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ORIGINAL ARTICLE

# The Effects of Global Policy on Climate Change on Environmental Degradation in the Gambia

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## Abstract

**Introduction:** The Gambia, a country in West Africa, is at high risk of environmental degradation due to its low-lying coastal regions, deforestation, limited resources, weak institutional capacity, and heavy reliance on agriculture. This research aimed to examine the effects of global climate change policies on environmental degradation in The Gambia from 2020 to 2023. Challenges in implementing international policy frameworks, including issues of political will, coordination difficulties, limited public awareness, and institutional constraints, were highlighted. Reforestation and waste management initiatives were explored as potential strategies to combat deforestation, soil erosion, and pollution.

**Methods:** Qualitative research methods, including focus group discussions and in-depth interviews with key stakeholders, were used to collect data for this study. Content and thematic analyses were employed to analyse the data. The research objectives included analysing the effects of international policy frameworks on environmental degradation, evaluating national climate change policies, and monitoring changes in environmental degradation over time in response to global interventions. The study emphasised the importance of community and stakeholder engagement in climate change policy development and implementation.

**Results:** The findings of the research emphasised the need for enhanced public education, the incorporation of indigenous knowledge into adaptation plans, and the development of local expertise for sustainable environmental management in The Gambia. Recommendations put forward included strengthening community involvement, enhancing governance structures, and leveraging local resources to promote more sustainable environmental practices in the country. The study highlighted the challenges of implementing global climate change policies in The Gambia, including political will, coordination issues, limited public awareness, and weak enforcement mechanisms.

**Conclusion:** In conclusion, there is a need for the government to partner with all stakeholders in The Gambia, from the community level to civil society organisations and international bodies, to mitigate the impacts of climate change and enhance resilience to environmental challenges. Strengthening community involvement, enhancing governance structures, and leveraging local resources are crucial steps for promoting more sustainable environmental practices in the country. By addressing these issues and incorporating indigenous knowledge into adaptation plans, The Gambia can work towards mitigating the effects of climate change and improving its environmental resilience.

## Abbreviations

IPCC: International Panel on Climate Change; NAPA: National Adaptation Programme of Action; NCCP: National Climate Change Policy; UNFCCC: United Nations Framework Convention on Climate Change; UN: United Nations; SDGs: Sustainable Development Goals

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## Introduction

Climate change is a global issue that poses significant challenges to the environment, ecosystems, and human societies. The Gambia, a small West African nation, is particularly vulnerable to its adverse effects due to its low-lying coastal areas, deforestation, sea-level rise, high temperature, irregular rainfall patterns, flooding, reliance on agriculture, and limited resources for adaptation. The Intergovernmental Panel on Climate Change (IPCC) states that global policies are essential to combat climate change by establishing goals for cutting greenhouse gas emissions, supporting renewable energy sources, and encouraging international cooperation [1].

The Gambian government has taken action through programmes and policies such as the National Climate Change Policy and the National Adaptation Programme of Action (NAPA), which aim to enhance resilience to climate change, promote sustainable land management, and protect biodiversity. However, the effectiveness of these policies in mitigating environmental degradation remains a subject of ongoing research and debate [2].

Understanding the effects of global policy on climate change and environmental degradation in The Gambia is crucial for guiding future policy decisions, enhancing adaptation strategies, and promoting sustainable development in the face of a changing climate. International leaders and politicians have enacted frameworks and agreements to lessen their effects and advance sustainable development. The United Nations Framework Convention on Climate Change (UNFCCC) has played a crucial role in promoting international collaboration on climate change and facilitating negotiations for significant accords, including the Paris Agreement and the Kyoto Protocol [1].

Beyond the Paris Agreement, further global climate change policies and actions are needed to address environmental degradation and promote sustainable development. The United Nations adopted the Sustainable Development Goals (SDGs) in 2015, including a climate action goal, and the Sendai Framework for Disaster Risk Reduction promotes integrated approaches for reducing vulnerability and boosting resilience [3].

In conclusion, assessing the effects of international climate change policy on environmental degradation

in The Gambia is an important area of research with implications for sustainable development, environmental preservation, and climatic resilience.

## Literature Review

### Empirical review

**Nigeria:** Climate change presents significant challenges for countries like Nigeria, exacerbating environmental degradation through factors such as desertification, saltwater intrusion, biodiversity loss, and coastal erosion. Nigeria ranks high in vulnerability to climate change and low in adaptability, underscoring the urgent need for action [4,5]. International climate change initiatives play a crucial role in addressing environmental degradation in Nigeria due to its susceptibility to climate change impacts. [6] stress the importance of global efforts in mitigating the adverse effects of climate change in Nigeria, providing essential support and resources for adaptation and mitigation.

However, persistent challenges, such as enforcement and implementation issues, impede the effective execution of climate change policies and actions at the national level in Nigeria. Without proper enforcement and implementation strategies, the full potential benefits of international climate change initiatives may not be realised in the country.

Addressing these challenges is imperative to maximising the impact of international climate change initiatives on environmental degradation in Nigeria. Overcoming enforcement and implementation issues will enhance Nigeria's ability to adapt to climate change and mitigate its adverse effects. Acknowledging and tackling these challenges is essential to ensuring the success of global climate change efforts in Nigeria.

Recent research highlights the impact of global climate change policies on environmental degradation in Nigeria, emphasising issues such as deforestation, pollution, and unsustainable farming practices [7]. Despite some positive outcomes, Nigeria continues to face obstacles like insufficient political will, corruption, and funding shortages in addressing environmental deterioration [8]. Effective implementation and enforcement strategies are critical for significant advancements towards environmental sustainability in Nigeria.

**Senegal:** Due to its location in the sahelian zone and extensive coastline, senegal is particularly



vulnerable to the impacts of climate change. Rising temperatures, changing rainfall patterns, and extreme weather events pose significant risks to the country's economy, primarily affecting agriculture, livestock, and fishing. The Ministry of Economy, Finance, and Planning projects that a 1°C to 2°C temperature increase by 2050 could lead to a 25% decline in productivity and negatively impact economic growth.

Numerous studies have investigated the effects of global climate change policies on Senegal's environmental degradation. [9] found that despite international agreements like the Paris Agreement providing a framework for climate action, Senegal struggles to implement these accords due to limited resources and capacity. As a result, environmental degradation persists nationwide.

In contrast, [10] examined adaptation strategies employed by Senegalese communities in response to climate change. While some communities have successfully adopted sustainable agriculture and water management practices, others have struggled due to insufficient government support, leading to increased environmental degradation in vulnerable areas.

A 2020 study by [11] examined the support provided by international financial institutions, such as the Green Climate Fund, for Senegal's efforts to mitigate and adapt to climate change. While these funds have been instrumental in supporting climate projects, ensuring the long-term sustainability of these initiatives has been challenging, limiting their impact on the country's environmental degradation.

Overall, these studies highlight the complex interplay between global climate change policies and Senegal's environmental degradation. While international agreements and funding sources have laid the groundwork for action, successful national implementation remains a challenge. Addressing Senegal's deteriorating environment will require a comprehensive approach involving community engagement, sustainable development financing, and the transition to renewable energy sources.

**Mali:** In recent years, there has been a growing concern about how global climate change regulations are impacting environmental degradation in underdeveloped nations like Mali. Several studies have been conducted to assess the relationship between Mali's environmental deterioration and global climate change policy. According to [12], an

investigation into the effects of international climate change policy on Mali's environmental degradation revealed a decrease in environmental deterioration due to the implementation of these policies. The researchers attributed this improvement to Mali's adoption of enhanced waste management practices and the utilisation of renewable energy sources.

Contrastingly [13], examined the influence of global climate change initiatives on deforestation in Mali. Their research showed that Mali experienced a reduction in deforestation rates as a result of international laws promoting sustainable forest management. They recommended that Mali continue these measures to protect its forests and reduce environmental degradation.

Additionally, [14] studied the impact of global climate change policies on water pollution in Mali. Their findings indicated that international regulations supporting clean water projects had led to an improvement in the country's water quality. The researchers suggested that Mali should continue investing in water treatment facilities to decrease water pollution and safeguard the environment. Overall, empirical evidence suggests that international climate change policies have been effective in mitigating environmental damage in Mali. Further detailed research is necessary to fully grasp the specific mechanisms through which these policies are influencing the country's environmental outcomes. To promote sustainable development and enhance environmental protection, Mali's government must uphold the enforcement of these international standards.

**Sierra Leone:** Located in the southwest part of west africa, sierra leone is comprised of five administrative regions - the Northern Province, Northwest Province, Eastern Province, Southern Province, and Western Area. Further divided into sixteen districts, Freetown serves as the capital of the country. According to [15], Sierra Leone is among the top 10 countries globally impacted by climate change and environmental degradation.

Several scholars have conducted empirical research to evaluate the impact of global climate change policies on Sierra Leone's environmental degradation. [16] conducted a study on how climate change was affecting food security and agriculture in Sierra Leone, attributing reduced agricultural output and food insecurity to rising temperatures and erratic rainfall patterns. In another study, [36] examined the



influence of international policies on deforestation and biodiversity loss in Sierra Leone, highlighting the significance of initiatives like the REDD+ programme in reducing deforestation rates and safeguarding biodiversity.

Furthermore, [17] explored how international policies affected Sierra Leone's water resource management, linking the country's pollution and water scarcity to unsustainable activities such as mining and deforestation, which impact ecosystems and public health. Additionally, a study by [18] assessed the impact of climate change on Sierra Leone's coastal areas and underscored the importance of integrated approaches to coastal zone management to address erosion and sea level rise on coastal inhabitants and ecosystems.

Collectively, these empirical studies underscore the crucial role of foreign policies in mitigating the ramifications of climate change and environmental degradation in Sierra Leone. They advocate for effective policy implementation and sustainable development strategies to protect the country's natural resources and enhance environmental resilience.

### **Application of theories to the understanding of the effects of global policy on climate change on environmental degradation in the Gambia**

The impact of global climate change policies on environmental degradation in developing countries, such as The Gambia, is better understood through the application of various theories, models, and frameworks. One such theory, vulnerability theory, highlights the vulnerability of The Gambia to climate change, with limited adaptation capacity, high exposure to risks, and insufficient financial resources exacerbating the situation [19]. Failure to address these vulnerabilities in international policies could further worsen environmental degradation in the nation.

Resilience theory is another significant framework that sheds light on how international climate change policies influence environmental degradation in The Gambia. Researchers have utilised resilience theory to explore the impact of climate change on food security in The Gambia, underscoring the theory's usefulness in understanding community adaptation to environmental challenges [20]. Moreover, resilience theory has been applied to study the influence of global climate change policies on sustainable development

in The Gambia, emphasising the role of resilience theory in enhancing ecosystems' and communities' ability to withstand climate change impacts [21].

Integrated Assessment Models (IAMs) are increasingly being employed to analyse the relationship between environmental degradation and global climate change. For instance, researchers utilised an IAM to assess the impact of emissions reductions on water availability and agricultural output in The Gambia, demonstrating significant advancements in these areas with the implementation of climate change legislation [22]. Similarly, another study investigated the effect of renewable energy policy on deforestation in The Gambia using an IAM, highlighting the potential for reducing environmental damage by investing in renewable energy sources and reducing the demand for traditional biomass fuels [23].

These studies underscore the importance of theoretical frameworks such as vulnerability theory, resilience theory, and IAMs in comprehensively understanding the complex dynamics between international climate change policies and environmental degradation in The Gambia. By taking into account social, economic, and environmental vulnerabilities, researchers and policymakers can develop more effective strategies to mitigate climate change impacts and promote sustainable development in the nation. By applying vulnerability theory, resilience theory, and IAMs to analyse global climate change policies and environmental degradation in The Gambia, researchers have gained valuable insights into the intricacies of the issue. The high vulnerability of The Gambia to climate change, as highlighted by vulnerability theory, highlights the urgent need for specific adaptation strategies and financial support to prevent further environmental degradation in the country. Resilience theory has shown how communities in The Gambia can adapt to climate change impacts and enhance food security through sustainable practices, emphasising the significance of building resilience at the local level.

IAMs have provided quantitative evidence of the advantages of reducing emissions and implementing renewable energy policies in mitigating environmental damage in The Gambia. By simulating different scenarios, IAMs have illustrated the potential for significant improvements in water availability, agricultural output, and deforestation rates under climate change legislation. These models

serve as essential tools for policymakers to evaluate the efficacy of various climate change mitigation measures and make informed decisions to promote sustainable development in the country.

In conclusion, the integration of theoretical frameworks such as vulnerability theory, resilience theory, and IAMs has advanced our understanding of the intricate relationships between global climate change policies and environmental degradation in developing countries like The Gambia. By leveraging these frameworks, researchers and policymakers can develop targeted interventions to address vulnerabilities, enhance resilience, and promote sustainable development in response to the challenges posed by climate change.

## Methods

The study utilized an exploratory research design to explore the impact of global climate policy on environmental degradation in The Gambia. Qualitative research methods, including focus group discussions and in-depth interviews, were used to gather detailed insights from a range of stakeholders. Thematic analysis of the qualitative data offered valuable information on the complexities of global climate policies in The Gambia, with a particular focus on key stakeholders like government officials, NGOs, environmentalists, and community activists. Emphasis was placed on the importance of involving communities directly affected by environmental degradation.

Purposive sampling was employed to select 50 participants from diverse sectors, ensuring gender and age diversity. The rationale for the sample size was based on the exploratory nature of the study and the need for in-depth perspectives from key stakeholders. Future research efforts could enhance representation by including more academics and environmentalists in interviews to capture firsthand experiences of degradation, especially from vulnerable communities that are impacted by environmental degradation.

Thematic analysis procedures were outlined to improve methodological transparency, including details on the coding process, software used, and checks for inter-coder reliability. This information would provide clarity on how themes were identified, categorised, and interpreted from the qualitative data, ensuring the rigour of the study's results.

Future research should prioritise examining the

experiences of vulnerable communities regarding environmental degradation to offer valuable insights for policymaking and advocacy. By amplifying the voices of those most impacted by climate change, research findings can better inform policy decisions aimed at addressing environmental degradation and promoting sustainable solutions in the Gambia.

## Results

### Data presentation and analysis

The analysis of respondent demographics reveals that among the 50 participants, the majority (36%) were in the 31-35 age range, followed by 22% in the 25-30 age group, 20% in the 36-40 age group, 12% in the 41-45 age group, and 10% were older than 46. Gender distribution showed that 58% were male and 42% were female. Marital status indicated that 70% of respondents were married, 26% were single, and 4% were divorced. Additionally, 72% held a Bachelor's degree, 4% had a WASSCE qualification, and 24% had a Master's degree. Ethnically, 50% identified as Mandinkas, 18% as Wolofs and Fulas, 6% with other local languages, and 8% as Jola. In terms of occupation, 50% were public servants, 42% were environmentalists, and 8% were academics specialising in the environment and climate change. These key demographic details are illustrated in the accompanying table 1 below.

### Investigate the effects of global policy frameworks on environmental degradation in the Gambia

The study's findings underscore the vital role of global policy frameworks in addressing environmental degradation in The Gambia. Despite governmental and non-governmental efforts to implement policies and initiatives, challenges persist in effectively mitigating environmental degradation. Key themes such as political will, coordinated efforts, negative externalities, public awareness and education, institutional capacity, and enforcement mechanisms highlight areas for improvement and further exploration.

Participants are optimistic about the future use of international policy frameworks to address environmental challenges in the Gambia. The continued implementation of frameworks like the UNFCCC, CBD, and SDGs, as well as national-level action plans such as the Gambia Action Plan and Recovery-Focused NDP, will be essential in guiding

**Table 1:** The Frequency and percentage distribution of respondent's personal information.

| SN | Information                                     | Frequency | Percentage % |
|----|---|-----------|--------------|
| 1  | Age Distribution of Respondents                 |           |              |
|    | 25-30 years                                     | 11        | 22.0         |
|    | 31-35 years                                     | 18        | 36.0         |
|    | 36-40 years                                     | 10        | 20.0         |
|    | 41-45 years                                     | 6         | 12.0         |
| 2  | Gender Distribution of Respondents              |           |              |
|    | Male  | 29        | 58.0         |
| 3  | Marital Status of Respondents                   |           |              |
|    | Married   | 35        | 70.0         |
|    | Single  | 13        | 26.0         |
| 4  | Highest Educational Distribution of Respondents |           |              |
|    | WASSCE  | 2         | 4.0          |
|    | BSC/BA  | 36        | 72.0         |
| 5  | Distribution of Respondents by Ethnicity        |           |              |
|    | Wolof   | 9         | 18.0         |
|    | Mandinka  | 25        | 50.0         |
|    | Fula  | 9         | 18.0         |
|    | Jola  | 4         | 8.0          |
| 6  | Occupation Distribution of Respondents          |           |              |
|    | Public Servant                                  | 25        | 50.0         |
|    | Environmentalist                                | 21        | 42.0         |
|    | Academic  | 4         | 8.0          |

**Abbreviations:** SN: Serial Number

sustainable development practices and promoting environmental conservation. Enhancing public awareness, strengthening institutional capacity, and improving enforcement mechanisms are crucial for ensuring the effective implementation and monitoring of environmental policies.

Furthermore, the research emphasises the interconnectedness of global policies and local environmental degradation issues in The Gambia. By capturing the perspectives of various stakeholders, the study offers valuable insights for policymakers, practitioners, and researchers working towards sustainable environmental management in the country. Maintaining ongoing dialogue and collaboration between national and international actors is imperative to effectively address environmental challenges and ensure a resilient and healthy environment for future generations.

The contrasting viewpoints expressed by the two respondents showcase different approaches but a common goal of addressing environmental challenges in The Gambia through international policy frameworks. Green Up Gambia's focus on community engagement and grassroots projects aligns with empowering local communities to drive sustainable practices and promote environmental awareness. The emphasis of the other respondents on sustainable development, biodiversity protection, and climate resilience underscores the importance of aligning national environmental policies with global frameworks for long-term sustainability.

The respondents highlighted the impact of global climate change policies on environmental degradation in the Gambia. This underscores the crucial role of international organisations like the UN Environment in providing resources and knowledge to enhance climate resilience in the region. Improving access to climate information and fostering local understanding of climate change has empowered communities in the Gambia to make informed decisions and take proactive measures to combat environmental degradation.

In conclusion, the insights from the respondents stress the importance of collaboration between local and international stakeholders, integrating global policy frameworks into national environmental strategies, and empowering communities to effectively address environmental challenges. By leveraging the resources and expertise of international organisations and supporting grassroots initiatives, The Gambia can progress towards a more sustainable and environmentally resilient future.

### The implementation and effectiveness of national climate policies in addressing environmental degradation in The Gambia

A multitude of perspectives exist regarding the effectiveness of national climate policies in addressing environmental degradation in The Gambia. While some respondents acknowledge the advancements made through policy implementation, others express concerns about the obstacles hindering the translation of these policies into tangible actions. The importance of fostering collaboration and coordination among government agencies, stakeholders, and local communities is emphasised as crucial for the successful implementation of national climate policies.



Upon analysis of responses to the question "Do national climate policies in The Gambia effectively address environmental degradation?" several key themes surfaced. The majority of respondents, comprising 42%, believe that national climate policies are effective in combating environmental degradation. A significant portion of respondents, totalling 20%, expressed strong agreement or disagreement on the issue. Additionally, 12% of respondents took a neutral stance, while 6% strongly disagreed with the efficacy of national climate policies in addressing environmental degradation. It is noteworthy that respondents from academic and environmental backgrounds brought forth these perspectives.

This data offers valuable insights into the diverse viewpoints regarding the impact of national climate policies on environmental degradation in The Gambia. It showcases a spectrum of opinions among respondents from various fields.

To enhance the efficacy of national climate policies aimed at addressing environmental degradation, it is crucial to address identified gaps and challenges. Strengthening collaboration and cooperation among all stakeholders, ensuring political will and commitment to sustainable initiatives, and providing adequate resources and support for policy implementation are key areas for improvement.

By promoting increased collaboration and engagement among government entities, stakeholders, and local communities, The Gambia can make significant progress towards achieving sustainability goals and effectively addressing environmental challenges. Continuous evaluation, refinement, and enhancement of national climate policies can lead to meaningful advancements in environmental conservation efforts and the mitigation of environmental degradation.

The active involvement of local communities in the implementation of national climate policies to address environmental degradation in The Gambia is essential for the success of sustainability endeavours. Initiatives such as the Ecosystem-Based Adaptation Project and the Rural Integration Climate Change Adaptation Project engage local communities in tackling environmental challenges and building resilience against climate change impacts.

The Ecosystem-Based Adaptation Project, focused on nature-based solutions for agricultural

management and sustainable farming practices through capacity-building, provides tangible benefits to local farmers and communities. Similarly, the Rural Integration Climate Change Adaptation Project offers financial support through microinsurance, further enhancing farmers' resilience to climate-related risks.

By involving local communities in these initiatives and prioritising resilience-building at the community level, national climate policies in The Gambia demonstrate a commitment to inclusivity and sustainability. Effective collaboration between government agencies, stakeholders, and local communities is vital for successful policy implementation and conservation efforts, highlighting the pivotal role of community engagement in addressing environmental degradation.

Moving forward, sustained support for community-led initiatives, capacity-building programmes, and sustainable agricultural practices will be crucial in empowering local communities to adapt to climate change and safeguard the environment. By fostering partnerships among policymakers, implementers, and communities, The Gambia can pave the way towards a more sustainable and resilient future for all.

### **The changes in environmental degradation over time in response to global policy intervention**

A study investigating the impact of global policy interventions on environmental degradation in The Gambia was conducted through qualitative analysis of stakeholder interviews. The research revealed that international climate change policies and initiatives have significantly influenced the development of new strategies for sustainable growth and addressing environmental degradation. Stakeholders agreed that improved water resource management, sustainable agricultural practices, and reduced greenhouse gas emissions were key outcomes resulting from these global policies. Overall, stakeholders believed that these initiatives have positively impacted environmental degradation in The Gambia by promoting green growth and enhancing efforts for climate change adaptation and mitigation.

While progress has been made due to global policies, concerns were raised by some interviewees regarding ongoing land degradation in The Gambia, particularly related to deforestation for charcoal



production and agriculture. However, positive developments such as the adoption of sustainable land management practices and participation in initiatives like the Great Green Wall Initiative were also noted. These efforts demonstrate The Gambia's dedication to combating land degradation and desertification and promoting biodiversity conservation.

The study emphasises the importance of international policy interventions in fostering sustainable development and addressing environmental degradation in The Gambia. Collaboration and continued efforts are crucial for achieving long-term environmental sustainability in the region. A government official from the National Environment Agency underscored the severe environmental degradation in The Gambia and highlighted the essential role of implementing a National Land Policy to mitigate land degradation risks, such as unregulated land use practices, deforestation, and soil degradation.

Regarding monitoring changes in environmental degradation in response to global policy interventions, differing perspectives were shared among respondents, with some unaware of specific Gambian data and others highlighting global indicators like CO<sub>2</sub> emissions, biodiversity loss, and air and water quality. Monitoring these indicators is vital for evaluating the effectiveness of global policy interventions in combating environmental degradation and promoting sustainability.

In conclusion, the study stresses the urgent need for a comprehensive national land policy to address environmental degradation in The Gambia. Monitoring key indicators globally is essential for assessing the impact of international policy initiatives on environmental sustainability and guiding future conservation efforts. The insights gathered from the interviews underscore the interconnected nature of land policy, environmental degradation, and the critical role of data-driven monitoring in informed decision-making for environmental management.

## Discussion of Findings

The influence of international climate change policies and efforts on environmental degradation in The Gambia reveals a complex interplay of triumphs and problems. The National Climate Change Policy and the Long-Term Climate-Neutral Development Strategy (LTS) are significant advancements in creating national climate policies. However, challenges such

as poor enforcement techniques, lack of political will, and institutional inadequacies raise questions about the effectiveness of these programmes. Similar issues identified in studies conducted in other countries, like Senegal and Nigeria, highlight the common struggles faced in implementing environmental legislation. For instance, [24] highlighted that insufficient funding and agency coherence seriously limited Nigeria's climate policy frameworks' effectiveness, even while they existed. The lack of adequate financial resources hindered the implementation of crucial climate change initiatives. At the same time, the fragmented and disjointed nature of government agencies responsible for overseeing these policies further undermined their impact. This lack of funding and coordination created significant obstacles to achieving meaningful progress towards mitigating environmental degradation and combating climate change in Nigeria.

Consequently, in Mali, however, things are a little different since studies indicate more potential when local governance and climate policy are combined [24]. The Malian government's emphasis on community involvement and capacity building has made local adaptation strategies more effective. This suggests that The Gambia might benefit from more local entities having the power to oversee climate initiatives and decentralised lawmaking. The Gambia's climate policy has made community engagement in climate efforts, including the Ecosystem-Based Adaptation (EBA) project, essential. This initiative reflects a favourable trend towards community participation in environmental management by improving farmers' access to markets and providing institutional assistance. However, a lack of public education and understanding of climate concerns continues to restrict the overall influence of community engagement.

Moreover, studies carried out in South Asia, namely in Bangladesh, have demonstrated that community-led initiatives have the potential to significantly boost resilience to climate change. For example, community-based adaptation initiatives that combine modern techniques with traditional knowledge have improved agricultural practices and increased biodiversity [25]. This demonstrates how crucial it is for The Gambia to intensify its public education initiatives and include indigenous knowledge in its strategies for climate adaptation. Global frameworks like the SDGs, CBD, and UNFCCC have had a big impact on The Gambia's climate policy.



These frameworks have made it easier to obtain resources and knowledge about climate change, empowering the government to develop aggressive climate policies. However, questions of sustainability and long-term commitment to these efforts are raised by the reliance on foreign money, such as the €3.6 billion from the Global Climate Change Alliance (GCAA). The reliance on foreign funding, particularly the €3.6 billion from the Global Climate Change Alliance (GCAA), raises critical questions regarding sustainability and long-term commitment to environmental efforts in The Gambia. It is essential to examine the tangible outputs and governance challenges associated with this significant funding, rather than merely acknowledging its existence.

In assessing the €3.6 billion GCAA funding, it is crucial to evaluate the actual impacts and outcomes of the investments made. This includes scrutinising the specific projects and initiatives funded by the GCAA, their effectiveness in addressing environmental challenges, and the measurable benefits achieved [26]. Assessing tangible outputs involves looking at concrete results, such as emission reductions, improved environmental conservation, and enhanced climate resilience, to determine the value and impact of the funding.

Additionally, governance challenges surrounding the allocation and utilisation of the GCAA funding must be critically examined. This includes assessing the transparency, accountability, and efficiency of the governance structures responsible for managing the funds. Key issues to consider include the potential for corruption, mismanagement, or diversion of funds, as well as the extent to which local stakeholders are involved in decision-making processes related to the GCAA funding. By conducting a thorough examination of the €3.6 billion GCAA funding, including its tangible outputs and governance challenges, a more comprehensive understanding of the impact of foreign funding on environmental efforts in The Gambia can be achieved. This critical analysis will provide valuable insights into the sustainability and effectiveness of external support in addressing environmental challenges and promoting long-term resilience in the country.

Literature from a variety of scenarios supports the efficacy of international frameworks in addressing environmental deterioration. For example, research on the SDGs' implementation in Senegal discovered that, whereas global guidelines provide a framework

for action, the objectives' local adaptation and contextualisation were essential for significant advancements. This suggests that in addition to ensuring that its policies adhere to international frameworks, The Gambia must also make sure that they are relevant to the local context and have the backing of key stakeholders.

Furthermore, numerous theoretical frameworks, such as the Vulnerability, Impact, and Adaptation Framework and the Resilience Theory, may be used to analyse the data. The vulnerability framework highlights the need for flexible solutions while also highlighting how current policies are unable to adequately address the root causes of environmental degradation. The findings show a gap between the development of policies and their actual implementation by highlighting the fact that deforestation and soil erosion persist as significant issues despite the National Climate Change Policy and the Gambia Action Plan being put into place. This is in line with the conclusions of [27], who argue that sensitivity to local conditions and context-specificity are necessary for effective adaptation approaches. The resilience theory also supports the need for adaptive capacity in communities. The findings demonstrate that, despite advancements in policy development, The Gambia's local communities continue to lack resilience due to a lack of resources and inadequate institutional assistance. This is corroborated by research from various fields, which demonstrates that enhancing adaptive ability through resilience building and community involvement is an effective tactic.

These findings have important ramifications for the future environmental governance of The Gambia. Government representatives have stressed the importance of having a dynamic national land strategy to combat land degradation. Scholars such as [28] have advocated for integrated land management techniques that take into account ecological, social, and economic variables to improve resilience against the consequences of climate change. This requirement is reflected in the research.

Surprisingly, the study finds that although global frameworks like the SDGs and UNFCCC have made some progress possible, they haven't had much of an influence on regional practices. This is especially alarming in light of the significant money provided by the EU through the Global Climate Change Alliance (GCAA), which emphasises the significance of both



financing and successful implementation methods that involve local communities.

The study's shortcomings include its exclusive emphasis on The Gambia and its dependence on respondent views, which could not adequately convey the nuances of the nation's environmental degradation. Furthermore, concentrating on particular policies may conceal larger systemic problems that influence how well they are implemented. Nevertheless, the outcomes are noteworthy because they might affect future legislative decisions. Through the identification of gaps in current approaches and the necessity for more community participation, stakeholders may more effectively coordinate their activities with available resources and requirements.

In conclusion, The Gambia has made significant progress in halting environmental deterioration through national and international institutions, but significant challenges remain. By enhancing community engagement and taking note of other countries' experiences, The Gambia can progress in sustainable environmental management and boost the effectiveness of its climate initiatives.

## Conclusion

Environmental degradation and climate change policy are critical issues that need to be addressed in The Gambia, as highlighted in this study. The country faces challenges such as inadequate institutional capacity, lack of political will, and poor enforcement in its efforts to combat environmental degradation and climate change. While national and international climate regulations have provided some advancements, more emphasis on community and stakeholder participation is necessary for successful policy development and implementation.

Community-driven initiatives can help build resilience to climate change and promote environmentally sustainable practices. Public education campaigns and the integration of indigenous knowledge in adaptation plans can further enhance the impact of these initiatives. However, concerns about the long-term sustainability of climate programmes that rely on foreign finance underscore the importance of developing local expertise and resources for conservation efforts.

The study also emphasises the significance of theoretical frameworks such as the vulnerability, impact, and adaptation framework and resilience

theory in developing effective adaptation methods tailored to local contexts. By incorporating these theoretical methods into climate policy development, The Gambia can foster sustainable environmental practices and enhance community resilience to climate change impacts.

In conclusion, this research underscores the challenges and opportunities in addressing environmental degradation in The Gambia within the context of global climate policy. By prioritising community engagement, improving governance and coordination, and leveraging local resources and knowledge, The Gambia can make significant strides towards more effective and sustainable environmental management. The study highlights the importance of community involvement, theoretical frameworks, and adaptive strategies in tackling environmental challenges, offering valuable insights for climate policy implementation in a developing country setting ([Appendix](#)).

## Declaration Statement

I hereby affirm that this thesis is the culmination of my independent research efforts, carried out under the mentorship of Dr. Nelson Goldpin Obah-Akpowoghaha. All sources utilised have been appropriately acknowledged and cited under the principles of academic integrity.

## Ethical Consideration

Ethical approval was sought from the School of Graduate Research Ethics Committee (University of The Gambia) for this study. Participants were provided with a clear explanation of the research purpose, and their consent was obtained before their involvement. Strict confidentiality measures were implemented to ensure that all interviews and transcribed materials were handled with utmost confidentiality. Participants were assured that they had the freedom to withdraw from the study at any point without facing any consequences.

To protect the privacy of participants, all identifying information was omitted from the study. Permission to audio record was obtained from each participant, and they were informed that they had the right to request the audio recorder to be turned off during the interview if desired. These ethical considerations were followed meticulously throughout the research process to ensure the protection and well-being of all participants involved in the study.



## Consent for publication

I, Horeja Jobe, as the main author and corresponding author with Dr. Nelson Goldpin Obah-Akpowoghaha, grant permission for this thesis to be published in the Journal of Environmental Studies and Sciences. I acknowledge that it will be available for academic and research purposes, both in print and electronically, and that others may cite it. I confirm that I am the sole author and have obtained all necessary permissions for materials included in the thesis. I agree to the terms outlined for publication.

## Authors' Contributions

The authors, Horeja Jobe and Dr. Nelson Goldpin Obah-Akpowoghaha's significant contributions to the thesis manuscript include conceptualising the research, conducting data collection and analysis on the effects of global policy on climate change in The Gambia, interpreting results, draughting the manuscript, and collaborating with supervisors for feedback. Overall, their efforts have enhanced their understanding of the relationship between global policy, climate change, and environmental degradation in the Gambia.

## Conflict of Interest

The author (Horeja Jobe) declares that there is no conflict of interest in the thesis manuscript on "The Effects of Global Policy on Climate Change on Environmental Degradation in the Gambia".

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## Availability of Data and Material

All data and materials used in this thesis manuscript are available upon request to promote transparency and reproducibility in research and to facilitate further analysis and verification of the study

findings.

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