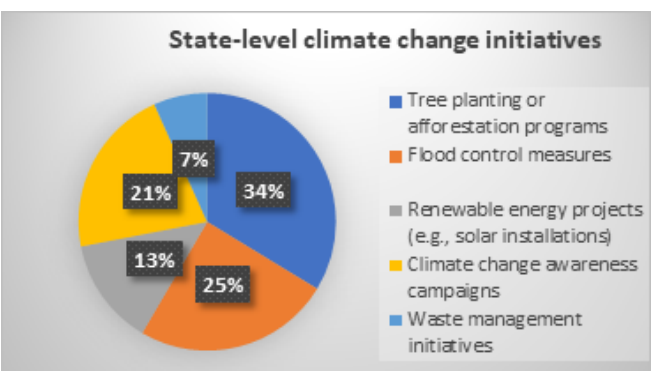


Figure 8. Types of climate change initiatives identified

Among those who were aware of state climate initiatives, tree planting, and afforestation programs were the most recognized, with 34% of respondents citing them. Flood control measures were mentioned by 25% of participants, while 13% identified renewable energy projects such as solar installations. Climate change awareness campaigns were acknowledged by 21% of respondents, whereas only 7% were aware of

waste management initiatives. These findings suggest that afforestation and flood control efforts have received the most attention, but waste management remains a relatively neglected area.

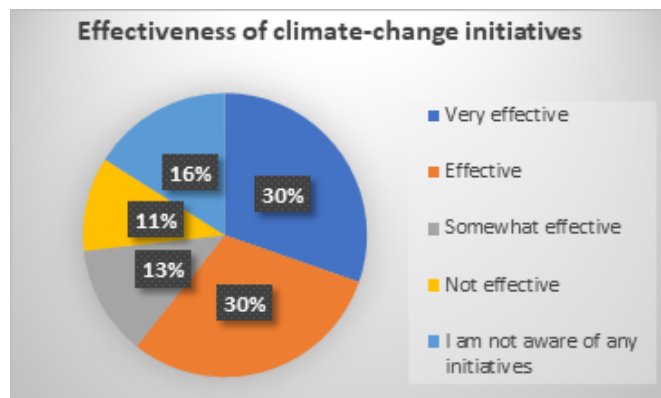


Figure 9. Perceived effectiveness of initiatives

When asked to assess the effectiveness of these initiatives, 30% of respondents considered them very effective, while another 30% found them effective. Meanwhile, 13% rated the initiatives as somewhat effective, and 11% believed they were not effective at all. Notably, 16% of respondents stated that they were not aware of any climate initiatives in the state, further emphasizing the need for increased public outreach and engagement.

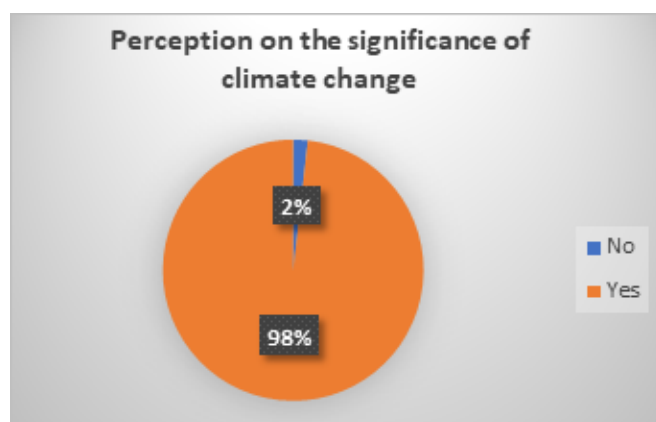


Figure 10. Perception of climate change urgency

Respondents overwhelmingly agreed that climate change is a serious issue, with 98% acknowledging its significance.

They identified several barriers preventing effective climate action in Zamfara State. One of the major challenges cited was a lack of awareness among both government officials and the general public. Many respondents emphasized that inadequate education and community engagement have slowed efforts to combat climate change. Additionally, financial constraints were highlighted as a significant barrier. Respondents noted that insufficient government funding for climate initiatives and poor policy implementation have hindered progress. Some participants also pointed to insecurity as a major obstacle, particularly due to deforestation linked to illegal logging and land degradation. Economic hardship and poverty were also mentioned as contributing factors that prevent residents from prioritizing environmental conservation. To address these issues, respondents recommended that the state government take proactive steps, including increasing public awareness through educational campaigns, enforcing afforestation programs to curb deforestation, and implementing policies that promote renewable energy and sustainable farming practices. Many participants also stressed the need for government intervention to provide financial and technical support for climate adaptation projects.



Figure 11. Willingness to participate in climate programs

Encouragingly, 91% of respondents expressed a willingness to participate in community-driven climate initiatives, suggesting strong public

interest in tackling climate change at the grassroots level.

Presentation of Interview Findings

Theme 1: Awareness of Climate Change and the Nigerian Climate Change Policy

Participant 1 reported that climate change awareness among the general public is very low, with limited understanding outside of areas where NGOs have conducted sensitization workshops. “There is little knowledge or literacy about climate change except where NGOs have organized workshops.” The participant emphasized that climate-related experiences like deforestation and pollution from motorcycles are commonly witnessed but not necessarily recognized as part of broader climate change dynamics. Participant 2 corroborated this, stating that rural communities are especially isolated from climate information due to limited access to education and communication channels. However, awareness among stakeholders including government actors and women's organizations has improved, largely due to workshops and training sessions facilitated by the state and its partners. Participant 3 presented a more optimistic view, noting that awareness is growing, especially through World Bank-supported initiatives and World Environment Day events. They highlighted the role of NGO collaborations and state-supported programs like Accrucell, which promote tree planting and environmental consciousness at the grassroots level.

When it comes to the National Climate Change Policy (NCCP), awareness is increasing among government stakeholders, especially within the Ministry of Environment and affiliated agencies. Participant 1 noted that the government has begun enforcing afforestation laws and engaging communities in tree conservation campaigns.

“There is a campaign that penalizes people for cutting down trees without replanting.” Participants 2 and 3 also emphasized that the NCCP is referenced in workshops and planning documents, though implementation remains partial and inconsistently understood across all sectors. Awareness is often confined to officials directly involved in climate or environmental work. Encouragingly, Zamfara has engaged in intentional educational efforts, particularly among government workers and community leaders. According to Participant 1, “The present governor is more committed to engaging people in climate education.” Workshops and seminars sometimes with support from foreign donors have targeted officials, women's groups, and rural leaders. This has led to the emergence of community climate messengers, who help relay policy messages in local dialects and cultural contexts. Despite these efforts, all three participants agreed that awareness is not yet mainstreamed, and campaigns remain episodic often linked to external funding or annual events, rather than a continuous public education strategy. Participant 2 specifically recommended expanding awareness in both urban and rural areas through structured, long-term climate education.

Theme 2: Policy Integration and Implementation

Participant 1 emphasized that Zamfara is not yet implementing the National Climate Change Policy (NCCP) fully, though climate-related themes have begun to appear in select government actions. They explained that enforcement of afforestation measures and environmental protection is occurring but is not yet framed as a systematic part of development planning. “There is awareness, but there's no strong institutional framework yet to enforce implementation across all sectors.” Participant 2 noted that integration exists primarily at the Ministry of Environment level, with other ministries such as Agriculture and Health

still operating independently and without a climate lens in their planning. They remarked: “Climate change is still seen as an environmental matter, not something the entire government must act on.” This sectoral disconnect reflects the absence of a centralized climate governance structure capable of coordinating across ministries and enforcing climate accountability.

However, the participants cited some positive developments suggesting an emerging policy integration process. For example, Participant 3 highlighted that World Bank-supported projects such as the FADAMA program and climate-smart agriculture pilots are increasingly aligned with broader climate goals. “We’ve started seeing development projects that promote climate-smart practices like water retention and tree planting.” These initiatives are often coordinated with the Ministry of Environment and supported by NGOs, but they have not yet been institutionalized through state legislation or a climate-specific budgeting process. Furthermore, the state does not yet have a domesticated climate change policy, though participants expressed hope that one may be developed in the near future. According to Participant 1, the state has started incorporating afforestation, anti-desertification, and sustainable land use strategies into environmental sector plans. However, these remain isolated initiatives rather than being part of a broader, legally binding framework. Budget integration is another gap. None of the participants mentioned a dedicated climate budget line or formal inclusion of climate considerations in the state’s Medium-Term Sector Strategies (MTSS) or budgeting processes. Most climate-related activities occur as ad hoc projects, dependent on donor timelines and outside support. There is also no formal monitoring and evaluation (M&E) system for climate integration, meaning that ministries and programs are not required to report on environmental or climate performance indicators. As Participant 2 pointed

out: “Even when actions are taken, we don’t have a system to measure or learn from them.” Still, the commitment of the current administration was acknowledged by multiple participants. Participant 1 emphasized that the current governor has demonstrated interest in environmental and climate issues, supporting campaigns against deforestation and encouraging tree planting in schools and markets. However, this leadership is not yet backed by institutional structures capable of sustaining action beyond one administration.

Theme 3: State-Led Climate Actions

Participant 1 highlighted that the state has launched campaigns against deforestation, with specific emphasis on regulating tree cutting. The government has introduced penalties for indiscriminate logging and encourages individuals to plant replacement trees, especially in areas vulnerable to desertification: “There is a campaign that penalizes people for cutting down trees without replanting.” Participant 2 pointed to ongoing tree-planting initiatives in schools and markets, reflecting a strategy to both raise awareness and improve urban microclimates. These efforts often include educational components that target schoolchildren, reinforcing the importance of environmental stewardship at the community level. In the agricultural sector, Participant 3 referenced climate-smart agriculture practices, such as drip irrigation, water harvesting, and composting, introduced through World Bank-funded programs like FADAMA and other climate-resilience projects. While still in the pilot stage, these practices demonstrate how climate goals are being embedded into rural livelihoods: “We’ve started seeing development projects that promote climate-smart practices like water retention and tree planting.”

Zamfara has also hosted environmental awareness campaigns tied to World Environment

Day and desertification control, often in collaboration with NGOs and international agencies. These events typically include advocacy, stakeholder dialogues, school outreach, and community cleanups, helping to build public participation around climate issues. In terms of enforcement, the government has also shown commitment to environmental regulations, particularly around waste management and sand mining, though the participants noted that enforcement is often inconsistent and under-resourced. Still, these efforts indicate a willingness to institutionalize climate-conscious practices. However, the participants acknowledged that many climate actions are fragmented and not part of a comprehensive climate strategy or plan. For instance, while afforestation campaigns exist, there is no unified monitoring system to track the survival rates of planted trees or assess the ecological impact of interventions. Similarly, while agriculture programs promote resilience, they are typically donor-driven and not fully mainstreamed into the state's agricultural extension services. There is also a lack of documented renewable energy initiatives, green infrastructure development, or sustainable transportation projects which are areas that could further enhance the state's climate mitigation profile. Participants did not mention formal partnerships with the private sector or investment in clean energy transitions.

Theme 4: Challenges in Climate Policy Implementation

A primary challenge, raised by Participant 1, is the lack of a robust institutional framework for climate policy enforcement and coordination. While the Ministry of Environment is taking the lead on several initiatives, other ministries have yet to fully integrate climate considerations into their operations. "There is no strong institutional framework yet to enforce implementation across all sectors." This reflects a broader problem of weak inter-ministerial collaboration, where

climate change is treated as an environmental issue rather than a cross-cutting development concern. Another key barrier is inadequate funding, which affects everything from public awareness campaigns to infrastructure investments. Participants repeatedly emphasized the reliance on external donors and NGOs, with very limited budgetary allocation from the state government for climate-related programs. Participant 2 noted: *"Government funding is insufficient. Without donor or NGO support, most programs would not be possible."* This lack of domestic financial commitment undermines continuity and often restricts project scope and coverage.

There is also a capacity gap at both the technical and institutional levels. According to Participant 3, there are too few trained personnel with expertise in climate risk assessment, project design, or monitoring and evaluation. This affects the state's ability to scale successful pilot programs, prepare climate finance proposals, or manage data systems required for policy formulation. Enforcement of environmental laws such as those related to afforestation and pollution control remains inconsistent and undermined by limited manpower and community resistance. Participant 1 highlighted that while there are regulations against tree cutting, enforcement is weak in remote areas and often depends on local cooperation, which is difficult to secure without sustained community engagement and incentives. A further challenge is the absence of a dedicated state climate change policy or law, which would provide a legal basis for institutional roles, accountability mechanisms, and budgeting. Without this, most climate actions occur in isolation, without the benefit of a strategic roadmap or legislative backing. Participant 2 stressed: *"Until we have a legal framework or a state climate plan, integration and enforcement will be difficult."*

Many rural communities still view environmental issues through a traditional or religious lens, which can either support or hinder climate action depending on how messages are framed. Participants emphasized that messaging must be sensitive to local realities and delivered through trusted community and religious leaders yet such engagement is still underdeveloped. There is also no centralized monitoring or reporting system to track climate action across ministries or assess the effectiveness of state interventions. This makes it difficult to gather data for decision-making, report to donors, or refine strategies based on outcomes. As Participant 3 pointed out: *“We are doing things, but we don't measure the results, and that's a problem.”*

Theme 5: Opportunities and Recommendations

One of the most promising opportunities lies in the growing political will at the state level. All three participants acknowledged that the current administration, particularly through the Ministry of Environment, has shown increased interest in climate-related issues, including campaigns for afforestation and community sensitization. Participant 1 observed: “The present governor is more committed to engaging people in climate education.” This growing leadership focus provides a critical entry point for scaling up both policy and action, particularly if channelled into institutional development and inter-ministerial coordination. Another key opportunity is the active involvement of NGOs and international development partners, particularly in areas such as afforestation, sustainable agriculture, and women's empowerment. Projects implemented through World Bank-supported programs, for example, have introduced climate-smart agriculture practices, water harvesting, and environmental education to select communities. These initiatives offer proven models that could be institutionalized and scaled up through stronger state support.

Participants also identified grassroots engagement platforms such as schools, market associations, and traditional institutions as effective channels for expanding climate education and local adaptation. Participant 2 noted that women's organizations, in particular, have become important vehicles for spreading awareness and organizing tree-planting campaigns. This highlights the untapped potential of community-driven climate action, especially when supported with funding and policy backing.

The success of certain public awareness campaigns, such as tree planting drives in schools and markets, further demonstrates that the public is willing to engage—provided the messaging is accessible and tied to their immediate experiences (e.g., desert encroachment, food insecurity, or economic opportunity). Participant 3 emphasized that: “When we link the environment to livelihood and health, people respond positively.” This creates an opportunity to frame climate action around resilience, productivity, and well-being, rather than just environmental protection in isolation. Another major recommendation from participants was the development of a formal state-level climate change policy or strategy. Such a policy would help structure responsibilities across ministries, establish legal backing for enforcement, create budget lines, and introduce monitoring and evaluation systems. It would also enable Zamfara to better access national and international climate finance mechanisms, which are often tied to documented plans and reporting structures.

The state's youth demographic is another area of promise. With proper investment in climate education, environmental clubs, and green job training (e.g., agroecology, composting, renewable energy), young people can play a central role in long-term adaptation and

advocacy. Participants recommended integrating climate change topics into school curricula and developing vocational programs aligned with climate-friendly livelihoods.

Discussion

Findings from both the survey and interviews demonstrate a high level of awareness of climate change among educated segments of Zamfara's population. With 98% of survey respondents indicating awareness, and 80% confirming knowledge of state-level climate initiatives, it is evident that climate change has entered public discourse. Educational institutions and social media emerged as the most influential awareness channels, indicating the critical role of formal education and digital platforms. This aligns with prior research showing that digital media significantly contributes to environmental awareness in developing contexts. However, the interviews offered a more nuanced view. While awareness exists among government actors and urban populations often boosted by NGO-led workshops and international donor programs, it remains significantly low in rural areas. Participants noted that community-level awareness is episodic, driven by periodic projects or environmental days, rather than continuous engagement. This gap is especially concerning in a state like Zamfara, where rural populations are most vulnerable to climate impacts such as desertification and drought. Moreover, local understanding of climate change is often limited to visible symptoms (e.g., excessive heat, deforestation), with little connection to broader climate science or policy discourse.

Notably, while 91% of respondents were aware of the National Climate Change Policy, interview data suggested that practical knowledge and understanding of the policy's provisions are largely confined to officials in the Ministry of Environment. This highlights a disconnect between awareness and actionable

understanding awareness exists, but it has not yet translated into broad-based climate literacy capable of informing community action or inter-sectoral policymaking.

One of the key objectives of this research was to examine how Zamfara has integrated the National Climate Change Policy into its governance structures. The findings suggest that policy integration is minimal and primarily restricted to the Ministry of Environment. While this ministry has taken steps to enforce afforestation laws, conduct environmental campaigns, and engage with donors, other ministries (e.g., Agriculture, Health, Planning) have not mainstreamed climate considerations into their programming. As one participant remarked, "Climate change is still seen as an environmental matter, not something the entire government must act on." This sectoral siloing is a critical governance gap, as effective climate action requires cross-sectoral collaboration. Furthermore, Zamfara lacks a domesticated climate change policy or strategy document, which would provide the legal and strategic foundation for coordinated action. Importantly, there is no formal inclusion of climate change in state budgeting processes or the Medium-Term Sector Strategy (MTSS). Participants confirmed that most climate-related interventions occur outside of mainstream government planning, often led by NGOs or external agencies. Without a climate-specific budget line or climate-responsive public financial management system, these efforts remain vulnerable to shifts in donor priorities and administrative turnover.

Despite the gaps in institutionalization, Zamfara has taken notable steps in launching climate-related initiatives. Tree planting and afforestation campaigns were the most widely recognized efforts among respondents (34%), followed by flood control and awareness campaigns. These actions indicate growing government

responsiveness, especially under the current administration, which participants noted has demonstrated strong political will and support for environmental causes. However, the effectiveness of these initiatives remains mixed. Only 30% of survey respondents described them as “very effective,” while 11% considered them ineffective. Interview participants noted that many of the state’s efforts, such as afforestation drives, lack proper follow-up mechanisms, such as tracking tree survival rates or integrating climate-smart practices into core agricultural policies. Renewable energy projects, waste management systems, and clean transportation which are central to climate mitigation are notably absent or underdeveloped in the state.

Encouragingly, 91% of survey respondents expressed willingness to engage in climate initiatives, suggesting strong grassroots interest. Interview data emphasized that local buy-in improves when climate issues are linked to livelihoods, health, or food security. Nonetheless, low literacy levels, traditional belief systems, and lack of sustained engagement with local institutions constrain the effectiveness of these participatory processes. Women and youth, in particular, remain underrepresented in official climate decision-making structures, despite their active roles in awareness campaigns and local adaptation practices.

The study identified several interconnected barriers. First, institutional weakness stands out as a major constraint. The absence of a dedicated climate policy, lack of inter-ministerial coordination, and poor enforcement capacity hinder cohesive climate governance. Most ministries operate in silos, and actions taken by one agency are rarely reinforced or supported by others. This reflects a broader governance issue where climate change is yet to be treated as a cross-cutting development priority. Second, financial limitations significantly curtail the scope

and sustainability of interventions. Climate programs are predominantly funded by external donors, with minimal contributions from the state budget. As one participant noted, “Without donor or NGO support, most programs would not be possible.” This over-reliance on external funding limits the state’s ability to design long-term strategies and undermines ownership. Third, capacity constraints at both technical and community levels pose serious challenges. There is a lack of skilled personnel to design, implement, and monitor climate programs, while rural populations often lack the knowledge or tools needed to adapt to climate impacts. Additionally, insecurity in certain areas exacerbates deforestation and land degradation, complicating efforts to enforce environmental laws or implement projects. Finally, the absence of a centralized monitoring and reporting system hinders policy learning, replication of successful models, and data-driven decision-making. Without reliable data, the state cannot effectively report on progress, attract climate finance, or adjust strategies based on outcomes.

Despite the challenges, several opportunities exist to strengthen climate governance in Zamfara. The growing political commitment, especially from the current administration, provides a foundation upon which institutional reforms can be built. The presence of NGOs and international development partners has already introduced climate-smart practices in agriculture and education, offering scalable models. Grassroots institutions such as schools, religious groups, women’s organizations, and traditional authorities are also underutilized assets. When empowered, these actors can become vehicles for climate adaptation, awareness, and behavioural change. Moreover, the youth demographic presents a powerful opportunity for building long-term resilience through education, environmental clubs, and training in green jobs. There is also significant potential to harness

community willingness, as evidenced by the high levels of interest in participating in climate initiatives. If paired with inclusive policies, transparent funding mechanisms, and decentralized program delivery, Zamfara could leverage this willingness to build a bottom-up climate movement that complements top-down policy efforts.

Conclusion

In Zamfara state, while there is growing recognition of climate change and its impacts, especially among educated and urban stakeholders, mainstreaming this awareness into actionable, inclusive, and institutionalized climate governance remains a significant hurdle. The state's approach to climate action is currently characterized by fragmented initiatives, donor dependency, and weak inter-sectoral collaboration. The lack of a dedicated climate policy or formal coordination mechanism undermines the effectiveness and sustainability of state efforts. However, the willingness of both government actors and citizens to engage in climate initiatives, coupled with political commitment and external support, presents a valuable opportunity to strengthen Zamfara's climate resilience.

To move from fragmented action to strategic climate governance, Zamfara must institutionalize its efforts, expand public engagement, and bridge policy with practice. These steps are essential for aligning state-level initiatives with Nigeria's national and international climate commitments, ensuring that climate action is not only reactive but transformative.

Recommendations

1. **Develop a State Climate Change Policy and Legal Framework:** Establish a formal state-level climate

change policy to provide legal backing for action, define institutional roles, enable coordination across sectors, and create a structured plan aligned with national goals.

2. **Integrate Climate Change into State Budgeting and Planning:** Include climate-specific budget lines in the state's Medium-Term Sector Strategy (MTSS) and annual budgets to institutionalize funding and reduce dependency on donor-driven interventions.
3. **Expand Climate Awareness and Literacy Campaigns:** Launch continuous climate education efforts using radio, schools, religious institutions, and community leaders to improve grassroots understanding and participation, especially in rural areas.
4. **Support Community-Based Adaptation Initiatives:** Empower local actors especially women's groups, youth associations, and traditional rulers to lead tree planting, soil conservation, and awareness campaigns tailored to local needs.
5. **Invest in Climate-Smart Agriculture and Resilience Programs:** Scale up sustainable farming techniques such as water harvesting, composting, and drip irrigation to improve food security and resilience in the face of climate variability.
6. **Promote Renewable Energy and Green Jobs:** Introduce and support solar energy initiatives and provide vocational training in clean energy, agroecology, and waste management to reduce emissions and build green livelihoods.
7. **Strengthen Enforcement of**

Environmental Regulations:

Increase institutional capacity and community collaboration for enforcing laws on deforestation, sand mining, and pollution, ensuring consistency and local compliance.

8. **Establish Monitoring, Evaluation, and Reporting Systems:** Develop a centralized system to track climate-related activities, assess outcomes, and inform data-driven policy and funding decisions at the state level.



COMPARATIVE ANALYSIS

This study examined climate action in twelve Nigerian states: Abia, Adamawa, Anambra, Bayelsa, Borno, Kogi, Lagos, Ogun, Plateau, Rivers, Sokoto, and Zamfara. These states were selected to reflect Nigeria's diverse geopolitical zones and to analyze how climate awareness, policy implementation, institutional readiness, and community participation vary across sub-national contexts. The findings reveal significant differences in capacity and approach but also shared challenges that cut across state lines.

In terms of climate change awareness, all twelve states demonstrated a relatively high level of recognition of the term “climate change,” particularly among urban dwellers and youth populations. However, there was a stark contrast in awareness of national policy frameworks such as the National Climate Change Policy (2021–2030). In Lagos, awareness of climate policy was markedly high, owing to the state's proactive environmental communication and the presence of formal climate action structures. Similarly, Anambra and Plateau recorded moderate policy awareness, with some respondents, particularly within academic and government circles, able to reference national frameworks. In contrast, states such as Ogun and Bayelsa showed a significant gap between general climate knowledge and familiarity with specific policy documents. In these states, even where climate challenges were evident, they were often viewed through the lens of environmental degradation or disaster response, rather than structured policy engagement. In Borno and Adamawa, awareness was generally lower among rural populations, and the link between conflict, displacement, and climate change was not always clearly articulated by respondents. Nevertheless, across nearly all states, a recurring theme was scepticism about government follow-through, with many respondents believing that while climate change is real, state interventions are

either inadequate or entirely absent.

In terms of policy implementation and institutionalization, Lagos emerged as the most institutionally advanced state, with an active Climate Action Plan that aligns with international standards and local laws, a dedicated unit within the Ministry of the Environment, and multi-sectoral partnerships. Anambra also showed evidence of forward planning, with institutional efforts being made to formalize climate initiatives within government structures. Abia, while still developing a comprehensive framework, has made a notable step by establishing a Department of Climate Change, which provides a foundation for future action. Plateau exhibited moderate institutional capacity, often relying on a mix of local leadership and civil society support to coordinate action. On the other hand, Ogun, Kogi, and Zamfara displayed little evidence of formal climate policy frameworks, and in many cases, climate actions were embedded within broader environmental or sanitation initiatives without clear reference to climate governance. In Sokoto and Bayelsa, although some form of institutional interest in environmental management exists, there is little coordination or strategic alignment with national policies. In Borno and Adamawa, the existence of climate-related projects often driven by international partners, stands in contrast with weak state-level policy ownership, as most programs are reactive rather than planned within a long-term climate strategy.

Sectoral interventions varied greatly, shaped by regional climate risks and economic profiles. Flood mitigation was a recurring theme in coastal and riverine states like Bayelsa, Rivers, and Lagos. Bayelsa, for instance, faces recurrent flooding and has attempted to institutionalize its response through the creation of the Ministry of Blue Economy and Green Economy. However, this initiative has yet to evolve into a fully operational climate governance mechanism. In Lagos, flood

control is complemented by investments in waste management, renewable energy, and green infrastructure. Rivers, while highly vulnerable to environmental degradation from oil-related activities, has focused mainly on tree planting and sanitation drives, with limited integration of climate resilience in state planning. Inland states such as Kogi and Plateau have undertaken some reforestation and awareness efforts, though these have been irregular and poorly monitored. Sokoto and Zamfara, grappling with desert encroachment, have implemented afforestation programs, but these are often fragmented and lack a long-term adaptation framework. In the northeast, Borno and Adamawa are faced with both environmental and humanitarian crises. Borno stands out for its effort to introduce low-emission transport and engage in solar-powered solutions despite insecurity, while Adamawa's interventions remain largely donor-driven, with weak ties to overarching state strategies. Abia and Anambra, in the southeast, showed a relatively balanced set of interventions, including awareness campaigns, solar energy adoption, and some flood response measures. Ogun however, displayed inconsistent efforts, often hindered by poor inter-agency coordination and insufficient political will.

The level of community engagement and civil society involvement also varied widely. In Lagos, youth engagement was highly visible, supported by school-based environmental programs and public events that foster participation. Abia, Anambra, and Plateau similarly demonstrated grassroots engagement, often led by local NGOs and educational institutions. In contrast, states like Ogun, Sokoto, and Zamfara showed weak linkages between government and local communities, and there was minimal infrastructure to support public involvement. In Bayelsa and Rivers, civil society organizations played a stronger role, particularly in sensitization and grassroots mobilization, often compensating

for limited state intervention. In Adamawa and Borno, community engagement was complicated by displacement and security concerns, although where peace was restored, there was moderate engagement in local adaptation projects. Kogi presented a mixed picture, with some engagement through NGOs but little effort from state actors to institutionalize climate participation platforms.

Several challenges emerged as common threads across the states. The most pressing was the persistent issue of inadequate funding. In almost all the states, respondents, especially from government offices, cited a lack of budgetary provision for climate change activities. This challenge was compounded by bureaucratic red tape, which made accessing funds or getting inter-ministerial cooperation difficult. Ogun, Kogi, and Zamfara were particularly affected by resource constraints. Additionally, many states lacked dedicated climate professionals, with existing staff often tasked with environmental responsibilities that stretched beyond their expertise. In Rivers and Adamawa, poor coordination among ministries was a significant bottleneck, while in Bayelsa and Sokoto, limited technical capacity within ministries hindered strategic planning. Another widespread issue was political inertia. In several states, climate change was perceived as a secondary issue, overshadowed by more immediate political and economic concerns.

Despite these constraints, some enabling factors offer a pathway for improved climate action. States like Lagos and Abia benefit from clear institutional frameworks, while Adamawa and Borno, though facing acute challenges, have leveraged international partnerships to implement practical solutions. Anambra and Plateau have demonstrated that strong local leadership and civil society collaboration can drive progress even in the absence of robust formal

frameworks. Youth enthusiasm was high in nearly all states, and where it was supported, such as in Lagos, Anambra, and Plateau, it translated into visible action. The presence of innovative ideas, such as Bayelsa's Blue Economy Ministry or Borno's solar mobility solutions, further indicates that local solutions can emerge even in resource-constrained settings.



CONCLUSION AND RECOMMENDATIONS

This research shows that addressing climate change in Nigeria requires not only a strong national policy framework but also active, localized implementation at the state level. While national strategies such as the Climate Change Policy (2021–2030) lay out a vision for a low-carbon and climate-resilient future, it is ultimately at the sub-national level that climate policies take form in people's lives through governance decisions, institutional arrangements, and community engagement. The study reveals that sub-national climate action in Nigeria is evolving, but it remains uneven and hindered by deep-rooted structural challenges. Yet beyond these challenges lies a critical opportunity. Across the twelve states studied, there is growing recognition of the risks that climate change poses, and there is increasing energy, particularly among youth, civil society, and select public institutions to find solutions. The challenge is no longer only about raising awareness but about creating the conditions under which this awareness can translate into durable action.

Crucially, the findings suggest that climate action must be reimagined as a core development issue. Climate policies cannot remain siloed within ministries of environment; they must become cross-cutting priorities embedded into agriculture, urban planning, health, energy, education, and finance. Where this integration is absent, efforts remain fragmented and limited in impact. Where governments act only in response to emergencies such as flooding or desertification without embedding climate risk into long-term planning, vulnerabilities deepen over time. There is also a need to redefine what leadership in climate governance looks like. Rather than relying solely on federal directives, state actors especially governors and sub-national agencies must take initiative. The presence of creative, local initiatives in some states demonstrates that progress is possible even with modest resources. What is

needed is political will, institutional stability, and consistent investment in local capacity. Furthermore, the gap between communities and government structures continues to constrain progress. Across regions, citizens expressed a desire to be involved in climate solutions but often lack the platforms, support, or trust needed to participate meaningfully. Building climate resilience requires bottom-up strategies that are not just participatory in rhetoric, but genuinely inclusive in design, execution, and benefit-sharing.

To move forward, a multi-faceted strategy is needed, one that addresses institutional gaps while leveraging existing community momentum and policy frameworks. The following recommendations are proposed:

1. There is an urgent need for the domestication of national climate policies at the state level. Each state should develop and adopt its own climate action plan or strategy that is context-specific and aligned with national priorities. This would ensure better ownership, coordination, and integration of climate issues into local development plans.
2. Institutional strengthening must be prioritized. States should invest in establishing and adequately staffing dedicated climate change departments or units with trained personnel. Capacity-building programs should be provided for policymakers, planners, and technical staff across relevant ministries to foster cross-sectoral collaboration and policy coherence.
3. Sustainable financing mechanisms should be developed. States need to allocate dedicated budget lines for climate-related activities and explore partnerships with the private sector, development agencies, and climate finance mechanisms such as the Green Climate Fund. Exploring

innovative financing tools like green bonds and climate resilience funds can also help bridge resource gaps.

4. Public education and community engagement must be expanded and sustained. Government agencies should partner with civil society, schools, and religious organizations to run regular sensitization programs, particularly in rural and underserved areas. Strengthening climate education in school curricula and supporting eco-clubs and local climate initiatives can help institutionalize climate action from the grassroots.
5. Monitoring and accountability frameworks should be developed to track the implementation and effectiveness of climate policies at the state level. States should set measurable targets and publicly report on progress to foster transparency and continuous improvement.
6. The federal government, through the National Council on Climate Change, should play a stronger coordinating and support role, providing technical assistance, facilitating peer learning among states, and creating incentives for climate innovation. This vertical integration of climate governance from federal to state to community will be essential for achieving Nigeria's climate commitments and building national resilience.
7. Climate action in Nigeria must shift from a top-down to a bottom-up approach that prioritizes grassroots participation, indigenous knowledge, and local ownership. Here, real action emerges from the ground up, driven by those most affected by climate change. This approach ensures more inclusive, effective, and sustainable outcomes.



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