IDP camp. Image via Festus Iyorah

Scoping Study on Disaster Risk Reduction and Environmental Sustainability in North-East Nigeria Humanitarian Context

June 2025

GLOBAL SHELTER CLUSTER
Coordinating Humanitarian Shelter and Settlements

UNDRR
UN Office for Disaster Risk Reduction

NIGERIA SHELTER SECTOR
Coordinating Humanitarian Shelter and Settlements

DMS/CCCM SECTOR
Nigeria

Abbreviations and Acronyms

ADSEMA Adamawa State Emergency Management Agency

AA Anticipatory Actions

BOSEMA Borno State Emergency Management Agency

BOACSDHR Borno State Agency for Coordination of Sustainable Development and Humanitarian Response

ECCAP Climate Change Action Project

CCCM Camp Coordination and Camp Management

CDMC Community Disaster Risk Management Committees

CEMCs Community Emergency Management Committees

DCC Department of Climate Change

DRC Danish Refugee Council

DRR Disaster Risk Reduction

ECOP Environment Community of Practice

EWS Early Warning Systems

GSC Global Shelter Cluster

ICRC International Committee of the Red Cross

IDP Internally Displaced Person

IEC Information, Education, and Communication

IFRC International Federation of Red Cross and Red Crescent Societies

INGO International Non-Governmental Organisation

IOM International Organisation for Migration

FGD Focus Group Discussions

FME Federal Ministry of Environment

GSC Global Shelter Cluster

NDMF National Disaster Management Framework

NDC Nationally Determined Contributions

NDRMP National Disaster Risk Management Policy

NESREA National Environmental Standards and Regulations Enforcement Agency

NEMA National Emergency Management Agency

NIHSA Nigerian Hydrological Services Agency

NiMet Nigeria Meteorological Agency

NRC Norwegian Refugee Council

NRCS Nigeria Red Cross Society

LEMCs Local Emergency Management Committees

LGA Local Government Area

SEMA State Emergency Management Agencies

SMA Site Management Agency

UNDRR United Nations Office for Disaster Risk Reduction

UNHCR United Nations Hight Commissioner for Refugees

WASH Water, Sanitation, and Hygiene

BAY states Borno, Adamawa, Yobe

YBMENV Yobe State Ministry of Environment

YOSEMA Yobe State Emergency Management Agency

Glossary

Anticipatory Action: Pre-planned, risk-informed actions triggered before a disaster strikes, based on early warnings and forecasts. Aims to reduce the humanitarian impact by acting ahead of predictable shocks

Climate: Climate in a narrow sense is usually defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years.

Climate adaptation: Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects.

Climate change: Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer.

Climate extreme (extreme weather or climate event): The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. For simplicity, both extreme weather events and extreme climate events are referred to collectively as "climate extremes". See also Extreme weather event.

Climate change mitigation: Reducing or preventing greenhouse gas emissions or enhancing carbon sinks.

Climate resilience: Is the ability to prepare for, recover from, and adapt to the impacts of climate change.

Contingency planning: A management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective and appropriate responses.

Coping capacity: The ability of people, *institutions*, organizations, and systems, using available skills, values, beliefs, resources, and opportunities, to address, manage, and overcome adverse conditions in the short to medium term.

Cost-effectiveness: A measure of the cost at which policy goal or outcome is achieved. The lower the cost the greater the cost-effectiveness.

Disaster management: The organisation, planning and application of measures preparing for, responding to and recovering from disasters.

Disaster risk: The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

Disaster risk assessment: A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.

Disaster risk information: Comprehensive information on all dimensions of disaster risk, including hazards, exposure, vulnerability and capacity, related to persons, communities, organizations and countries and their assets.

Disaster risk management: Disaster risk management is the application of disaster

risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.

Disaster risk reduction: Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

Early warning system: An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.

Emergency relief: Immediate assistance after a disaster to save lives and meet basic needs.

Environmental protection: Actions to prevent or reduce environmental damage.

Environmental sustainability: Managing natural resources to meet current humanitarian needs without compromising future generations.

Evacuation: Moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event in order to protect them

Exposure: The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

Hazard: A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.

Human-induced disasters: Disasters resulting from human actions like conflict, pollution, or industrial accidents.

Multi-hazard: means (1) the selection of multiple major hazards that the country faces, and (2) the specific contexts where hazardous events may occur simultaneously, cascading or cumulatively over time, and considering the potential interrelated effects.

Mitigation: The lessening or minimising of the adverse impacts of a hazardous event.

Natural disaster: Serious disruption caused by a hazard interacting with vulnerability, not just the event itself.

Preparedness: The knowledge and capacities developed by governments, response and recovery organisations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters.

Prevention: Activities and measures to avoid existing and new disaster risks.

Reconstruction: The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

Recovery: The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

Rehabilitation: The restoration of basic services and facilities for the functioning of a

community or a society affected by a disaster.

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

Risk assessment: The process of identifying and analysing hazards, vulnerabilities, and exposure.

Structural and non-structural measures: Structural measures are any physical construction to reduce or avoid possible impacts of hazards, or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Non-structural measures are measures not involving physical construction which use knowledge, practice or agreement to reduce disaster risks and impacts, in

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

Contents

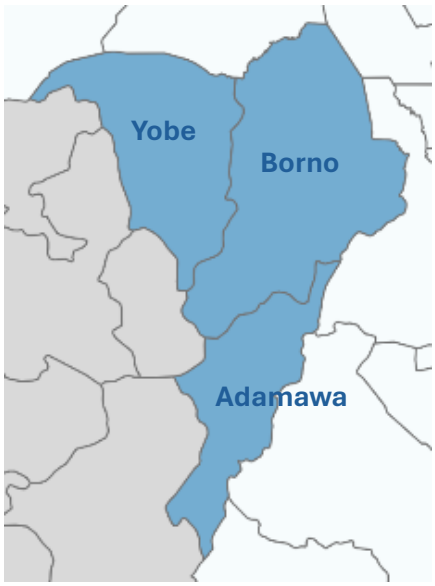
1. Overview

The United Nations Office for Disaster Risk Reduction[1] (UNDRR), in collaboration with the Global Shelter Cluster[2] (GSC), is supporting the Nigeria CCCM (Camp Coordination and Camp Management) / Shelter/ NFI (Non-Food Item) Sector[3], to integrate Disaster Risk Reduction (DRR) and sustainability into humanitarian operations in North-East Nigeria. The goal is to contribute to long-term resilience building through a shelter and settlements approach by enhancing the capacity of humanitarian actors to mainstream DRR. A dedicated consultancy has been launched to guide this integration process.

1.1. Context

North-East Nigeria is deeply affected by conflict[4] and climate-related hazards, causing large-scale displacement and ongoing humanitarian needs. The region is increasingly vulnerable to floods, fires, droughts, windstorms, deforestation and erosion, with over 2.25 million internally displace persons (IDPs) spread across 259 camps, 75% of which are informal. Only 25% are formally recognised and coordinated[5]. In addition, there are over 1,000 host community locations hosting displaced populations.

Furthermore, 69% of these sites lack a Site Management Agency (SMA), limiting coordination and risk mitigation capacity[6]. Approximately 59% of Internally Displaced Person (IDPs), 1,152,613 individuals, are living within the host community sites, while 41% are in camps.



Map 1: Nort-East Nigeria

Strengthening DRR within the management of displacement is crucial to reducing vulnerabilities and supporting recovery in a fragile humanitarian landscape.

1.2. Sector Coordination

The Nigeria CCCM/Shelter/NFI Sector provides coordination support to government and humanitarian actors to address shelter, NFI and camp management needs in the North-East region. It is led by NEMA (National Emergency Management Agency) and co-led by IOM and UNHCR and operates under the Nigeria Humanitarian Needs and Response Plan[7].

The Sector has already undertaken key efforts to mitigate hazards that are being exacerbated by climate change and becoming even greater risks, including those related to drought, flooding,

[1] UNDRR - Homepage | UNDRR
[2] Global Shelter Cluster | Shelter Cluster
[3] Nigeria: CCCM - Shelter and NFI | ReliefWeb Response
[4] North-East Nigeria faces the Boko Haram and ISWAP insurgency alongside farmer–herder conflicts over land and water. Banditry and intercommunal violence further destabilise the region and drive displacement.
[5] Nigeria — North-East Displacement Report Round 49 (March 2025) | Displacement Tracking Matrix
[6] Nigeria — North-East Displacement Report Round 49 (March 2025) | Displacement Tracking Matrix
[7] Nigeria 2025 Humanitarian Needs and Response Plan (January 2025) | OCHA

fires and extreme winds. The current initiative aims to build on these efforts and further strengthen the resilience of both displaced and host populations.

1.3. Objectives of the DRR Consultancy

The aim of this consultancy is to strengthen the integration of DRR and environmental sustainability across CCCM, Shelter/NFI programming in the three priority states of Borno, Adamawa and Yobe (BAY States).

Objectives:

1. Enhance Community Resilience; Empower IDPs and host communities to identify risks and take proactive measures to reduce vulnerability and respond effectively to hazards.
2. Strengthen Institutional Capacity; Build the capacity of local authorities, humanitarian agencies, and community leaders in DRR and displacement management.
3. Promote Sustainable, Risk-Informed Recovery; Integrate DRR into displacement management strategies to support sustainable recovery and durable solutions, aligned with the Humanitarian–Development–Peace Nexus.

The consultancy combines desk research and stakeholder consultations to assess current DRR policies, tools, actors, and coordination mechanisms in North-East Nigeria. It identifies existing gaps and proposes feasible actions to strengthen the integration of DRR and environmental sustainability into CCCM, Shelter, and NFI programming.

This report presents the findings of the scoping exercise and lays the foundation for developing sector-wide recommendations to mainstream DRR and environmental sustainability into shelter, CCCM, and NIF projects. The development process will begin with an in-person workshop in Maiduguri in June 2025. This workshop will bring together key partners to collaboratively initiate the formulation of these recommendations, focusing on practical, site-level risk reduction measures and nature-based solutions that address the region's most pressing hazards: flooding, fire, extreme heat, and high winds.

Rather than resulting in a stand-alone document, the recommendations are intended to be integrated into existing plans and operational documents. This approach aims to ensure that DRR and environmental considerations are embedded in day-to-day practice and aligned with the broader transition context.

The recommendations will continue to evolve beyond the workshop through ongoing consultation and coordination, aligning with the 2025–2026 humanitarian response planning cycle. They are intended to support the broader objectives of the Humanitarian–Development–Peace Nexus by promoting resilience, sustainability, and local ownership within both displaced and host communities[8]. The aim is to position the recommendations as a practical input to the wider transition process.

[8] Nigeria 2025 Humanitarian Needs and Response Plan (January 2025) | OCHA

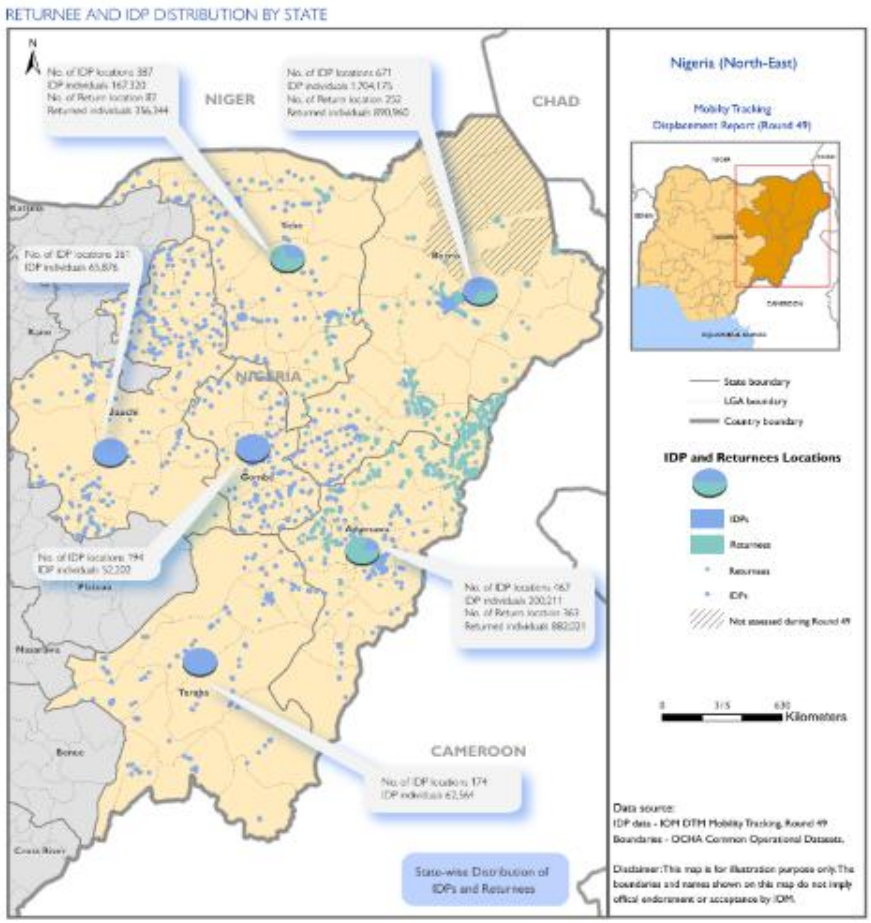
1.4. Shelter, NFI, and CCCM Situation Overview in North-East Nigeria

Understanding the shelter conditions and living arrangements of IDPs in North-East Nigeria is crucial for effective DRR and for improving environmental outcomes. The types of shelters, spatial layout of camps, and hosting arrangements significantly influence vulnerability to hazards such as flooding, fire, and erosion.

People in Need[9]

- Shelter and NFI: 3.38 million people (across Borno, Adamawa, and Yobe states)
- CCCM: 2.57 million IDPs and returnees across 1,551 camps and camp-like settings

The displaced population is largely made up of IDPs (47%), returnees (28%), and host community members (25%). Most face severe or extreme shelter needs.



Map 2: North- East Nigeria Displacement Tracking Map by IOM

Shelter Conditions in Northeast Nigeria[10]

In Camps and Camp-like Settings

- 38% of shelters are makeshift, constructed from local materials.
- 24% are emergency shelters.

[9] Nigeria 2025 Humanitarian Needs and Response Plan (January 2025) | OCHA
[10] Nigeria — Site Assessment — Round 49 (North-east) — IDPs and Returnee | Displacement Tracking Matrix

- 16% are Type 1 emergency shelter kits.
- 8% of households live in preexisting structures (partitioned).
- 4% live in makeshift shelters built using household items.
- 3% reside in preexisting structures (unpartitioned).
- 3% live in rented houses.
- 2% are accommodated by other families.
- 1% live in communal shelters.
- 1% reside in individual houses.
- Durable shelters made from brick or block are rare

In Host Communities

- 49% of households live in rented houses
- 19% are accommodated by other families.
- 10% reside in preexisting structures (partitioned).
- 7% live in makeshift shelters constructed from local materials.
- 7% are housed in communal shelters.
- 3% live in preexisting structures (unpartitioned).
- 2% of households live in makeshift shelters.
- 2% reside in transitional shelters.
- 1% of shelters are made of brick or block.

Key Challenges[11]

Overcrowding and Inadequate Infrastructure

- Severe overcrowding in both camp and host settings increases exposure to health and protection risks.
- Nearly half of IDP sites are congested and located in flood-prone areas.
- Poor site planning and lack of basic infrastructure (e.g., drainage, safe cooking spaces, firebreaks) increase vulnerability to floods and fires.

Shelter Materials and Fire Risk

- Widespread use of flammable materials such as thatch, plastic sheeting, and tarpaulin leaves camps highly susceptible to fire outbreaks.

Environmental Hazards

- Flooding; A major environmental hazard caused by heavy rainfall and river overflow, made worse by poor drainage, deforestation, and dam releases.
- Droughts; Recurring periods of low rainfall, increasingly severe affecting agriculture and water access[12].
- Soil erosion; Loss of fertile topsoil due to heavy rain, deforestation, and poor land use, leading to reduced agricultural productivity and land degradation[13].

[11] HNRP_2025_Nigeria final 23, January 2025 (2).pdf
[12] https://gwcnweb.org/2022/01/10/slow-onset-of-climate-change-events-and-water-supply-nexus-assessing-the-impacts-in-northeast-nigeria
[13] View of Soil Erosion in Northern Nigeria: Potential Impact and Possible Solution: A Review

- Desertification; Long-term degradation of drylands, driven by climatic changes, overgrazing, and loss of vegetation[14].
- Wildfires; Common during the dry season, often caused by bush burning and extreme heat, damaging vegetation and increasing erosion risk[15].
- Heatwaves; Prolonged periods of extreme heat, often exceeding 40°C, affecting health, water supply, and crops[16].
- Dust storms (Haboobs); Sudden, powerful windstorms that lift dust and sand, reducing air quality and visibility, especially in arid and semi-arid zones[17].

Legal and Land Tenure Issues

- 23.8% of IDP sites are on private land without formal agreements, heightening the risk of eviction and limiting long-term planning.

Protection and Vulnerability

- The situation is particularly critical for women, children, older persons, and people with disabilities.
- Camp closures, particularly in Borno, risk triggering the growth of unplanned urban settlements.
- The fluid security context hampers access to services and reduces the ability to implement sustainable DRR or shelter solutions.

Gaps and Outlook

In 2024, 84% of Shelter/NFI needs were unmet[18]. Thousands of households still live in makeshift structures, overcrowded reception centres, or in the open. Returnees often inhabit damaged or self-constructed shelters, while host communities face pressure from growing competition over space and resources.

The projected needs in 2025 are expected to remain high, driven by:

- A growing caseload of returnees and new arrivals.
- Increasing numbers of IDPs in host communities.
- Continued conflict, climate shocks, and displacement.

Strategic Priorities

To reduce risk and improve living conditions, the Shelter/NFI and CCCM sectors must:

- Promote safe, dignified, and fire-resistant shelter solutions and fire-safe settlements.
- Improve camp/site planning and invest in basic infrastructure.
- Strengthen tenure security and access to suitable land.
- Support community-based governance and participatory management.
- Integrate CCCM and Shelter/NFI responses to address both in-camp and out-of-camp needs in a coordinated, rights-based manner.
- Incorporate environmental sustainability into shelter design and site management.

[14] (PDF) Desertification in Northern Nigeria: Causes and Consequences
[15] 190205_USAID Nigeria brief_final_to Joslin
[16] (PDF) Heat Wave and Its Impact in Northeastern Nigeria: A Case Study of Yobe State, Nigeria
[17] WeatherInsightAAM.pdf
[18] Nigeria 2025 Humanitarian Needs and Response Plan (January 2025) | OCHA

Integrating DRR into shelter, settlement, and camp management in North-East Nigeria is essential, given the region's exposure to conflict, hazards, and recurring displacement. Overcrowded and informal displacement sites face high risks from floods, fires, and extreme weather.

Mainstreaming DRR makes humanitarian responses more preventive and resilient. Measures like safer shelter design, better site planning, nature-based solutions, and stronger local governance reduce vulnerability and support safer living conditions.

This approach shifts focus from short-term aid to long-term recovery. By embedding DRR into CCCM, Shelter, and NFI programming, actors can save lives, protect assets, and support dignified, sustainable solutions. This shift comes at a time when the humanitarian response is being scaled down, even as needs remain high. While clear answers may not yet exist, it is essential to acknowledge this reality and ensure that efforts to mainstream DRR also consider the operational and resource constraints currently facing the sector.

2. Key Hazards in North-East Nigeria Impacting Shelter and Settlements

North-East Nigeria experiences recurring natural hazards, particularly floods, extreme heat and extreme winds, which are increasing in frequency and severity. These risks are compounded by climate change and environmental degradation. Man-made hazards, such as fires, often intensified by the seasonal Harmattan winds and "Haboobs" (stong frontal weather systems), also pose growing threats, especially in IDP sites where overcrowding and limited infrastructure heighten vulnerability. These challenges are further compounded by protracted conflict[19] and resource-based communal clashes, particularly between farmers and herders. Hazards and conflicts often intersect seasonally, creating high-risk windows for affected settlements.

The combination of natural hazards, such as floods and extreme heat, and man-made threats, such as fires and armed conflict, poses compound threats to shelter conditions, infrastructure, service delivery, and civilian protection.

Graphic 1: Seasonal Calendar of Events and Risks. North-East Nigeria (OCHA)

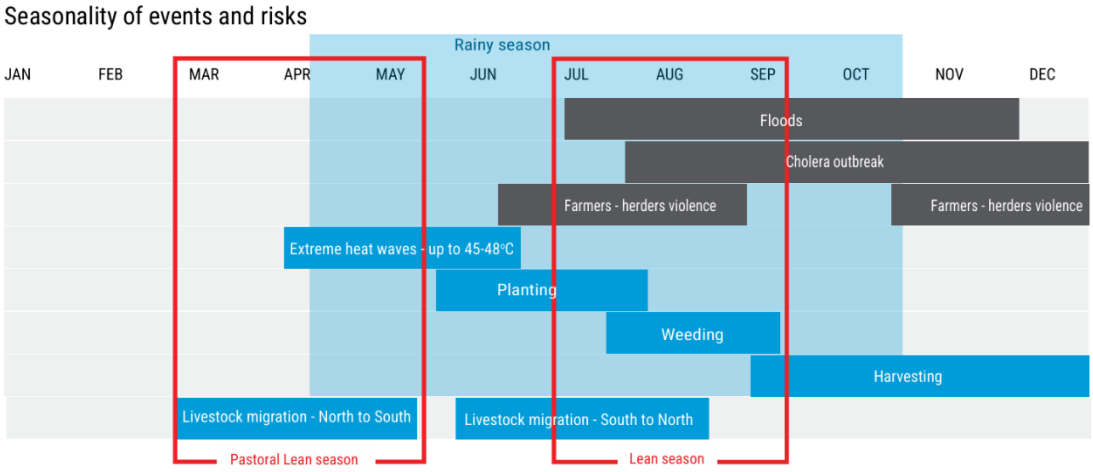
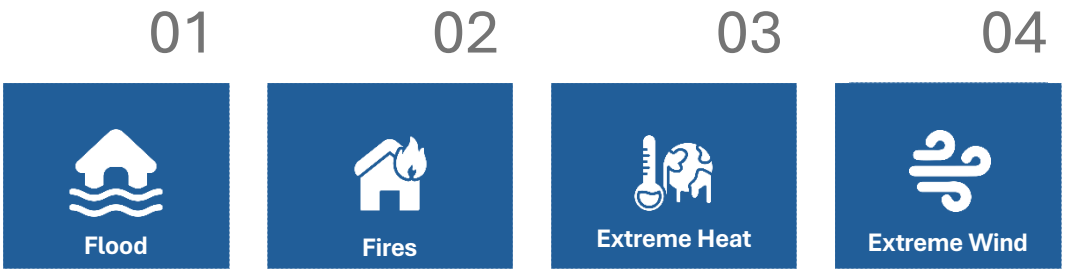


Figure 1: Key Hazards Identified as Priorities for the CCCM/Shelter/NFI Sector in North-East Nigeria



The boxes below contain a summary of each of the hazards.

[19] The protracted conflict in North-East Nigeria stems from the Boko Haram and ISWAP insurgency, which began in 2009. It has caused mass displacement, widespread insecurity, and severe disruption to livelihoods and services.

01 Floods

Peak risk period: July - November
Trigger: Rainy season, poor drainage, dam releases (e.g. Cameroon)
Preparedness: April - May

The BAY states; Borno, Adamawa, and Yobe, are highly vulnerable to seasonal flooding and periodic droughts, both of which are expected to intensify due to climate change.
Since 1998, flooding has severely affected an average of 520,000 people annually in the region, including between 20,000 and 100,000 IDPs each year.
In the coming year, an estimated 532,384 individuals are expected to be impacted by floods[20].

Seasonal Context

- Flooding aligns with the rainy season (June–October), peaking in August and September.
- Flash floods typically occur from July to September, while riverine floods extend into November.
- The flood season overlaps with the lean season, end of planting, and weeding period.
- Often coincides with a lull in farmer–herder clashes, offering temporary stability.

Aggravating Factors

- Poor soil conditions: Much of the region has low-permeability soils that absorb water slowly and are prone to erosion, causing water to pool and flow across the surface.
- Lack of vegetation: Deforestation and overgrazing reduce the natural absorption and retention capacity of land.
- Unplanned settlements: Many IDP sites and informal communities are built without proper drainage systems or consideration for site topography and flood risk.
- Congestion in camps and sites: During new influxes, people build shelters in any available space, affecting both planned and unplanned sites and often disrupting layout, drainage, and access.
- Urban expansion: Growth in urban areas often outpaces infrastructure, leading to blocked drainage and increased surface runoff.
- Dam releases: Water releases from upstream dams (e.g., in Cameroon) increase downstream flood risk without sufficient local preparedness.

Impact on Shelter

- Makeshift shelters (e.g., tarpaulin, thatch, mud) are easily damaged or collapse when waterlogged.
- Flooding weakens shelter structures and encourages mould, which affects health and liveability.

Impact on Settlements

- Flooded latrines and WASH (Water, Sanitation, and Hygiene) infrastructure, leading to outbreaks (cholera, diarrhoea).
- Blocked access roads delay emergency response and disrupt market supply chains.
- Disruption of schools, health posts, and community gathering spaces.
- Damage to livelihood structures (e.g. markets, shops, farmland in peri-urban areas).

[20] Nigeria 2025 Humanitarian Needs and Response Plan (January 2025) | OCHA

02 Fires

Peak risk period: March - May
Trigger: Dry conditions, open cooking, flammable shelter materials, electrical shorts
Preparedness: January-February

In North-East Nigeria, the rising number of fire outbreaks in IDP camp settings continues to place additional strain on an already overstretched humanitarian response, further increasing the vulnerability of the affected population. Between January and June 2024, 97 fire incidents were reported across 32 IDP sites in Borno State, affecting 12,376 households. Most of the affected families lost their shelters and essential belongings, including registration documents, food ration cards, biometric ID cards, and vital food and non-food items[21].

Seasonal Context

- Fire outbreaks align with the dry season, when vegetation is highly combustible and humidity is low.
- This period overlaps with land preparation and early planting, when bush burning is common.
- It also marks the start of herder migration; a period often linked to heightened tensions between farmers and herders.

Aggravating Factors

- Flammable shelter materials: Many shelters are made of thatch, plastic sheeting, and tarpaulin, which ignite and spread fire rapidly.
- Shelter density: Closely built shelters in overcrowded camps allow fires to spread quickly and uncontrollably.
- Open flames and unsafe cooking: Use of open fires or unstable stoves in or near shelters increases fire risk.
- Lack of firebreaks and response tools: Most camps lack designated firebreaks, fire extinguishers, or trained community responders.
- Electrical hazards: Unregulated and improvised wiring for lighting or charging can cause electrical shorts and sparks.

Impact on Shelters

- Fires can rapidly destroy entire rows of shelters, particularly in tightly packed areas.
- NFIs, food stores, documents and household possessions are often completely lost.
- Reconstruction efforts are delayed by limited resources and space constraints.

Impact on Settlements

- Fires often wipe out entire sections of camps, necessitating emergency relocations.
- Absence of fire safety infrastructure allows fires to burn unchecked.
- Overcrowding and panic during fires lead to injuries and additional shelter damage.
- Protection and shelter actors face pressure to respond rapidly, often with limited resources.

[21] CCCM, Shelter/NFI Sector - Fire Incidents Report | January - June 2024 - Nigeria | ReliefWeb

03 Extreme Heat (45-48 degrees)

Peak risk period: April to June
Trigger: Prolonged dry season, poor ventilation, climate change
Preparedness starts: February/March

In North-East Nigeria, extreme heat events are becoming increasingly severe and frequent, largely due to climate change and prolonged dry seasons. Temperatures between 45°C and 48°C are regularly recorded in the lead-up to the rainy season, creating harsh and often life-threatening conditions, especially in overcrowded and poorly ventilated camp settings.
This period overlaps with the fire season and directly precedes flood preparedness efforts, often leading to gaps in targeted heat-risk planning.

Seasonal Context

- Heatwaves typically occur immediately before the onset of the rainy season, peaking in April to June.
- Coincides with herder migration, which increases competition over water and grazing resources.
- This timing overlaps with the start of the planting season, affecting livelihoods and labour productivity.

Aggravating Factors – What Makes Extreme Heat Worse

- Inadequate shelter design: Tarpaulin and zinc structures trap heat, transforming shelters into “hot boxes” with no insulation or airflow.
- Poor ventilation: Closely packed shelters and lack of windows or shade worsen indoor temperatures.
- Limited access to cooling and water: Few IDP sites have shaded communal areas, and water scarcity limits coping capacity.
- Inadequate planning: Heatwaves are not consistently factored into DRR or humanitarian response plans.
- Health service strain: Health centres are often ill-equipped to handle heat-related illness, such as dehydration or heatstroke.

Impact on Shelters

- Tarpaulin, plastic, and zinc roofs intensify internal temperatures, leading to dangerous living conditions.
- Shelter materials degrade faster under prolonged exposure, reducing lifespan and protection.

Impact on Settlements

- High water consumption strains already fragile water supply systems, particularly in areas dependent on trucking or boreholes.
- Communal facilities such as learning centres and health posts become unusable during the hottest hours.
- Vulnerable populations, including children, the elderly, and those with chronic health conditions, face elevated risk of heatstroke and dehydration.

- Daytime economic activity declines as movement is limited to early morning and late evening.

04 Extreme Winds

Peak risk period: November - March
Trigger: Dry, dusty winds from the Sahara; low humidity; flammable shelter materials
Preparedness: September/October

Harmattan winds are a seasonal climatic phenomenon in North-East Nigeria, characterised by strong, dry, and dust-laden winds blowing from the Sahara Desert. These winds drastically reduce humidity levels, desiccate vegetation, and increase the flammability of shelters and natural surroundings. Their impact is especially severe in IDP camps, where overcrowding and poor shelter design amplify the risk of rapid fire outbreaks and structural damage.
This period overlaps with early fire season preparedness and exacerbates other environmental risks, including respiratory health issues and reduced visibility for humanitarian operations.

Seasonal Context

- Typically occurs between November and March, preceding the fire and heatwave seasons.
- Often coincides with the harvest and dry season movement of populations.
- Leads to widespread dryness and wind-driven dust, affecting both living conditions and service delivery.

Aggravating Factors

- Flammable conditions: The dryness increases the likelihood and spread of fires, especially in camps with thatched or plastic shelters.
- Shelter damage: Strong gusts can damage makeshift structures, especially those with loose tarpaulin or roofing.
- Respiratory health impacts: Dust particles aggravate asthma and respiratory conditions, particularly in children and the elderly.
- Low visibility: Dust haze reduces road visibility and complicates logistics and humanitarian access.

Impact on Shelter

- Increased wear and tear on plastic sheeting and roofing, reducing shelter durability.
- Structural instability due to wind pressure on weak shelter frames.
- Higher likelihood of fire ignition and rapid spread due to dry, dusty conditions.

Impact on Settlements

- Outdoor communal activities are disrupted due to dust and poor air quality.
- Logistics and response coordination may face delays due to visibility and road hazards.
- Compound risks when combined with fire outbreaks, especially in dense camps lacking firebreaks.

Table 1: Multi-Hazard Risk Matrix – Shelter and Settlement Impacts in North-East Nigeria

Risk	Season Peak	Shelter Impact	Settlement Impact
Flooding	July-November	Makeshift shelters collapse or become uninhabitable; water damage; mould growth.	Flooded latrines and boreholes; blocked access roads; disrupted services (schools, health posts, markets).
Fire	March-May	Rapid destruction of flammable shelters; loss of NFIs and essential documents.	Entire shelter blocks wiped out; absence of firebreaks; panic; injuries; lack of fire response infrastructure.
Extreme Heat	April-June	Tarpaulin/zinc shelters trap heat ("hot boxes"); material degradation.	Increased water demand; reduced use of overheated communal spaces; health risks (heatstroke, dehydration).
Extreme Winds	Nov - March	Shelter damage from wind gusts; faster wear of plastic and tarpaulin; higher fire risk.	Respiratory health issues; reduced visibility for logistics; increased flammability and fire spread.
Farmer-Herder Conflict	April-Jun, Oct-Dec	Shelter destruction, forced re-displacement.	Protection risks; closure of services; disrupted coexistence; restricted mobility.
Lean Season	Jul-Sep	Overcrowding; increased use of makeshift shelters due to food insecurity.	Food stress; malnutrition; pressure on host communities and public infrastructure.

3. DRR and Environmental Governance in Nigeria: Institutional Roles and Coordination Frameworks

DRR and environmental governance in Nigeria operate through a multi-tiered institutional framework spanning federal, state, local, and community levels. These structures are underpinned by national legislation and guided by global commitments such as the *Sendai Framework for Disaster Risk Reduction*[22], the *Paris Agreement*[23], and the *National Adaptation Plan Framework*[24]. Despite significant institutional presence, coordination across these levels remains a persistent challenge, particularly in complex operational environments such as North-East Nigeria.

This section provides a detailed overview of Nigeria's DRR and environmental governance system, focusing on institutional mandates, coordination mechanisms, and policy frameworks at national and state levels. Special attention is given to the conflict-affected Yobe, Adamawa, and Borno states. It outlines how DRR, climate adaptation, and environmental sustainability are embedded in disaster preparedness and response structures.

The section also explores coordination challenges between national and subnational actors and highlights innovative state-level initiatives aimed at enhancing resilience, particularly in flood-prone and displacement-affected communities.

3.1. Disaster Risk Management Coordination Structure in Nigeria

DRR in Nigeria is built on a four-tiered system, designed to facilitate early warning systems, preparedness, and response across all levels of government and communities:

- Federal Level – Led by the National Emergency Management Agency (NEMA)
- State Level – Managed by State Emergency Management Agencies (SEMAs)
- Local Level – Coordinated through Local Emergency Management Committees (LEMCs)
- Community Level – Implemented by Community Emergency Management Committees (CEMCs)

The inputs below are based on a desk review and interviews with selected government stakeholders. For further information, refer to Annexes 2 and 3.

The diagram below shows the Disaster Risk Management Structure in Nigeria.

[22] Sendai Framework for Disaster Risk Reduction 2015-2030 | UNDRR
[23] parisagreement_publication.pdf
[24] napgn-en-2020-Nigeria-National-Adaptation-Plan-NAP-Framework.pdf

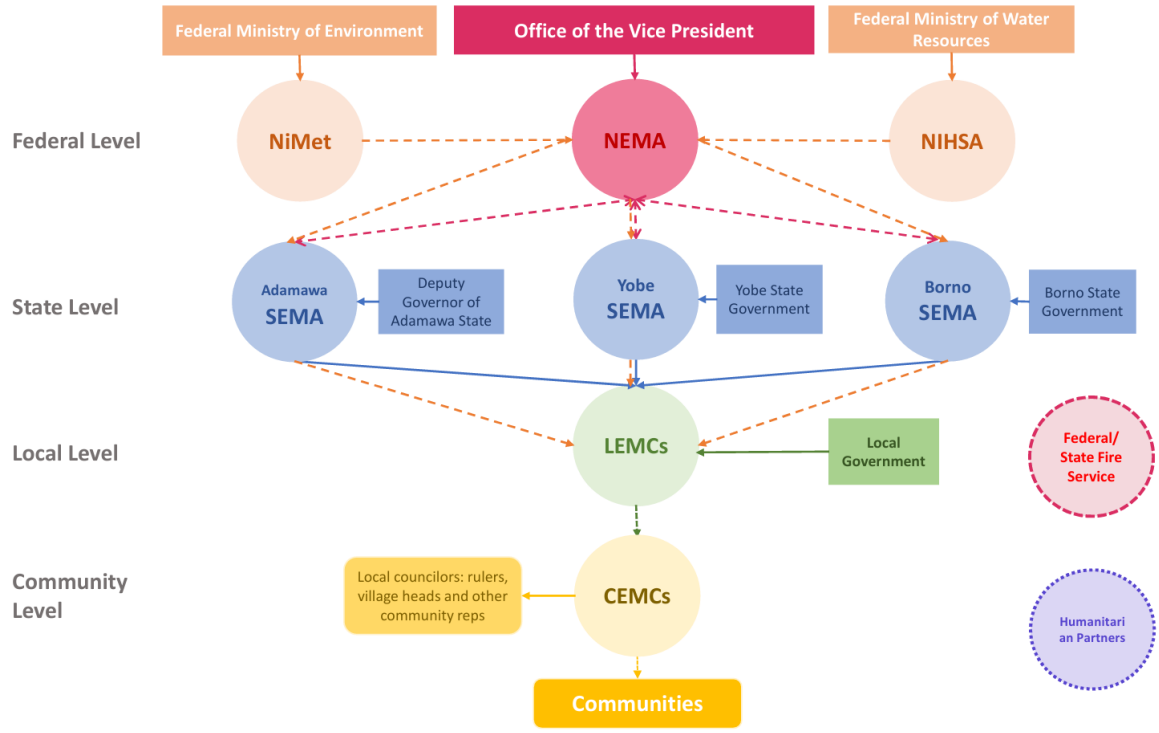


Diagram 1 Disaster Risk Management Structure in Nigeria

Federal Level: National Coordination

National Emergency Management Agency (NEMA[25])

- Serves as the lead federal agency responsible for disaster preparedness, mitigation, coordination, and emergency response across Nigeria.
- Reports directly to the Office of the Vice President, who chairs NEMA's governing board.
- Operates through both national headquarters and zonal offices across the country.
- Functions:
  - Coordinates multi-sector responses during disasters.
  - Provides technical guidance and support to SEMAs and LEMCs.
  - Oversees information flow and national emergency policy implementation.

Key Partnerships

- SEMAs – NEMA's closest subnational partners, responsible for implementing national disaster policies at the state level and ensuring coordination with local governments.
- NiMet (Nigerian Meteorological Agency) – Supplies weather and seasonal forecasts; under the Federal Ministry of Environment.
- NIHSA (Nigeria Hydrological Services Agency) – Provides flood and hydrological data; under the Federal Ministry of Water Resources.

Challenges

[25] NEMA Nigeria – Official Site

- Lack of a formal reporting line with SEMAs, leading to uneven coordination across states.

State Level: State Coordination

State Emergency Management Agencies (SEMAs)[26]

- Function under the authority of state governments, with structures tailored to state needs.
- Work in collaboration with NEMA and oversee all local emergency management activities.
- Oversees the implementation of the National Disaster Risk Management Policy (NDRMP[27]) and National Disaster Management Framework (NDMF[28]).
- Responsible for:
    - State-level disaster preparedness and response.
    - Implementing national Early Warning Systems (EWS) locally.
    - Training and supervising Local Emergency Committees (LEMCs).

The SEMAs of the BAY States:

- ADSEMA – Adamawa State Emergency Management Agency.
- BOSEMA – Borno State Emergency Management Agency.
- YOSEMA – Yobe State Emergency Management Agency.

Each agency functions independently but aligns with federal DRR frameworks and coordinates with national and regional partners.
Challenges:

- Lack of a formal reporting line with NEMA, leading to uneven coordination across states.
- Overlapping mandates in states with new humanitarian coordination structures.
- Limited capacity or inconsistent engagement depending on the state.

Institutional transition in Adamawa

In 2024, the Ministry for Reconstruction, Rehab, Reintegration Humanitarian Services[29] (*Triple R Ministry*) took over lead responsibility for humanitarian coordination in Adamawa State.

- This transition created temporary confusion among partners regarding leadership and roles.
- ADSEMA now co-leads monthly coordination meetings with the Triple R Ministry to:
    - Streamline inter-agency collaboration
    - Prevent duplication of efforts
    - Clarify field-level responsibilities and humanitarian entry points

Despite the shift, ADSEMA remains the state's lead agency for DRR and operational emergency coordination.

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[26] SEMA representatives from Borno and Yobe States were contacted and invited to participate; however, interviews could not be conducted. Only the SEMA from Adamawa State was available and participated in the interview process. As a result, the information presented in this report reflects more precise and detailed input from Adamawa State.
[27] Microsoft Word - NCP 2019-2021 - Revised
[28] Microsoft Word - 21708_nigherianationaldisastermanagementf.doc
[29] Ministry of Reconstruction, Rehab, Reintegration Humanitarian Service – Adamawa State Planning Commission

Local Level: Local Coordination

Local Emergency Management Committees (LEMCs)

- Operate at the local government level, under the guidance and supervision of SEMAs.
- Responsible for:
    - Community-level emergency preparedness and first-line response.
    - Risk communication, often disseminated through traditional leaders or district heads.
    - Liaising with SEMAs to report incidents and receive support.

Challenges:

- Functionality varies across LGAs.
- Often underfunded and under-trained.
- Gaps in consistent risk communication during fast-onset disasters.

Community Level: Community-Based Coordination

Community Emergency Management Committees (CEMCs)

- Grassroots-level disaster preparedness structures tailored to high-risk or disaster-prone communities.
- Their structure and responsibilities may vary from state to state.

General Composition (based on Adamawa State model):

- Ward councillor (Chairman).
- Village head or their representative.
- One woman representative.
- Two additional community members.

Key Functions (based on Adamawa State model):

- Conduct localised monitoring (e.g. river gauges for flood risk).
- Identify safe pathways and evacuation sites.
- Lead sensitisation and awareness-raising within IDP and host communities.
- Coordinate community-level early warning dissemination and first response actions.
- Liaise with LEMCs and SEMAs for post-event reporting and response planning.

CEMCs act as the most immediate link between communities and the DRM system, strengthening local ownership of preparedness and response mechanisms.

Challenges:

- Lack of standardisation across states.
- Weak links to formal DRM (Disaster Risk Management) systems.
- Infrequent support or training from higher-level authorities.

Federal and State Fire Service

- Legally mandated responders for fire outbreaks and flood-related disasters in Nigeria.
- Function at both federal and state levels, often co-located and sharing operational headquarters.
- Play a dual role in fire response and prevention, with increasing involvement in risk education and sensitisation.

General Structure and Mandate:

- Federal Fire Service (FFS) – Reports to the Federal Ministry of Interior.
- State Fire Services – Operate under state governments.
- Both coordinate with:
    - NEMA / SEMA.
    - Military and university fire services.
    - Local emergency responders.
    - Participate in humanitarian coordination forums in North-East Nigeria.

Challenges:

- Overlapping responsibilities between federal and state levels.
- Coordination is often informal, or personality driven.
- Mandates and authority can be unclear in multi-stakeholder settings.

Humanitarian Coordination Forums

- Include UN agencies, INGOs, NGOs, and donors.
- Particularly active in North-East Nigeria.
- Support coordination with government bodies, such as NEMA & SEMAs on disaster when requested, to ensure aligned response efforts.

Early Warning System

- Forecasting agencies:
    - **NiMet** – Provides weather and climate forecasts, including seasonal predictions and real-time data. Operates under the Federal Ministry of Environment.
    - **NIHSA** – provides hydrological and flood forecasts, including the Annual Flood Outlook (AFO) and real-time alerts. Operates under the Federal Ministry of Water Resources.
- Dissemination flow: NEMA → SEMA → LEMCs → CEMCs → Communities (via traditional leaders/district heads).

Challenges:

- Overlapping roles:
    - NiMet issues rainfall forecasts.
    - NIHSA focuses on riverine floods.
    - NEMA responds to flash floods → Leads to confusion and duplication.
- Unclear communication roles: No formal agreement on who should issue public guidance (NiMet, NEMA, or SEMAs).
- Fragmented systems: Forecasts are not integrated into a unified, actionable platform.

- Weak last-mile dissemination: Alerts often arrive late or not at all at the community level.
- Low accessibility: Messages are rarely tailored for low-literacy or rural audiences, limiting usefulness.

Summary of the Key Challenges

Despite a well-defined institutional framework for DRR and environmental governance in Nigeria, several persistent challenges continue to undermine effective coordination and preparedness, particularly in complex and high-risk regions like North-East Nigeria.

Below is a summary table of the key challenges identified across federal, state, local, and community levels:

Table 2: Summary of Key Coordination and Governance Challenges in Nigeria's DRR System

Institutional and Coordination Challenges

- **No formal reporting line between SEMAs and NEMA**, due to Nigeria's federal system, there is no formal reporting line between SEMAs and NEMA, which leads to variation in coordination dynamics across states. The strength of coordination between NEMA and individual SEMAs can differ depending on state-specific contexts and institutional capacities[30].
- **Inconsistent data** between federal and state agencies, particularly on disaster impacts and displacement figures.
- **Operational overlaps**, especially where federal funding is involved, cause confusion over leadership.
- **Limited alignment and trust** between national and state-level actors; federal policies are not always adopted at state level.
- **Overlapping mandates**, notably in states with new humanitarian coordination bodies (e.g. Triple R Ministry), lead to role ambiguity.
- **Fragmented responsibilities for early warning and response** across NiMet (weather), NIHSA (flood), and NEMA (response), delaying coordinated preparedness.
- **Unclear communication responsibilities** during emergencies; lack of clarity on who should guide public action (NiMet, NEMA, or SEMAs).
- **No integrated forecasting platform**, leading to disconnected alerts from meteorological, hydrological, and operational agencies.

Subnational and Community-Level Challenges

- **Variable functionality of LEMCs** across LGAs; many are underfunded, poorly trained, or inactive.
- **CEMCs are not formally integrated** into national DRM systems (e.g. not referenced in NEMA's framework), weakening local preparedness.

[30] *"Sometimes SEMA can produce a figure on a flood and NEMA might not agree, and vice versa."* — Quote from a Key Informant Interview

- **Breakdowns in early warning dissemination**, with alerts often failing to reach communities on time.
- **Low accessibility of warning messages**, which are often too technical or not adapted for low-literacy or rural audiences.
- **Informal fire service coordination**, with unclear or overlapping mandates between federal and state responders.

Systemic Impact

- **Data discrepancies and conflicting reports** undermine decision-making and inter-agency trust.
- **Response delays and duplication**, due to unclear leadership and roles.
- **Reduced effectiveness of impact-based forecasting** when not accompanied by clear, actionable communication.
- **Underused local knowledge and capacity**, especially at LGA and community levels.
- **Fragmented humanitarian coordination**, with limited alignment across federal, state, and local actors, affecting early action and resilience-building.

The tables below provide an overview of the key institutions involved in DRR and environmental governance in Nigeria, with a focus on their mandates, roles, and the frameworks or tools they use. The information is organised by federal, state (Adamawa, Borno, and Yobe), local, and community levels to reflect the multi-tiered coordination structure currently in place.

For further details on the mandates, responsibilities, and coordination roles of each agency, please refer to Annex 2.

Table 3: Federal Level Institutions for DRR and Environmental Governance

Institution	Mandate / Role	Key Frameworks / Tools
NEMA *National Emergency Management Agency* [31]	Leads national DRR and emergency response; implements national disaster policies	NDRMP, NDMF, National Contingency
FME *Federal Ministry of Environment* [32]	Leads climate and environmental policy, coordinates with national climate bodies	National Climate Change Policy, NDCs
NiMet *Nigeria Meteorological Agency*[33]	Provides climate forecasts and early warning	EWSs, Climate Bulletins
NIHSA *Nigerian Hydrological Services Agency* [34]	Provides flood forecasts and hydrological data; leads flood risk analysis and river basin monitoring	Annual Flood Outlook (AFO), Real-Time Hydrological Monitoring Network

[31] NEMA Nigeria – Official Site
[32] Federal Ministry of Environment
[33] NiMet
[34] NIHSA

NESREA *National Environmental Standards & Regulations Enforcement Agency* [35]	Enforces environmental laws and regulations	NESREA Act, National Environmental Standards

Table 4: Adamawa State Institutions for DRR and Environmental Governance

Institution	Mandate / Role	Key Frameworks / Tools
ADSEMA *Adamawa State Emergency Management Agency* [36]	Disaster response and IDP rehabilitation in Adamawa	Crisis response, risk assessment, community engagement
Adamawa State Ministry of Environment	Implements State Climate Change Policy and environmental projects	Climate change mainstreaming, adaptation, sustainability
Adamawa State Planning Commission[37]	Coordinates multi-sectoral development strategies including DRR	Development planning with DRR/environmental priorities

Table 5: Borno State Institutions for DRR and Environmental Governance

Institution	Mandate / Role	Key Frameworks / Tools
BOSEMA *Borno State Emergency Management Agency*[38]	Manages emergency relief, resettlement and risk reduction	Emergency aid, repatriation, preparedness systems
Borno State Ministry of Environment[39]	Leads environmental protection and climate adaptation	Pollution control, afforestation, environmental awareness
BOACSDHR *Borno State Agency for Coordination of Sustainable Development and Humanitarian Response* [40]	Coordinates humanitarian and development efforts; integrates DRR and climate planning	Coordination, policy, data management, capacity building

Table 6: Yobe State Institutions for DRR and Environmental Governance

Institution	Mandate / Role	Key Frameworks / Tools

[35] NESREA
[36] Adamawa State Emergency Management Agency (ADSEMA) – Adamawa State Planning Commission
[37] Adamawa State Planning Commission – Adamawa State Planning Commission
[38] Borno State Emergency Management Agency-SEMA | Maiduguri | Facebook
[39] Borno State Government | Official website
[40] Borno State Agency for Coordination of Sustainable Development and Humanitarian Response

YOSEMA *Yobe State Emergency Management Agency* [41]	Coordinates disaster response and risk reduction in Yobe	Relief, early warning, IDP recovery, partner coordination
YBMENV *Yobe State Ministry of Environment* [42]	Leads state climate policy and environmental sustainability	Climate resilience, EIAs, afforestation, donor project oversight (ECCAP, FRILIA)
Yobe State Planning Commission[43]	Integrates DRR and environment into development planning	Strategic planning, sustainable development budgeting

Table 7: Local Level for DRR

Institution	Mandate / Role	Key Frameworks / Tools
LEMCS	Coordinate disaster preparedness, early warning, and first response at the Local Government Area (LGA) level; support SEMA and local actors in risk reduction and emergency relief.	National Disaster Management Framework (NDMF); Community Risk Maps; Local Response Protocols

Table 8: Community Level for DRR

Institution	Mandate / Role	Key Frameworks / Tools
CEMCS	Mobilise grassroots-level disaster preparedness and response; raise awareness on local risks; lead early warning dissemination and evacuation support within communities; liaise with LEMCs, SEMA, and partners; Mobilisation and post-disaster recovery.	Flood Contingency Plans; Community EWS; Risk Mapping Tools; Anticipatory Action Plans; Public Awareness and First Aid Training Materials

3.1. National DRR and Climate Governance Policies

Nigeria has a national policy framework in place to guide DRR, climate resilience, and emergency response across all levels of government. These policies provide the foundation for coordination, preparedness, recovery, and integration with broader development and climate adaptation goals.

The tables below provide an overview of key national and state-level documents, highlighting the institutions responsible and the main objectives of each policy. They are organised to show the governance structure at the federal and state levels.

For further details on the mandates and functions of specific agencies, please refer to Annex 2. For more comprehensive policy information, please refer to Annexes 3 and 4.

[41] Home - YOSEMA
[42] Yobe State – Official Website
[43] YOBE STATE MINISTRY OF BUDGET & PLANNING

Table 9: National DRR and Climate Governance Policies

Policy / Document	Year	Agency	Purpose
National Disaster Risk Management Policy (NDRMP)	2018	NEMA	Strategic national DRM plan promoting coordination, preparedness, recovery, and integration with development and climate goals.
National Contingency Plan (NCP)	2019–2021	NEMA	Multi-risk disaster coordination framework focusing on early warning, sectoral preparedness, and resource mobilisation.
National Disaster Response Plan	2002	NEMA	Outlines federal agency roles in emergencies via 13 Support Service Areas. Ensures coordinated national response.
National Disaster Management Framework (NDMF)	2010	NEMA	Regulatory guide promoting proactive risk reduction and stakeholder coordination.
National Climate Change Policy (2021–2030)	2021	Ministry of Environment	Framework for climate resilience, low-carbon development, and sectoral adaptation.
National Adaptation Plan Framework	2020	Ministry of Environment	Guides sub-national and sectoral climate adaptation in alignment with the Cancun Adaptation Framework.

NEMA is also developing a Strategic Plan (2025–2029) to adapt to emerging risks and align with international best practices.

A national workshop on a flood-trigger framework development was held in Yola, Adamawa State (October 2024), focused on strengthening resilience in flood-prone communities.

3.1. State-Level Climate and DRR Frameworks

Table 10: National DRR and Climate Governance Policies

State	Document / Policy	Year	Purpose
Adamawa	Emergency Management & Response Framework	2020	Tech-driven coordination system to improve disaster response.
Adamawa	State Climate Change Policy	2024	Strategic vision for adaptation and mitigation, integrated into agriculture, water, health, and infrastructure.
Yobe	Emergency Response & DRR Assessment	2022	Evaluates DRR readiness and early warning gaps.

Yobe	FRILIA Executive Order	2024	Establishes inclusive land governance and environmental standards for agriculture.
Borno	Durable Solutions Strategy for IDPs	2024	Merges DRR with IDP reintegration and climate-resilient infrastructure.
Borno	Climate Action Plan	2024–2030	Framework to tackle environmental degradation and enhance state-wide resilience.

Adamawa State DRR and Environmental Initiatives

Key Initiatives:

- Rapid Needs Assessment (Oct 2023): Identified immediate and long-term needs in flood-affected communities.
- Flood Anticipatory Action Framework: Developed with support from FAO and other partners.
- EWS: Involves CEMCs in local river gauge monitoring and identifying evacuation routes.
- Flood Contingency Plans: Developed with input from MDAs and international actors to ensure coordinated responses.

4. Stakeholder Consultation

As part of efforts to assess how DRR and environmental sustainability are being integrated into CCCM, Shelter, and NFI programming in Northeast Nigeria, a targeted consultation process was conducted with key partners and government agencies. The objective was to identify practical approaches, coordination mechanisms with authorities, implementation challenges, and examples of effective or innovative practice within the sector.

A total of 17 stakeholders participated in the consultation. This included:

- 12 implementing partners with active CCCM, Shelter, and/or NFI programming.
- 2 coordination/support actors (IFRC and OCHA).
- 3 government institutions involved in disaster management and emergency response.

These actors were selected by the CCCM/Shelter/NFI Sector and represent a mix of international, national, local organisations operating across Borno, Adamawa, and Yobe States and government institutions.

Additionally, 4 stakeholders were contacted but did not participate in the consultation. 1 INGO and 3 other government institutions.

Findings from these consultations offer a synthesis of current sectoral practice in the region. They highlight both the progress being made and the persistent gaps in DRR integration, particularly in relation to environmental challenges and coordination with local authorities.

A list of interviewees is available in Annex 1.

4.1. Key Insights

DRR is increasingly recognised as a vital component of humanitarian programming in North-East Nigeria. Both international and local actors are embedding DRR within shelter, CCCM, and NFI interventions. Community-led efforts are being spearheaded by local organisations such as CAREAID and PRIDE, while international agencies, including IOM and NRC, tend to apply more structured risk assessments and hazard-specific planning models. However, approaches across the sector remain fragmented, with limited standardisation and coordination.

4.2. Common Hazards

A consistent set of hazards emerged from the consultation. Seasonal flooding is the most frequently cited, followed by fire outbreaks in overcrowded IDP camps and the growing threat of extreme heat. Other risks, such as drought, cholera, and climate-induced conflict, particularly herder–farmer tensions, were noted, though less commonly. These hazards are often interconnected and are aggravated by poor site planning, insecure land tenure, deforestation, and inadequate infrastructure.

Although extreme wind has been identified as one of the sector's priority hazards, it was rarely mentioned during consultations, only one partner explicitly raised it. This may indicate a gap in hazard awareness or monitoring. However, its relevance should not be underestimated: extreme wind can significantly increase fire risk, especially in densely populated, poorly planned IDP

camps with flammable shelter materials. As such, it remains an important compounding hazard to consider in DRR planning.

4.2.1. Sectoral Response to Major Hazards

Flooding, driven by seasonal rainfall, blocked drainage, and dam discharges, remains the most damaging and recurrent threat. It affects both camps and host communities, leading to shelter collapse, water contamination, and service disruption.

In response, most organisations have undertaken drainage improvement, distributed sandbags or earth-filling materials, and elevated shelters in select locations. Reinforced structures have also been introduced in isolated cases (e.g. BOAID). Preparedness measures such as pre-positioned emergency supplies, contingency planning, and local risk mapping are widely practised. However, formal evacuation or relocation plans are rare and have been reported only by one agency (IOM).

Fire outbreaks present serious risks in densely populated displacement settings. Flammable materials, close shelter spacing, unsafe cooking practices and extreme winds, contribute to the frequency and severity of incidents.

To reduce fire risks, organisations have installed fire points, provided extinguishers, supported the formation of community fire committees, and promoted fire safety awareness. Behavioural interventions such as promoting safe cooking or communal kitchens are also being used. Some actors are redesigning shelters to include firebreaks or greater spacing, and a few promote the use of fire-resistant materials like mud bricks and compressed earth blocks (CEB[44], e.g. NRC, IOM, UNHCR). Periodic fire drills and training activities complement these structural efforts.

Extreme heat is an increasingly urgent issue. Many shelters are constructed using materials that trap heat, while the absence of ventilation, shading or openings (often due to security concerns) further worsens living conditions. Environmental degradation, especially deforestation, amplifies these risks.

In response, organisations are planting trees, introducing shaded communal areas, and promoting heat-resistant construction methods (e.g. SHO, SHI, CAREAID). Camp decongestion is rarely addressed directly, although it is widely acknowledged as a factor.

4.3. Environmental Sustainability

Environmental sustainability has become an increasingly important focus within CCCM, Shelter, NFI, and DRR programming in North-East Nigeria. Humanitarian actors and government agencies alike are recognising that environmental degradation and climate change significantly exacerbate disaster risks, particularly in displacement contexts. Despite growing momentum, progress remains uneven due to persistent challenges around funding, coordination, and community engagement.

4.3.1. Key Environmental Concerns

[44] A Compressed Earth Block (CEB) is a sustainable building material made by compacting a mixture of subsoil, sand, and a small amount of stabilizer (like cement or lime) into dense, uniform blocks using a mechanical press.

Several key environmental issues have been identified. These include widespread deforestation caused by heavy reliance on firewood for cooking (according to one interviewee, approximately 95% of the population relies on firewood for cooking); land degradation and soil erosion due to shelter expansion and construction material extraction; poor waste management practices that lead to blocked drainage and heightened flood risk; and water scarcity or contamination resulting from droughts or overwhelmed infrastructure. Many displacement sites are also located in environmentally sensitive or flood-prone areas, increasing exposure to hazards such as flooding, extreme heat, and windstorms. Climate change is making these conditions more severe and unpredictable.

4.3.2. Environmental Measures

To address these challenges, organisations are implementing a variety of environmental measures. These include the use of more sustainable and climate-resilient shelter materials promoted by actors as NRC, UNHCR, DRC, and IOM, like mud bricks, and compressed earth blocks, which are locally sourced and reduce environmental impact. Site planning has also improved, with some actors designing shelters to withstand wind and heat or constructing concrete foundations in flood-prone areas.

Tree planting is widely practiced; however, there has been little to no mention of care, maintenance, or the long-term sustainability of these efforts. Organisations such as CAREAID, SHO, and PRIDE, for shading, erosion control, and microclimate regulation, both by communities and through coordinated efforts with local ministries. Some organisations have embedded reforestation clauses into shelter vendor contracts (NRC) or developed agroforestry initiatives to rehabilitate damaged landscapes (NRCS).

Waste management is also receiving increased attention. Organisations such as BOAID and SHI have supported drainage rehabilitation, promoted better solid waste disposal practices, and carried out community sensitisation campaigns to tackle pollution and blockages that increase flood risk. Additionally, clean energy alternatives such as solar stoves and fuel-efficient cooking technologies (UNHCR, SHO) are being introduced to reduce dependence on firewood.

Environmental integration is being mainstreamed across programmes. Environmental training is sometimes included in shelter activities; awareness campaigns include messaging on climate risks and natural resource management; and tools like NEAT+[45] (used by NRC) and other environmental screening checklists (used by DRC) are helping guide planning. Nature-based solutions, such as half-moon earthworks in Jigawa State (NRCS) for land restoration and runoff management, are also gaining ground as part of ecosystem-based DRR strategies.

4.3.3. Challenges

Despite these efforts, significant challenges persist. Limited funding restricts both the scale and consistency of environmental initiatives. Durable and eco-friendly materials remain cost-prohibitive for many actors. Insecurity and poor infrastructure limit access to certain areas, impeding implementation. Behavioural resistance also presents obstacles, especially when communities are asked to adopt unfamiliar layouts or energy alternatives without clear

[45] The Nexus Environmental Assessment Tool (NEAT+) | Department of Economic and Social Affairs

incentives. Weak enforcement of environmental regulations and gaps in staff technical capacity further hinder progress. In some locations, drainage systems are only installed on a temporary basis due to government restrictions on permanent construction, undermining long-term risk reduction efforts.

Moreover, while national policies, such as the Climate Change Act[46], National Drought Plan[47], and relevant DRR guidelines, exist, their application at the local level is often weak. Field staff may lack access to or awareness of these policies, and coordination with institutions like the Ministry of Environment, NESREA, or local authorities can be fragmented.

4.4. Community Engagement and Inclusion

The humanitarian partners place strong emphasis on community engagement and inclusion across EWS, Anticipatory Action (AA), DRR, Shelter, CCCM, and NFI activities. This is seen as essential for ensuring locally appropriate, sustainable, and effective interventions.

Many partners adopt community-led approaches, involving residents in risk identification, planning, and implementation. Structures such as Community Disaster Risk Management Committees (CDMCs), fire safety committees, and women/youth groups are commonly used and trained to lead local preparedness and response. Coordination also includes traditional leaders and local government representatives.

Participatory tools, including risk mapping, focus groups, and seasonal audits, are widely applied. Special attention is given to the inclusion of vulnerable groups such as women, the elderly, persons with disabilities, and minority communities. Shelter and cash-for-work activities are often designed to be accessible and inclusive (NRC).

Risk communication is conducted through diverse and localised channels like radio, posters, storytelling (e.g. YPHO, PRIDE), and community focal points. Key messages address fire safety, flooding, shelter maintenance, and environmental conservation.

Communities are actively involved in implementation and recovery, carrying out tasks such as shelter reinforcement, drainage works, and tree planting. Some are trained as artisans or fire wardens (FFS), with many interventions supported through self-help (PRIDE) or cash-based approaches (DRC, NRC, SHO).

Feedback mechanisms like help desks and hotlines are in place to ensure accountability and responsiveness.

Overall, community engagement is deeply embedded in partner strategies and plays a central role in building resilience. However, challenges remain, including sustaining participation and building long-term capacity within community structures.

4.5. Early Warning Systems and Anticipatory Action

[46] Nigeria's Climate Change Act - Climate Change Laws of the World
[47] National Drought Plan. | UNEP Law and Environment Assistance Platform

Humanitarian partners recognise the importance of EWS and anticipatory action as essential components of DRR and resilience-building. While still emerging, several promising practices and gaps are evident across sectors.

Early Warning Systems

Partners have begun integrating early warning mechanisms into their programmes, particularly in relation to flooding, disease outbreaks (e.g., cholera), and fire risks in high-density displacement sites. For example, some agencies collaborate with local authorities and community leaders to disseminate timely alerts using mobile-based communication such as WhatsApp (SHO) community radios, TV (CARE AID, SHO, SHI, YPHO) and town criers, usually engaged through traditional leaders (SHO). Risk mapping and seasonal forecast awareness are also supported through coordination with NEMA, SEMA, and meteorological agencies.

However, EWS coverage remains fragmented and inconsistent across LGAs. In many camps and host communities, information dissemination is not systematic, and warnings often fail to reach the most vulnerable populations, including women, the elderly, and persons with disabilities. Additionally, community feedback mechanisms linked to EWS are limited, reducing their effectiveness and responsiveness.

Anticipatory Actions (AA)

Some humanitarian partners are piloting anticipatory actions, particularly in preparation for the rainy season. These efforts include the pre-positioning of NFIs and emergency shelter kits, site improvements to enhance drainage and reduce flood risk, and fire prevention awareness campaigns, including training on safe cooking practices. In some high-risk areas, there have also been efforts to temporarily relocate or reinforce shelters to better withstand seasonal hazards.

However, these initiatives tend to be sector-specific and are not yet embedded within a coordinated anticipatory action framework. Challenges such as resource constraints, data gaps, and limited local capacity continue to hinder the scalability and effectiveness of these measures.

4.6. Coordination with Government

Coordination with the Nigerian government at federal, state, and local levels is widely practiced and recognised as essential for effective DRR and humanitarian action. Positive examples of collaboration exist, particularly with institutions such as NEMA, SEMA, FSD. Several actors, including IFRC and OCHA, have made efforts to link national policy frameworks to local-level implementation. However, significant challenges persist across the system, including unclear mandates, fragmented communication flows, inconsistent data sharing, weak policy enforcement, and bureaucratic delays. These issues are particularly pronounced at the local level, where coordination structures are often under-resourced or underutilised. Additionally, some partners (UNHCR, DRC) continue to face operational barriers related to land access, informal settlement policy, and limitations in enforcement, which hamper timely preparedness and response. Strengthening coordination across all levels of government remains a critical priority for scaling effective and inclusive DRR efforts.

4.7. Organisational Alignment and Use of Policies/Guidelines:

Some organisations reported that their activities are aligned, at least in part, with national DRR and environmental policies. Some referenced frameworks include:

- The National Disaster Risk Reduction Policy (NEMA)
- The National Environmental Policy
- The National Climate Change Policy
- Nigeria's Nationally Determined Contributions (NDCs)
- The National Guidelines on Internally Displaced Persons (IDPs)

Despite these references, many organisations noted that formal alignment or consistent use of these frameworks is still pending. In practice, no single DRR policy or framework is being universally followed across the humanitarian response. These documents are often treated as broad guidance rather than operational tools, and they are rarely disseminated or applied consistently at the field level.

Several actors, including SHO and NRC, highlighted that field teams often lack access to national DRR policies or practical standard operating procedures (SOPs), which limits their ability to implement coordinated or policy-informed activities.

Some organisations are working to bridge this gap through internal frameworks or hybrid approaches. NRC, for example, aligns its programming with internal environmental SOPs, the BAY State Development Strategy, and the Durable Solutions Action Plan, seeking to integrate both national and local DRR frameworks. IOM indicated that its activities are informed by a combination of United Nations, national, and internal IOM policies, though acknowledged that gaps in harmonisation remain. CAREAID reported using IOM's DRR and site planning guidelines as part of its field-level interventions.

These mixed approaches underscore the need for more practical, harmonised, and accessible DRR policy tools, particularly those tailored for frontline staff working in complex operational environments.

4.8. Tools and Approaches in Use

While some international agencies (e.g. IOM, NRC, UNHCR) are using tools like NEAT+ for environmental screening, shelter damage matrices, and risk analysis frameworks, local actors often rely on practical, community-based methods such as site walkthroughs, FGDs, and seasonal calendars. There is broad consensus on the need for harmonised, accessible, and locally adapted DRR toolkits in simple formats and local languages.

Examples of tools currently in use include:

Assessment and Screening Tools

- NEAT+ (Nexus Environmental Assessment Tool) – NRC
- Environmental Screening Tools – DRC
- Shelter Damage Categorisation Matrices – IOM
- Multi-Sector Needs Assessments (MSNAs) – DRC
- Conflict-Sensitive Needs Assessments – CAREAID
- Enhanced Vulnerability and Capacity Assessment (EVCA) – NRCS

Risk Mapping and Site Analysis Tools

- Internal Trackers and Tools – BOAID
- Site Risk Mapping through FGDs – SHI, CAREAID, BOAID
- Safety Mapping (Participatory Risk Assessment) – NRC
- Community-Led Hazard Mapping – BOAID, CAREAID, NRCS, IOM, PRIDE, SHO, SHI, YPHO

Community Engagement and Participatory Tools

- Focus Group Discussions (FGDs) – CAREAID, NRC, PRIDE, SHO, SHI
- Community Engagement Toolkit – CAREAID (based on NRC's toolkit)
- Diagram-Based IEC Tools – BOAID
- IEC Materials – BOAID, NRCS, UNHCR, SHI, YPHO

Technical and Planning Tools

- IOM DRR and Site Planning Guidelines – Referenced by CAREAID

Digital Tools and Data Collection

- ODK and KoboCollect Mobile Apps – SHO, NRCS
- Power BI (for Data Visualisation) – NRCS

4.9. Good Practices Identified

Flood Preparedness and Mitigation

- BOAID implemented an Integrated Flood Mitigation and Risk Communication model, combining structural reinforcement, sandbagging, kit prepositioning, ongoing awareness campaigns, and coordination with traditional leaders and authorities.
- CAREAID introduced a Community-Based Flood Preparedness Model featuring community-led risk mapping, public awareness, flood kit prepositioning, drainage rehabilitation, training, drills, and storytelling theatre.
- SHO developed a Community-Led Flood Preparedness Model that includes participatory risk mapping, drainage work, drills, and awareness activities using storytelling.
- SHI carried out flood mitigation through sandbagging and site layout adjustments.
- PRIDE used Sand-filling and improved layouts in flood-prone areas prevent shelter loss that successfully withstood recent floods.
- UNHCR incorporated seasonal risk patterns into shelter planning and used stabilised soil bricks and sand-filled drums in flood-prone areas.
- NRCS piloted the Kaduna Anticipatory Action Project, using forecast-based triggers and cash assistance to respond to flooding.

Fire Preparedness and Safety

- ICRC promoted the use of firebreaks in camp layouts to reduce fire spread.
- SHI supported fire preparedness through infrastructure and fire safety training.
- PRIDE set up Fire Committees in camps, providing training and early response capacity.
- UNHCR established community fire points and used fire-resistant materials such as stabilised soil bricks.

- Federal Fire Service launched a radio awareness campaign on fire safety and trained IDPs as camp fire wardens for first response.
- NRC developed community fire preparedness activities, including awareness and risk reduction in overcrowded settings.

Durable and Resilient Shelter Solutions

- DRC used Interlocking Stabilised Soil Brick (ISSB) shelters for structural durability and piloted cash-based shelter repair, involving communities in design and planning.
- IOM designed a Durable Earth Block Shelter Model resistant to fire and flood, and applied a post-disaster shelter damage scale for targeted recovery.
- UNHCR used climate-resilient materials like stabilised soil bricks in shelter design.
- NRC implemented cash-for-work programmes for shelter/site upgrades that link DRR, livelihoods, and inclusion.

Community Structures and Local Governance

- NRCS established Community Disaster Management Committees (CDMCs), linking scientific forecasts with local knowledge and improving preparedness coordination.
- CAREAID, SHO, and SHI supported local ownership through community mapping, drills, and ongoing engagement.
- NRC and PRIDE involved local actors directly in planning and first response (e.g. fire committees, training).
- BOAID coordinated closely with traditional leaders and state authorities, integrating local governance into DRR.

Anticipatory Action and Early Warning

- IFRC's Kaduna project is a leading example of anticipatory action, using a 7-day lead time to trigger coordinated responses.
- NRCS and CDMCs are integrating local and scientific forecasting.
- BOAID and CAREAID include prepositioning of emergency kits as part of seasonal planning.

In the table below is an overview of DRR and environmental activities implemented by key partners across Northeast Nigeria. It covers areas such as flood preparedness, fire risk reduction, extreme heat mitigation, environmental sustainability, and general DRR efforts. The matrix highlights which organisations are engaged in each type of intervention, helping to identify coverage, overlaps, and potential gaps.

Table 11: Matrix of DRR and Environmental Interventions by Organisation

DRR/Environmental Activity	BOAID	CAREAID	DRC	ICRC	IFRC*	IOM	NRCS	NRC	PRIDE	SHO	SHI	UNHCR	YPHO
Flood Mitigation/Preparedness													
Implementing drainage (construction, clearance, maintenance)	x	x		x				x		x	x	x	x
Sandbags/Earth-filling/Site Elevation	x	x		x			x	x	x	x	x		x

Elevated shelters/Platforms			x			x						x	x
Reinforcing parapet walls (against floods)	x												
Community flood mitigation/preparedness (plans, training, drills, comms)	x	x	x				x	x	x	x	x	x	x
Using risk mapping/Assessments (general or hazard-specific)	x	x	x	x	x	x	x	x	x	x	x	x	x
Pre-positioning flood/Emergency kits/Supplies	x	x	x		x	x	x	x	x	x	x	x	x
Evacuation/Relocation strategies/Safer land allocation						x							
Fire Risk Reduction													
Installing fire points/Extinguishers/Kits	x	x								x		x	x
Establishing community fire committees/Teams	x							x	x				
Conducting fire safety awareness/Sensitisation	x	x		x			x	x	x	x	x	x	x
Promoting safe cooking practices/Alternative energy (linked to fire)	x	x					x	x		x		x	x
Implementing firebreaks/Shelter spacing/Layouts			x	x		x		x	x	x	x	x	x
Using fire-resistant shelter materials		x	x			x		x		x		x	x
Conducting fire drills/Training		x					x	x		x	x	x	x
Extreme Heat Mitigation													
Planting trees for shade/Cooling/Environmental Protection	x	x		x	x	x	x	x		x	x	x	x
Providing/Promoting shade structures/Shaded Communal Areas		x					x	x		x	x	x	x
Using climate-adapted/Heat-resistant shelter materials		x	x			x		x		x		x	x
Decongestion (linked to heat)								x					
Promoting solar/Alternative energy (heat/firewood link)	x	x					x	x		x		x	x
Environmental Sustainability (Broader)													
Using sustainable/Local materials in shelter construction	x	x	x	x		x		x		x		x	x
Waste management improvement/Training		x						x		x	x		x

Promoting alternative energy sources												x	x
Environmental awareness/Sensitisation (general)	x	x					x	x		x	x		
Land restoration/Protection/Erosion control		x			x		x			x	x	x	x
Environmental assessment tools (e.g. NEAT+)								x					
Advocacy for environmental standards/Policies		x								x			x
General DRR/Preparedness													
Using EWS/Forecasts (use/dissemination)	x	x	x		x	x	x	x	x	x	x	x	x
Pre-positioning general emergency items/Supplies	x	x	x		x	x	x	x	x	x	x	x	x
Using participatory risk mapping/Assessments (general)	x	x	x	x		x	x	x	x	x	x	x	x
Community engagement/Inclusion (General DRR/Env Planning)	x	x	x	x	x	x	x	x	x	x	x	x	x

** The IFRC does not directly implement programmes but provides technical and financial support to the Nigerian Red Cross Society (NRCS), which leads operational activities on the ground*

4.10. Operational Challenges

Despite significant progress, a range of interconnected challenges continue to hinder the effectiveness, sustainability, and scale-up of DRR efforts in North-East Nigeria. These are the most frequently cited barriers, organised into thematic categories. The numbers in parentheses show how many organisations explicitly mentioned each request.

A. Financial and Resource Constraints

1. **Funding Limitations** *(cited by 17 stakeholders)*
    - Most frequently cited barrier.
    - Affects everything from infrastructure and shelter improvements to staff training, environmental initiatives, prepositioning, and anticipatory action.
    - Limits scale-up of durable and climate-resilient solutions.

2. **Delayed Responses and Material Supply Issues** *(cited by 4 stakeholders)*
    - Delays in procuring or distributing essential materials (e.g. sandbags, NFIs) hamper timely implementation.

3. **Lack of Pre-Positioned Stockpiles** *(Referenced under recommendations)*
    - While not numerically cited, frequently suggested as a solution to preparedness shortfalls, especially in remote or flood-prone areas.

B. Coordination and Governance

4. **Coordination Gaps / Fragmentation / Weak Links** *(cited by 17 stakeholders)*
    - Weak coordination between federal (NEMA), state (SEMA), and local levels (LEMCs and CEMCs).
    - Overlapping mandates, unclear leadership, bypassing of coordination structures, and poor data sharing.

5. **Policy and Mandate Issues** *(cited by 10 stakeholders)*
    - Inconsistent application and weak enforcement of DRR/environmental policies.
    - Staff often lack awareness or access to key frameworks.
    - Uncertainty around government-led processes (e.g. camp closures, sector transitions).

6. **Transition Confusion** *(cited by 1stakeholders)*
    - Changes in coordination leadership (e.g. in Adamawa State) have caused partner confusion and disrupted coordination.

C. Technical and Capacity Gaps

7. **Limited Staff Capacity and Technical Knowledge** *(cited by 11 stakeholders)*
    - Field teams often lack DRR, climate, and infrastructure planning expertise.
    - Local authorities and CEMCs require ongoing capacity-building support.

8. **Lack of Standardised Tools and Guidelines** *(cited by 10 stakeholders)*
    - Absence of harmonised DRR toolkits adapted to local operational needs.
    - Field staff lack access to practical SOPs, templates, and checklists.

9. **Weak Early Warning Systems** *(cited by 11 stakeholders)*
    - Breakdown in information flow from national to local level (e.g. NiMet and CEMCs).
    - Limited localised or low-tech communication tools for timely alerts.

D. Environmental and Physical Site Challenges

10. **Environmental Pressures and Degradation** *(cited by 11 stakeholders)*
    - Deforestation, poor waste management, and erosion increase vulnerability to fire, flood, and heat.
    - Environmental considerations are rarely integrated during site setup or shelter design.

11. **Access Constraints and Insecurity** *(cited by 8 stakeholders)*
    - Security conditions limit humanitarian access to many LGAs.
    - Seasonal inaccessibility during rains delays response and planning.

12. **Congestion and Overcrowding** *(cited by 9 stakeholders)*

- High population density in camps reduces effectiveness of firebreaks, site layouts, and drainage.
- Makes decongestion and shelter upgrades difficult or impossible.

13. **Informal and Unplanned Settlements** *(cited by 4 stakeholders)*
    - Many sites are not officially recognised, limiting the implementation of DRR and planning regulations.
    - Irregular layouts reduce resilience and increase hazard exposure.

E. Social and Behavioural Barriers

14. **Behavioural Barriers and Community Resistance** *(cited by 7 stakeholders)*
    - Low uptake of clean energy, DRR behaviours, or new site layouts.
    - Participation in drills or engagement activities often depends on incentives.
    - Ongoing harmful practices (e.g. tree cutting, poor waste disposal) persist despite awareness efforts.

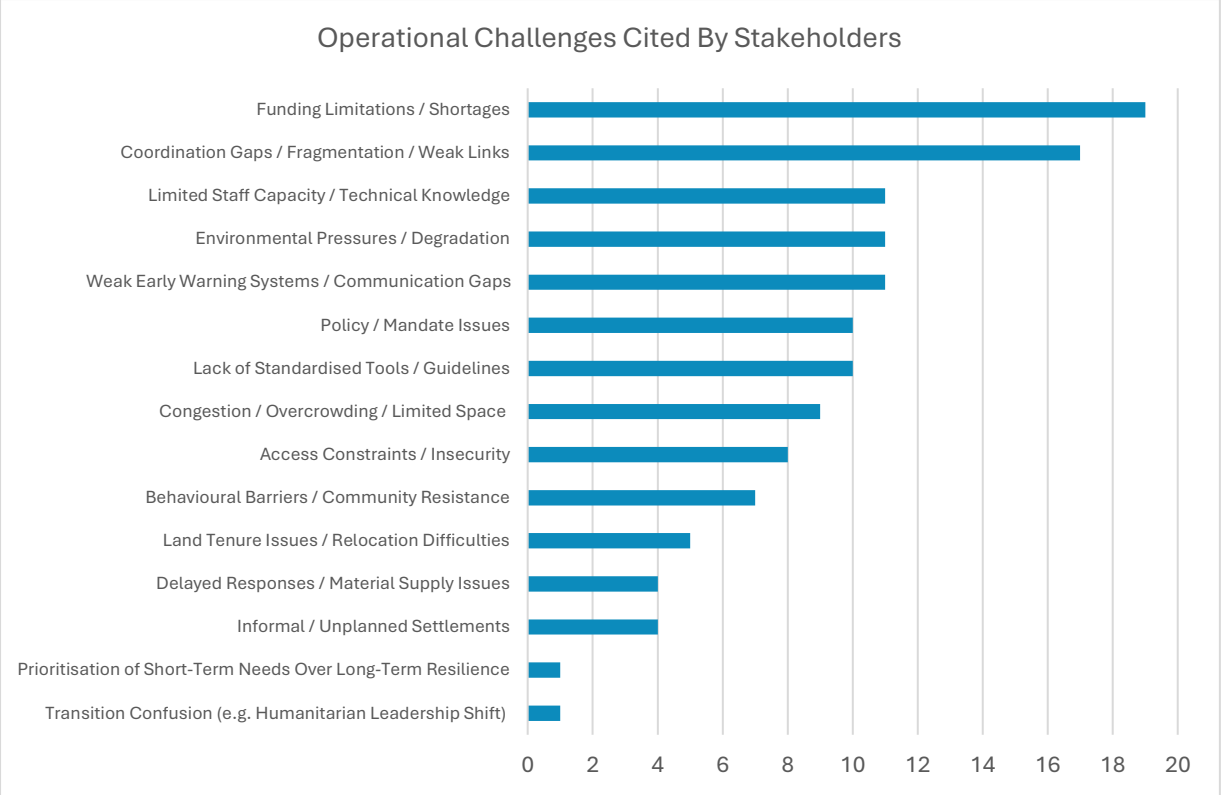
15. **Community Engagement Fatigue** *(Reference indirectly)*
    - Communities disengage from DRR activities when follow-up is lacking, or benefits are not clear.

F. Land and Tenure Issues

16. **Insecure Land Tenure and Relocation Barriers** *(cited by 5 stakeholders)*
    - Informal settlements and resistance from landlords limit the ability to invest in durable shelter or relocate vulnerable populations.
    - Lack of formal land access blocks infrastructure and long-term resilience planning.

Below, the graph shows how many times each operational challenge was cited by stakeholders.

Graph 1: Operational Challenges Cited by Stakeholders



4.11. Strategic Requests

These requests reflect the priorities of organisations working on CCCM, Shelter, NFI, DRR, and environmental integration in North-East Nigeria. The numbers in parentheses show how many organisations explicitly mentioned each request.

A. Capacity Strengthening and Local Empowerment

1. **Capacity Building** *(cited by 14 stakeholders)*
    - Build the technical capacity of field staff, local NGOs, and community structures (e.g. CEMCs, CDMCs).
    - Training topics include DRR principles, site planning, climate risk reduction, and emergency preparedness.
    - Specific calls for international training (NEMA) and budget support for local actor participation (PRIDE, Federal Fire Service).

2. **Promote Community-Led Approaches & Empower Local Actors** *(cited by 13 stakeholders)*
    - Prioritise inclusive, community-driven DRR strategies.
    - Support the inclusion of local NGOs and community groups in planning and coordination forums.
    - Encourage low-tech communication and behaviour change solutions and provide incentives for participation.

B. Policy, Advocacy, and Institutional Support

4. **Advocacy (for Policy, Resources, Procedures, and Sector Recognition)** *(cited by 13 stakeholders)*
    - Advocate for anticipatory action funding and enforcement of environmental and DRR regulations.
    - Promote awareness of DRR policies and inclusion in development strategies.
    - Request policy advocacy for pre-approved emergency protocols and sector recognition.
    - Includes infrastructure advocacy such as road access to remote sites.

C. Tools, Guidance, and Knowledge Sharing

5. **Standardised Tools, Guidelines, and Awareness Materials** *(cited by 12 stakeholders)*
    - Develop and harmonise DRR tools, checklists, SOPs, and IEC materials adapted to field realities.
    - Translate into local languages and simplify for frontline use.
    - Promote sharing of hazard maps, awareness packages, and sectoral toolkits.

6. **Sharing Knowledge and Best Practices** *(cited by 6 stakeholders)*
    - Facilitate inter-agency exchange of tools, case studies, and methodologies.
    - Use existing programmes as learning platforms.
    - Encourage replication of successful approaches (e.g. community radio campaigns).

D. Coordination and Systems Strengthening

6. **Improved Coordination** *(cited by 11 stakeholders)*
    - Strengthen vertical and horizontal coordination at national, state, and LGA levels.
    - Clarify roles of government, NGOs, and communities.
    - Improve coordination with specific government agencies (e.g. NiMet, Fire Services).
    - Promote cross-sectoral coordination on early warning and risk reduction.

7. **Timely Response and Anticipatory Action Support** *(cited by 10 stakeholders)*
    - Institutionalise anticipatory action frameworks and funding mechanisms.
    - Establish pre-approved emergency response protocols with government.
    - Streamline access to response materials and improve response timelines.

E. Resilience and Climate Adaptation

8. **Integrate Durable and Climate-Smart Solutions** *(cited by 7 stakeholders)*
    - Promote nature-based and climate-resilient site and shelter designs.
    - Advocate for policies and funding that support durable, sustainable solutions.
    - Support early investment in climate-smart infrastructure and fire/heat-resistant shelter materials.

F. Logistics and Infrastructure Preparedness

9. **Pre-positioned Stockpiles, Materials, and Infrastructure Support** *(cited by 5 stakeholders)*
    - Establish pipelines for critical materials: fire safety equipment, shelter, NFIs, drainage, and flood response tools.
    - Strategically locate supplies in high-risk or hard-to-reach areas.
    - Advocate for basic infrastructure upgrades, particularly roads to remote LGAs.

Below, the graph shows how many times each strategic request was cited by stakeholders.

Graph 2: Strategic Requests Cited by Stakeholders

5. Conclusion

North-East Nigeria faces overlapping humanitarian and environmental challenges, where conflict, displacement, and both natural and man-made hazards, compounded by climate change and environmental degradation, converge to deepen vulnerability. CCCM, Shelter, and NFI actors are already integrating DRR into their work, demonstrating resilience, innovation, and commitment despite significant constraints.

The consultations revealed a diverse range of responses, from community-led risk mapping to AA and climate-sensitive shelter design. Yet persistent gaps remain; fragmented policies, weak coordination, insecure land tenure, and underfunded initiatives continue to stall progress. Tackling these challenges requires more than technical fixes, it calls for system-wide shifts in how risk is assessed, planned for, and managed.

The consultation also highlighted that while Nigeria's institutional DRR architecture is relatively well-defined, spanning from federal agencies like NEMA, SEMAs, NiMet, and NIHSA, down to community-level actors such as LEMCs and CEMCs, coordination and functionality vary widely across states. The lack of formal reporting lines, overlapping mandates, unclear communication responsibilities, and poor last-mile dissemination of early warnings all contribute to fragmented disaster response and limited risk reduction outcomes. Strengthening coordination, will be essential to improving preparedness and reducing disaster impacts.

In this context, the role of EWS and AA becomes critical. While some humanitarian actors have linked seasonal forecasts to early action, such as pre-positioning supplies, reinforcing shelters, or disseminating risk messages, these efforts remain fragmented and under-resourced. Community-level early warning dissemination is often inconsistent or poorly timed, limiting the ability of vulnerable populations to act before a hazard strikes. Embedding EWS and AA into preparedness planning, with clear triggers, local dissemination mechanisms, and pre-agreed actions, is essential to shifting from reactive to proactive disaster management.

Local actors have emerged as critical drivers of DRR at the community level. While they consistently highlight the need for more funding and technical support, they possess deep contextual knowledge and trusted relationships with affected populations. With the right resources and inclusion in coordination structures, they are best positioned to lead effective grassroots resilience efforts.

Integrating DRR into humanitarian programming ensures that aid not only responds to crises but helps prevent them. Safer shelters, better site layouts, environmental restoration, and inclusive community engagement are not just technical upgrades, they are pathways to dignity, safety, and sustainability.

However, a particularly urgent concern is the anticipated phase-out of the CCCM/Shelter/NFI Sector lead by IOM and UNHCH, by July 2025. As coordination responsibilities are expected to transition to local authorities, there is still significant uncertainty around how this handover will take place, who will be accountable, and how continuity of support and coordination will be

maintained. Without a clear transition plan, the risk of fragmentation, capacity gaps, and loss of institutional knowledge could further weaken the DRR and resilience agenda in the region.

Ultimately, DRR is not a standalone agenda, it is a shared responsibility that aligns with the objectives of collaboration across the Humanitarian–Development–Peace Nexus. Strengthening it now is an investment in future resilience. With the right tools, partnerships, and support, North-East Nigeria can transition from risk to recovery, and from fragility to long-term stability.

In summary, building resilience in North-East Nigeria requires a shift from reactive to preventive approaches. By mainstreaming DRR and environmental actions, into shelter, site planning and NFIs, and aligning these efforts with community leadership and national frameworks, the humanitarian sector can create safer, more dignified, and more sustainable living conditions for displaced and host populations alike.

6. Recommendations

Based on the challenges, good practices, and forward-looking perspectives gathered during the scoping exercise, the following recommendations are proposed to strengthen disaster DRR, environmental integration, and overall resilience in the CCCM, Shelter, and NFI sectors in North-East Nigeria.

Although the recommendations are not categorised by priority or feasibility, it is important that they be considered within the context of the region's evolving situation. Moving forward, these recommendations should be reviewed, prioritised, and adapted according to three possible scenarios:

(1) Improvement; a transition towards durable solutions and development;
(2) Worsening crisis; increased displacement, humanitarian needs, and conflict;
(3) Continuation of the current context; a protracted crisis marked by instability and limited progress.

To support effective planning and implementation, it is strongly recommended that local and national partners be actively involved in assessing which recommendations are feasible under each scenario. Conducting a structured exercise with stakeholders to map out priorities across the three scenarios would help develop a phased and realistic implementation strategy that reflects both current constraints and future possibilities.

1. **Promote Safe, Durable, and Environmentally Friendly Shelter Solutions**
   Humanitarian actors should progressively shift from short-term emergency shelters like plastic sheeting to safer, more durable structures made from locally available materials such as stabilised soil bricks and mud blocks. These materials help reduce heat and fire risks while supporting environmental goals. To make this possible, more advocacy is needed around land tenure to enable investment in semi-permanent or permanent structures. Shelter designs should consider fire breaks, shaded communal areas, and orientation for heat and wind resistance.

2. **Promote Risk-Informed Site Planning and Infrastructure**
   Poorly planned and overcrowded settlements significantly increase vulnerability to hazards like flooding, fires, and disease outbreaks. Many displacement sites are established on marginal or informal land without adequate space, infrastructure, or long-term planning. Agencies and government should prioritise investment in basic infrastructure, such as drainage, access paths, firebreaks, and communal facilities, using seasonal risk data and participatory mapping. Risk-informed design should be applied even in temporary settings, with attention to decongestion, climate-sensitive layout, and safe access for all, including persons with disabilities. Future site planning must also consider long-term sustainability, including integration with host communities and alignment with land use policies.

3. **Invest in Clean Energy and Safer Cooking Alternatives**
   Reducing firewood dependency is critical for both safety and the environment. Programmes should promote practical, locally acceptable alternatives such as solar cookers or fuel-efficient stoves, especially where bans on tree cutting are in place. However, adoption requires realistic planning, community buy-in, and support for affordable energy solutions.

4. **Empower Local Actors through Funding and Capacity Building**
   Local NGOs, CEMCs, CDMCs, and fire committees are often first responders but lack funding and technical expertise. Support should prioritise training on DRR, inclusion in coordination mechanisms, and provision of flexible funding directly to local actors. Successful examples like CAREAID's site planning or PRIDE's community engagement illustrate the importance of grassroots leadership.

5. **Advocate for Predictable and Flexible Funding Streams**
   Insufficient and short-term funding remains a major barrier to implementing effective DRR, shelter, and environmental resilience activities. Stakeholders should advocate for longer-term, flexible financing that allows for preparedness and early action, such as prepositioning NFIs, upgrading shelters, or building drainage systems ahead of seasonal hazards. Successful anticipatory action pilots by IFRC and OCHA show the value of funding that is available before disasters strike. Continued advocacy with donors is needed to prioritise risk-informed and resilience-focused investments in both shelter and NFI programming.

6. **Improve Coordination across All Levels**
   Coordination between NEMA, SEMAs, LEMCs, humanitarian actors, and communities remains fragmented LGA coordination forums should be strengthened through regular, inclusive meetings with clear roles, chaired by the local authority and facilitated by local stakeholders. Actors must be regularly brought together through joint platforms, such as the upcoming DRR workshop. Government leadership should be supported rather than substituted, especially in light of future transition planning.

7. **Develop and Distribute Simple, Practical DRR Toolkits**
   Frontline staff need practical, easy-to-use tools to implement DRR. Toolkits should be standardised but adaptable, translated into local languages, and include visual materials where literacy is low. Contents might include hazard mapping templates, SOPs for fire or flood preparedness, and risk communication materials.

8. **Align Policy with Practice at Local Level**
   Although Nigeria has several national policies related to DRR, climate change, and IDPs, these are not always known or used in the field. Humanitarian agencies should support the translation of these frameworks into local-level SOPs and promote their uptake by state and local actors. Coordination with ministries, such as Environment, is essential for consistent application.

9. **Scale Up Nature-Based Solutions and Environmental Measures**
   Environmental issues such as erosion and deforestation directly affect displacement

sites. Integrated responses are needed, including tree planting[48], erosion control, drainage management, and safe waste disposal. Nature-based solutions, like those piloted by NRCS's Webuma[49] or NRC's use of NEAT+, can be scaled if funding and technical support are secured.

10. Enhance Community Engagement and Risk Awareness

Communities must be co-owners of DRR efforts. Agencies should support participatory tools like hazard mapping, storytelling, and theatre, and tailor risk communication through culturally appropriate and inclusive methods (e.g. radio, visual materials). Follow-up is essential to avoid engagement fatigue.

11. Strengthen Early Warning Systems and Anticipatory Action

While EWS exist nationally, many communities lack access to timely, actionable information. Coordination between humanitarian agencies and institutions like NiMet, NIHSA, and SEMAs should be improved. Improve local EWS by using clear, local-language alerts via radios, SMS, and community focal points. Link warnings to pre-agreed triggers and simple, actionable protocols (e.g. pre-positioning NFIs, reinforcing shelters, or relocating at-risk households). Train local committees and integrate EWS and AA into site-level and LGA contingency plans. Advocate for flexible funding to support early action, and document results to build an evidence base for scale-up. Coordination with NiMet, NEMA, and SEMAs is essential to ensure accuracy and local relevance.

12. Foster Knowledge Sharing and Scale Context-Specific Solutions

Innovative practices exist across the sector, however are often implemented in isolation. Sector leads and working groups should facilitate regular knowledge exchange through workshops, case studies, and peer learning platforms to document, share, and adapt these approaches. Where successful pilots have shown impact, like fire committees or flood preparedness in specific LGAs, they should be scaled up thoughtfully, with careful adaptation to local risk profiles, environmental conditions, and community preferences to ensure relevance and sustainability.

13. Explore the Use of Cash for DRR, Shelter, and NFI Resilience

Cash-based assistance can be an effective way to support risk reduction at the household level. It allows families to upgrade shelters using safer, more durable materials, invest in basic infrastructure like drainage or shading, and access alternative energy or fire safety tools. For NFIs, cash can offer flexibility to meet specific seasonal needs or replace lost items after disasters. Pilots by agencies such as DRC have shown

[48] Tree planting initiatives in displacement settings can offer significant long-term benefits, including shade provision, soil stabilisation, microclimate regulation, and erosion control. However, for these efforts to be truly sustainable, planning must go beyond planting alone. This includes selecting appropriate indigenous or drought-resistant species, establishing clear responsibilities for watering, protection, and maintenance, and integrating trees into broader site planning and environmental strategies. In many contexts, tree planting is implemented as a one-off activity, without follow-up or accountability mechanisms, leading to poor survival rates. Ensuring long-term impact requires community ownership, collaboration with local ministries (e.g. Agriculture or Environment), and inclusion of tree care components in contracts or cash-for-work programmes.

[49] The Webuma Project is an environmental and climate resilience initiative implemented by the NRCS in partnership with the IFRC in Jigawa State, Nigeria. It focuses on gender-sensitive and climate-smart livelihoods, using Nature-Based Solutions (NbS) as part of a broader ecosystem-based DRR strategy. Activities under the project include land restoration using half-moon earthworks across 40 hectares, agroforestry through Farmer Field Schools, and forest restoration within a 10-hectare forest reserve. The NRCS leads community engagement, ensuring local ownership and participatory implementation to promote long-term sustainability and resilience.

this approach is feasible in North-East Nigeria. However, its success depends on strong market assessments, technical guidance, and meaningful community engagement, alongside coordination and endorsement from relevant government actors to ensure alignment with national standards, protection principles, and long-term resilience goals.

14. Mainstream Gender and Protection Across Risk Reduction and Shelter Programming

Disaster risks and displacement affect women, girls, persons with disabilities, and other at-risk groups differently. It is essential to design DRR and shelter interventions that are inclusive, safe, and responsive to these diverse needs. Site planning should account for safety concerns, including the placement of latrines, lighting, and communal shelters. Women and marginalised groups should be actively involved in risk mapping, decision-making, and community committees. Protection-sensitive approaches must also ensure safe access to NFIs (like dignity kits) and shelter support, with attention to gender-based violence (GBV) risks during both planning and response phases.

15. Plan for Transition and Local Ownership

With IOM and UNHCR stepping back from CCCM/Shelter/NFI co-leadership in 2025, a clear transition plan is essential. National and state-level authorities must be supported to take over coordination roles, and institutional memory must be preserved. This includes ensuring DRR remains a priority beyond the current humanitarian architecture.

7. Annexes

Annex 1: Informants

Annex 2: Key Institutions for DRR and Environmental Governance in Nigeria

Annex 3: Policy Documents and Resources on DRR and Climate Governance in Nigeria Federal Level

Annex 4: Legal and Policy Frameworks