TOWARDS GENDERED IMPACT OF CLIMATE CHANGE ON WEST AFRICA'S ECONOMIC DEVELOPMENT: CHALLENGES AND PROSPECTS

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Abstract

Research Problem: *Climate change poses a major threat to sustainable economic development in West Africa, yet its effects are experienced unevenly across gender groups, Women, who dominate smallholder agriculture, informal trade, and household resource management, face disproportionate vulnerabilities because of unequal access to land, finance, technology, education, and decision-making. This paper analyzes how gender inequalities impede inclusive economic advancement and climate-change resilience.*

Methods/Theory: *The study adopts a qualitative descriptive research descriptive research design based on secondary data obtained from scholarly publications, policy documents, and institutional reports. It is anchored on the ecofeminism, feminist political economy and sustainable livelihoods framework, to explain the intersection between climate change, gender relations, and economic development.*

Results: *Findings reveal that climate change intensifies existing gender disparities by reducing agricultural productivity, worsening food and water insecurity, increasing unpaid care responsibilities, heightening health risks, and weakening women's adaptive capacity. Structural barriers, including insecure land tenure, limited financial inclusion, inadequate education, and weak participation in climate governance, further constrain women's contribution to regional development. Nevertheless, women demonstrate resilience through community-based adaptation, sustainable livelihood practices, and local leadership initiatives.*

Conclusion: *Gender-responsive climate action is essential for strengthening resilience, promoting women's economic participation, and achieving sustainable and inclusive economic development in West Africa.*

Key Contribution to Knowledge and Recommendation: *The paper demonstrates that gender inequality constitutes a critical pathway*

through which climate change constrains regional economic development. It recommends mainstreaming gender into climate policies, strengthening women's land rights, expanding access to finance, education, and climate smart technologies, and promoting inclusive governance alongside community driven adaptation initiatives for sustainable development.

Section 1: Introduction

Climate change stands as one of the greatest challenges of the 21st century, influencing economic growth, environmental stability, and social justice on a global scale. Its effects are particularly acute in Africa, a region marked by high vulnerability to climatic fluctuations and risky weather events (Childs, 2019). Growing temperatures and increasingly irregular rainfall patterns, largely linked to greenhouse gas emissions, intensify these challenges. According to the Intergovernmental Panel on Climate Change (IPCC, 2024), human activities have already contributed to approximately 1.1°C of warming compared to pre-industrial levels, with projections suggesting a further global rise of 0.5°C to 3.5°C by mid-century (Allen et al., 2018). Such shifts are expected to exacerbate weather unpredictability, reduce rainfall in certain regions, and heighten risks for livelihoods and sustainable development, particularly in resource-dependent economies.

While the economic consequences of climate change are far-reaching, one dimension that remains insufficiently addressed is its gendered impact. Women and men often face climate-related risks differently due to their distinct social roles, responsibilities, and access to resources. In many African contexts, women carry the primary responsibility for securing food, water, and household energy. They also play a central role in small-scale agriculture, a sector highly sensitive to climatic variability. Yet, systemic barriers such as restricted land ownership, limited credit contact, and inadequate information constrain women's ability to adapt effectively to environmental stressors. While scholars such as Buvinić et al. (2020), Azong and Kelso (2021), and Segnon et al. (2024) have examined gender and climate change in various African contexts, existing studies tend to focus on specific countries or sectors rather than providing a comprehensive regional analysis. Furthermore, much of the literature emphasizes women's vulnerability without adequately exploring their agency and adaptive capacity. The integration of feminist political economy, sustainable livelihoods, and ecofeminist perspectives into a single analytical framework for West Africa remains underdeveloped. This paper addresses these gaps by providing a comprehensive regional analysis that examines both the vulnerabilities and agency of women, integrating multiple theoretical perspectives, and offering policy recommendations for gender-responsive climate action in West Africa.

To address these gaps, the study pursues three objectives: (i) to examine how climate change disproportionately affects men and women in West Africa, particularly in relation to access to resources, livelihood opportunities, and economic participation; (ii) to analyze the structural, social, and institutional barriers that exacerbate women's vulnerability to climate impacts while limiting their contributions to sustainable economic development; and (iii) to identify gender-sensitive strategies and policy recommendations that can enhance resilience, promote inclusive adaptation, and support long-term economic growth in West Africa.

West Africa is one of the regions most vulnerable to climate change, facing recurrent droughts, floods, desertification, and rising

temperatures that threaten food security, livelihoods, and overall economic growth. While these impacts affect entire populations, they are not experienced evenly. Women, who make up the majority of smallholder farmers, informal traders, and providers of household sustenance, are disproportionately exposed to climate shocks. Their inadequate access to land, credit, technology, and decision-making structures reduces their adaptive capacity compared to men. Consequently, climate change does not only widen existing gender inequalities but also constrains women's economic contributions, thereby undermining regional development goals. Despite the centrality of women's roles in agriculture and informal economies the very sectors most affected by climate change policy responses across West African states often adopt gender-neutral frameworks. These approaches overlook the specific vulnerabilities and capacities of women, leading to incomplete strategies that fail to harness their full potential as agents of resilience and growth. The neglect of a gendered lens in climate development discourse results in missed opportunities for inclusive adaptation, sustainable economic transformation, and poverty reduction. Therefore, the problem this paper addresses is the insufficient understanding and integration of gender dimensions in examining the economic impacts of climate change in West Africa. Without deliberate efforts to analyze and respond to these dynamics, climate policies risk perpetuating structural inequalities, slowing economic progress, and leaving half of the region's population at the margins of development.

This paper examines in what way climate change disproportionately affects men and women in West Africa, particularly in relation to access to resources, livelihood opportunities, and economic participation. the differentiated effects of climate change on men and women in West Africa, with a particular focus on economic development. By highlighting gender-specific vulnerabilities and adaptation capacities, the study aims to analyze the structural, social, and institutional barriers that exacerbate women's vulnerability to climate impacts while limiting their contributions to sustainable economic development. It also aims to identify gender-sensitive strategies and policy recommendations that can enhance resilience, promote inclusive adaptation, and support long-term economic growth in West Africa. The following sections explore critical challenges including food insecurity, water scarcity, health burdens, and displacement while also evaluating policy responses that integrate gender perspectives into climate adaptation and development planning.

Section 2: Literature Review

Several empirical studies have examined the gendered impacts of climate change in West Africa. Buvinić et al. (2020) examined women's economic empowerment in West Africa, highlighting the structural barriers that limit women's participation in climate-sensitive sectors. Azong and Kelso (2021) investigated gender, ethnicity, and vulnerability to climate change in Cameroon, demonstrating how intersecting identities shape climate experiences. Segnon et al. (2024) conducted a gender vulnerability assessment in semi-arid areas of Mali, providing empirical evidence of differentiated vulnerabilities. However, these studies tend to focus on specific countries or sectors rather than providing a comprehensive regional analysis. The literature gap that this study addresses is the insufficient integration of feminist political economy, sustainable livelihoods, and ecofeminist perspectives into a comprehensive regional analysis of gendered climate impacts in West Africa."

Across these studies, a consistent finding emerges: women in West Africa face disproportionate climate vulnerabilities due to structural inequalities in access to land,

finance, technology, and decision-making. However, studies diverge on the extent to which women's agency and adaptive capacity are recognized. While some studies emphasized vulnerability, others highlight women's resilience and leadership in community-based adaptation. This study contributes to this debate by examining both the vulnerabilities and agency of women, and by proposing policy recommendations that build on women's existing capacities."

Section 3: Materials and Methods

This paper adopts a qualitative, descriptive research design based primarily on secondary sources. The purpose of this approach is to analyze, interpret, and synthesize existing knowledge related to the research problem. Secondary data is particularly useful for developing a comprehensive understanding of the topic, identifying patterns and trends, and situating the research within established academic discourse. The paper draws upon secondary data collected from a variety of reliable and credible sources. Academic journals, newspapers, magazines, unpublished papers, online resources, official publications. Sources were selected based on the following criteria: (i) publication date from 2000 to 2025 to capture both foundational and contemporary scholarship; (ii) geographic focus on West Africa or relevant comparative contexts; (iii) thematic relevance to climate change, gender, economic development, or adaptation; (iv) publication in peer-reviewed journals, institutional reports (IPCC, UNFCCC, AfDB), government documents, or scholarly books; (v) availability of English-language versions; (vi) methodological rigour, with preference for studies employing systematic data collection and clear analytical frameworks. “Thematic analysis was conducted using the following steps: (i) familiarization with the data through repeated reading of selected sources; (ii) generation of initial codes based on recurring themes (e.g., agricultural productivity, food security, water scarcity, health impacts, migration, adaptation strategies); (iii) grouping codes into broader analytical categories corresponding to the study's objectives: gendered vulnerabilities, systemic barriers, adaptation capacities, and policy responses; (iv) reviewing themes against the data to ensure consistency and comprehensiveness; (v) defining and naming themes; and (vi) producing the narrative analysis presented in this paper."

Summary Table of Data Source:

Source Type	Number of Sources	Key Themes Covered
Peer Reviewed Journal Articles	18	Gender and climate change, adaptation, vulnerability
Institutional Reports (IPCC, UNFCCC, AfDB, WHO)	10	Climate projections, policy frameworks, health impacts
Books and Book Chapters	6	Theoretical frameworks, historical context
Policy Documents and Working Papers	5	Gender policies, adaptation strategies
Online Resources and News Media	4	Contemporary examples, recent developments
Total	43	

Analytical conclusions were derived through a process of triangulation: Findings from academic studies were compared with institutional reports and policy documents to verify consistency. Claims about climate impacts were cross-referenced with IPCC projections and country-level data. Where sources diverged, the paper presents the range of interpretations and explains the basis for the preferred conclusion.

Section 4: Theoretical Framework

This paper adopts a multi-theoretical approach by drawing on feminist political economy, the sustainable livelihoods framework, and ecofeminism. Together, these perspectives provide complementary insights into how climate change intersects with gender relations and shapes economic development in West Africa. The feminist political economy perspective foregrounds how structural inequalities particularly in access to land, credit, labor markets, and political representation produce differentiated economic outcomes for men and women. In West Africa, women are disproportionately focused in climate-sensitive sectors such as subsistence agriculture, informal trading, and water collection. Their restricted access to productive assets means that climate-related shocks deepen existing inequalities and hinder regional economic growth by limiting the productive potential of women. This framework is useful for exposing the institutional and structural constraints that underpin gendered vulnerability. The sustainable livelihoods framework (Chambers & Conway, 1992) provides an asset-based lens for analyzing how households cope with and adapt to external stressors. Climate change directly erodes critical livelihood assets such as natural resources, infrastructure, and financial capital through recurrent droughts, floods, and environmental degradation. When these stresses are filtered through gendered power relations, women often face greater disadvantages in securing resources and opportunities. The framework highlights how gendered restrictions in access to livelihood assets undermine both household resilience and broader economic stability.

Ecofeminism extends the analysis by linking environmental degradation to gender oppression. It emphasizes that women's everyday roles in food production, water management, and natural resource use create both heightened exposure to ecological stress and unique capacities for leading adaptation strategies. In the West African context, ecofeminism highlights how women shoulder disproportionate burdens of climate impacts, while simultaneously underscoring their agency in advancing community-based, sustainable practices. By bringing these perspectives together, the paper avoids portraying women solely as passive victims. Instead, it frames them as active agents of adaptation and transformation. Feminist political economy exposes the structural barriers; the livelihoods framework situates gendered vulnerability at the household and community levels; and ecofeminism reveals the cultural and ecological dimensions of gender environment relations. Collectively, these frameworks provide a robust foundation for identifying gender-sensitive policies that strengthen resilience and promote inclusive economic development in West Africa.

While feminist political economy, the sustainable livelihoods framework, and ecofeminism provide complementary insights, each theory has limitations. Feminist political economy, while exposing structural inequalities, sometimes underestimates cultural and ecological dimensions of gender-environment relations. The sustainable livelihoods framework, while useful for analyzing asset- based adaptation, can be overly technocratic and may overlook power dynamics. Ecofeminism, while highlighting the link between environmental degradation

and gender oppression, has been criticized for essentializing women's relationship with nature. This paper addresses these limitations by integrating the three frameworks, recognizing that no single theory fully captures the complexity of gendered climate impacts. The combined framework allows for analysis of structural barriers (feminist political economy), household-level adaptation (sustainable livelihoods), and cultural-ecological dimensions (ecofeminism).

Alternative theoretical frameworks such as intersectionality theory would emphasise the interaction between gender and other social categories such as class, ethnicity, and age. Resilience theory would focus on the capacity of systems to absorb shocks and recover. While these frameworks offer valuable insights, this paper privileges feminist political economy, sustainable livelihoods, and ecofeminism because they directly address the intersection of gender, environment and economic development that is central to the research problem. This paper proposes that the integration of feminist political economy, sustainable livelihoods, and ecofeminism provides a robust framework for analysing gendered climate impacts in West Africa. The combined framework reveals that gender inequality is not merely a social issue but a critical pathway through which climate change constrains regional economic development.

By highlighting both structural barriers and women's agency, the framework contributes to a more nuanced understanding of gender-environment-development relations.

Section 5: Overview of Climate Change Realities in West Africa

Climate change, driven largely by human-induced greenhouse gas emissions, represents one of the greatest threats to sustainable development in the 21st century. Although West Africa contributes only a small fraction to global emissions, its geographical characteristics and limited adaptive capacity make it disproportionately weak (UNFCCC, 2021; Teye & Nikoi, 2022). The region's dependence on rain-fed agriculture and natural resources means that rising temperatures, erratic rainfall, and extreme weather events directly threaten livelihoods, food systems, and socio-economic stability.

One of the most visible challenges in West Africa is the increasing frequency of climate extremes such as droughts, floods, and heat waves. These shocks disrupt agricultural production, reduce crop yields, and damage livestock productivity, placing millions at risk of food insecurity and malnutrition (Hansen, 2002; IPCC, 2014, cited in Partey et al., 2016). The Intergovernmental Panel on Climate Change projects that by 2050, shorter growing seasons and more intense droughts could reduce cereal yields by up to 40%, with the expansion of arid and semi-arid lands by as much as 8%. For smallholder farmers who form the majority of the agricultural workforce weak access to irrigation, credit, and improved seeds makes adaptation particularly difficult (Schraven et al., 2020).

Economic impacts are already evident. The African Development Bank (2023) notes that West Africa's GDP growth slowed from 4.4% in 2021 to 3.8% in 2022, with climate shocks compounding global crises such as COVID-19 and the war in Ukraine. Although moderate recovery is projected in the coming years, agriculture-driven economies remain highly exposed to weather variability, threatening long-term growth prospects.

Beyond agriculture, climate change is undermining water resources, energy production, and public health. Hydropower generation, a critical energy source for many West African countries, is at risk from declining rainfall and altered river flows. Coastal communities face rising sea levels and erosion, endangering infrastructure, fisheries, and tourism. Health systems are under

growing strain as shifting temperatures and precipitation patterns increase the spread of vector- and waterborne diseases. The 2024 cholera outbreaks across 30 Nigerian states, linked to flooding and inadequate sanitation, illustrate the health and economic toll of climate-related disease (Otu, 2024; WHO, 2024).

Gendered impacts compound these vulnerabilities. Women, who are disproportionately responsible for securing food, water, and household energy, face heavier adaptation burdens. Limited access to land, finance, and agricultural inputs restricts their resilience, while high fertility rates and unpaid care responsibilities further reduce their mobility and economic participation (Buvinić et al., 2020). Without gender-responsive adaptation strategies, climate modification threatens to deepen current disparities and undermine inclusive development.

In sum, West Africa's minimal contribution to global warming belies the scale of the risks it faces. Climate change threatens to reverse fragile development gains by destabilizing agriculture, health, infrastructure, and gender equity. Addressing these challenges requires not only technical solutions such as climate-resilient agriculture, improved water management, and health surveillance systems but also structural reforms to enhance adaptive capacity, reduce inequality, and strengthen regional cooperation.

Viewed through the lens of feminist political economy, the climate change realities described above are not gender-neutral. The economic impacts of climate change are mediated by structural inequalities that disadvantage women. As the sustainable livelihoods framework highlights, climate change erodes critical livelihoods assets such as natural resources and financial capital, but women face greater disadvantages in securing these assts due to restricted access to land, credit, and information.

While the overview presents important data on climate impacts, it is important to recognize that these impacts are experienced differently by men and women. Women's roles in agriculture, water collection, and household management mean that they bear a disproportionate burden of climate stressors. The following sections will examine theses gendered dimensions in greater detail.

Section 6: Gendered Dimensions of Climate Change in West Africa and Specific Challenges Faced by Women

Gender refers not simply to biological differences between men and women but to the socially and culturally constructed roles, expectations, and responsibilities that societies assign to them (Akpabio, 2005). These roles emerge from repeated communal practices and are shaped by historical, economic, and cultural contexts. In many African societies, men have traditionally been viewed as protectors and providers, responsible for meeting financial obligations and ensuring security, while women have been cast as caregivers and household managers. During the pre-colonial era, these roles were often complementary; however, colonial institutions reinforced patriarchal norms that marginalized women and restricted their admittance to resources and policymaking power. Contemporary shifts, including women's increasing access to education and economic prospects reflect ongoing struggles to challenge these structural inequalities (Attricki & Duhoe, 2022).

In West Africa, gender roles continue to influence socio-economic responsibilities and access to resources. Women are heavily engaged in household management, caregiving, and subsistence farming, yet these responsibilities limit their opportunities in formal labor markets, education, and

healthcare. Men, conversely, are often expected to serve as breadwinners and decision-makers, which perpetuates unequal power dynamics. These norms also shape access to land, inheritance rights, and financial services, where women frequently encounter systemic barriers that constrain their entrepreneurial capacity and participation in economic development (Chikuruwo, 2024; Baskin, 2022). The Lake Chad Basin illustrates these dynamics vividly. Although women play critical roles in agriculture, fishing, and sustaining local traditions, their access to land, credit, and markets remains restricted. As a result, they often depend on male relatives for farming rights and are excluded from policymaking at family and community levels (Sanusi, 2018; Chama & Oyibo, 2019, cited in Chikuruwo, 2024).

These entrenched gender inequalities intersect with climate change impacts Men's occupations in agriculture, forestry, and fishing expose them to risks from droughts, floods, and erratic rainfall. Women, meanwhile, are disproportionately burdened because they are primarily responsible for water, food, and fuel collection, tasks made more difficult by environmental stress. Limited access to land tenure, finance, and information compounds women's vulnerability, while restrictive gender norms further reduce their ability to adapt effectively (UNFCCC, 2022). Intersectionality provides a critical lens for understanding these challenges. Gender interacts with other social categories such as class, ethnicity, geography, and age to shape experiences of climate change. For example, rural women from marginalized ethnic groups may face compounded disadvantages, lacking access to both resources and representation in decision-making processes. Elderly women in remote areas may experience vulnerabilities distinct from those of younger urban men. These overlapping factors influence access to resources, resilience capacities, and adaptive responses (Ahmed et al., 2016; Huyer et al., 2021, 2024; Tantoh et al., 2021; Elias et al., 2024, cited in Segon et al., 2024).

Recognizing these intersecting vulnerabilities is important for designing inclusive adaptation strategies. Policies that consider only gender differences without accounting for other dimensions of inequality risk overlooking the needs of the most marginalized groups. By integrating intersectionality into climate adaptation planning, governments and development actors can promote more equitable and effective responses to climate change in West Africa.

Women in West Africa encounter a extensive range of challenges that intersect with socio-economic responsibilities and culturally defined gender roles. These challenges are further compounded by climate change, which heightens existing inequalities and constrains economic development in the region. A major obstacle is unequal access to education and healthcare. Although progress has been made, disparities remain significant, especially in rural areas where poverty, early marriage, and cultural expectations limit girls' school attendance and increase dropout rates. Limited education restricts women's participation in decision-making and curtails their economic opportunities. Similarly, poor access to healthcare services undermines women's well-being and productivity. Economic empowerment is another critical concern. Women often lack secure land rights, financial resources, and employment opportunities, which hinders their ability to achieve financial independence. As agricultural productivity declines due to climate variability, women farmers are particularly at risk because their livelihoods depend heavily on natural resources but their access to credit, inputs, and markets is constrained (Azong & Kelso,2021; Adeola et al., 2023). Reliance on men for financial

support reinforces patriarchal structures and perpetuates poverty cycles.

Gender-based violence further undermines women's social and economic participation. Domestic abuse, sexual harassment, and harmful practices restrict women's mobility and agency, while also producing long-term psychological and physical harm. These forms of violence limit women's opportunities to contribute fully to community and national development. Food insecurity presents another dimension of vulnerability. Although women are central to household food production and preparation, their limited access to land and productive resources restricts their capacity to provide for their families. In countries such as Nigeria, where land tenure systems favor men, women are frequently excluded from land ownership and inheritance rights (Amaonwu, 2024). This exclusion, combined with unequal power relations in households, often results in women and children receiving less nutritious food compared to men. Despite these barriers, women remain vital contributors to West African agriculture and food systems. They are heavily involved in planting, harvesting, and processing crops and account for a substantial proportion of farmers and entrepreneurs. Their resilience and contributions are recognized in studies showing that women-headed households are often more food-secure than male-headed ones, provided they have access to resources and land titles (Egal et al., 2023, cited in Amaonwu, 2024). However, their productivity is undermined by limited market access, discriminatory norms, and weak representation in decision-making structures.

Climate change intensifies these challenges. Rising temperatures, erratic rainfall, and natural disasters disrupt agricultural production and food supply chains, disproportionately affecting women who are heavily dependent on subsistence farming and natural resource management. Without targeted support, women's adaptive capacity remains limited, increasing their vulnerability to climate-related risks (Adeola et al., 2023). Overall, women's contributions to agriculture and food security are indispensable, yet systemic barriers prevent them from reaching their full potential. Addressing these challenges requires policies that promote gender equality, expand access to education and healthcare, strengthen women's land and property rights, and support female farmers through credit, technology, and market linkages. Empowering women in these ways not only enhances resilience to climate change but also advances inclusive and sustainable economic development in West Africa.

The gendered dimensions identified above can be understood through the lens of ecofeminism, which emphasizes the link between environmental degradation and gender oppression. Women's roles in food production, water management, and natural resource use create both heightened exposure to ecological stress and unique capacities for leading adaptation strategies. Feminist political economy exposes the structural barriers that constrain women's adaptive capacity, while the sustainable livelihoods framework situates gendered vulnerability at the household and community levels.

The challenges faced by women are interconnected. Unequal access to education limits economic opportunities, which in turn restricts access to financial resources and land rights. These constraints reduce women's adaptive capacity to climate change, leading to greater food insecurity health risks. Addressing these interconnected challenges requires comprehensive policy interventions.

Section 7: Impact of climate change on agricultural productivity and food security

Agriculture in West Africa is highly vulnerable to climate change, with rising temperatures, irregular rainfall, and frequent extreme weather events severely disrupting

food systems. Prolonged droughts, heat stress, and erratic precipitation directly reduce crop yields, heighten food shortages, and destabilize farmer incomes. In Senegal, for example, declining rainfall, rising average temperatures, and pressures on water and soil resources have already undermined agricultural productivity, threatening both livelihoods and national economic output (Faye, 2022). These challenges are compounded by existing pressures such as land degradation, erosion, and pest infestations, creating a fragile agricultural base that struggles to sustain growing populations.

Water scarcity is one of the most critical consequences of climate change in the region, affecting agriculture, domestic use, and public health. Rapid population growth, urbanization, and conservational stress are depleting reliable water supplies. Semi-arid and arid zones are particularly at risk, where access to safe drinking water and irrigation is limited. In Burkina Faso, studies project that rising demand will soon surpass available freshwater resources, threatening both rural and urban populations (WaterAid, 2021). Currently, over 40% of people in the region lack reliable drinking water, while sanitation services remain inaccessible to more than half of the population. Dependence on rivers, ponds, and other surface water sources often contaminated exacerbates risks of waterborne diseases.

Women bear a disproportionate burden in this context, as they are often responsible for collecting water. This chore consumes significant time and energy, limiting opportunities for education and economic advancement. At the same time, women play essential roles in community water management, contributing valuable knowledge and practices that can promote sustainable resource use.

The wellbeing implications of climate change in West Africa are profound. Expanding temperatures and shifting rainfall patterns fuel the spread of diseases such as malaria, cholera, and meningitis, excessively affecting weak groups such as women, children, and the elderly (Monday, 2019). Floods and droughts increase risks of waterborne infections and malnutrition, while extreme heat events have already resulted in fatalities in northern Nigeria (Nigerian Meteorological Agency, 2021; EM-DAT, 2023). Weak healthcare infrastructure, shortages of medical personnel, and financial barriers further compound these risks, especially in rural areas. As a result, preventable diseases and climate-sensitive illnesses remain major drivers of mortality and inequality across the region.

Environmental stressors such as drought, desertification, floods, and rising sea levels are forcing communities to migrate in search of safety and resources. Displacement places enormous strain on host communities by creating competition over land, food, and water, often heightening social tensions. Women face particular vulnerabilities in these contexts, including exposure to gender-based violence, loss of livelihood opportunities, and increased caregiving responsibilities. Yet, they also play a pivotal role in shaping household migration strategies, managing relocation logistics, and sustaining family welfare in new environments. Recognizing and supporting women's agency in migration dynamics is critical for building resilience and ensuring equitable adaptation strategies.

The impacts of climate change on agricultural productivity and food security can be understood through the sustainable livelihoods framework. Which highlights how climate change erodes critical livelihoods assets. Women's restricted access to land, credit, and technology means that they face greater disadvantages in adapting to climate stressors, reinforcing the inequalities identified by feminist political economy. Agricultural productivity declines lead to food insecurity,

which in turn contributes to health risks and displacement. Women bear a disproportionate burden in this chain of impacts, as they are responsible for household food provision and care giving. Addressing these interconnected challenges requires integrated policy responses.

Section 8: Systemic Barriers Exacerbating Gendered Impacts and Prospects for Addressing Gendered Impacts

Land tenure and property rights remain critical obstacles to women's empowerment in West Africa. Possession and control of land are largely concentrated in the hands of men, a reality reinforced by customary traditions and, in some cases, discriminatory legal frameworks. This marginalization restricts women's ability to farm productively, secure housing, and recover livelihoods after climate-induced displacement. The absence of secure land rights not only undermines their food security and economic independence but also deepens cycles of poverty and vulnerability.

Access to financial services is another significant barrier. Many women are unable to obtain loans, insurance, or credit because they lack collateral and face institutional discrimination. Without these resources, women struggle to start businesses, invest in agricultural production, or build financial security. The result is a persistent gap in economic participation and wealth accumulation between men and women.

These inequalities are further reflected in political and institutional spaces. Women remain underrepresented in policymaking bodies at local, national, and regional levels. Their limited participation weakens the integration of gender perspectives into climate policies, economic planning, and resource management. As a result, women's specific needs and experiences are frequently overlooked in policy design and implementation.

Education and access to information also reinforce disparities. Girls in many parts of West Africa face barriers to schooling, resulting in limited skills and knowledge compared to their male counterparts. The lack of gender-sensitive information particularly regarding climate change adaptation, land rights, and economic opportunities further sidelines women from leadership and resilience-building efforts. Without targeted interventions, these gaps restrict women's ability to fully contribute to community resilience and sustainable development.

Addressing these systemic barriers requires reforming land tenure systems, expanding access to credit and financial literacy, increasing women's participation in leadership roles, and ensuring equal educational opportunities. Equally important is the integration of gender-sensitive information into climate and development strategies. Recognizing women's roles as farmers, caregivers, and leaders is essential not only for equity but also for building resilient and sustainable societies in West Africa.

The integration of gender-sensitive policies into climate change version policies in West Africa offers significant potential to reduce inequalities and strengthen resilience. By applying a gender lens, policymakers and practitioners can design interventions that address the specific vulnerabilities of women, who are disproportionately affected by environmental stressors due to unequal access to resources, limited decision-making power, and entrenched social norms. When implemented effectively, gender-responsive initiatives can not only mitigate climate risks but also advance social justice and sustainable development.

One key benefit of such policies is the recognition of women's central role in household food security, natural resource management, and energy provision. Programs that enhance women's access to climate-smart

agricultural practices, financial resources, and clean energy solutions have shown promise in boosting both resilience and livelihoods. For instance, providing women farmers with training in drought-resistant crops or expanding access to solar technologies can simultaneously reduce vulnerability and promote economic empowerment. Similarly, community-based adaptation projects that elevate women into leadership roles demonstrate how inclusive participation improves both governance and outcomes.

However, while these initiatives highlight the opportunities of gender-sensitive approaches, critical challenges remain. Many interventions risk becoming tokenistic, with women included in planning committees but excluded from real decision-making power. Structural barriers such as discriminatory inheritance laws, weak enforcement of land rights, and limited access to financial services continue to restrict women's agency. Furthermore, donor-driven programs often face sustainability issues once external funding ends, raising questions about long-term viability.

Another challenge lies in the uneven distribution of benefits. Education and training programs, though vital, frequently fail to reach rural women who lack literacy or mobility, leaving them excluded from opportunities to build adaptive capacity. Likewise, leadership initiatives often empower a small number of elite women while neglecting broader systemic change. Without addressing these shortcomings, gender-sensitive policies risk reinforcing rather than dismantling existing inequalities.

Going forward, successful climate adaptation in West Africa must balance policy ambition with practical realities. Governments should prioritize the enforcement of gender-equality legislation, expand rural women's access to credit and land, and ensure that adaptation programs move beyond symbolic inclusion. Community-driven and participatory approaches remain essential but must be adequately funded and designed to reflect local contexts rather than externally imposed models. Importantly, monitoring and evaluation mechanisms should measure not only women's participation rates but also their actual influence over decision-making and control of resources.

In conclusion, gender-sensitive climate policies and programs in West Africa hold great promise for advancing both equity and resilience. Yet, to translate potential into impact, stakeholders must confront structural inequalities, address implementation gaps, and ensure sustainability. By combining inclusive approaches with systemic reforms, West Africa can move toward a more equitable, climate-resilient future in which women are not just participants but central actors in shaping adaptation strategies.

The following recommendations are offered, prioritized by urgency:

1. Immediate: strengthen women's land and property rights through legal reforms and enforcement.
2. Short-term: expand women's access to financial services and climate-smart technologies.
3. Medium-term: integrate gender perspectives into national climate policies and development plans; and
4. Long-term: invest in women's education and leadership development to ensure their participation in decision-making processes.

Implementing gender-sensitive policies faces significant challenges, including political resistance, limited institutional capacity, and inadequate funding. Overcoming these challenges requires political will, sustained

investment, and effective monitoring and evaluation mechanisms.

Section 9: Conclusion

In order to mitigate the gendered impact of climate change on economic development in West Africa, there is need for urgent and harmonized efforts from governments, international organizations, and civil society to mitigate the gendered impacts of climate change and promote sustainable economic growth in West Africa. Gender-sensitive policies and programs are required to address the challenges faced by women in the region. The Paris Agreement and Agenda 2030 for Sustainable Development both emphasize the importance of gender equality and the well-being of women. Adding comprehensive gender initiatives within national climate actions is imperative for West African nations to reposition beyond gender policy disparities. Climate change exacerbates existing gender gaps, particularly in areas such as food insecurity, water collection, access to healthcare, displacement, migration, and financial access. These challenges climax the importance of integrating gender perspectives into climate change adaptation and mitigation strategies. Furthermore, it is significant to note that education as a systemic barrier perpetuates gendered impacts of climate change in West Africa. Lack of access to climate-related information and education hinders women's ability to adapt to changing environmental conditions and participate in decision-making processes. Addressing this barrier requires targeted efforts to provide women with the information and skills necessary to cope with climate change effects effectively.

Also, addressing gendered impacts in West Africa, would involve the implementation of gender-sensitive policies that endow women economically, socially, and politically. Investing in women's education, ensuring their participation in climate change adaptation initiatives, and promoting gender equality in financial access and decision-making. They are essential steps towards building resilience and fostering sustainable development in the region. It is imperative to note that climate change, gender equality, and economic development in West Africa are interconnected. By recognizing and addressing the specific challenges faced by women, policymakers can create more inclusive and effective strategies to mitigate the impact of climate change and promote sustainable development in the region.

Section 10: Recommendations

Based on the findings, the following specific recommendations are offered:

i. Government should mainstream gender into national climate policies and development plans, ensuring that adaptation strategies address the specific vulnerabilities and capacities of women.

ii. Legal reforms should strengthen women's land and property rights, removing barriers to ownership and inheritance.

iii. Financial institutions should expand women's access to credit, insurance, and savings mechanisms, recognizing the specific needs of women in climate-sensitive sectors

iv. Education and training programmes should build women's capacity in climate-smart agriculture, sustainable resource management, and entrepreneurship and

v. Governance structures should ensure women's participation in decision-making at all levels, from local communities to national policy processes.

The findings have implications for the theoretical frameworks employed in this study. They suggest that feminist political economy, sustainable livelihoods, and ecofeminism

provide complementary insights, but that each framework needs to be extended to account for the political economy of climate adaptation and the agency of women. The study contributes to theory development by developing the value of integrating multiple perspectives for understanding complex gender-environment-development relations.

Future research should:

i. Conduct quantitative studies to measure the economic costs of gendered climate impacts.

ii. Examine the effectiveness of gender-sensitive adaptation programmes

iii. Investigate the intersection of gender with other social categories such as class, ethnicity, and age; and

iv. Explore the role of women's organisations and movements in advancing climate justice.

Originality and Contribution to Knowledge

Originality: The paper makes a significant original contribution by providing a comprehensive regional analysis of the gendered impacts of climate change on economic development in West Africa. While previous studies have examined gender and climate change in specific countries or sectors, this paper offers a broader regional perspective that integrates multiple theoretical frameworks and covers a wide range of challenges and prospects.

Key Contributions:

Regional analysis: The paper provides a comprehensive analysis of gendered climate impacts across West Africa, moving beyond country-specific studies to offer a regional perspective.

Theoretical integration: The paper integrates feminist political economy, sustainable livelihoods, and ecofeminism into a single analytical framework, demonstrating the value of multi-theoretical approaches.

Women's agency: The paper frames women not only as vulnerable but also as active agents of adaptation and transformation, contributing to a more nuanced understanding of gender-environment relations.

Policy relevance: The paper offers practical recommendations for gender-responsive climate action, contributing to policy debates on climate adaptation and sustainable development.

Comprehensive coverage: The paper covers a wide range of challenges, including agricultural productivity, food security, water scarcity, health impacts, displacement, and systemic barriers, providing a comprehensive overview of gendered climate impacts.

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