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EFFECTS OF CLIMATE CHANGE ON HOST COMMUNITIES: A STUDY OF SELECTED TOURIST CENTRES IN NIGERIA

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ABSTRACT

Climate change affects host communities just like it affects actual tourist sites and tourist activities. While the direct effects of climate change on tourist sites have been well established, the aftermath of these effects is also observable on the host communities in different dimensions. Using the Protection Motivation Theory (PMT), this study examined not only climate/environmental changes and risks but also considered the social and economic dimensions of climate change risks to host communities. It employed a combination of secondary data from United Nations Tourism Data (1995-2022) and a theoretical-analytical approach for the review of published articles over a period of 10years (2015-2025). The selected articles were from scholarly databases such as Google scholar, Research-gate, and scopus-indexed outlets. The aim of the research is to examine how climate change impacts tourist-host communities. Key findings showed that climate change does not affect only natural resources in Nigeria, it also affects the residents of the host communities of tourism sites with the adverse effects ranging from increased temperatures, reduced length of rainy season and mortality due to flooding as high as 612 to internal displacement of over 1.4 Million people in 2022 among others. The study concludes by recommending initiatives such as community-based approaches, government interventions as well as education and awareness as measures to mitigate the effects of climate change on the host communities of tourist centres..

KEY WORDS climate change, sustainability, host communities, tourist sites.

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1. INTRODUCTION

Climate change refers to the measurable systemic change in the patterns or state of the climate, driven by natural events or anthropogenic activities that alter the composition of the atmosphere across various regions of the world (Salonen and Reiser, 2023). The effects of global warming and climate change have increased significantly over the past two decades with diverse effects on host communities of tourist centers (Sarkar and Rahman, 2024). According to Abreu-Rangel et al., (2023), host communities are native or migrant individuals residing permanently or temporarily in a tourist destination; they are heterogeneous and complementary, with different cultures, identities, and local values, interacting and playing a central and influential role in the development and atmosphere perceived in that destination.

Greenhouse gas emission from human activities is responsible for approximately 1.1°C of warming since 1850-1900, and over the next 20 years, the global temperature is expected to reach or exceed 1.5°C (IPCC, 2021). The global emperature is increasing largely due to activities of man which include tourism (Nunes, 2023; Asonibare, Umaru, Adesina, *et al.* 2024). The contribution of tourism to the total global greenhouse gas emission is put at 8% (Lenzen et al., 2018). Although studies on tourism and climate change adaptation began in the 1960s, focused research on climate change and tourism has only emerged in the last 15 years (Oloruntade, Sajo, and Imoukhuede, 2016; Njoroge, 2023).

Earlier interests in the nexus of tourism and climate change examined the spatial distribution of tourist destinations based on environmental and climatic characteristics, tourism resources, socio-economic stability and travel cost (Lawal & Irhue, 2016; Gössling & Scott, 2024). Other studies investigated tourist destinations and exposure to climatic changing patterns, implications for destination attractiveness and competitiveness, and tourist demand responses (Efe 2007; Dahiya & Batra,

2016; Ngxongo, 2021; Lin and Wang, 2023). In these studies, climate consideration has been established to play a vital role in the choice of tourist destination while harsh or unpredictable weather has become a major factor that determines patronage of tourist sites (Lin and Wang, 2023).

The impacts of climate change on tourist sites' host communities are multifaceted, encompassing economic losses, health risks, shifts in tourism patterns, and environmental degradation (Okon et al., 2021). These challenges negatively affect the appeal of tourism destinations, leading to reduced tourist numbers and eventual economic losses for local communities. Addressing these challenges requires concerted efforts from stakeholders such as governments, businesses, and local communities and are expected to implement sustainable practices that enhance resilience against climate-induced changes while ensuring continued socio-economic benefits from tourism activities (Mim., Hasan, Hossain, & Khan, 2022). To achieve these, there is the need to identify specific socio-economic and political challenges peculiar to the host communities of tourist centres in Nigeria. Therefore, this study examined the socio-economic and political implications of climate change on the host communities who are the population that are more vulnerable to the effects of climate change (Okoli and Ewah, 2004).

While studies have examined how climate uncertainties can affect factors and patronage of tourist sites, studies on the effect of climate change on the host population of tourist sites are few and emerging and this is a gap this study seeks to address (Ashamu, 2016). The first objective is to examine the socio-economic and environmental effects of climate change, while the second objective is to assess the strategies to mitigate the effects of climate change on the host communities of tourist sites in Nigeria.

1.1. Problem Statement

While considering the impact of climate change on the tourism industry, there is need to further understand its impact on the socio-economic and environmental aspects of the host community's livelihood. Nigeria has vast potential for tourism, but the industry continues to suffer from myriads of problems ranging from mismanagement to underdevelopment and climate change among others (Esuola, 2009). Diverse tourism potentials exist across the six geopolitical zones in Nigeria (Northwest, Northeast, Northcentral, Southwest, Southeast and South-south) but not much benefits are traceable to the host communities of most tourist sites, especially as climate change remains a major obstacle that significantly impacts the local economies of tourist destinations through several key channels.

Some of the impacts include decreased tourist demand, infrastructure damage, shifts in tourism patterns, and ecosystem degradation; economic implication affects tourism businesses and destinations in the form of ecological and environmental threats. Giampiccoli *et al.*, (2022) identified the negative impacts of tourism on the destinations to include human displacement and relocation of communities, disruption of economic systems, socio-political processes and organization as well as poverty and inequality. Some of the negative effects of tourism can include inflation, facilitation of crime, pressure on local infrastructures, environmental problems, and degradation of local culture and impacts can vary from 'socio-cultural to environmental devastation' to the exclusion of local residents from tourism planning exercise (Pham *et al.*, 2019).

The importance of the host communities in the process of planning and management of tourism (Abreu-Rangel et al., 2023) is critical, realising the major role of the host communities to achieving sustainable tourism development. In line with the United Nations Sustainable

Development Goals (SDGs) of the 2030 Agenda for Sustainable Development, the need to revisit the present economic growth ideology in the context of social and environmental needs in development becomes very prominent (Saarinen, 2018). This study buttresses the need for the host communities to benefit from tourism even in the face of climate change realities.

1.2. Study Area – Nigeria

Nigeria is the most populous country in Africa with an area extent of 923,768 sq. km and an extensive coastline of about 853km. Bordered by Benin, Cameroon, Chad and Niger, and shares maritime borders with Ghana, Equatorial Guinea and Sao Tome and Principe, the country is made up of 36 states and the Federal Capital Territory (Abuja) with about 250 different ethnolinguistic groups. The country is endowed with both economic and natural resources, such as crude oil, minerals, and arable land, among others. Nigeria is witnessing rising cases of climate-related hazards and disasters due to its diverse agro-ecological zones, rapidly growing urban and rural populations, extensive coastline that is vulnerable to sea level rise and surges, as well as underlying economic challenges and poor governance.

The risks posed by the climate crisis in Nigeria have triggered rising cases of infectious disease outbreaks, frequent communal conflicts, farmer-herder crises, loss of livelihoods, loss of aquatic and terrestrial organisms, decreasing food security and rising economic crises (Lawal, 2022). World Bank (2021) ranks Nigeria 160th out of 180 countries vulnerable to climate change extreme events as the country experiences natural hazards and climate-related events such as drought and floods. From the north to south part of Nigeria, the footprints of climate change remains obvious on both tourist sites and the host communities and climate change continues to manifest in various forms across the country.

1.3. Methodology

The data for the study were obtained from secondary sources which are literature published in reputable outlets databases such as ResearchGate, Scopus Indexed journal outlets and Google Scholar for the period 2015 to 2025. The research design involved a purposive selection of case studies across Nigeria. The keywords for the search were *climate change, effects, impacts, host communities, local population*. The search included the boolean string “and” “or” and “not”. The selection of the case study sites was purposive as they were selected to cut across the different geographical regions in Nigeria.

2. LITERATURE AND THEORETICAL FRAMEWORK

The Protection Motivation Theory explains how individuals protect themselves (protection motivation) from threats and the coping process which evaluates the ability to cope with and/or avert the threatened danger. According to Frantz, Bushkin, & O’Keefe (2024), the Protection Motivation Theory (PMT) typifies different pro-environmental behaviour and has proven to be useful in the context of predicting climate change mitigation behaviour. This present study considers the response of the host communities to the adverse effects of climate change since climate change is a significant environmental threat. PMT was designed to address differences in the perception of climate change categorising response into deniers and acknowledged.

PMT mainly depicts the direct influences of threat severity, threat vulnerability, response efficacy, and self-efficacy on individuals’ protective responses (Fisher *et al.*, 2018). Climate change is of global concern, with far-reaching effects that transcend geographical boundaries. In Nigeria, the impacts of climate change are increasingly felt, particularly in host communities of tourist centres. This study adopts PMT to examine climate change effects on host communities and its perception as a threat. It seeks to unravel how some of the communities cope with the perceived danger in the form of behaviours that may further adversely affect tourism activities. These communities, which rely heavily on tourism for their economic sustainability, are witnessing significant environmental, social, and economic changes induced by climate change. Table 1.1 depicts the contribution of tourism to Nigeria’s economy (1995-2022).

Table 1.1 Growth and Contribution of Tourism to The Nigerian Economy

Year	Number of tourists	Receipts	% of GNP
2022	528,000	1.13 bn \$	0.24%
2021	518,000	265.00 m \$	0.06%
2020	502,000	321.00 m \$	0.07%
2019	2.01 m	1.47 bn \$	0.31%
2018	1.97 m	1.98 bn \$	0.47%
2017	1.93 m	2.62 bn \$	0.70%
2016	1.89 m	1.09 bn \$	0.27%
2015	1.26 m	461.00 m \$	0.09%
2014	4.80 m	605.00 m \$	0.11%
2013	600,000	616.00 m \$	0.12%
2012	486,000	638.00 m \$	0.14%
2011	715,000	688.00 m \$	0.17%
2010	1.56 m	736.00 m \$	0.20%
2009	1.41 m	791.00 m \$	0.27%
2008	1.31 m	958.00 m \$	0.28%
2007	1.21 m	337.00 m \$	0.12%
2006	1.11 m	209.00 m \$	0.09%
2005	1.01 m	139.00 m \$	0.08%
2004	962,000	49.00 m \$	0.04%
2003	924,000	58.00 m \$	0.06%
2002	887,000	256.00 m \$	0.27%
2001	850,000	168.00 m \$	0.23%
2000	813,000	186.00 m \$	0.27%
1999	776,000	99.00 m \$	0.17%
1998	739,000	81.00 m \$	0.15%
1997	611,000	83.00 m \$	0.15%
1996	822,000	58.00 m \$	0.11%
1995	656,000	47.00 m \$	0.11%

Source: UN Tourism, (2025).

The revenue earned from tourism increased from 47.00 million USD in 1995, contributing about 0.11% of the gross national product to as much as \$1.47 billion in 2019. The industry continues to perform below expectation when the tourism potential is considered. CEIC (2021) further reported a general deterioration in the level of economic activities related to tourism in Nigeria. The tourism sector has capacity to transform the country's economy in terms of the revenue generated in a significant and positive way, increasing foreign exchange earnings from tourism and this will further lead to increased economic growth (Matthew *et al.*, 2021). Many countries of the world have identified tourism as a sustainable revenue source but tourism's contribution to economic development in Nigeria still leaves much to be desired (Okey, 2003). Jemirade (2021) identified corruption and bad management as part of the factors adversely affecting tourism in Nigeria. This could be part of the reasons for the reducing contribution of travel and tourism to the GDP of Nigeria. This revenue decline might not be unconnected to the effects of climate change. Nigeria has over 7000 tourist centres and with the concerted efforts of government, tourism is becoming an essential part of the country's economy. The World Travel and Tourism Council (WTTC) in 2014 also envisaged a growth of 6% per annum for period of ten years for the Nigerian tourism industry. In view of this, the study focuses on empirical investigation of the contribution of the rapidly developing tourism sector to economic growth in Nigeria. Fig 1.2 depicts the need for economic diversification amidst Nigeria's economic crisis.

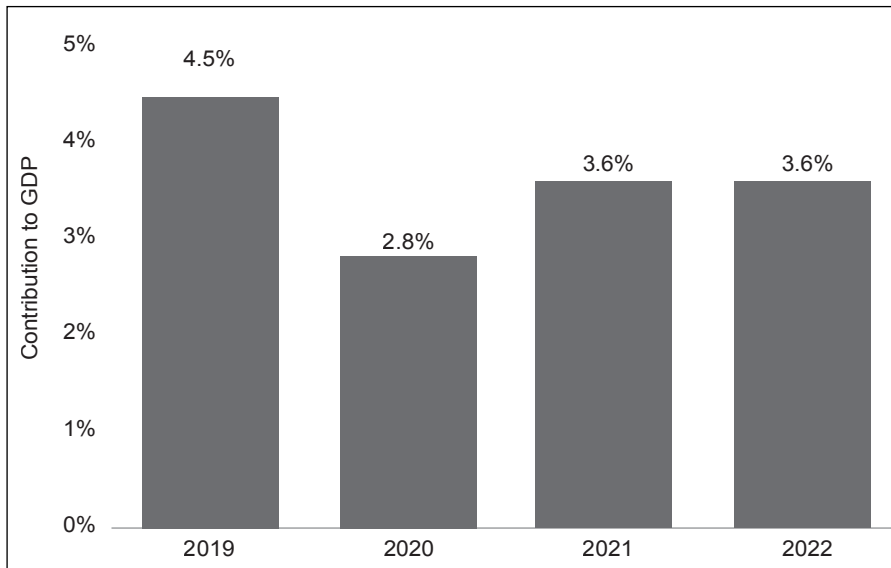


Fig. 1.1 Contribution of travel and tourism to GDP in Nigeria from 2019 to 2022
Source: Statista, (2024)

Considering the effects of climate change on host communities of tourist sites, this study categorises the impacts into three sections below namely, environmental, social and economic.

2.1. Environmental Impacts

With longer rainy seasons in the Southern parts of Nigeria and prolonged dry season in the Northern parts, climate change is already happening all over the country. Several gullies have been created and many roads, highways, pipelines, and homes throughout rural and urban Nigeria have been destroyed. The National Emergency Management Agency (NEMA) stated in the 2022 reports on climate change in Nigeria that 612 Nigerians were killed by disastrous floods, while 1.4 million Nigerians were forced into refugee camps. From Anambra, Delta, Cross River, Rivers, Bayelsa, to Benue States, more than 140,000 hectares of farmland were destroyed, and there were also destructions of roads and other important infrastructure (NEMA, 2023).

In Nigeria, changes in weather patterns such as irregularity in the rainfall pattern affect tourist activities as well as the sites of tourism as the rainy season is known to end at a certain month but due to climate change, the rainy season is often prolonged. The country has two main seasons--the rainy season and the dry season. There seem to be a high level of marked variations in the timing of these seasons leading to uncertainties in the timing of visitation and this can lead to shock or aggression by the host communities as they have a preconceived idea of the usual time of tourists' visits (Dickson Dillimono & Dickinson, 2015). Studies have established the vulnerability of Nigerian coast to flooding effects owing to climate change with the associated consequences on the vegetation, soils, economic structure, population and settlement, energy demands, and agricultural activities of the coastal communities (Adeleke *et al.*, 2020). A study estimated that over 830 kilometers of Nigerian coastline are under the threat of climate change considering the processes of flooding and erosion (Folorunsho *et al.*, 2023).

Communities in the Niger Delta state on the Atlantic coast have lost or are at the verge of losing their homes and lands due to rocks crashing into their beaches (Sarkar & Rahman, 2024; Ene, 2025). Further, Nwilo *et al.*, (2020) observed the pattern of vegetation loss and noticed a striking loss across the north-west and the north-east regions including the Lake Chad area in Nigeria. Due to unpredictable rainfall,

prolonged dry seasons, increased temperatures caused by climate change, tourist centres such as reserves, parks and mountain resort are experiencing fluctuations in their natural landscapes. The once lush greenery of these areas is gradually being replaced by arid, desiccated land, affecting the flora and fauna that attract tourists. Aniramu *et al.*, (2021) examined the implications of climatic changes on the biodiversity condition, particularly nature-based tourism using the case of Ikogosi-Ekiti warm spring in Ekiti state, Nigeria. The result revealed that changes in rainfall and temperature pattern negatively affected the luxuriant vegetation and due to this depletion, human intrusion over time has led to massive reduction in the quality of the forest. Thus, it can be said that climate change affects the biodiversity of tourist sites. Human population, in a bid to survive, encroaches on the vegetation, thus leading to depletion. This loss of biodiversity obviously affects the ecosystem and diminishes the appeal of the tourist centres. As climate conditions evolve, so do tourist preferences. Research indicates that climate change influences visitors' decision-making processes regarding destination selection, with many opting for locations perceived as more stable or comfortable under changing climatic conditions (Oladokun *et al.*, 2015; Ngxongo, 2021; Tanrisever *et al.*, 2024).

2.2. Social and Economic Impacts

The 2022 flood in Nigeria was due to heavier rainfall attributed to climate change and the release of excess water from the Lagdo dam which affected the majority of areas, led to forced movement and voluntary human mobility. The effects of flooding have intensified existing socio-economic disparities for children and young people, who are severely affected by hunger and malnutrition and face a disproportionately high unemployment of as much as 42.5 % in the country. These socioeconomic disparities have far-reaching consequences for human security, violence and criminality

(Stromsta, 2024). Host communities, particularly those reliant on tourism, face significant hurdles as they adapt to changing climatic conditions. They experience decline in the number of tourists due to the degradation of natural environment combined with the increased frequency of extreme weather events, (Amalu *et al.*, 2021). *The tourism-related infrastructure, including hotels, destination facilities of social service delivery and commerce, water channels, and communications networks, were either drained or virtually destroyed.* The local economies of these communities suffer, leading to increased poverty and reduced quality of life (Baba & Abdulrahman, 2024).

Studies have established that tourism has the potential to improve socio-economic development of the host communities. For instance, Mbagwu *et al.*, (2016) observed that tourism can attract socio-economic opportunities like banking institutions and communication industries and can contribute to economic development and as well as social development of Cross River State, Nigeria. Ijeomah and Okoli (2016) assessed the level of tourist visitation and host communities' involvement in tourism in selected destinations in Nigeria such as Oguta Lake destination, Okomu National Park and Farin Ruwa Waterfall. All the household respondents (100%) from Farin ruwa waterfall reported to have derived some benefits from the management of the park. However, all household respondents (100%) in the three destinations were not satisfied with the level of benefits derived from the sites. The findings of Datong (2025) revealed that Plateau State possess a diverse array of tourism assets such as natural landscapes, historical sites, cultural festivals, and adventure activities, but several challenges hinder the effective utilisation of tourism for economic diversification. The study highlighted the need to address concerns related to security, environmental sustainability, and the equitable distribution of tourism benefits among local communities.

To mitigate the effects of climate change, host communities and tourism operators are forced to invest in adaptation measures. These include the construction of flood defences, reforestation projects, and the development of sustainable tourism practices. While these measures are necessary, they come at a high cost, straining the financial resources of the communities. For many, the costs of adaptation are simply unaffordable, leaving them vulnerable to the ongoing impacts of climate change. Climate change may lead to a geographical shift in tourist destinations as some areas become less appealing due to adverse environmental conditions leading to lower attendance and subsequent economic downturns for local businesses (Rogerson, 2016; Wayde, 2017; Gössling & Scott, 2024). Conversely, new destinations may emerge, potentially leading to overcrowding and ecological strain on previously less-trafficked areas (Oladokun *et al.*, 2015). Rising temperature and extreme weather events lead to discomfort for tourists, resulting in decreased demand (Chang *et al.*, 2024). This shift can cause economic losses for communities that rely heavily on tourism revenue. These phenomena have devastating effects on the infrastructure of tourist facilities, causing significant financial losses and disrupting the livelihoods of the host communities (Lankes *et al.*, 2024).

The changing climate also poses significant health risks to host communities. Increased temperature and altered rainfall patterns can lead to the proliferation of vector-borne diseases such as malaria and dengue fever. Additionally, the scarcity of clean water and food resulting from environmental changes can cause malnutrition and other health problems. According to UNICEF (2023) Out of 163 countries, Nigeria ranked second in terms of risk that climate change poses to children. These health risks further exacerbate the vulnerability of the communities and reduce their capacity to cope with the impacts of climate change. Rising temperature and extreme weather increase health-related risks for both

tourists and host communities. Issues such as heat-related illnesses and the spread of vector-borne diseases are becoming more prevalent.

Furthermore, Baloch *et al.*, (2023) in Pakistan revealed that although socio-economic benefits such as (employment, business opportunities, and infrastructure development) are directly related to tourism development and growth, natural and environmental resources were found to be gradually degrading and manifested in the form of overutilisation of land, intrusion from external cultures, and pollution in air and water due to traffic congestion, accumulation of solid waste, sewage, and carbon emissions. Ajayi (2024) reported that several Nigeria's heritage sites face significant threats due to climate change, with experts warning of both cultural and economic impacts if urgent measures are not taken. Heritage professionals highlighted how rising ocean levels and environmental changes endanger all 16 recognized heritage sites nationwide and emphasized that protecting these sites could also offer economic benefits, as they hold great tourism potential.

3. DISCUSSIONS

Nigeria's climate has been changing and is evident in the form of the impacts that directly affect tourism sites and in particular, the host communities (Haider, 2019). Tourism sites face risks due to their economic dependence and Table 1.2 provides a general overview of climate change on various natural resources and tourist sites. As evidenced in the literature, climate change impacts cut across the entire country. Considering the diverse impacts of climate change on the host communities of sites of tourism, the PMT offers valuable insights to how the various impacts can be managed, the first is to ensure sustainable practices that ensures that the various environmental threats are addressed while host communities continues to adopt behaviours that are protective of the tourists as well as the tourist sites rather than destructive ones.

Table 1.2 – Impact of Climate Change on Tourist Sites and Host Communities in Nigeria

Impacts of climate change on Tourist communities	Key findings of study	Authors
Drought and desertification	Nigeria is faced with rapid desert encroachment affecting fifteen northernmost states in different proportion.	Olagunju (2015), Ndabula, Terdoo, & Jidauna (2021)
Freshwater resources	Climate change affects water resources leading to induce water stress.	Ayanlade, (2023); Olanrewaju et al. (2019)
Runoffs and flooding	Coastal communities are faced with frequent flooding due to the rise in extreme rainfall and storm surges associated with climate change in communities (especially Lagos and Niger-Delta areas).	Ekoh et al., (2022); Umar & Gray, (2022); Gbadegesin and Ikwuyatum (2024)
Submersion of beaches and coastal lands	The South-south (Niger Delta region) is the most vulnerable.	Sarkar & Rahman, (2024); Adagbasa., Samuel, Durowoju, & Obidiya. (2024). Adewale (2023).
Lake Chad and other lakes in the country are drying up and at risk of disappearing	Lack of resilience of many lakes in the country and in particular in the Lake Chad region	Riebe & Dressel (2021); Olowoyeye, & Kanwar, (2023), Oloruntade, Sajo, and Omoukhuede, (2016)
Rainfall variation	Extremely low in the North and high precipitation in parts of the Southwest and Southeast	Ibebuchi, & Abu, (2023). Ogundari, Ademuwagun, & Appah, (2021).
Significant increase in temperature over all the ecological zones	Significant increase in annual total precipitation across the Niger-Delta, Guinea coast and Sahel zones.	Balogun & Onokerhoraye (2022), Gbode et al., (2019)
Human security concerns in the host communities	Environmental degradation/depletion has affected natural resources and the livelihood activities in the local communities leading to kidnapping, attacking tourists and, armed robbery and rape	Siloko, (2024); Ani, Anyika, and Mutambara, (2022),
Risks to Nigeria's Historic Sites	Within the last decade in Nigeria, Regional drought and flooding events have adversely affected cultural heritage, including heritage buildings and cultural landscapes.	Adetunji & Daly, (2024); Ajayi (2024)
Flora and fauna resources on land, Deforestation	Gathering wood for cooking has led to depletion of certain plants and extinction of animals due to indiscriminate killings.	Abdulkadir et al., 2017; Akande et al., (2017)
Loss of the wetlands	Climate change has a pronounced impact on wetlands functions e.g. Hadejia/Nguru wetlands among others.	Ningi (2016); Edo & Albrecht (2021)
Displacement of settlements	The Nigeria Middle Belt has been the region mostly impacted by violent death resulting from land resource scarcity. Displacement due to natural hazards have also happened at various parts of the country.	Olagunju et al., (2021); Okon et al., (2021)

Source: Author's compilation, 2025

4. MITIGATION AND ADAPTATION STRATEGIES

In order to ameliorate the effects of climate change in the host communities, several intervention and initiatives that will be pivotal to mitigating the adverse effects of climate change on the host communities have been identified and are listed below:

- **Community-Based Approaches:** To effectively address the impacts of climate change, it is essential to involve the host communities in the development and implementation of mitigation and adaptation strategies. Community-based approaches that leverage local knowledge and resources can enhance resilience and ensure that the measures are sustainable and culturally appropriate. Anambra, Okoye (2023) recommended the need for communities to contribute towards tree planting and more importantly the role of the women in tree planting. It is expected that trees planted will lower greenhouse gas emissions that aggravate climate change and generally reduce the effects of heat waves, floods, and droughts.
- **Government and Policy Interventions:** The Nigerian government has a crucial role to play in supporting host communities through policy interventions and funding. Although certain policies exist, there is need for more tourism-focused policies on climate change in Nigeria. Policies aimed at promoting sustainable tourism, protecting natural resources, and supporting climate adaptation initiatives are essential. Furthermore, collaboration with international organizations can provide additional resources and expertise to bolster local efforts.

The Nigerian government has developed several climate change adaptation and mitigation plans and frameworks, such as the Nationally Determined Contribution (NDC), the National Adaptation Plan Framework (NAPF), the National Strategy and Plan of Action on Climate Change in Nigeria (NASPA-CCN), the Climate Change Act (CCA) and the Medium-Term National Development Plan, to name a few (Okeke, 2024). The importance of locally led adaptation (LLA) which provides extensive insight into how different communities can address the impacts of climate change on their livelihoods is at the fore of this initiative. LLA strategies are led by local stakeholders who adopt bottom-up, community-driven initiatives.

- **Education and Awareness:** According to the provisions of the Climate Change Act (2021), the Secretariat of the Climate Change Council is directed to consult with the Federal Ministries of Budget, Education, Environment, and National Planning to formulate an Action Plan every five years on public awareness, Article 4 (v) of the Act states that the Action Plan shall set out a “structure for public awareness and engagement in climate change actions” (p. 15) (Olujobi and Odogbo, 2024). Raising awareness about the effects of climate change and the importance of sustainable practices is vital. African indigenous knowledge can be adopted as an alternative climate change mitigation strategy.

Adeola, Evans & Ngare, (2024) buttressed the essence of local knowledge, perspectives, observations, and opinion of individuals affected by climate to provide detailed understanding of climate change and practical mitigation strategies as well as the application of the environmental

ethics of Ubuntu. Ayanlade and Jegede (2016) proposed the need to include climate change in the curriculum of universities as it will aid better understanding of climate change issues and both global and local adaptation strategies. Educational programs that inform both residents and tourists about the environmental challenges and encourage responsible behaviour can contribute to the preservation of tourist centres and the well-being of host communities.

- **Collaborations:** It is imperative for the communities to invest in sustainable practices and adaptive measures to mitigate the adverse effects of climate change. Collaborative efforts between all stakeholders (governments, non-governmental organisations, businesses, and local populations) are essential to ensure the long-term viability and resilience of these communities in the face of an evolving climate.

5. CONCLUSION

The effects of climate change on host communities of tourist centres in Nigeria are profound and multifaceted. Addressing the various impacts requires a comprehensive approach that includes environmental, economic, and social interventions for the host communities of tourist sites. By implementing effective mitigation and adaptation strategies which involves all stakeholders, and fosters a culture of sustainability, it is possible to safeguard the future of these tourist centres, communities and ensure that they continue to thrive or co-exist in a mutually beneficial manner, despite the changing climate.

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