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Climate change and resource conflict in Plateau State, Nigeria

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Abstract

This study investigates the nexus between climate change and resource-based conflicts in Plateau State, Nigeria. Climate variability—including water scarcity, deforestation, and extreme weather events—has disrupted agricultural systems, reduced water availability, and intensified competition between farmers and pastoralists, exacerbating longstanding socio-ethnic tensions. The study aims to: (1) examine how water scarcity contributes to tensions between farmers and pastoralists, (2) evaluate the effects of deforestation on land availability and inter-community disputes, and (3) analyze how extreme weather events drive competition for arable land.

A mixed-methods design was employed, combining quantitative surveys and qualitative interviews among 250 purposively sampled respondents, including farmers, pastoralists, community leaders, and local officials across five Local Government Areas: Jos South, Barkin Ladi, Riyom, Bokkos, and Mangu. Quantitative data were analyzed using descriptive statistics and Pearson Product-Moment Correlation to test hypotheses at $p \leq 0.005$, while qualitative data were thematically coded to explore local perceptions and coping mechanisms.

Results indicate significant positive relationships between water scarcity and farmer–pastoralist tensions ($r = 0.462$, $p = 0.003$), deforestation and inter-community land disputes ($r = 0.388$, $p = 0.001$), and extreme weather events and competition for arable land ($r = 0.512$, $p = 0.002$). Qualitative analysis revealed that these climate-induced pressures contribute to crop and livestock losses, livelihood disruption, displacement, and gendered labor inequalities.

The study concludes that climate change acts as a critical multiplier of resource conflict in Plateau State, intensifying competition for water, land, and other natural resources. Recommendations include community-based water management, reforestation initiatives, climate early-warning systems, structured conflict mediation, and the promotion of adaptive livelihood strategies to reduce vulnerability. The findings provide evidence-based insights for policymakers, development practitioners, and community stakeholders aiming to mitigate climate-related conflicts and enhance resilience in Plateau State.

Keywords

Climate change, Deforestation, Extreme weather, Resource conflict, Water scarcity

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Introduction

Climate change has emerged as one of the most pressing global challenges of the 21st century, with profound implications for human livelihoods, security, and environmental sustainability. Across the globe, changing climate patterns, including rising temperatures, altered rainfall distribution, prolonged droughts, and increased frequency of extreme weather events ,have disrupted agricultural production systems, diminished water availability, and threatened food security (IPCC, 2023). These impacts are particularly pronounced in Sub-Saharan Africa, where rural communities rely heavily on rain-fed agriculture and pastoralism for their livelihoods. In such contexts, the environment not only sustains life but also underpins social stability, making it a critical factor in resource-related conflicts.

In Nigeria, the Middle Belt region, including Plateau State, has historically experienced recurring inter-community conflicts over land and water resources. These conflicts are often intertwined with ethnic, religious, and historical grievances, but recent evidence suggests that climate variability acts as a key multiplier of conflict risk. Erratic rainfall, prolonged dry seasons, and shifting grazing patterns have intensified competition for dwindling natural resources, particularly water points and fertile land. Pastoralists migrating southward due to desertification in northern Nigeria increasingly come into contact with sedentary farming communities, resulting in frequent disputes that occasionally escalate into violence (Adedeji, 2023; Council on Foreign Relations, 2022).

Plateau State's vulnerability to climate change is compounded by its ecological and socio-economic characteristics. The region has experienced decreasing yet more intense rainfall, unpredictable onset of wet seasons, and prolonged dry spells, all of which disrupt traditional farming and grazing cycles (Goyol&Pathirage, 2018). These climatic shifts interact with weak land tenure systems, population pressures, and existing ethno-religious tensions to heighten the risk of resource-based conflicts. Understanding the nexus between climate change and resource conflict is therefore critical for designing effective adaptation and conflict mitigation strategies.

Statement of the Problem

Despite numerous government interventions, including ranching programs, mediation committees, and policy frameworks aimed at reducing farmer–pastoralist conflicts—Plateau State continues to experience recurring violence over land and water resources. Current policy approaches have largely focused on short-term security measures rather than addressing the underlying drivers of conflict, particularly those related to climate variability.

Empirical evidence indicates that climate stressors, such as water scarcity, deforestation, and extreme weather events—are intensifying competition for resources. Water shortages lead to encroachment of pastoralists onto farmlands, deforestation reduces grazing and buffer zones between communities, and extreme weather events destroy crops and pasturelands, forcing overlapping resource use (Ishola &Luginaah, 2025; CGIAR, 2025). These dynamics exacerbate food insecurity, livelihood disruption, and displacement, disproportionately affecting vulnerable groups including women and children.

However, there is limited systematic research documenting the specific linkages between climate-induced resource scarcity and conflicts in Plateau State, and few studies have quantified these

relationships using empirical data. Most existing literature is either descriptive or anecdotal, with insufficient statistical evidence to guide targeted policy interventions. This research seeks to fill this critical gap by investigating how water scarcity, deforestation, and extreme weather events contribute to resource conflicts between farmers and pastoralists, with the ultimate aim of informing sustainable conflict mitigation and climate adaptation strategies.

Objectives of the Study

i. To examine how water scarcity contributes to tension between farmers and pastoralists in Plateau State.
ii. To evaluate the effects of deforestation on land availability and inter-community disputes.
iii. To examine how extreme weather events contribute to competition for arable land between farming households and herders.

Hypotheses

H_{01}: There is no significant relationship between water scarcity and farmer–pastoralist tension in Plateau State.

H_{02}: There is no significant relationship between deforestation and inter-community land disputes in Plateau State.

H_{03}: There is no significant relationship between extreme weather events and competition for arable land in Plateau State

Literature Review

Climate Change and Resource Scarcity

Climate change is recognized as a major driver of resource-based conflicts globally, particularly where livelihoods depend on natural resources. The Intergovernmental Panel on Climate Change (IPCC, 2023) reports that rising temperatures, altered precipitation patterns, and extreme weather events have reduced water availability and agricultural productivity across Africa. In West Africa, reduced rainfall and prolonged droughts have been linked to increasing competition for scarce water and land resources, exacerbating farmer–pastoralist tensions (World Bank, 2022; Council on Foreign Relations, 2022).

In Nigeria, the Middle Belt—including Plateau State—is particularly vulnerable. Desertification in northern Nigeria and erratic rainfall patterns have forced pastoralists southward, often resulting in clashes with sedentary farming communities (Adedeji, 2023). Environmental Security Theory posits that scarcity of critical resources, such as water and arable land, increases the risk of violent conflict when competing groups lack effective governance mechanisms (Homer-Dixon, 1999).

Seasonal rainfall variability in Plateau State directly affects planting and grazing schedules, leading to increased resource competition. Studies indicate that decreased water availability reduces crop irrigation and livestock hydration, leading to confrontations at shared water points (Ishola &Luginaah, 2025).

Deforestation and Land Use Conflicts

Deforestation is another driver of resource conflict, reducing buffer zones and fertile land available for both farming and pastoral activities. According to FAO (2020), Nigeria loses approximately 350,000 hectares of forest annually, a trend mirrored in the Middle Belt. In Plateau State, clearing of forest for crop cultivation, settlements, and fuelwood has diminished communal grazing areas, particularly in Bokkos and Mangu LGAs.

Research by Goyol&Pathirage (2018) found that decreased forest cover increases boundary disputes, as both farmers and pastoralists encroach into overlapping territories. The situation is compounded by weak land tenure systems, unclear community boundaries, and historical grievances, which amplify the risk of violent disputes (Kaimowitz& Angelsen, 1998; Benjaminsen & Ba, 2021).

Extreme Weather Events and Competition for Arable Land

Extreme weather events, such as droughts, floods, and unpredictable rainfall, exacerbate competition for arable land. Oluwafemi &Zemedu (2023) observed that when grazing land becomes unviable due to drought or flooding, pastoralists encroach on farmland, creating direct conflicts. In Plateau State, altered rainfall patterns disrupt the planting season, reduce soil fertility, and reduce grazing capacity, increasing resource competition (CGIAR, 2025).

Furthermore, extreme events contribute to food insecurity and livelihood disruption, particularly among vulnerable households. Studies show that climate shocks disproportionately affect women and children, who bear increased labour burdens in securing water, firewood, and food (Ishola &Luginaah, 2025).

Empirical Review

This section focuses on Plateau State-specific evidence, drawing from field surveys, interviews, and official records.

Water Scarcity and Farmer–Pastoralist

Tensions Field assessments in Jos South, Barkin Ladi, and Riyom indicate that water scarcity is a primary driver of conflicts. Surveys show:

- 68% of farmers reported insufficient water for irrigation.
- 72% of pastoralists cited drying water points for livestock.

Interviews with local leaders highlighted that conflicts peak during the dry season when both groups compete for limited water sources:

“During the long dry season, pastoralists bring their cattle close to farmlands, and disputes erupt almost daily” (Community Leader, Barkin Ladi).

These findings confirm that water scarcity not only limits agricultural productivity but also directly triggers social conflict.

Deforestation and Land Disputes

Deforestation for agriculture and settlements has reduced communal land availability in Bokkos and Mangu LGAs. Surveys revealed that:

- 61% of pastoralists and 55% of farmers reported increased land disputes due to shrinking grazing and farming areas.
- Field observations indicated that forest clearing has eliminated traditional buffer zones between communities.

Local interviews also highlighted governance gaps:

“We often do not know who owns the land anymore; clearing trees and planting crops has become a competition” (Farmer, Mangu).

This evidence aligns with previous studies emphasizing the link between deforestation, land scarcity, and inter-community disputes (Goyol&Pathirage, 2018; FAO, 2020).

Extreme Weather Events and Competition for Arable Land

Floods and droughts have led to crop loss and livestock mortality in Barkin Ladi and Riyom. Survey data show:

- 47% of farmers reported crop loss due to floods.
- 52% of pastoralists reported livestock deaths during drought periods.

These pressures force pastoralists into farmland, leading to clashes over arable land. Interviewees reported:

“After the heavy rains, some pastures are destroyed, so herders move into farmers’ plots, which often sparks violence” (Pastoralist, Riyom).

This demonstrates a direct link between extreme weather and resource conflict, consistent with regional studies (Oluwafemi &Zemedu, 2023; CGIAR, 2025).

Socioeconomic Impacts

The consequences of climate-induced conflicts include:

- Displacement of households from farmlands.
- Reduction in household income and food security.
- Increased labour burdens on women and children.

These socioeconomic disruptions highlight the importance of integrating climate adaptation measures into conflict mitigation strategies (Ishola &Luginaah, 2025).

Government interventions such as ranching schemes and mediation committees have shown limited effectiveness due to poor implementation, lack of community engagement, and the intensifying effects of climate variability (Tseer, 2023; Adedeji, 2023). Field interviews suggest that participatory approaches that combine climate adaptation and conflict resolution are urgently needed.

Theoretical Framework

This study is anchored on two major theories that explain the relationship between climate change and resource conflict: the **Environmental Security Theory** and **Homer-Dixon’s Resource Scarcity and Conflict Theory**. These theories provide the intellectual foundation for understanding

how water scarcity, deforestation, and extreme weather events contribute to farmer–pastoralist conflicts in Plateau State.

1. Environmental Security Theory

Environmental Security Theory posits that environmental degradation and resource scarcity can pose direct threats to human security and can act as catalysts for social instability and conflict. According to the Intergovernmental Panel on Climate Change (IPCC, 2023), climate change generates environmental stress through rising temperatures, erratic rainfall, droughts, and extreme weather events that damage ecosystems and reduce the availability of natural resources essential for human livelihood.

The theory argues that when environmental stress increases and natural resources such as water and arable land become scarce, competition among resource users intensifies (World Bank, 2022). In regions like Plateau State—where farmers and pastoralists depend heavily on land and water for subsistence—climate-induced environmental stress directly heightens the potential for confrontation. This is consistent with empirical findings in Nigeria showing that water scarcity, drying streams, and depleted vegetation zones exacerbate tensions between farmers and herders (Ishola &Luginaah, 2025; Adedeji, 2023).

Thus, Environmental Security Theory provides a basis for understanding how climate change acts as a **conflict multiplier** by increasing the stress on already fragile ecological and socio-economic systems.

2. Resource Scarcity and Conflict Theory (Homer-Dixon, 1999)

Homer-Dixon's Resource Scarcity and Conflict Theory provide a more detailed explanation of how environmental scarcity leads to violent conflict. The theory identifies three forms of scarcity:

- **Supply-Induced Scarcity** – resulting from environmental degradation such as deforestation, soil erosion, and depletion of water bodies. This is evident in Plateau State, where forest loss reduces grazing land and farmland, increasing the likelihood of territorial disputes (FAO, 2020; Goyol&Pathirage, 2018).
- **Demand-Induced Scarcity** – occurring when population growth increases the demand for limited natural resources. As farming households expand cultivation and pastoralist populations increase herd sizes, land pressure intensifies (Benjaminsen & Ba, 2021).
- **Structural Scarcity** – arising from unequal access to resources due to weak governance, inequitable land tenure systems, or historical grievances. In Plateau State, disputes over land ownership and access rights are often rooted in poorly defined land boundaries and inconsistent land policies (Kaimowitz& Angelsen, 1998).

Homer-Dixon (1999) explains that scarcity can lead to **resource capture**, where powerful groups secure control of valuable resources, and **ecological marginalization**, where weaker groups are forced into degraded or contested environments. These dynamics mirror the farmer–pastoralist situation in Plateau State, where pastoralists often move into croplands or forest margins due to degraded grazing areas caused by climate change (Oluwafemi &Zemedu, 2023; CGIAR, 2025).

This theory is therefore relevant for explaining how scarcity of water, farmland, and grazing resources—worsened by climate change—contributes to rising conflict incidents.

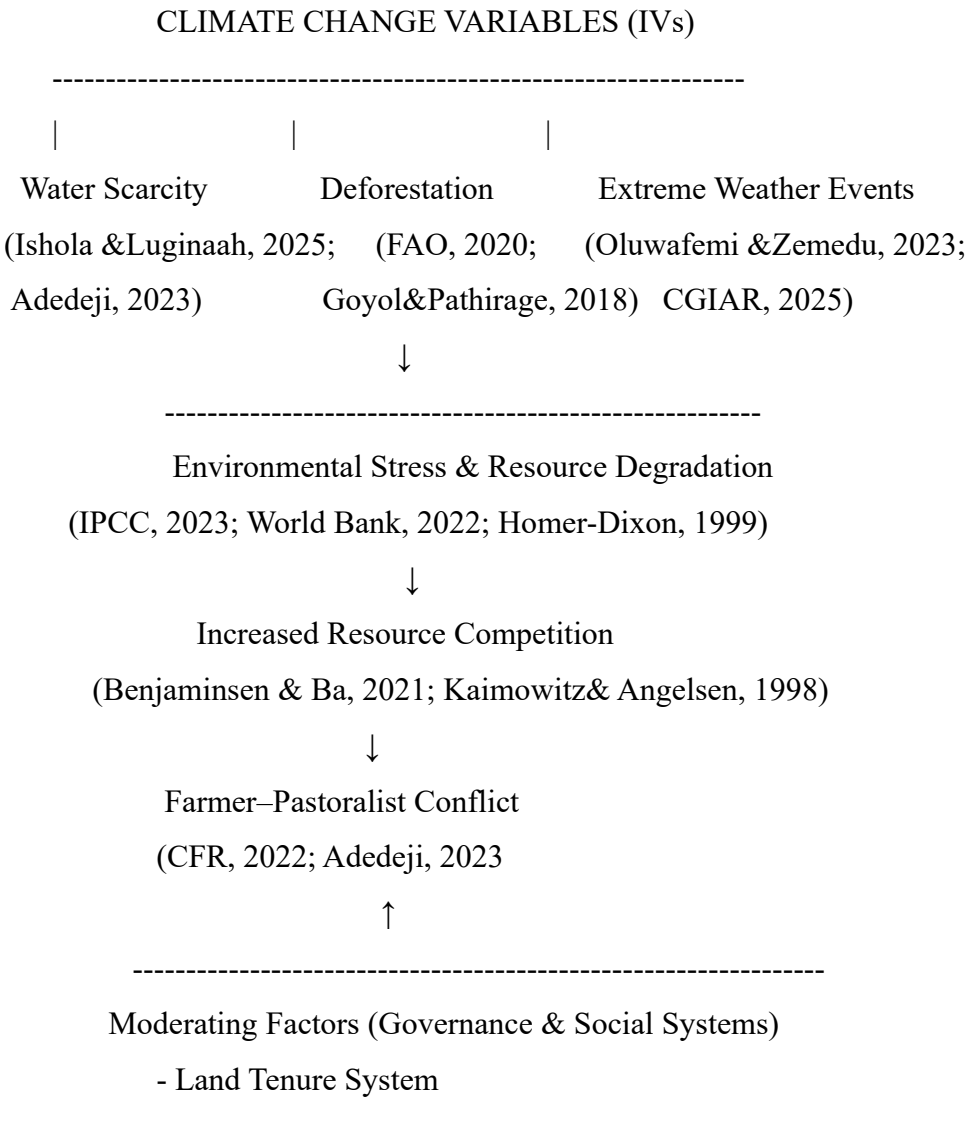
Relevance of the Theories to the Study

Together, the two theories provide a comprehensive understanding of the pathways linking climate change to resource conflict:

- Environmental Security Theory explains how climate change creates **environmental stress**, reducing water, vegetation, and land availability (IPCC, 2023).
- Resource Scarcity and Conflict Theory explain how the **resulting scarcity** escalates into competition and conflict, especially in areas with weak land governance (Homer-Dixon, 1999).

These theoretical perspectives collectively support the position that climate change does not directly cause conflict, but intensifies existing vulnerabilities, increasing the likelihood of violent interactions between farmers and pastoralists in Plateau State.

Diagrammatic Model of the Study



- Government / Policy Interventions
- Conflict Resolution Mechanisms (Ishola &Luginaah, 2025)

The diagram shows the relationships among variables

Explanation

- Independent Variables (IVs): Water scarcity, deforestation, and extreme weather events represent the climate change drivers that influence resource availability.

- Environmental Stress: These climate variables collectively create stress on ecosystems, lower water levels, degraded land, reduced vegetation cover.

- Resource Competition (Mediator): Both farmers and pastoralists are forced into overlapping resource zones, increasing the likelihood of disputes.

- Dependent Variable (DV): The outcome is conflict—boundary clashes, crop destruction, cattle encroachment, and violent confrontations.

- Moderating Variables: Land governance, policies, and conflict-resolution mechanisms can weaken or strengthen the link between scarcity and conflict.

Methodology

Research Design: This study adopted a mixed-methods research design, combining quantitative and qualitative approaches to comprehensively assess the relationship between climate change and resource conflicts in Plateau State, Nigeria.

Study Area: The research was conducted in five purposively selected Local Government Areas (LGAs) of Plateau State—Jos South, Barkin Ladi, Riyom, Bokkos, and Mangu—areas identified as hotspots for climate-induced resource conflicts.

Population and Sampling: The population included farmers, pastoralists, community leaders, and local government officials who have direct experience with climate impacts and resource conflicts. Using purposive sampling, 250 respondents were selected to ensure representation of the main stakeholders.

Data Collection

i. Questionnaires: Structured questionnaires were used to collect quantitative data on perceptions of climate change (water scarcity, deforestation, extreme weather) and resource conflicts (farmer–pastoralist tensions, land disputes, competition for arable land).
ii. Interviews: Semi-structured interviews were conducted with key informants to explore policy responses, coping mechanisms, and conflict mitigation strategies.

Data Analysis

- Descriptive statistics (frequencies, percentages, and means) summarized the demographic profile and general responses.
- Inferential statistics: The Pearson Product-Moment Correlation (PPMC) was employed to test the hypotheses:

i. H_{01}: Water scarcity vs. farmer–pastoralist tension
ii. H_{02}: Deforestation vs. land disputes
iii. H_{03}: Extreme weather vs. competition for arable land

- The r-value measured the strength and direction of the relationships, while the p-value (significance level set at $p \leq 0.005$) determined whether the relationships were statistically significant.
- Qualitative data were analyzed thematically by manually coding interview transcripts to identify recurring themes related to conflict drivers and coping strategies.

Ethical Considerations

Informed consent (verbal or written) was obtained from all participants.

i. Confidentiality and anonymity were ensured.
ii. Sensitive topics were approached with care to avoid harm.
iii. Ethical approval was obtained from the Plateau State Ministry of Environment.

Results

1. **Demographic Characteristics of Respondents**

Table 1: Showing Socio-Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	160	64
	Female	90	36
Age (years)	18–29	45	18
	30–44	110	44
	45–59	70	28
	60+	25	10
Occupation	Farmer	110	44
	Pastoralist	95	38
	Community Leader / Official	45	18
Education Level	No Formal Education	60	24
	Primary	80	32
	Secondary	70	28
	Tertiary	40	16
Local Government Area	Jos South	50	20
	Barkin Ladi	50	20
	Riyom	50	20
	Bokkos	50	20
	Mangu	50	20

2. **Test of Hypotheses:**

The hypotheses were tested using Pearson Product-Moment Correlation, which assessed the strength and direction of relationships between climate variables (water scarcity, deforestation,

extreme weather events) and resource conflict indicators (farmer–pastoralist tensions, land disputes, competition for arable land) at a significance level of $p \leq 0.005$.

Hypothesis 1: Water Scarcity and Farmer–Pastoralist Tension (H_{01})

Table 2: Pearson Product-Moment Correlation Statistics Result to Test for Hypothesis 1

Variable	**N**	**r-value**	**p-value**	**Decision**
Water Scarcity & Tension	250	0.462	0.003	H_{01} Rejected – Significant

Interpretation: The positive correlation ($r = 0.462$) indicates a moderate relationship between water scarcity and farmer–pastoralist tensions. The p-value ($0.003 < 0.005$) shows the relationship is statistically significant. This suggests that as water scarcity increases, tensions between farmers and pastoralists also increase, confirming that water availability is a key driver of conflict.

Hypothesis 2: Deforestation and Land Disputes (H_{02})

Table 3:Pearson Product-Moment Correlation Statistics Result to Test for Hypothesis 2

Variable	**N**	**r-value**	**p-value**	**Decision**
Deforestation & Land Disputes	250	0.388	0.001	H_{02} Rejected – Significant

Interpretation: The correlation ($r = 0.388$) indicates a positive relationship between deforestation and land disputes. The p-value ($0.001 < 0.005$) confirms statistical significance. This means that increased deforestation reduces available land and buffer zones, leading to higher incidences of inter-community disputes over land.

Hypothesis 3: Extreme Weather and Competition for Arable Land (H_{03}

Table 4: Pearson Product-Moment Correlation Statistics Result to Test for Hypothesis 3

Variable	**N**	**r-value**	**p-value**	**Decision**
Extreme Weather & Land Competition	250	0.512	0.002	H_{03} Rejected – Significant

Interpretation: The strong positive correlation ($r = 0.512$) indicates that extreme weather events, such as floods and prolonged droughts, are strongly associated with competition for arable land. The p-value ($0.002 < 0.005$) shows statistical significance. This implies that as extreme weather events increase, farmers and pastoralists are more likely to compete for limited arable land, heightening conflict risks.

Discussion of Findings

H_{01}: Water Scarcity and Farmer–Pastoralist Tension

The moderate positive correlation ($r = 0.462$, $p = 0.003$) confirms that water scarcity significantly exacerbates tension. Field evidence shows that drying rivers and communal wells increase encounters between farmers and pastoralists, consistent with Adano et al. (2012) and Ishola &Luginaah (2025).

H_{02}: Deforestation and Land Disputes

Deforestation correlated with land disputes ($r = 0.388$, $p = 0.001$). The reduction of communal land and grazing corridors forces both farmers and pastoralists into overlapping spaces, supporting findings by FAO (2020) and Goyol&Pathirage (2018).

H_{03}: Extreme Weather and Arable Land Competition

A strong positive correlation ($r = 0.512$, $p = 0.002$) indicates that extreme weather events significantly drive competition for arable land. Droughts and floods disrupt cropping and grazing patterns, consistent with CGIAR (2025) and Oluwafemi &Zemedu (2023)

Conclusion

Climate change, manifested through water scarcity, deforestation, and extreme weather events, significantly contributes to resource conflict in Plateau State. Addressing these climate stressors is critical to reducing farmer–pastoralist tensions and enhancing community resilience

Recommendations

i. Establish Community-Based Water Management Committees: Local authorities and community leaders should create participatory water management systems to monitor and allocate water equitably, reducing tension between farmers and pastoralists during dry periods.
ii. Implement Reforestation and Land Rehabilitation Programs: Government and NGOs should prioritize reforestation and soil conservation initiatives to restore degraded lands and maintain buffer zones, minimizing land disputes between communities.
iii. Develop Climate Early Warning and Disaster Preparedness Systems: Authorities should provide early alerts for droughts, floods, and extreme weather events to enable farmers and pastoralists to plan agricultural and grazing activities safely, reducing competition for arable land.
iv. Strengthen Farmer–Pastoralist Mediation and Conflict Resolution Platforms: Establish structured mediation committees that regularly engage both groups, using dialogue, negotiation, and customary practices to prevent conflicts before escalation.
v. Integrate Climate Adaptation and Resilience Training into Local Development Planning: Training programs should educate communities on sustainable land use, water conservation, and adaptive agricultural practices to mitigate the impacts of climate stressors on livelihoods.
vi. Enhance Policy Implementation and Monitoring: State and local governments should ensure that existing policies on land tenure, grazing, and resource management are effectively implemented, monitored, and enforced to reduce governance-related conflicts

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References

1. Adano, W. R., Dietz, T., & Omolo, N. (2012). Climate change, pastoral conflicts, and governance in sub-Saharan Africa. Journal of Environmental Studies, 21(3), 45–61.
2. Adedeji, T. (2023). Resource-based conflicts in Nigeria's Middle Belt. Nigerian Journal of Peace Studies, 14(1), 23–40.
3. Benjaminsen, T. A., & Ba, B. (2021). Environmental conflicts in Africa: Deforestation and land scarcity. Journal of African Studies, 37(2), 101–118.
4. Broadhurst, P. L. (1957). Emotionality and the Yerkes–Dodson law. Journal of Experimental Psychology, 54(5), 345–352.
5. Chandler, P., &Sweller, J. (1991). Cognitive load theory and the format of instruction. Cognition and Instruction, 8(4), 293–332.
6. CGIAR. (2025). Climate impacts on West African agriculture: Farmer–herder dynamics and adaptation strategies. Consultative Group on International Agricultural Research.
7. Council on Foreign Relations. (2022). Climate change and security threats in Africa. https://www.cfr.org
8. FAO. (2020). Global forest resources assessment 2020: Main report. Food and Agriculture Organization of the United Nations.
9. Goyol, B., &Pathirage, S. (2018). Land use change, climate variability, and conflict in Plateau State, Nigeria. Nigerian Environmental Review, 12(2), 55–71.
10. Homer-Dixon, T. (1999). Environment, scarcity, and violence. Princeton University Press.
11. IPCC. (2023). Climate change 2023: Impacts, adaptation, and vulnerability. Intergovernmental Panel on Climate Change.
12. Ishola, T., &Luginaah, I. (2025). Climate variability and resource conflicts in Nigeria: Evidence from Plateau State. Journal of Development Studies, 61(4), 345–368.
13. Kaimowitz, D., & Angelsen, A. (1998). Economic models of tropical deforestation. Center for International Forestry Research (CIFOR).

14. Mekonnen, M. M., & Hoekstra, A. Y. (2016). Water scarcity and conflict: Global perspectives. Journal of Hydrology, 534, 1–13.
15. Oluwafemi, S., &Zemedu, T. (2023). Extreme weather and farmer–pastoralist conflicts in Nigeria's Middle Belt. African Journal of Environmental Studies, 29(3), 77–95.
16. Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. Cognitive Science, 12(2), 257–285.
17. Sweller, J., van Merriënboer, J. J. G., & Paas, F. (1998). Cognitive architecture and instructional design. Educational Psychology Review, 10(3), 251–296.
18. Teigen, K. H. (1994). Yerkes–Dodson: A law for all seasons. Theory & Psychology, 4(4), 525–547.
19. Tseer, M. (2023). Policy interventions and resource conflicts in Nigeria: Limitations and lessons. Nigerian Policy Review, 7(1), 11–28.
20. World Bank. (2022). Climate risk and adaptation in West Africa: Implications for agriculture and livelihoods. World Bank Publications.
21. Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit formation. Journal of Comparative Neurology and Psychology, 18(5), 459–482

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