

Analysing the Impact of International Climate Change Policies on Environmental Degradation in the Gambia

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ABSTRACT

The Gambia, situated in West Africa, encounters distinctive challenges stemming from its susceptibility to the effects of climate change. Characterized by low-lying coastal regions and deforestation, the country faces a heightened risk of environmental degradation compared to its global counterparts. Constraints in resources, institutional capacity, and a significant dependence on agriculture compound these challenges.

This study examined the impact of international climate change policies on environmental degradation in The Gambia between 2020 and 2023. It emphasized the challenges in translating international policy frameworks into action, citing obstacles like political commitment, coordination issues, adverse externalities, low public awareness, institutional capacity limitations, and ineffective enforcement mechanisms. The research delved into reforestation and waste management projects as possible approaches to address deforestation, soil erosion, and pollution in the country.

The study aimed to assess the impact of international policy frameworks on environmental degradation, assess national climate change policies, and track changes in environmental degradation over time in response to global interventions. Data collection utilised qualitative research methods, such as focus group discussions and in-depth interviews with key stakeholders. The collected data was analysed through content and thematic analyses.

The research underscored the significance of community and stakeholder participation in the development and execution of climate change policies. The findings emphasised the necessity for improved public awareness, integration of indigenous knowledge in adaptation strategies and building local capacity for sustainable environmental management in The Gambia. Recommendations called for increased community engagement, strengthened governance mechanisms, and leveraging local resources to advance more sustainable environmental practices within the country.

To tackle these challenges, it is recommended that the government collaborate with all stakeholders, including the community, civil society organisations, and international entities, to mitigate the effects of climate change and strengthen resilience to environmental challenges.

Keywords: The Gambia International Policies, Climate Change, Environmental Degradation, Sustainable Development

Problem Statement

The Gambia, a vulnerable West African country, faces significant threats to its environment, ecosystems, and livelihoods due to climate change. As global efforts to combat climate change intensify through various policies and agreements, understanding the specific impacts of these global initiatives on environmental degradation in The Gambia is crucial for effective mitigation and adaptation strategies. Despite the existing body of research on climate change and environmental degradation, there are notable

gaps in the literature regarding the direct linkages between global policy interventions and their effects on environmental degradation in The Gambia.

One key gap in the current literature is the lack of comprehensive studies specifically examining the effects of global climate policies on environmental degradation in The Gambia. While some studies focus on climate change impacts, adaptation strategies, and vulnerability assessments in the country, there is insufficient analysis of how global policy frameworks, such as the Paris Agreement, the Kyoto Protocol, and the UNFCCC, influence environmental degradation at the local level in The Gambia.

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Additionally, there is a gap in understanding how global climate policies are implemented and operationalised at the national level in The Gambia. Despite the development of the National Climate Change Policy (NCCP, 2016) and the National Adaptation Programme of Action (NAPA, 2003) in the country, more empirical research is needed to assess the effectiveness of these policies in addressing environmental degradation. Studies focusing on policy implementation, enforcement mechanisms, stakeholder engagement, and monitoring and evaluation are essential for evaluating the gaps between policy intentions and on-the-ground outcomes.

Furthermore, there is a need for more analysis of the complex interactions between climate change and environmental degradation in The Gambia. While climate change exacerbates existing environmental challenges such as deforestation, soil erosion, and coastal erosion, holistic studies examining these interactions are necessary. Understanding how climate change influences environmental degradation processes and vice versa is crucial for developing integrated and effective strategies to address these interconnected challenges.

Longitudinal studies tracking changes in environmental degradation over time in response to global policy interventions are necessary to identify trends, patterns, and shifts in environmental conditions, as well as to evaluate the sustained impact of policy measures. Comparative analyses with other countries facing similar environmental challenges could offer valuable insights into best practices, lessons learnt, and transferable strategies for mitigating environmental degradation in The Gambia.

This study aims to bridge the gaps in the literature related to the effects of global policy on climate change and environmental degradation in The Gambia. By conducting a comprehensive analysis, the study seeks to provide insights into how global policy interventions influence environmental degradation in The Gambia, thereby contributing to evidence-based strategies for enhancing environmental sustainability, resilience, and adaptation in the face of climate change [1].

Research Questions

Drawing from the above-stated problems, the study came up with the following research questions. These are:

1. What are the effects of global policy frameworks on environmental degradation in The Gambia?
2. How does the implementation and effectiveness of national climate change policies address environmental degradation in The Gambia?
3. What are the changes in environmental degradation over time in response to global policy interventions in The Gambia?

Objectives

This research aims to assess and recommend to policymakers, researchers, etc., how to address the impact of international climate change policies on environmental degradation in The Gambia. The specific objectives of the studies are to:

1. investigate the effects of global policy frameworks on environmental degradation in The Gambia;
2. assess the implementation and effectiveness of national climate change policies in addressing environmental degradation in The Gambia; and

3. investigate the changes in environmental degradation over time in response to global policy interventions in The Gambia.

Literature Review

Empirical Review

This section critically examines existing scientific literature to identify divergent and convergent perspectives on the impact of international climate change policies on environmental degradation in selected countries. The research will analyze studies that evaluate the impact of international policies related to climate change on environmental degradation in specific nations.

Himalayas Region, Southeast Asia, and South Asia

The impacts of international climate change and environmental degradation are being increasingly felt in Southeast Asia, South Asia, and the Himalayan region in Asia. Numerous researchers have conducted studies examining the relationship between global climate change policies and environmental degradation across various disciplines. One such study by Shrestha et al. in 2016 focused on the effects of global climate change policies on the retreat of Himalayan glaciers. The research highlighted that the melting glaciers in the Himalayan region are leading to glacier lake outbursts, floods, and changes in water supply, directly impacting the ecosystem. These effects are attributed to the policies related to global climate change that are causing the glaciers to melt. Another study by Bajracharya et al. explored the influence of global climate change policies on biodiversity decline in the Himalayas [2]. According to the study, international policy agreements are disrupting the region's ecosystems, leading to habitat loss and ultimately a reduction in biodiversity.

Maharjan and Shrestha studied the implications of global climate change policies on agricultural production in the Himalayan region [3]. Their analysis revealed a decline in agricultural production and increased food insecurity due to altered weather patterns and the greater frequency of catastrophic weather events resulting from international policy agreements.

Moreover, a substantial body of research has explored the correlation between global climate change policy and environmental degradation in Southeast Asia. Tol et al. examined how the Paris Agreement has impacted the ability of Southeast Asian nations to both mitigate and adapt to climate change. While countries in the region have committed to reducing greenhouse gas emissions in line with the agreement, the study underscored the need for improved implementation and enforcement. The authors also emphasised the importance of collaboration between industrialized nations and Southeast Asian countries to support the latter in achieving their climate objectives.

In addition, Lin et al. conducted a study investigating the effects of the Clean Development Mechanism (CDM) on environmental degradation in Southeast Asia [4]. The authors asserted that the CDM has reduced greenhouse gas emissions in the region; however, its effectiveness in promoting sustainable development and addressing environmental issues such as pollution and deforestation remains a topic of debate. The study highlighted the necessity for enhanced monitoring and evaluation of these programmes to ensure that CDM activities effectively contribute to environmental conservation.

Singh et al. conducted a study focusing on the impact of carbon pricing policies on environmental degradation in Southeast Asia [5]. The authors asserted that carbon pricing mechanisms can potentially accelerate the transition to a low-carbon economy by reducing carbon emissions. They emphasized the importance of incorporating social and economic considerations into the development and implementation of carbon pricing policies to ensure both equity and effectiveness.

In a study conducted in 2013, Khatiwada et al. examined the effects of global climate policies on environmental degradation in South Asia. Analysis of data from multiple South Asian countries revealed that while international climate policies were successful in reducing carbon emissions, their impact on other forms of environmental degradation, such as water pollution and deforestation, was limited.

Similarly, Dasgupta et al. investigated the influence of international climate policy on air pollution in South Asia. Their findings indicated a slight decrease in regional air pollution as a result of global climate policy; however, carbon emissions did not see a comparable reduction. This highlighted the need for more targeted strategies to address specific forms of environmental degradation in the region.

Furthermore, Ahmed et al. explored how global climate policies impact water pollution in South Asia [6]. Their research revealed a significant reduction in water pollution in the region attributed to global climate initiatives. This underscores the potential of international policy efforts to mitigate environmental degradation in South Asia, though the efficacy of such measures may vary depending on the specific environmental issue being addressed.

Overall, empirical evidence suggests that global climate change policies have had a substantial impact on environmental degradation in Southeast Asia and the Himalayan region. However, challenges persist in the implementation and enforcement of these policies, as well as in addressing specific environmental concerns and advancing sustainable development. Further research is warranted to identify viable solutions and assess the effectiveness of policies aimed at combating global climate change on environmental degradation in Southeast Asia.

Theoretical Framework

This section introduces a theoretical framework that will be utilised for analysing the influence of international climate change policies on environmental degradation in The Gambia.

The Vulnerability, Impact, and Adaptation Framework

The Vulnerability, Impact, and Adaptation (VIA) paradigm is frequently utilised by researchers to examine the impact of international climate change policies on environmental degradation in The Gambia and other regions. This paradigm aids in assessing a region's vulnerability to climate change, understanding how global actions may influence local environmental degradation, and developing strategies for adaptation and mitigation. The VIA framework was developed by the Intergovernmental Panel on Climate Change (IPCC) in the late 1990s [7].

Badjie et al. applied the VIA framework to analyse the impact of global climate change policies on environmental degradation in

The Gambia [8]. The authors utilised this framework to propose sustainable development solutions and evaluate the potential consequences of international policy decisions on The Gambia's environment.

In a separate study by Jallow et al., the VIA paradigm was employed to assess The Gambia's susceptibility to climate change and the potential impacts of external policies on the region's deforestation [9]. The researchers recommended adaptation measures to mitigate these effects using the VIA framework. The VIA paradigm serves as a valuable tool for researchers studying the influence of global climate change policies on environmental degradation in regions like The Gambia. By systematically evaluating vulnerabilities, impacts, and adaptation strategies, this framework facilitates informed policy development and decision-making to address the challenges posed by climate change and environmental degradation.

Methodology

An exploratory research design was used in the study to fully investigate how international climate policy affects environmental degradation in The Gambia. The study explored the diverse viewpoints of important stakeholders using qualitative research techniques, such as focus groups and in-depth interviews. Nuanced insights into the complex dynamics surrounding international climate policies in The Gambia were obtained through thematic analysis of the qualitative data.

The research's main goal was to gain a thorough grasp of how national environmental degradation is influenced by international climate policy by engaging with key stakeholders, including government representatives, non-governmental organisations, environmentalists, and community activists. A holistic approach to understanding the problem was highlighted by the study's notable emphasis on including communities that are directly impacted by environmental degradation.

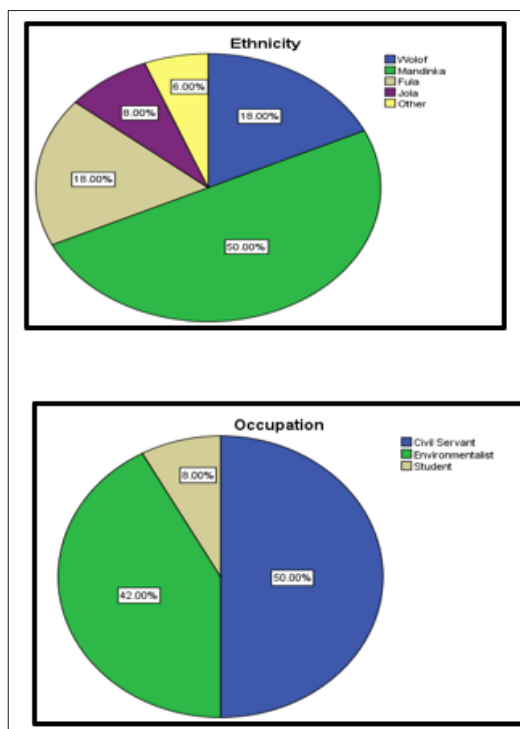
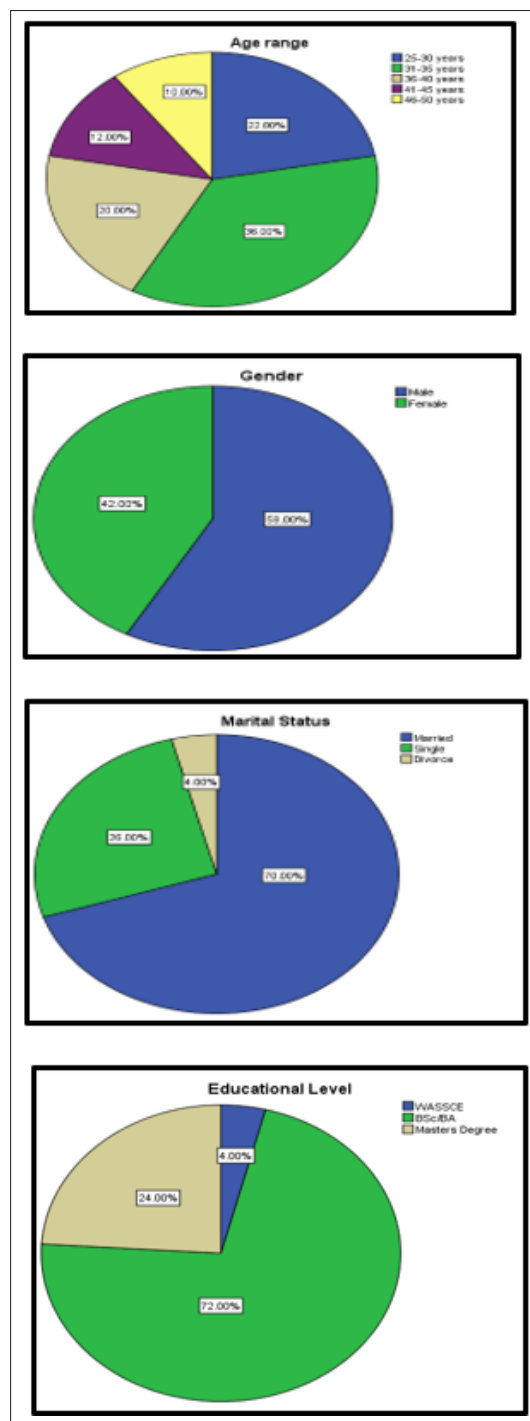
A purposive sampling technique was carefully used to choose a diverse pool of 50 participants from a range of sectors, guaranteeing representation from different genders and age groups, with the main goal of offering a thorough understanding to guide policy decisions and propel advocacy initiatives on environmental degradation and climate change in The Gambia. Strict procedures were followed to validate and guarantee the accuracy of the research instruments, and the study used rigorous qualitative data collection methods that integrated primary and secondary sources. This involved putting the interview guide and survey questionnaire through a pilot test. Furthermore, standardised data collection approaches, comprehensive research assistant training, and consistent data analysis procedures were adhered to, effectively mitigating bias and errors in data collection processes.

Data Analysis on Respondents' Information

The age distribution of the respondents was examined in detail, with 22% belonging to the 25-30 age group, 36% to the 31-35 age group, and 20% to the 36-40 age group. Additionally, 10% were older than 46, and 12% were between 41 and 45 years old. The gender distribution showed 58% of the respondents were male and 42% were female. Marital status revealed that 70% of respondents were married, with 26% being single and

4% divorced. In terms of education, 72% had a Bachelor's degree, 4% had a WASSCE, and 24% had a Master's degree. Ethnically, 50% of respondents were Mandinkas, 18% were Wolofs and Fulas each, 6% spoke other local languages, and 8% were Jolas. Occupation-wise, 50% were public servants, 42% were environmentalists, and 8% were academics specialising in the environment and climate change. These detailed findings suggest a diverse and representative sample of respondents for the study. All of these are shown in the charts below:

Charts Distribution and Percentages on Respondents' Personal Information



Interview Guide and Responses on Analysing the Impact of International Climate Change Policies on Environmental Degradation in The Gambia

Objective 1) To investigate the effects of global policy frameworks on environmental degradation in The Gambia
Q1) How have The Gambia's government and non-governmental organisations responded to global policy on climate change and environmental degradation?

First respondent

The government and non-governmental organizations in The Gambia have taken proactive measures to address international climate policies and environmental degradation. Through the implementation of adaptation policies, clean energy standards, and investments in renewable energy sources, they are working towards reducing reliance on fossil fuels. Additionally, initiatives such as climate change education and mitigation policies are being implemented to combat the impacts of climate change. Both the government and NGOs play a crucial role in the collective effort to fight against environmental challenges and promote sustainable development.

Second respondent: Through phone

The government of The Gambia has aligned with global policies on climate change by ratifying international agreements such as the UNFCCC and the Paris Agreement. They have developed the National Climate Change Policy and Environmental Action Plan to guide efforts in mitigating and adapting to climate change. Specific actions include prioritizing renewable energy, reforestation, and sustainable land management practices. Additionally, NGOs in The Gambia have actively contributed to addressing environmental challenges through projects focusing on sustainable agriculture, conservation, and advocacy for stronger environmental policies. Collaboration between the government, NGOs, and local communities highlights a shared commitment to promoting environmental sustainability and resilience to climate change.

Q2) What specific international policy frameworks have significantly impacted environmental degradation in The Gambia?

First respondent:

An official from the Ministry of Environment, Climate Change, and Natural Resources highlighted the impact of the UNFCCC, CBD, and SDGs on environmental degradation. The SDGs play a significant role in addressing environmental challenges in The Gambia, aiming to reduce greenhouse gas emissions and enhance resilience to climate change effects. These frameworks also emphasize the protection of biodiversity, crucial for ecosystem health and human well-being.

Second respondent:

In a recent interview with an officer from the National Environment Agency, it was highlighted that both the Gambia Action Plan (GEAP III) and the Recovery Focused National Development Plan (RF-NDP 2023-2027) play a significant role in addressing environmental degradation issues. The officer emphasised that the GEAP III aims to reduce poverty, promote economic growth, and enhance social development while tackling environmental concerns such as deforestation and pollution. Additionally, the RF-NDP 2023-2027 focuses on achieving sustainable development goals and enhancing climate resilience through the promotion of renewable energy, sustainable agriculture, and resource conservation efforts. The Gambia is actively working towards reducing environmental degradation, safeguarding biodiversity, and maintaining a healthy environment, with the National Environment Agency actively monitoring and enforcing regulations to support these objectives.

Q3) What are your hopes for the future in terms of addressing environmental issues in the Gambia through global policy frameworks?

First respondent:

Green Up Gambia's objectives revolve around fostering community engagement and grassroots initiatives that align with global policy frameworks to address environmental issues with international standards and best practices in mind. By prioritizing public awareness and education, we believe that empowering individuals will facilitate positive change and enable them to proactively pursue sustainable practices. Our focus is on enhancing community and environmental well-being through the promotion of sustainable agriculture, effective waste management, and the adoption of renewable energy solutions. Looking towards a promising future, our commitment lies in collaborating with both local and international partners to cultivate a more resilient and environmentally conscious Gambia.

Second respondent:

Green Up Gambia is dedicated to advancing sustainable development, protecting biodiversity, and enhancing climate resilience to address environmental issues in The Gambia within the framework of international policies. The organisation aims to strengthen its ability to implement environmental policies consistent with global frameworks such as the Sustainable Development Goals and the Paris Agreement through increased collaboration with international partners. Working closely with stakeholders, Green Up Gambia is committed to realising its vision of a greener and healthier Gambia for future generations.

In an interview, a representative highlighted the importance of community engagement and grassroots initiatives in promoting ecological awareness and sustainable practices. The focus on waste management, renewable energy, and sustainable agriculture underscores the organisation's holistic approach to environmental challenges. Collaboration with domestic and foreign partners is essential to building a more resilient and environmentally conscious nation. Another respondent emphasized the significance of sustainable development, biodiversity protection, and climate resilience to tackle environmental concerns in The Gambia through international policy frameworks. The goal is to align environmental policies with global standards and strengthen partnerships with international entities. Both perspectives underscore a shared commitment to leveraging international policy frameworks to drive sustainable solutions and create a more environmentally friendly future for The Gambia.

Objective

2) To assess the implementation and effectiveness of climate change policies in addressing environmental degradation in The Gambia

Q1) How effective do you believe this national climate policies have been in addressing environmental degradation?

First respondent:

An interviewee from the Ministry of Environment highlighted the intertwined nature of climate change policies and environmental deterioration. The EU-funded national climate change initiatives aimed to address climate challenges with a significant budget and were completed in 2016. Key focus areas included new governance structures, the creation of a National Climate Change Secretariat, and the implementation of a National Climate Change Fund policy. Coordination through the National Climate Change Secretariat and funding allocation from the Climate Change Fund Policy are vital for climate-related efforts in The Gambia. The importance of comprehensive policies, international cooperation, and financial support was stressed by respondents, emphasizing the need for coordinated action to combat climate change and environmental degradation. EU financing, the National Climate Change Secretariat and the Climate Change Fund policy play crucial roles in achieving effective climate action in The Gambia.

Q2) How have local communities in The Gambia been involved in the implementation of national climate policies to combat environmental degradation?

First respondent:

Local communities play a crucial role in national climate policy implementation to combat environmental degradation. One key initiative is the \$25 million Ecosystem-Based Adaptation (EBA) project, which comprises three components. Firstly, support is provided to farmers in implementing nature-based solutions for agricultural management, such as mangroves and combating deforestation to prevent land degradation. Secondly, efforts are made to enhance market access for hundreds of local communities, offering training on sustainable farming practices and responsible crop harvesting. Thirdly, institutional support and capacity building are provided through the establishment of new institutions, like multipurpose centres in Nyakoi and

Brikamaba, along with technical assistance and training for local actors on integrating ecosystem-based approaches into climate adaptation strategies. The Rural Integration Climate Change Adaptation Project is another initiative that offers farmers financial support through microinsurance.

Second respondent:

The second respondent highlighted that most initiatives in the programme are geared towards building resilience at the community level, with active involvement from local communities.

Third respondent:

The active involvement of local communities in national climate policies is crucial as it ensures tailored, context-specific solutions based on local knowledge. This participation fosters ownership, empowerment, and accountability, leading to greater commitment to sustainability. Additionally, engaging communities builds resilience, promotes collaboration with organisations, and supports sustainable development for long-term environmental and economic benefits.

Q3) How do you assess the level of coordination and collaboration between government agencies and stakeholders in implementing national climate policies to combat environmental degradation?

First respondent:

An official from NEA highlighted that individuals seeking to implement their ideas for climate change policies often face resistance when there is a lack of political will, making it challenging to garner cooperation for their implementation. The preference for personalised policies can also present difficulties in coordination. Additionally, organisations frequently complete projects without effectively engaging stakeholders in collaborative efforts.

Objective

3: To investigate changes in environmental degradation over time in response to global policy interventions in The Gambia

Q1) How have these global policies and interventions impacted environmental degradation in The Gambia over time?

First respondent: through phone

According to an academic with expertise in environmental sciences, the discipline has helped develop a number of strategies and policies that guide our economy towards green growth.

Second respondent:

Global policies and interventions have significantly impacted addressing environmental degradation in The Gambia by focusing on climate change adaptation and mitigation. Through the implementation of international policies and actions, The Gambia has successfully tackled environmental degradation. Improved management of water resources, advancements in agricultural practices, and reductions in greenhouse gas emissions have been accomplished through the National Adaptation Plan, Climate Change Policy, and support from the Green Climate Fund. The integration of renewable energy sources has been instrumental in lowering emissions and improving energy security, as detailed in the National Renewable Energy Plan.

These measures are crucial in advancing a sustainable future for both the environment and its inhabitants.

Q2) Has there been any notable improvement in environmental degradation in The Gambia as a result of global policy interventions? If so, can you provide specific examples?

First respondent:

An official from NEA highlighted that land degradation in The Gambia is continuing to worsen each year, despite efforts from restoration projects and smart agriculture practices. The country is still experiencing large-scale deforestation, with activities such as charcoal production, forest conversion for agriculture, and the expansion of estate development being major contributing factors.

Second respondent:

The adoption of sustainable land management techniques represents a significant step forward in addressing the environmental degradation facing The Gambia as a result of international policy initiatives. As a member of the United Nations Convention to Combat Desertification (UNCCD), The Gambia has committed to utilising sustainable land management practices to combat land degradation and desertification. A prime example of this commitment is The Great Green Wall Initiative, a pan-African endeavour aimed at halting land degradation and desertification in the Sahel region, which includes The Gambia. This initiative involves tree planting and the implementation of sustainable land management methods to enhance soil fertility and restore damaged land. Additionally, The Gambia has taken strides in enhancing its conservation efforts by establishing national parks and protected areas. For instance, the creation of the River Gambia National Park serves to safeguard the biodiversity of the River Gambia and its surrounding ecosystems. While these global policy interventions have played crucial roles, there remains additional work to be undertaken towards the preservation of The Gambia's environment.

Q3) Are there any specific indicators or data that have been used to tackle changes in environmental degradation in response to global policy interventions? If so, what are they?

First respondent:

In examining changes in environmental degradation in response to global policy initiatives, we explored the utilisation of various data and indicators as a means of monitoring environmental deterioration. During interviews with a government representative and an environmental studies scholar at The Gambia University, it was revealed that environmental degradation is monitored through a range of worldwide policy initiatives. Key indicators include CO₂ emissions, global temperature trends, biodiversity loss, air and water quality, deforestation rates, and the Sustainable Development Goals (SDGs) set forth by the United Nations. Monitoring stations for temperature provide essential data on the increase in global temperatures, while sources of CO₂ emissions, such as energy production, transportation, and deforestation, are closely monitored. Biodiversity loss is assessed through factors like population declines, habitat loss, and rates of species extinction. Air and water quality are monitored by measuring pollution levels, water contamination, and access to clean drinking water.

Deforestation rates in critical ecosystems like the Amazon rainforest are tracked to gauge the extent of habitat destruction. Additionally, a variety of indicators and data sources are employed to monitor progress towards the 17 Sustainable Development Goals (SDGs) established by the UN, including goals related to clean energy, sustainable cities, and life on land and underwater. These indicators and statistics play a crucial role in evaluating the effectiveness of global policy initiatives aimed at mitigating environmental degradation and promoting sustainability.

Discussion of Findings

The impact of international climate change policies and efforts on environmental degradation in The Gambia reveals a nuanced interplay of successes and challenges. The National Climate Change Policy and the Long-Term Climate-Neutral Development Strategy (LTS) represent significant strides in the development of national climate policies. However, issues such as inadequate enforcement mechanisms, lack of political commitment, and institutional shortcomings cast doubt on the efficacy of these initiatives. Similar challenges identified in studies conducted in neighbouring countries like Senegal and Nigeria underscore the common hurdles faced in the implementation of environmental legislation. For example, Nwankwo et al. emphasized that Nigeria's climate policy frameworks suffered from limited funding and a lack of agency coordination, despite their existence [10]. Inadequate financial resources impeded the implementation of critical climate change initiatives, while the fragmented nature of government agencies responsible for overseeing these policies further weakened their effectiveness. The combination of insufficient funding and poor coordination posed significant barriers to making meaningful progress in addressing environmental degradation and climate change in Nigeria.

In contrast, research in Mali suggests that combining local governance with climate policy has the potential to yield greater benefits (Diallo et al., 2020). The government of Mali's focus on community participation and capacity building has enhanced the effectiveness of local adaptation strategies. This experience implies that The Gambia could enhance its climate initiatives by granting more authority to local entities and implementing decentralised decision-making processes. The Gambia's climate policy has prioritised community engagement in climate actions, notably through the Ecosystem-Based Adaptation (EBA) project. This initiative signifies a positive shift towards involving communities in environmental management, as it improves farmers' access to markets and provides institutional support. However, a lack of public awareness and understanding of climate issues continues to hinder the full potential of community engagement efforts.

Research conducted in South Asia, particularly in Bangladesh, has highlighted the positive impact of community-led initiatives in enhancing resilience to climate change. For instance, initiatives that integrate modern agricultural techniques with traditional knowledge have been shown to improve agricultural practices and promote biodiversity (Mastrorillo et al., 2016). This underscores the importance for The Gambia to enhance its public education campaigns and integrate indigenous knowledge into its climate adaptation strategies. The influence of global

frameworks such as the Sustainable Development Goals (SDGs), Convention on Biological Diversity (CBD), and United Nations Framework Convention on Climate Change (UNFCCC) on The Gambia's climate policy has been substantial. These frameworks have facilitated access to resources and knowledge on climate change, enabling the government to formulate robust climate policies.

However, challenges regarding the sustainability and long-term commitment to these initiatives arise from the dependence on foreign funding, such as the €3.6 billion from the Global Climate Change Alliance (GCAA). Literature from diverse contexts highlights the effectiveness of international frameworks in addressing environmental degradation. For instance, a study on SDG implementation in Senegal emphasized the importance of aligning global objectives with local conditions and involving key stakeholders for significant progress. This suggests that in addition to aligning its policies with international frameworks, The Gambia should ensure their relevance to the local context and garner support from key stakeholders.

Several theoretical frameworks, such as the Vulnerability, Impact, and Adaptation Framework and Resilience Theory, can be utilised to analyse the data. The Vulnerability framework emphasizes the importance of adaptable solutions and sheds light on how existing policies fall short of addressing the underlying causes of environmental degradation. The study identifies a discrepancy between policy formulation and implementation, noting persistent challenges such as deforestation and soil erosion despite the enactment of the National Climate Change Policy and the Gambia Action Plan. This is consistent with the findings of Adger et al. who underscore the necessity of sensitivity to local contexts and the specificity of adaptation strategies for effectiveness [11]. Resilience Theory also underscores the significance of building adaptive capacity within communities.

The research reveals that, despite progress in policy development, local communities in The Gambia still struggle with resilience due to resource constraints and insufficient institutional support. This aligns with evidence from various disciplines, emphasizing the value of enhancing adaptive capacity through resilience-building efforts and community engagement. The implications of these findings are crucial for the future environmental governance of The Gambia. Policymakers have highlighted the necessity of a responsive national land strategy to address land degradation effectively. Scholars such as Beddington et al. have recommended the adoption of integrated land management approaches that consider ecological, social, and economic factors to enhance resilience to climate change impacts. This recommendation is echoed in the research findings.

The research uncovers a paradox where, despite some advancement facilitated by global frameworks such as the Sustainable Development Goals (SDGs) and the United Nations Framework Convention on Climate Change (UNFCCC), their impact on regional practices remains limited. This is concerning given the substantial funding from the European Union under the Global Climate Change Alliance (GCCA), which underscores the importance of financial support and successful implementation strategies involving local communities.

The study's limitations include its narrow focus on The Gambia and reliance on subjective respondent perspectives, which may not capture the full complexity of the country's environmental degradation. Additionally, a concentration on specific policies could obscure broader systemic issues influencing their effectiveness. Nonetheless, the findings are significant as they could influence future policy decisions. By highlighting gaps in current approaches and advocating for increased community engagement, stakeholders can better align their actions with available resources and requirements, as suggested by the study.

In summary, The Gambia has made notable strides in addressing environmental degradation with the support of domestic and global organizations. However, substantial obstacles persist. To advance sustainable environmental practices and enhance the efficacy of its climate efforts, The Gambia can benefit from increased community involvement and insights from the experiences of other nations [12].

Conclusion

The Gambia faces challenges in addressing environmental degradation and climate change policy, despite global efforts. The study highlights the need for community and stakeholder participation in climate change policies and studies on regional and global initiatives. The Gambia must improve public education campaigns, include indigenous knowledge in adaptation plans, and develop local expertise for long-term sustainability. The vulnerability, impact, and adaptation framework and resilience theory can be used to develop effective adaptation methods. By combining these theoretical methods, The Gambia can promote sustainable environmental practices and increase community resilience to climate change consequences [13-15].

Recommendations

Based on the research findings and conclusions regarding the impact of international climate change policies on environmental degradation in The Gambia, the following recommendations are proposed:

- The Gambia must prioritise community engagement in the development and implementation of climate policies. This can be achieved through public awareness campaigns, capacity-building programmes, and incorporating indigenous knowledge in adaptation strategies.
- Strengthening governance and coordination in The Gambia is essential for the effective execution of climate policies. This involves addressing institutional weaknesses, improving enforcement mechanisms, and fostering political commitment.
- The Gambia should leverage local resources and expertise to drive its climate initiatives, moving away from dependence on foreign funding and focusing on long-term sustainability.
- Adopting theoretical frameworks such as vulnerability, impact, adaptation, and resilience will enable The Gambia to develop tailored adaptive strategies that address specific environmental challenges within the country.
- The Gambia can learn from successful climate action models, such as Mali's integration of local governance and Senegal's community engagement, to implement climate policies effectively.
- Enhancing institutional capacity in The Gambia through training and technical support is vital for the enforcement of

environmental policies, drawing on successful approaches from organizations like the UNEP and the World Bank.

- The Gambia should enhance international cooperation through knowledge sharing and collaboration, following the example of Nigeria's successful partnerships with UNEP to combat environmental degradation.

By implementing these sustainable practices, The Gambia can play a significant role in combating environmental degradation and climate change, contributing to global efforts for a sustainable future.

Declarations:

Ethical Approval

The study received ethical approval from the University of The Gambia's School of Graduate Research Ethics Committee, ensuring participants were informed of the research purpose and consented to it, and confidentiality was maintained. Participants had the freedom to withdraw at any time, and identifying information was omitted. Permission to audio record was obtained, and participants had the right to request the audio recorder be disabled.

Conflict of Interest

The authors, Horeja Jobe and Dr Nelson Goldpin Akpowoghaha, declare no conflict of interest in their thesis manuscript "Analysing the Impact of International Climate Change Policies on Environmental Degradation in The Gambia".

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Availability of Data and Materials

The thesis manuscript offers easy access to all data and materials, promoting transparency and reproducibility and facilitating further analysis and verification of the study's findings upon request.

Authors' Contributions

Horeja Jobe and Dr Nelson Goldpin Akpowoghaha contributed significantly to the thesis manuscript, enhancing understanding of the link between international policies, climate change, and environmental degradation in The Gambia.

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