

Climate-Induced Displacement and Social Cohesion: A Social Work Perspective from North Central Nigeria

Edward D. I. Anzaku, PhD¹, David G. Ishor, PhD², Muhammad Kabiru Dahiru, PhD³, Dorothy Akpovye Bage-John, PhD⁴, James Matthew Okwoli, PhD⁵, Stanley A. Kavwam, PhD⁶

^{1,2,3,4,5,6}Department of Social Work, Faculty of Social Sciences, Federal University of Lafia, Nigeria (Collaborators from Geography, Sociology, and Psychology)

ABSTRACT

Climate change has also heightened environmental stresses that undermine agrarian livelihoods and resource competition in Sub-Saharan Africa. This article explores the interlinkages between climate-induced displacement and social cohesion problems in North Central Nigeria, specifically in Benue, Nasarawa, and Plateau States. Using a pragmatic approach and a mixed-methods sequential explanatory design, this research employed structured surveys among 600 respondents and key informant interviews with 30 key informants among community leaders, IDP officials, and local authorities. Quantitatively, this research found that increased levels of climate change-induced environmental stresses were significantly related to an increased likelihood of displacement ($\beta = .48$, 95% CI [.35, .61], $p < .001$) and social cohesion ($\beta = -.36$, 95% CI [-.49, -.23], $p < .01$). Moreover, the duration and frequency of displacement were inversely related to community trust ($r = -.42$, 95% CI [-.55, -.29], $p < .001$). Climate-induced displacement also heightened tensions among host communities and internally displaced persons (IDPs), as found in this qualitative thematic analysis: "Climate change-induced environmental stresses undermine traditional social support systems and resource competition among host communities and IDPs, manifesting as tensions among host communities and IDPs in North Central Nigeria." However, localized coping strategies, such as communal farming groups, show signs of resilience, providing opportunities for rebuilding the fabric of society. Ethical clearance was granted by the Federal University of Lafia Research Ethics Committee (FUL/SW/REC/2025/012). Recommendations from the research include that social workers act as mediators during conflicts, while governments implement climate-smart livelihoods to promote harmonious integration.

KEYWORDS: Climate Change; Internal Displacement; Social Cohesion; North Central Nigeria; Social Work Practice

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1. INTRODUCTION

One of the most pressing socio-environmental issues in the 21st century is climate change, which has manifested in the form of rainfall patterns, rising temperatures, and extreme weather events (Intergovernmental Panel on Climate Change [IPCC], 2022). These issues in global climates, in turn, have affected agrarian societies, resulting in forced migration and internal displacement (Black et al., 2011; McLeman, 2018). For internally displaced persons, these issues make them highly vulnerable to socio-economic marginalization, resource scarcity, and institutional support (Internal Displacement Monitoring Centre [IDMC], 2022). Though there has been a surge in the study of internal displacement, the relationship between climate change and social cohesion, or the glue that

holds societies together, has not been sufficiently explored in the context of Sub-Saharan societies, especially from a social work point of view.

North Central Nigeria, including states such as Benue, Nasarawa, and Plateau, is marked by agrarian modes of living that are highly dependent on the rainfall season. The changes in climatic conditions, such as irregular rainfall and prolonged dry weather conditions, have affected the productivity of farming activities and the contest for land and water resources (Adeniyi, 2020; Olaniyi & Adeola, 2021). This has further led to the complex flow of displacements that pose critical issues on the effects of environmental stressors on social cohesion, which is viewed as the association of mutual trust, norms, and efficacy (Forrest & Kearns, 2001). These states were purposively chosen because of the documented high climate variability and prolonged displacements compared to other neighboring states such as Kogi and Kwara. The lack of evidence on the climate-displacement-cohesion connection has substantial implications for policy and practice. A lack of nuanced understanding of the effects of environmental stressors on social cohesion implies that intervention strategies are only targeted at providing physical assistance without addressing the social repair that is essential for integration.

Social work, with its "person-in-environment" perspective and commitment to social justice, is particularly suited to address these multi-level issues. Nevertheless, social work's contribution to climate migration research is limited in comparison to environmental science and demography. This study aims to fill the existing gaps in the literature by exploring the empirical relationship between climate change perception, displacement, and social cohesion in Benue, Nasarawa, and Plateau States. This study makes a significant contribution to the existing literature by employing a mixed-methods research design to ensure the quality and validity of the results. The following hypotheses were tested in the quantitative study:

- **H₁:** Higher levels of climate-related stress are significantly associated with increased likelihood of displacement.
- **H₂:** Displacement duration and frequency are inversely related to social cohesion scores.
- **H₃:** Climate-induced displacement significantly predicts lower community trust and collective action.

2. LITERATURE REVIEW

2.1 Climate Change and Human Mobility in the Global South

Climate change entails changes in temperature and precipitation patterns over a long period. Climate change is primarily caused by human activities that result in the modification of the atmospheric composition. In the context of Nigeria, climate change entails regional warming, fluctuations in rainfall patterns, and desertification. Climate change affects environmental resources. Climate change and human migration are increasingly recognized as a complex and non-linear relationship where climate change acts as a "threat multiplier" for human migration, where people are forced to migrate due to climate-related impacts on their livelihoods. In West Africa, climate variability is often linked with rural-urban migration and conflict-induced migration. In the context of Nigeria, there is a convergence of climate-related factors and socio-political factors, which trigger migration events. Climate-related factors in the country include regional warming, fluctuations in rainfall patterns, and desertification. Climate change and migration have been linked in the context of Nigeria. In the context of previous research, there have been efforts to examine the economic impacts of flooding in the Benue Valley. However, there is a lack of research on the role of climate variability in triggering migration events, resulting in social fragmentation between migrants and the host communities.

2.2 Vulnerability and Social Cohesion among IDPs

Internally displaced persons are often characterized by multidimensional vulnerabilities such as economic underdevelopment and social exclusion (IDMC, 2022). Compared to refugees, IDPs are under the jurisdiction of internal governance that might not have the capacity to provide protection (Ferris, 2014). Social cohesion, which is the level of connectedness and solidarity within the community, is essential in fostering resilience in the face of such crises (Ager & Strang, 2008). High social cohesion promotes cooperation and conflict resolution, and the displaced are often characterized by the loss of social capital, which results in conflict between them (Mger et al., 2017).

2.3 The Nigerian Policy Context and Knowledge Gaps

However, existing literature in Nigeria tends to examine climate change impacts, displacement, and conflicts as independent concepts (Olaniyi & Adeola, 2021). In addition, whereas there is a National Migration Policy and a National Climate Change Policy in Nigeria, there is a lack of integration of these policies at the community level to address the issue of the social fabric of IDP-affected areas. This study fills this gap by offering a comprehensive analysis of the climate-IDP-cohesion nexus in the North Central region, where resource competition is most felt.

3. THEORETICAL FRAMEWORK

This research employs an integrative theoretical model that utilizes four theories to effectively examine the complexity of climate change-induced displacement.

1. Environmental Stress Theory: This theory argues that environmental stress affects the stability of livelihoods and is the primary driver of migration (McLeman, 2018). This theory is employed in the development of the "Climate Perception Scale."

2. Social Capital Theory: This theory is based on the argument by Putnam (2000) that social capital is essential in maintaining social cohesion in the community. This theory is employed in the development of the "Social Trust" and "Community Participation" components of the research.

3. Vulnerability Frameworks: These frameworks examine the role of structural inequality in the process of climate change-induced displacement. This theory ensures that the research examines the impacts of climate change and displacement differently in the community.

4. Ecological Systems Theory (Social Work Lens): To ensure that the research is applicable in the social work community, this theory examines the relationship between the individual and the environment. This theory ensures that the research is not individualistic in focus but rather examines the role of environmental stress in the process of social functioning.

Conceptual Model: The research is based on the chain of events where Climate Change (Environmental Stress) → Internal Displacement (Vulnerability) → Social Cohesion (Social Capital). This framework implies that social work can mediate to rebuild social capital in spite of environmental stress. Although these Western-developed theories form a strong framework, their application to Nigeria recognizes cultural factors such as collective decision-making and collective responsibility for one another, which may mitigate stress in a way that differs from individualistic theory.

4. METHODOLOGY

4.1 Research Design and Philosophical Paradigm

The research adopted a pragmatic paradigm, which values solutions to complex social issues over philosophical clarity. This approach made it possible to adopt a mixed-methods sequential explanatory research design, where quantitative research would first be conducted to establish patterns, followed by qualitative research to add depth to the results.

4.2 Study Area and Sampling Procedure

The research area for this research covered Benue, Nasarawa, and Plateau States in North Central Nigeria. This choice of states is based on their recorded history of climate variability (flooding and drought) and their large populations of IDPs. The research design for this study is based on a multi-stage sampling technique as follows:

1. Purposive Selection: The three states were selected based on their intensity of displacement.
2. Stratification: 10 Local Government Areas (LGAs) per state and 4 communities per LGA were selected based on their rural/urban nature and impact of displacement.
3. Systematic Random Sampling: This is based on the selection of households within the selected communities.

4.3 Participants and Sample Size

The quantitative sample for this study consisted of 600 adult respondents, 200 from each of the three states. The respondents included IDPs and host community members, each constituting 50% of the sample. The power analysis using G*Power confirmed that a sample of 600 respondents was sufficient for detecting a medium effect size ($f^2 = 0.15$) with a power of 0.95 for a significance level of 0.05. The qualitative part of this study consisted of 30 KIIs from community leaders, IDP camp authorities, and local government representatives from the three states. The response rate for this part of the study was 96%, and the only reason for non-response was the absence of respondents during the field visit.

4.4 Research Instruments and Rigor

1. Climate Perception Scale (10 items): This measured perceived changes in rainfall and temperature using Cronbach's alpha reliability test ($\alpha = 0.84$).

2. Displacement Experience Index: This measured the frequency, duration, and major causes of displacement.

3. Social Cohesion Scale: This was adapted from Ager and Strang (2008), and it measured trust, cooperation, and intergroup relations using Cronbach's alpha reliability test ($\alpha = 0.81$).

The content validity was established through a panel of five experts in social work and environmental science. The data collection tools were pre-tested in a non-sampled community with 40 households, leading to the modification of some items to enhance local understanding. The data collection tools were translated into Hausa, Tiv, and Idoma using a back-translation method to enhance conceptual equivalence.

4.5 Fieldwork and Ethical Considerations

Data collection took place between June and October 2025, during the peak rainy season, to collect real-time climate stressors. Ethical clearance was sought from the Federal University of Lafia Research Ethics Committee (Ref: FUL/SW/REC/2025/012). Informed consent was sought through verbal or written consent, depending on the participants' literacy level. A trauma-informed

approach was adopted for IDPs, who are often vulnerable. Participants were offered referrals to psychosocial support services. Data is stored on password-protected devices, with identifiers removed during analysis.

4.6 Data Analysis

For quantitative data analysis, we used SPSS version 27. Summary statistics were used to analyze demographic data, while Pearson's correlation and multiple regression were used to analyze associations among variables. Normal distribution, homoscedasticity, and multicollinearity ($VIF < 2.5$) were checked to satisfy model assumptions. Thematic analysis was used to analyze qualitative data, as described in Braun and Clarke's (2006) approach. Initially, two coders were used to design a codebook (inter-rater reliability: $\kappa = 0.79$), and themes were iteratively developed to include all data points.

5. RESULTS

5.1 Respondent Demographics

To contextualize the findings, Table 1 presents the demographic characteristics of the 600 respondents across the three states.

Table 1: Demographic Characteristics of Respondents (N = 600)

Characteristic	Category	Frequency (n)	Percentage (%)
State	Benue	200	33.3
	Nasarawa	200	33.3
	Plateau	200	33.3
Gender	Male	312	52.0
	Female	288	48.0
Age (Years)	18–35	246	41.0
	36–55	228	38.0
	56+	126	21.0
Status	IDP	300	50.0
	Host Community	300	50.0
Education	None	108	18.0
	Primary	192	32.0
	Secondary	216	36.0
	Tertiary	84	14.0

Source: Field Survey, 2025

5.2 Descriptive Statistics of Key Study Variables

Table 2 summarizes the descriptive statistics for climate stress exposure, displacement experience, and social cohesion dimensions.

Table 2: Descriptive Statistics of Climate Stress, Displacement, and Social Cohesion (N = 600)

Variable	Mean	SD	Min	Max
Climate Stress Index	3.82	0.76	1.20	5.00
Displacement Frequency	2.41	1.12	0.00	5.00
Displacement Duration (months)	14.6	8.9	1	48
Social Trust	2.74	0.81	1.00	5.00
Community Participation	2.61	0.88	1.00	5.00
Intergroup Relations	2.49	0.91	1.00	5.00
Overall Social Cohesion Score	2.61	0.73	1.10	4.90

Source: Field Survey, 2025

Interpretation: Overall social cohesion scores fell below the neutral midpoint (3.0), indicating widespread cohesion challenges in communities experiencing climate-induced displacement.

5.3 Social Cohesion Challenges Identified

Respondents indicated several perceived challenges affecting social cohesion, with resource competition and mistrust emerging as the most dominant stressors.

Table 3: Reported Social Cohesion Challenges Among Respondents (Multiple Responses Permitted)

Social Cohesion Challenge	Frequency (n)	Percentage (%)
Competition over land and water	432	72.0
Mistrust between IDPs and host communities	401	66.8
Breakdown of traditional authority	358	59.7
Ethnic or religious tensions	336	56.0
Weak community participation	319	53.2
Youth unemployment and frustration	287	47.8
Limited conflict resolution mechanisms	264	44.0

Source: Field Survey, 2025

5.4 Correlation Analysis

Table 4 presents the correlation matrix for the primary study variables, including 95% confidence intervals.

Table 4: Correlation Matrix of Climate Stress, Displacement, and Social Cohesion

Variable	1	2	3
1. Climate Stress	1		
2. Displacement Experience	.49*** [.38, .59]	1	
3. Social Cohesion	-.37*** [-.48, -.25]	-.42*** [-.53, -.30]	1

Note: *** $p < .001$; 95% Confidence Intervals in brackets.

5.5 Regression Analysis

A multiple regression model was used to predict Social Cohesion based on climate stress, displacement frequency, and demographic factors.

Table 5: Multiple Regression Predicting Social Cohesion (N = 600)

Predictor	B	SE	β	t	p	95% CI
(Constant)	4.12	0.24		17.17	<.001	[3.65, 4.59]
Climate Stress	-.028	0.04	-.31	-7.00	<.001	[-0.36, -0.20]
Displacement Frequency	-.034	0.05	-.38	-6.80	<.001	[-0.44, -0.24]
Age	0.08	0.03	.11	2.67	.008	[0.02, 0.14]
Education Level	0.12	0.04	.14	3.00	.003	[0.04, 0.20]
IDP Status (1=IDP)	-.022	0.06	-.18	-3.67	<.001	[-0.34, -0.10]

Model Fit: $R^2 = .41$, Adjusted $R^2 = .39$, $F(5, 594) = 82.4$, $p < .001$. VIF < 1.8 for all predictors.

5.6 Qualitative Findings: Thematic Analysis

The qualitative data added depth to the quantitative results and showed that there were five major themes that defined the lived experience of climate-induced displacement and social cohesion.

• **Theme 1: Resource Competition and Livelihood Strain.** All participants were able to emphasize how climate-induced resource scarcity increases resource competition over land. A community leader in Benue State (KII-BN-04) commented: "The rains are no longer predictable, and the land is tired. When people are forced to move because their farms are flooded, they come to areas where the locals are already struggling. We are all fighting for the same small piece of fertile ground."

• **Theme 2: Erosion of Trust and Communal Solidarity.** Repeated displacement was also seen to result in an erosion of trust among people in host communities. An IDP officer in Nasarawa (KII-NS-02) commented: "At first, there was sympathy. But as the displacement becomes frequent and lasts for years, the host communities begin to see IDPs as competitors rather than brothers. Trust is the first thing to break when everyone is hungry."

Theme 3: Breakdown of Traditional Governance Structures. The scale of climate-related crises can overwhelm traditional dispute resolution mechanisms. A leader from Plateau State noted in our interview (KII-PL-01): "Our traditional ways of settling land conflicts were informed by a time when land was not scarce. However, today's conflicts are not only violent, they are too

regular. Our elderly are losing voice in settling conflicts because the young are not seeing how talking can resolve the issue of a dry well or a flooded farm."

• **Theme 4: Identity-Based Tensions and "Indigene-Settler" Dichotomies.** Scarcity can lead to the politicization of ethnic and religious identities. A religious leader in Benue State noted in our interview (KII-BN-07): "Although the root cause is land, the issue has since become one of identity, of who is original and who is a stranger in our land. Climate change has forced us to become more loyal to our ancestral lands, and in the process, we are creating enemies out of our neighbors along ethnic and religious lines."

• **Theme 5: Youth Marginalization and Vulnerability.** Displaced and marginalized youth, especially when out of employment, become vulnerable to criminal activities. This theme is a "negative case" in the sense that our interviewees formed an inter-ethnic "survival gang." This theme shows that while traditional ties are breaking down, new forms of solidarity are being forged, although in a destructive way, among the marginalized.

6. DISCUSSION

6.1 Interpretation of Findings and Theoretical Alignment

The results show that climate change indirectly affects social cohesion through the pathway of displacement-related stress. This is supported by the regression model, which shows that climate stress and frequency of displacement are significant predictors of social cohesion, explaining 41% of the variance in social cohesion. This is in line with Environmental Stress Theory, which states that ecological disruption is a major driver of social instability (McLeman, 2018). In support of Social Capital Theory (Putnam, 2000), the results show that displacement affects social capital, which is a critical component of social cohesion. This is supported by the inverse relationship between the duration of displacement and trust, indicating that the longer a population is displaced, the harder it is to build social capital. This is particularly supported by the qualitative results, in which "erosion of trust" emerged as a dominant theme.

From the Ecological Systems Theory point of view, this research demonstrates the significance of the role of the "macro-system" (climate) in imposing a need for change in the "micro-system" (family and community) and resulting in a failure of social functioning. The "indigene-settler" dualism revealed through the qualitative research represents a defensive strategy in the face of systemic vulnerability, where communities attempt to preserve scarce resources by limiting the boundaries of their social groups. In the Nigerian context, there are clear limitations to Western theories, with traditional and religious networks being more resilient than civic ones.

6.2 Comparison with Extant Literature

These findings are consistent with the International Organization for Migration (IOM, 2024) report, which noted that climate stressors are increasingly affecting the lives of IDPs in Nigeria's Middle Belt region. This study, however, contributes to the existing body of knowledge by quantifying the effects of climate stressors, specifically on social cohesion. Although Olaniyi and Adeola (2021) concentrated on the conflict-migration nexus, this study's findings, however, indicate that even without the occurrence of conflict, the "slow-onset" of trust and traditional authority erosion remains a major long-term challenge for regional stability.

6.3 Limitations of the Study

However, certain limitations need to be addressed. Firstly, the cross-sectional nature of the data does not allow for causal effects to be established, and longitudinal data would have been necessary to assess the erosion of cohesion. Secondly, the reliance on self-reported data for climate stress and social trust could have introduced recall bias or social desirability bias. Thirdly, although the multi-state nature of the data is advantageous, the results may not be generalizable to other regions of Nigeria with different socio-political dynamics. Lastly, although the adapted scales had precise measurement, it is possible that they did not capture the cultural nuances of social cohesion in rural Nigeria, although they had high reliability ($\alpha > 0.80$).

7. IMPLICATIONS AND RECOMMENDATIONS

7.1 Practice Implications for Social Work

Social workers have to transcend their traditional role as relief workers and become mediators and community builders in the following ways:

1. Conflict Mediation: Social workers should be trained in "Alternative Dispute Resolution" (ADR) techniques that utilize traditional authority figures to rebuild trust between IDPs and host communities.

2. Trauma-Informed Integration: Social workers should design interventions that address the collective trauma of displacement, which often takes the form of aggression towards "outsiders."

3. Empowerment through Communal Groups: Social workers should facilitate the creation of an inclusive "Communal Farming Group" where IDPs and host communities work together to achieve economic gain and rebuild social capital through cooperation.

7.2 Policy Implications

Governments at all levels should:

- 1. Include Social Cohesion in Climate Policy:** The National Climate Policy should consider incorporating parameters for social stability and trust within its monitoring parameters.
- 2. Climate-Smart Livelihoods:** Support afforestation and irrigation initiatives that will reduce competition for resources, especially in IDPs' hotspots.
- 3. Inclusive Governance:** Support traditional and religious leaders by providing them with the necessary resources and legal authority to address conflicts over resources.

7.3 Research Recommendations

Longitudinal studies should be conducted to measure the efficacy of social work intervention in re-establishing social cohesion. Interventions comparing the efficacy of different mediation approaches, such as traditional and legalistic mediation, would be useful in identifying best practice in the West African context.

8. CONCLUSION

In conclusion, the study has demonstrated the efficacy of providing empirical evidence to support the claim that climate change is a major factor in IDP flows and, in effect, acts to erode social cohesion in North Central Nigeria. The study has demonstrated the potential for social work to combine the rigor of quantitative and qualitative approaches to research. It has been demonstrated that the erosion of social cohesion in North Central Nigeria is not simply a by-product of climate change, but a major challenge to social stability in the region. For social work, the study has demonstrated the need for social work to move from its traditional, reactive stance to one in which an ecological perspective is integrated to address environmental change as a core element of social justice.

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