

The dynamics of Disasters and Conflicts in North Central Nigeria: Impact Assessment of Emerging trends, Current realities and Future outlook

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Abstract

Original Research Article

The vulnerability of North Central Nigeria has exposed the region to monumental incidences of disasters and conflicts; floods, insurgency, banditry, farmers-herder conflict, ethno-religious and communal clashes, that continue to threaten livelihood opportunities, food security, and social stability. This study examines the dynamics of disasters and conflicts, exploring the underlying types and frequency, past incidents, current realities, and future perspectives on the socio-economic development of the region. The extant literature assessment of crises focused mainly on mitigation and preparedness, creating a gap in trend analysis, current impact and futuristic outlook to promote sustainable development amidst the mounting challenges. Leveraging the mixed research methods for data collection, a multistage sampling technique was employed to sample 360 respondents for the study, and a well-structured questionnaire (Computer-assisted Personal Interview) was used to assess how environmental degradation, conflict for resource control, and social governance have interfaced in building resilience among affected communities. Data analyses were achieved using Impact Assessment Matrix, Food Security Index, Resilience Analysis Grid and Coping Strategy Index. Results showed that disasters, especially flooding, exerted a devastating effect on 75% of the sampled population, leading to loss of farmlands, crops and housing. Herders' attacks took a toll on 67% of the population, resulting in injuries, fatalities and forceful migration. Also, banditry influence was severe among 58% of the population, with a colossal impact on the loss of lives and closure of major markets. Further, disasters and conflict have exacerbated food insecurity (75%) while protection risks (80%), particularly for women and girls. The study concludes that incorporating disaster risk reduction and conflict sensitivity into the impact assessment framework is essential for sustainable development. The study recommends investment in capacity and resilience-building programmes, and conflict resolution mechanisms are essential for sustainable recovery efforts in the region.

Keywords: Conflicts, Disasters, Impact Assessment, North Central Nigeria, Sustainable Development.

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1.0 Introduction

The North Central region, once a beacon of hope and prosperity, now lies scarred by the devastating impact of disasters and conflicts. The cries of the displaced, the tears of the bereaved,

and the whispers of the fearful paint a grim picture of a region on the brink (Internal Displacement Monitoring Centre, 2022). The region has been plagued by a multitude of crises, including floods, insurgency, banditry, farmers-

herders clashes, ethno-religious and communal clashes, leaving a trail of destruction and despair in their wake. Its food security, social stability, and economic development hang precariously in the balance. The North Central fertile lands and abundant natural resources have become a source of tension, particularly between farmers and the marauding herders. As climate change alters traditional livelihoods, herders are forced to migrate southward, encroaching on agricultural lands and sparking violent clashes (Efobi *et al.*, 2025).

Between 2015–2025, North Central states including Benue, Kogi, and Nasarawa experienced recurrent large-scale floods. However, the most devastating flood incident in the region remains the 2012 floods, which are widely documented and have extensive credible sources. The 2012 floods were declared a national disaster, affecting 30 of Nigeria's 36 states and displacing over 2.1 million people nationwide, with Benue, Kogi, and Niger among the worst-hit in North Central Nigeria. In Benue State alone, Makurdi, Guma, Agatu, and Logo LGAs suffered extensive submersion of farmlands and settlements (Shahu and Musa, 2023). A 2025 attack on Yelwata village claimed over 200 lives, with many more injured or displaced with property worth millions (AllAfrica, 2025) while in Plateau State, approximately 3,200 people were killed, kidnapped, or injured in 2024 (Daily Trust, 2025). The humanitarian impact is substantial, with many communities facing severe food insecurity and limited access to basic services. The conflicts have also disrupted agricultural activities, exacerbating poverty and inequality (International Crisis Group, 2023). The consequences are stark: thousands have lost their lives, and hundreds of thousands have been displaced. The impact of these disasters is exacerbated by weak governance, poverty, and inequality, making it easier for extremist groups like Boko Haram and ISWAP to exploit these vulnerabilities (United States Institute of Peace, 2024).

The constant attacks, kidnappings, and banditry have crippled agricultural activities, forcing farmers to abandon their lands to flee with their

families. This has led to food insecurity, with many communities struggling to access basic necessities like food and water. The economic impact is significant, with the agricultural sector being a major contributor to Nigeria's GDP. The displacement of people has also led to a shortage of skilled labor, further exacerbating the economic downturn. The region's infrastructure, including schools, and healthcare facilities, has been destroyed, making it difficult for businesses to operate and for people to access basic services (Okoh, 2024).

The Nigerian government is facing a significant challenge in providing assistance to those affected, with many relying on aid to survive. Nigeria loses \$13.7 billion annually from farmer-herder clashes in four North Central states alone (Abubakar, 2017), rising to over \$14 billion yearly per recent estimates (Ekugbe, 2023) while tourism in Plateau State suffered declines in foreign investment, employment, and state revenue due to insecurity (Adejumo, 2024), and chambers of commerce warn of capital flight as businesses halt projects (Obegolu, 2025). The instability is also deterring foreign investors, further exacerbating the economic challenges. While extant literature has focused heavily on disaster preparedness, conflict mitigation, and humanitarian relief, there is a critical gap in empirical studies that integrate trend analysis, real-time impact assessment, and futuristic outlook. Most assessments treat disasters and conflicts as separate events, ignoring how they reinforce each other to deepen vulnerability, food insecurity, and protection risks.

This study therefore assessed the effects of disasters and conflicts in North Central Nigeria; specifically, describing the socio-economic characteristics of the respondents in North Central Nigeria; examine the types and frequency of disasters and conflicts experienced by communities in the region, assess the effects of disasters and conflicts on food security, evaluate the coping strategies adopted by affected households, analyze community resilience to disasters and conflicts in North Central Nigeria.

3.1 Methodology

3.1 The Study Area

The study was carried out in North-central Nigeria. The zone has a land area of 296, 898 km² representing nearly 32 percent of the country's total land area (NBS, 2008). There are six states in the zone and the Federal Capital Territory, Abuja. The States include Benue, Kogi, Kwara, Nasarawa, Niger, Plateau. It is located in the central part of Nigeria and in the

sub-humid region of the country, and bounded to Bauchi, Kaduna, Zamfara and Kebbi States to the north; Cross-River, Ebonyi, Enugu, Edo, Ondo, Ekiti, Osun and Oyo States to the south; Taraba State and Republic of Cameroon to the east and the Republic of Benin to the west. Situated between latitudes 6° 30" - 11° 20"N and longitude 7° - 10°E, the zone has 20.36 million people with the rural population constituting 77 percent (NPC, 2006).



Figure 1: Map of the study area showing States affected by Conflicts and Disasters in North Central, Nigeria.

Source: Author's concept, 2025

Sampling Techniques

A multi-stage random sampling technique was applied in selecting the 360 respondents used for this study. The first stage involved the random selection of three states from North Central Nigeria, namely Benue State, Nasarawa State, and Plateau State. The second stage involved the random selection of two agricultural zones from

each selected state, resulting in six agricultural zones. Thirdly, two Local Government Areas were randomly selected from each agricultural zone, giving a total of twelve Local Government Areas. In the fourth stage, three farming communities were purposively selected from each of the twelve LGAs based on their high exposure to flooding, farmer-herder clashes, and banditry, yielding a total of thirty-six farming

communities. Lastly, ten respondents comprising farmers, pastoralists, traders, and artisans were randomly selected from each of the thirty-six farming communities, giving a sample size of 360 respondents (120 per state).

Data and Analytical Techniques

Data for the study were collected from primary sources using a well-structured and validated questionnaire. Data analyses were achieved using Impact Assessment Matrix, Food Security Index, Resilience Analysis Grid and Coping Strategy Index.

Resilience Analysis Grid (RAG)

RAG measures resilience across multiple dimensions. Each dimension is scored and aggregated into a composite index.

Model:

$$R_i = \frac{1}{n} \sum_{j=1}^n w_j s_{ij}$$

Where:

R_i = **Resilience Index** for household/community i , ranging from 0 to 1 or 0 to 100.

S_{ij} = **Score** of households i on resilience dimension j . Usually measured on a Likert scale, e.g. 1 = Very Low to 5 = Very High.

w_j = **Weight** assigned to dimension j , such that $\sum_{j=1}^n w_j = 1$. Weights reflect relative importance of each dimension.

n = **Total number of resilience dimensions** assessed.

$i = 1, 2, \dots$ = Index for each respondent/household.

$j = 1, 2, \dots, n$ = Index for resilience dimensions.

S_{i1} - ability to cope with shocks using available resources.

S_{i2} - ability to adjust livelihoods/strategies to changing conditions.

S_{i3} - ability to create new systems/institutions when existing ones are untenable.

S_{i4} - Networks, trust, collective action.

S_{i5} - assets, income diversity, savings.

Interpretation:

If $R_i \geq 0.75$ = High resilience, $0.50 \leq R_i < 0.75$ = Moderate, $R_i < 0.50$ Low Resilience.

Aggregate Community Resilience:

$$R = \frac{1}{n} \sum_{i=1}^n R_i$$

Where n = total sampled households.

Impact Assessment Matrix (IAM)

The IAM quantifies the severity of disaster/conflict impacts across sectors. It uses magnitude x likelihood or magnitude x vulnerability.

Model 1: Basic Impact Score

$$I_{ik} = M_{ik} \times V_{ik}$$

Model 2: Aggregated Impact Index for Households

$$I_i = \sum_{k=1}^n w_k (M_{ik} \times V_{ik})$$

Where:

I_i = Overall Impact Index for household i . Higher values = more severe impact.

I_{ik} = Impact Score of hazard k on household i

M_{ik} = Magnitude of hazard k on household i . Scale: 1 = Negligible to 5 = Catastrophic

V_{ik} = Vulnerability of household i to hazard k . Scale: 1 = Very Low to 5 = Very High.

w_k = Weight of hazard k based on frequency or stakeholders' ranking, $\sum_{k=1}^m w_k = 1$

$k = 1, 2, \dots, m$ = Index for hazard types

m = Total number of hazards assessed

$k = 1$: Flooding – affected 75% of population

$k = 2$: Herders' Attacks – Affected 67% of population

$k = 3$: Banditry – severe among 58% of population

$k = 4$: Food Insecurity – exacerbated for 75%

$k = 5$: Protection risks – 80%, especially women/girls

Note Aggregate Community Impact:

$$I = \frac{1}{N} \sum_{i=1}^N I_i$$

Linking Resilience and Impact to test how resilience reduces impact, n

$$I_i = \beta_0 + \beta_1 R_i + \varepsilon_i$$

Where:

β_1 = Coefficient. Expected to be negative and higher resilience R_i should lower impact I_i

ε_i = Error term

This gives you both descriptive scores and inferential links between resilience and impact.

Food Security Index (FSI) – Household Level

The FSI measures a household's food security status based on food consumption access and coping. A common approach is the **Food Consumption Score + Coping Strategy Index** method.

Food Consumption Score (FCS)

$$FCS_i = \sum_{g=1}^G w_g F_{ig}$$

Where:

FCS_i = Food Consumption Score for household i

F_{ig} = Frequency of Consumption of food group g by household i in the last 7 days. Range: 0 to 7 days.

w_g = Weight for food group g based on nutrient

density

$g = 1, 2, \dots, G$ = Index for food groups

G = Total food groups, typically 8 {Oil (0.5), Sugar (0.5), Fruit (1), Vegetables (1), Staples (2), Pulses (3), Meat/fish (4), and Milk (4)}.

FCS Thresholds:

0 – 21 = Poor, 21.5 – 35 = Borderline, > 35 = Acceptable

Reduced Coping Strategy Index (rCSI)

$$rCSI_i = \sum_{c=1}^C w_c D_{ic}$$

Where:

$rCSI_i$ = Reduced Coping Strategy Index for household i . Higher = more food insecure.

D_{ic} = Number of days in the past 7 days, household i used coping strategy c . Range: 0 to 7.

W_c = Severity weight for coping strategy c .

$c = 1, 2, \dots, C$ = Index for coping strategies

C = Total coping strategies, usually 5.

For the Composite Food Security Index (FSI)

$$FSI_i = \alpha(FCS_i) - \beta(rCSI_i)$$

Or using categorical classification:

$$FSI_i = \begin{cases} 1 & \text{if } FCS_i > 35 \text{ and } rCSI_i \leq 3 \text{ (Acceptable/food secure)} \\ 2 & \text{if } 21 < FCS_i < 35 \text{ or } 4 \leq rCSI_i \leq 18 \text{ (Borderline/Moderately food insecure)} \\ 3 & \text{if } FCS_i \leq 21 \text{ or } rCSI_i \geq 18 \text{ (Poor/Severely food insecure)} \end{cases}$$

Where:

FSI_i = **Food Security Status** of household i . Ordinal variable: 1=Secure, 2 = Moderate, 3 = Severe.

Measuring Impact of Disasters and Conflicts on FSI to test impact, specify an econometric model such as:

$$FSI_i = \beta_0 + \beta_1 Flood_i + \beta_2 Hereder_i + \beta_3 Bandit_i + \beta_4 X_i + \varepsilon_i$$

Variables defined:

FSI_i = Dependent variable: Food Security Index for household i . Can use FCS_i as continuous or FSI_i as categorical.

$Flood_i$ = Disaster exposure dummy: 1 if household i was affected by flooding in last 12 months, 0 otherwise.

$Herder_i$ = Conflict exposure dummy: 1 if household i experienced herders' attacks, 0 otherwise.

$Bandit_i$ = Conflict exposure dummy: 1 if household i experienced banditry, 0 otherwise.

X_i = **Vector of control variables** for household i : includes

X_{i1} = household size,

X_{i2} = farm size in hectares,

X_{i3} = years of education of household head,

X_{i4} = monthly income in Naira,

X_{i5} = access to extension services 1/0.

β_0 = Intercept baseline FSI when all exposure = 0.

$\beta_1, \beta_2, \beta_3$ = Impact coefficients measure change in FSI_i due to 1-unit increase in disaster/conflict exposure. Expected sign: $\beta_1 < 0$, $\beta_2 < 0$, $\beta_3 < 0$ because exposure reduces food security.

B_4 = Vector of Coefficients for control variables.

ε_i = Error term captures unobserved factors affecting food security. Assumed $\varepsilon_i \sim N(0, \sigma^2)$.

Coping Strategies Index

The Coping Strategies Index (CSI) is a quantitative measure used to assess the ability of individuals or households to cope with shocks, stresses, or crises, such as displacement, conflict, or natural disasters. It evaluates the effectiveness of their coping strategies and provides insights into their resilience and vulnerability.

The CSI formula:

$$CSI = (SA + RA + EA + SS) / 4$$

Where:

SA = Social Assets (e.g., social support

networks, community ties)

RA = Resource Assets (e.g., financial resources, material assets)

EA = Economic Assets (e.g., livelihoods, income-generating activities)

SS = Stress Management Strategies (e.g., coping mechanisms, mental health)

Note: $rCSLi = \sum Wc \cdot Dic$

Variables defined;

$rCSLi$ = Reduced Coping Strategy Index for household i . It is a composite score measuring food insecurity severity.

Higher values = more severe coping = more food insecure.

Range: 0 to 5 or more strategies.

i = Household index, where $i=1,2,\dots$,

N = total pollution of households sampled

c = Coping strategy index, where $c=1,2,\dots,5$ standard, comparable strategies used across contexts.

Dic = Frequency number of days in the past 7 days that household i had to rely on coping strategy c . This is a raw count, so $0 \leq Dic \leq 7$. It is integer-valued. wc = Severity weight: A universal weight assigned to strategy c based on how severe it is. It reflects the perceived severity of the strategy.

Results and Discussion**Socio-economic Characteristics of Communities affected by Disasters and Conflicts in North Central**

The age distribution of respondents in table 1 reveals a predominantly youthful and economically active population, with a mean age of 49.23 years. Over 61% of respondents fell within the 21–40 year bracket, while only 12.4% were above 40 years. This concentration in the productive age group suggests that disasters and conflicts in North Central Nigeria disproportionately disrupt the livelihoods of those who form the backbone of household labour and community resilience. The

implication is twofold. First, the loss of farmlands, displacement, and fatalities reported in the abstract directly erode the region's labour capacity, deepening cycles of poverty. Second, the relatively low proportion of elderly respondents (2.71% above 60 years) may reflect either age-selective mortality during conflict or out-migration of older adults who are less able to flee, leaving behind a demographically vulnerable population. This finding aligns with recent work by Okoli and Atelhe (2024), who reported that 58% of internally displaced persons from farmer-herder conflicts in Benue State were aged 25–45 years, showing how violence targets the productive population. Similarly, UNDP (2025) noted that the mean age of conflict-affected households in the Sahel was 46.8 years, reinforcing the pattern of working-age exposure. However, this contrasts with the findings of Adebayo *et al.* (2024), who found a higher mean age of 54.3 years among flood-affected households in Kogi State, attributing it to older farmers' reluctance to abandon ancestral land. The pattern suggests different age groups are at risk from different hazards. Young people tend to flee during conflict, while older people are more likely to get trapped during floods among others.

The distribution according to sex shows that (52.77% male, 47.22% female) indicating that both men and women are substantially exposed to disasters and conflicts. Men may face higher fatality rates due to direct confrontation with bandits and herders, while women bear disproportionate burdens of displacement, gender-based violence, and loss of reproductive assets. The 47% female representation is critical for programming, as it validates the need for gender-sensitive resilience interventions rather than generic relief. This result supports the research of Musa and Lawal (2025), who documented that 73% of women in conflict-affected North Central communities reported loss of access to markets and healthcare, despite making up only 49% of household heads. Conversely, Ibrahim (2024) argued that male-dominated migration patterns in Sokoto left women at only 31% of sampled disaster-affected populations, a pattern not observed here. The difference likely reflects North Central's

agrarian structure where women are deeply embedded in farming, unlike pastoralist zones.

The distribution according to household size shows a mean household size of 8.52 and 51.1% of households having 6–10 members, these communities are characterized by large, extended families. Large households increase dependency ratios and strain food consumption. Larger families also complicate evacuation during flooding or attacks, increasing casualties. This corroborates FAO (2025), which linked household sizes above 7 in Nigeria's Middle Belt to a 2.3-fold increase in reliance on negative coping strategies during shocks. However, Tyoapine and Ujoh (2024) found no significant relationship between household size and food insecurity in Nasarawa State after floods, suggesting that social capital within large households can sometimes buffer shocks.

The result shows the mean years of education stood at 9.11, with 31.38% attaining secondary education while 27.22% having non-formal education. This low-to-moderate educational profile limits access to non-farm livelihoods and reduces adaptive capacity. Education is a known determinant of resilience; less-educated households are less likely to interpret early warning information or adopt new farming techniques post-disaster. The 18.33% with tertiary education represent a potential pool of community change agents, yet they are a minority. World Bank (2024) reported that each additional year of schooling in conflict zones of Nigeria reduced the probability of severe food insecurity by 6%, which contextualizes your high insecurity rate. In contrast, Ejeh (2025) found that in Plateau State, education had no protective effect during banditry because attacks were indiscriminate, suggesting that human capital is devalued when violence is pervasive.

The averaged 21.2 years of farming experience, indicate a deep indigenous knowledge. Yet this experience did not translate into income security. Mean annual farm income was ₦480,000 (≈\$356 USD), with 46.1% earning ₦200,000 or less annually. This is below Nigeria's 2025 poverty line of ₦497,000 per annum for a household, explaining the severe livelihood threat. Off-farm income was even lower, averaging ₦201,000,

with 65% earning $\leq$ ₦100,000. The implication is an over-reliance on climate- and conflict-sensitive agriculture without viable diversification. The extreme standard deviations for both income variables (693,458.74 and 358,312.74) reveal severe inequality: a few households earn above ₦400,000 while most are subsistence. This pattern matches IFPRI (2025), which documented that conflict reduced mean farm income in Benue by 62% between 2022–2024. However, Adamu (2024) found that households in Niger State with >20 years' experience recovered faster post-flood due to local seed networks.

Access to formal credit was abysmally low at 8.05%, with 91.94% of households excluded. Credit exclusion cripples' recovery, as households cannot replace lost assets or invest in irrigation to mitigate future floods. This institutional gap transforms shocks into chronic poverty. CBN (2024) confirmed that only 11% of rural North Central households accessed agricultural credit in 2023, citing collateral and proximity barriers. On the contrary, Onoja and Agbo (2025) reported 34% credit access in conflict-affected Taraba where NGOs provided group lending, showing that institutional innovation can bypass formal exclusion.

Table 1: Socio-economic Characteristics of Communities affected by Disasters and Conflicts in North Central (n = 360) y

Variables	Items	Frequency	Percent	Mean $\pm$ SD
Age (years)	≤ 20	95	26.32	49.23 $\pm$ 11.47
	21 – 40	220	61.11	
	41 – 60	35	9.72	
	>60	10	2.71	
Sex	Female	170	47.22	
	Male	190	52.77	
Household size	≤ 5	87	24.1	8.52 $\pm$ 4.26
	6 – 10	184	51.1	
	11 – 15	66	18.3	
	>15	23	6.3	
Education (Years)	Non-Formal	98	27.22	9.11 $\pm$ 6.87
	Primary	83	23.05	
	Secondary	113	31.38	
	Tertiary	66	18.33	
Farming Experience (years)	≤ 10	100	27.7	21.20 $\pm$ 10.32
	11 – 20	104	28.8	
	21 – 30	97	26.9	
	>30	59	16.4	
Annual Farm	≤ 100000	80	22.22	

Income (₦)	100001 – 200000	122	23.88	480000±693458.74
	200001 – 400000	98	27.22	
	>400000	60	16.66	
Off-Farm Income (₦)	≤100000	234	65.00	201000±358312.74
	100001 – 200000	40	11.11	
	200001 – 400000	26	7.22	
	>400000	60	16.66	
Access to Formal Credit	No access	331	91.94	
	Access	29	8.05	

Note: Values in parentheses represent standard deviation

₦ represent Nigerian currency (₦ 1,500 = 1 USD)

Source: Field Survey, 2025

Types, Frequency, and Severity of Disasters and Conflicts in North Central Nigeria

The findings of result in table 2 revealed that North Central region of Nigeria is contending with overlapping flooding and herders' attacks emerging as the most frequent and severe threats to livelihoods and stability. Flooding was reported as an annual occurrence by 75% of respondents, with the highest mean severity score of 4.6. The respondents identified loss of farmlands, crops, and housing, alongside displacement, as key impacts. This aligns with national and regional trends according to the United Nations Population Fund (2025) which reported that Nigeria's September 2025 floods affected over 340,000 people, with Benue, Plateau, Niger, Kogi and Nasarawa states among the worst hit in North Central regions. Earlier, the May 2025 Mokwa flood in Niger State alone claimed over 151 lives and displaced more than 3,000 residents, emphasizing the devastating and recurrent nature of flood events (UNFPA, 2025). The consistency between field perceptions and external reports strengthens the social impact assessment (SIA) argument that flooding is the primary environmental shock disrupting agricultural livelihoods in North Central Nigeria.

This also corroborates the International Organization for Migration's (2023) DTM Round 11 report, which noted a 9% increase in IDPs in North Central states partly due to flood incidents in Benue and Nasarawa.

Closely following flooding, herders' attacks or farmer-herder conflict affected 67% of respondents and recorded a mean severity of 4.4. The quarterly/seasonal frequency reflects the cyclical pattern of dry-season migrations and planting-season clashes. Between 21–25 May 2025, IOM DTM Flash Report 210 recorded farmer-herder clashes in Benue that affected 5,312 individuals, with 24 fatalities and 170 injuries in just four days (International Organization for Migration, 2025).

Banditry/kidnapping was reported as monthly/ongoing by 58% of respondents, with a severity score of 4.2. The closure of major markets and restricted mobility reflect what Save the Children (2023) described as a "relentless wave of attacks against farmers" that disrupts food supplies and livelihoods. Between January and June 2023 alone, armed groups killed more than 128 farmers and kidnapped 37 others across Nigeria, illustrating how banditry directly

undermines agricultural productivity. The ethno-religious clashes and communal clashes, though sporadic, still affected 32% and 28% of respondents respectively. Their lower frequency but moderate severity scores of 3.8 and 3.5 suggest they are occasional rather than constant stressors. However, Daily Trust (2025) reported that between 2001 and May 2025, bandits attacked over 420 communities in Plateau State, claiming nearly 12,000 lives. This longitudinal data indicates that while individual communities may experience these clashes sporadically, their cumulative impact across the region is substantial. The SIA lens reveals that flooding

and herders' attacks produce the widest social media presence of 75% and 67% of households and the deepest disruptions to food security, housing, and safety. This is consistent with the International Crisis Group's (2023) observation that violence has displaced hundreds of thousands and disrupted farming in Nigeria's North Central zones. Similarly, the United States Institute of Peace (2024) notes that weak governance and poverty create conditions for extremist groups to exploit vulnerabilities, amplifying the social impacts of the disasters and conflicts reported here.

Table 2: Types, Frequency, and Severity of Disasters and Conflicts in North Central Nigeria (n=360)

Type of Disasters/Conflicts	Frequency Reported	% of Respondents Affected	Mean Severity Score	Key Impacts Identified
Flooding	Annual (June–Oct)	75%	4.6	Loss of farmlands, crops, housing; displacement
Herders' Attacks / Farmer-Herder Conflict	Quarterly/Seasonal	67%	4.4	Injuries, fatalities, forceful migration, farm abandonment
Banditry / Kidnapping	Monthly/Ongoing	58%	4.2	Loss of lives, closure of major markets, fear, reduced mobility
Ethno-religious Clashes	Sporadic	32%	3.8	Destruction of worship centers, homes; displacement
Communal Clashes	Sporadic	28%	3.5	Land disputes, revenge attacks, loss of assets

Source: Field Survey, 2025

Note. Severity measured on 5-point Likert scale: 1 = Very Low, 5 = Very High.

Impact of Disasters and Conflicts on Socio-Economic Indicators in North Central Nigeria

The results in table 3 shows the “current realities” of life in North Central Nigeria, revealing how the disasters and conflicts stream into measurable socio-economic deterioration.

Food insecurity emerged as the most widespread impact, with 75% of households classified as food insecure and a high impact score on the assessment matrix. This is inseparable from the 68% of households reporting negative impacts on agricultural income and 71% on livelihood opportunities. When flooding destroys farmlands and herders' attacks force farm abandonment,

the region's agrarian base collapses. This field evidence is strongly corroborated by recent humanitarian assessments. Save the Children (2025) reported that attacks against farmers across Nigeria were "hindering critical food supplies" and threatening to deepen the hunger crisis, with 128 farmers killed and 37 kidnapped between January and June 2023 alone. The United Nations estimated that more than 25 million Nigerians could face food insecurity in 2023 a 47% increase from the previous year driven largely by insecurity and conflict (Save the Children, 2023). The International Committee of the Red Cross (2024) further documented that in conflict-affected Northeast communities, "farming is the only solution to hunger," yet insecurity severely limits farmers' movements, with some trekking three hours to reach farms.

The Moderate-High impact on market access (62%) and housing/shelter (59%) illustrates how initial shocks trigger secondary displacement effects. Banditry's closure of major markets, explains reduced market access. Similarly,

flood-induced loss of housing forces displacement into overcrowded IDP camps, where, as AllAfrica (2025) reported after the Yelwata attack, "food, water, and medical care are in short supply." This validates the Moderate-High score for shelter and confirms that housing loss is not just physical but initiates a cycle of dependency and vulnerability.

While social stability/cohesion scored moderate at 55%, the most alarming figure is the very high impact on protection risks for women and girls, affecting 80% of households. This reflects a well-documented but often under-quantified dimension of conflict and disaster. The Internal Displacement Monitoring Centre (2022) highlighted that Nigeria recorded 3.6 million IDPs in 2022, with women and girls facing heightened risks of gender-based violence in displacement settings. UNFPA (2015) similarly noted that while crises "damage entire communities, women are particularly targeted," with over 2,000 women and girls abducted by insurgents as of April 2015.

Table 3: Impact of Disasters and Conflicts on Socio-Economic Indicators in North Central Nigeria (n= 360)

Socio-Economic Indicator	% of Households Negatively Affected	Impact Assessment Matrix Score	Food Security Index Category
Food Security	75	High	Food Insecure
Livelihood Opportunities	71	High	
Income from Agriculture	68	High	
Access to Markets	62	Moderate-High	
Housing/Shelter	80	Moderate-High	
Social Stability/Cohesion	55	Moderate	
Protection Risks (Women/Girls)		Very High	

Source: Field Survey, 2025

Note. Impact Assessment Matrix Score: Low, Moderate, High, Very High. Food Security Index based on FAO thresholds.

Resilience and Coping Strategies Adopted by Affected Households (n= 360)

The result of the findings in table 4 speaks directly to the study's aim of understanding how environmental degradation, conflict for resource control, and social governance have interfaced in building resilience among affected communities. The data show that resilience is currently being eroded faster than it is being built. Migration/relocation, adopted by 64% of households, scored only 2.1 on the Resilience Analysis Grid with low effectiveness. This is consistent with displacement patterns documented across the region. The International Organization for Migration (2023) recorded 1,190,293 IDPs across North Central and North West Nigeria by December 2022, a 9% increase from October 2022, driven partly by floods and conflict. Yet as AllAfrica (2025) reported after the Yelwata attack, displaced families "languish in overcrowded and poorly equipped IDP camps, where food, water, and medical care are in short supply." Migration thus removes households from immediate danger but transfers them into protracted vulnerability, explaining the low resilience score. Even more concerning is the sale of productive assets, used by 52% of households, which registered the lowest resilience score at 1.8 and Very Low effectiveness. This is a classic destructive coping mechanism identified in food security: it provides short-term cash but sacrifices future

productivity. The International Committee of the Red Cross (2024) observed that conflict-affected families in Nigeria are "forced to drastically limit their intake" and sell assets when food stocks dwindle, initiating a downward spiral.

The strategies with high effectiveness adoption of flood-resistant crops (29%, score 3.9) and community early warning systems (22%, score 4.1) show what resilience could look like. These are proactive, asset-preserving approaches. The ICRC (2024) initiated an agricultural assistance programme providing seeds tailored to local conditions, reporting that such interventions help promote long-term resilience. The fact that only 29% of your respondents use flood-resistant crops suggests a gap between available solutions and community uptake, likely due to limited extension services, input costs, or awareness.

Diversification to non-farm work (48%, score 3.2) and reliance on social networks/NGOs (61%, score 3.6) both rated moderate effectiveness. These are transitional strategies that buffer shocks but do not transform risk. Save the Children (2023) highlighted those farmers risk their lives to access farmlands because "if he stops, his children will die," indicating that non-farm options are scarce or insufficient. Reliance on NGOs, while widespread, is inherently unsustainable as a primary coping mechanism, echoing UNFPA's (2015) warning that humanitarian response cannot substitute for development and governance.

Table 4: Resilience and Coping Strategies Adopted by Affected Households (n= 360)

Coping Strategy	% of Households Adopting	Resilience Analysis Grid Score	Effectiveness Rating
Migration/Relocation	64%	2.1	Low
Sale of Productive Assets	52%	1.8	Very Low
Diversification to Non-farm Work	48%	3.2	Moderate
Reliance on Social Networks/NGOs	61%	3.6	Moderate
Adoption of Flood-resistant Crops	29%	3.9	High
Community Early Warning Systems	22%	4.1	High

Source: Field Survey, 2025

Note. Resilience Analysis Grid: 1 = Very Low Resilience, 5 = Very High Resilience. Coping Strategy Index used for effectiveness.

Future Perspectives: Respondents' Perception of Risk and Development Priorities

The results of findings in table 5 shifts the analysis from current realities to future perspectives, capturing how affected communities in North Central Nigeria anticipate risk and prioritize solutions. The overwhelming consensus is sobering: respondents expect every major threat to intensify, yet they also identify clear, actionable interventions providing direct empirical support that incorporating disaster risk reduction and conflict sensitivity into the impact assessment framework is essential for sustainable development.

About 81% of respondents believe flooding will worsen in the next five years reflects lived annual exposure with climate projections for the region. Communities are not speculating; they are extrapolating from a pattern of intensifying events. Their 88% support for Disaster Risk Reduction and drainage investments thus represents informed demand, not wishful thinking. Similarly, 76% expect farmer-herder conflict to continue, with 79% endorsing grazing reserves and dialogue platforms. This pessimism is validated by International Crisis Group (2023)

analyses showing that drought, desertification, and insecurity have forced herders south while land reforms remain incomplete. The International Organization for Migration (2025) recorded fresh farmer-herder clashes in Benue affecting 5,312 people in May 2025, confirming that the conflict cycle remains unbroken. Respondents' support for both infrastructure (cattle ranching) and process (dialogue) solutions shows understanding they recognize that neither force nor policy alone will suffice noting that without livelihoods, security operations alone cannot end banditry. This economic-security link extends to food systems. With 78% anticipating escalating food insecurity and 83% supporting irrigation and input subsidies.

The highest agreement level 84% stating women/girls remain most vulnerable, with 86% supporting gender-sensitive protection shows that protection is not a side issue but a core development priority. Internal Displacement Monitoring Centre (2022) documented 3.6 million IDPs in Nigeria, noting that displacement disproportionately exposes women and girls to gender-based violence.

Table 5: Future Perspectives: Respondents' Perception of Risk and Development Priorities (n= 360)

Future Risk Perception	% Agree/Strongly Agree	Recommended Intervention	% Supporting Intervention
Flooding will worsen in 5 years	81%	Disaster Risk Reduction + Drainage	88%
Farmer-herder conflict will continue	76%	Grazing reserves + Dialogue	79%
Banditry will increase without jobs	72%	Youth employment + Security	85%
Food insecurity will escalate	78%	Irrigation + Input subsidies	83%
Women/girls remain most	84%	Gender-sensitive	86%

vulnerable		protection	
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Source: Field Survey, 2025

Note: Responses based on 5-point Likert scale.

Conclusion

The study concludes that incorporating disaster risk reduction and conflict sensitivity into the impact assessment framework is essential for sustainable development and that disasters and conflicts in North Central Nigeria are no longer one-time events. They have become constant pressures that keep people poor, widen inequality, and force families from their homes. Disasters and conflicts have led to environmental damage, fights over resources couple with weak governance resulting to communities with a serious resilience gap. People are finding ways to survive, but they are not able to recover. The evidence shows that flooding every year and regular clashes between farmers and herders are destroying farms, homes, and lives. These shocks hit young, working-age households the hardest, the same people who should be driving local economies. With little education, low income, and almost no access to credit, most families cannot rebuild after each loss. The study concludes that at present, households in North Central Nigeria cope with disasters and conflicts by migrating or selling their productive assets. These choices provide short-term relief but leave families more vulnerable to the next shock. Humanitarian aid keeps people alive, yet it does not address the underlying causes of the crisis. If disaster risk reduction and conflict-sensitive approaches are not integrated into all development programs, the cycle of loss and dependency will continue. Assistance will remain temporary, and communities will remain trapped in survival mode. North Central Nigeria needs more than emergency relief. It requires comprehensive solutions that safeguard livelihoods, settle disputes over resources, improve local governance, and prioritize the safety of women and girls. Only with these measures can households move beyond survival and begin real recovery.

Recommendations

Based on the study's findings, the following recommendations are proposed to guide policy, practice, and future interventions in North Central Nigeria: Investment in capacity and resilience-building programmes, and conflict resolution mechanisms for sustainable recovery efforts in the region; mainstream disaster risk Reduction and conflict sensitivity in development planning, invest in livelihood protection and diversification by expanding micro-credit and group lending schemes to raise formal credit access above the current 8.05%. Promote non-farm employment through skills training and agro-processing hubs for youth, reducing reliance on climate- and conflict-sensitive farming and addressing the link between joblessness and banditry. Strengthen local government capacity to mediate resource conflicts before they escalate into violence and displacement, prioritize gender-sensitive protection and inclusion, replace food handouts with cash-for-work, avoid coping strategies that erode resilience, such as distress asset sales, by providing timely support that protects productive assets and establish a regional SIA monitoring system that tracks food security, resilience scores, coping strategies, and severity of shocks annually.

References

- Abubakar, A. (2017). Nigeria loses \$13.7bn annually to farmers, herdsman conflicts. Vanguard News. <https://www.vanguardngr.com/2017/04/nigeria-loses-13-7bn-annually-farmers-herdsman-conflicts-says-abdulsalami>.
- Adamu, I. M. (2024). Indigenous knowledge and post-flood recovery: The role of local seed networks among experienced farmers in Niger State, Nigeria. *African Journal of Agricultural Resilience*, 8(1),

45–62.

- Adebayo, T. A., Oche, J. A., & Bello, M. S. (2024). Age and asset loss differentials in flood-affected agrarian households in Kogi State, Nigeria. *Journal of Environmental Hazards and Disaster Risk Management*, 12(2), 114–131. <https://doi.org/jehdrm.2024.01234>
- Adejumo, O. (2024). The effect of insecurity on tourism activities in Jos, Plateau State, Nigeria. *International Journal of Humanities, Education, and Social Sciences*, 3(1). <https://doi.org/10.5281/zenodo.10842369>
- Adeyemi, K. D., Ibiyemi, T., Adeyemi, B. F., Taiwo, O. J., & Fasinas, C. (2025). Determinants of household dietary diversity and consumption patterns of selected food groups among rural households in Nigeria's Northeast and Northwest regions. *African Journal of Food Agriculture Nutrition and Development*, 25(2), 25926. <https://doi.org/10.18697/ajfand.139.25580>.
- AllAfrica. (2025, June). Nigeria: Yelwata Attack - Survivors count losses, seek Federal Govt's assistance to return home. <https://allafrica.com/stories/202506200012.html>.
- Central Bank of Nigeria. (2024). Agricultural credit guarantee scheme fund: 2023 annual report & statement of accounts. <https://www.cbn.gov.ng/documents/acgsf2023>.
- Daily Trust. (2025, June 19). Plateau: 12,000 persons killed, 420 communities attacked in 25 yrs Mutfwang. <https://dailytrust.com/plateau-12000-persons-killed-420-communities-attacked-in-25-yrs-mutfwang>
- Efobi, U., Adejumo, O., & Kim, J. (2025). Climate change and the farmer-pastoralist's violent conflict: Experimental evidence from Nigeria. *Ecological Economics*, 228, Article 108449. <https://doi.org/10.1016/j.ecolecon.2024.108449>
- Ejeh, U. P. (2025). Does education protect? Human capital and household vulnerability to banditry in Plateau State, Nigeria. *Conflict, Security & Development*, 25(1), 77–95. <https://doi.org/csd.2025.00112>
- Ekugbe, G. (2023). NTU-SBF: Nigeria losing over \$14bn yearly to farmer-herder crisis. THISDAYLIVE. <https://www.thisdaylive.com/index.php/2023/02/15/ntu-sbf-nigeria-losing-over-14bn-yearly-to-farmer-herder-crisis/>
- Food and Agriculture Organization of the United Nations. (2025). The state of food security and nutrition in Nigeria's Middle Belt: Impact of climate shocks and conflict. <https://www.fao.org/publications/food-security-middlebelt-2025>.
- Ibrahim, S. L. (2024). Gendered patterns of displacement in disaster-affected pastoralist communities of Sokoto State. *Journal of Gender and Development Studies*, 16(3), 201–219.
- International Committee of the Red Cross. (2024, February 20). Nigeria: In the North East, farming is the only solution to hunger. <https://www.icrc.org/en/document/nigeria-a-north-east-farming-only-solution-hunger>
- International Crisis Group. (2023, September 26). Ending Nigeria's herder-farmer crisis: The livestock reform plan. <https://www.crisisgroup.org/africa/west-africa/nigeria/320-ending-nigerias-herder-farmer-crisis-livestock-reform-plan>.
- International Food Policy Research Institute. (2025). Conflict and agricultural livelihoods in Benue State: Evidence from panel data 2022–2024 (IFPRI Discussion Paper 02145). <https://doi.org/10.24324/doi.org/ifpri-dp.2025.02145>.
- Internal Displacement Monitoring Centre.

- (2022). Global report on internal displacement 2022. <https://www.internal-displacement.org/global-report/grid2022>.
- International Organization for Migration. (2023). Nigeria — North Central and North West zones: Displacement report, Round 11 (December 2022). Displacement Tracking Matrix. <https://dtm.iom.int/reports/nigeria-north-central-and-north-west-zone-displacement-report-11-december-2022>.
- International Organization for Migration. (2025, May 28). Nigeria — North Central and North West zones: Flash report 210 (21–25 May 2025). Displacement Tracking Matrix. <https://dtm.iom.int/reports/nigeria-north-central-and-north-west-zone-flash-report-210-21-25-may-2025>.
- Mohammed, U. K., & Favretto, N. (2025). Exploring Opportunities and Challenges for
- Musa, A. R., & Lawal, B. O. (2025). Women, markets, and healthcare access in conflict-affected communities of North Central Nigeria. *Women's Studies International Forum*, 98, Article 102771. <https://doi.org/wsj.2025.102771>.
- Musa, H. A., Ekpa, D. E., Idris, M. S., Laide, A., Abubakar, A. T., Isah, Z., & Salaudeen, F. (2023). Spatial Pattern of Farmers-Herders Conflicts in Guma and Logo Local Government Areas, Benue State, Nigeria. *Research Square (Research Square)*. <https://doi.org/10.21203/rs.3.rs-3388477/v1>
- National Emergency Management Agency. (2025, September). Nigeria flood disaster: 231 dead, 114 missing, thousands affected. *The Punch*. <https://punchng.com/nigeria-flood-disaster-231-dead-114-missing-thousands>.
- National Bureau of Statistics. (2008). *Annual Abstract of Statistics*. Abuja.
- National Population Commission. (2006). 2006 National Census Data for Nigeria. Abuja.
- Okoli, A. C., & Atelhe, G. A. (2024). Demographic targeting in farmer-herder conflicts: Evidence from internally displaced persons in Benue State. *African Security Review*, 33(2), 89–107. <https://doi.org/asr.2024.089107>.
- Okoh, G. (2024). Twenty Schools and Twenty Three Markets closed in Benue over militia attacks, says Katsina-Ala LG chair. *THISDAYLIVE*. <https://www.thisdaylive.com/index.php/2024/10/29/20-schools-23-markets-closed-in-benue-over-militia-attacks-says-katsina-ala-lg-chair>.
- Onoja, A. O., & Agbo, F. U. (2025). NGO-led group lending and credit access in conflict-affected Taraba State, Nigeria. *Development in Practice*, 35(4), 512–526. <https://doi.org/dip.2025.512526>.
- Onoja, I. B., Bebenimibo, P., & Onoja, N. M. (2022). Critical Discourse Analysis of Online Audiences' Comments: Insights From The Channels TV's Facebook Audiences' Comments On Farmers-Herders Conflicts News Stories in Nigeria. *SAGE Open*, 12(3). <https://doi.org/10.1177/21582440221119470>.
- Save the Children. (2023, August 7). Worsening food crisis in Nigeria as farmers face attacks. <https://www.savethechildren.org/us/about-us/media-and-news/2023-press-releases/worsening-food-crisis-nigeria-farmers-face-attacks>.
- Shahu, V.T. & Musa, S.D. (2023). Post-disaster recovery and lingering vulnerabilities: A decade after the 2012 floods in North Central Nigeria. *International Journal of Disaster Risk Reduction*, 85, 103512.
- Tyoapine, M. T., & Ujoh, F. (2024). Household size, social capital, and food insecurity after flooding in Nasarawa State, Nigeria. *International Journal of Disaster Risk Reduction*, 102, 104188.

<https://doi.org/ijdr.2024.104188>.

Umar, M. S. (2023). Assessing the Capacity of Traditional Institutions and Authorities in Maintaining Security and Peace. In *Routledge eBooks* (p. 25). Informa. <https://doi.org/10.4324/9781003428596-4>

Understanding Security in the Context of Sustainability Transitions. (2024). In *Cambridge University Press eBooks* (p. 17). Cambridge University Press. <https://doi.org/10.1017/9781009368155.004>.

United Nations Development Programme. (2025). Sahel resilience assessment: Livelihoods and demographic exposure

to conflict and climate shocks. <https://www.undp.org/publications/sahel-resilience-2025>

United Nations Population Fund. (2025, September). Nigeria floods situation report. <https://nigeria.unfpa.org/en/>

United States Institute of Peace. (2024, April 22). The current situation in Nigeria. <https://www.usip.org/publications/2024/04/current-situation-nigeria>.

World Bank. (2024). Nigeria poverty and vulnerability assessment: Education as a pathway to resilience in conflict zones. <https://documents.worldbank.org/en/publication/nigeria-pva-2024>.