

ADAMAWA STATE ANTICIPATORY ACTION PROTOCOL



**SAFEGUARDING THE LIVES, WELL-BEING
AND BUILDING THE RESILIENCE OF THE
PEOPLE OF ADAMAWA STATE.**

2025





RT. Hon. Ahmadu Umaru Fintiri

Executive Governor of Adamawa State.

PLEDGE

Recognizing the devastating effects of flooding in Adamawa State, displacement of communities, destruction of critical infrastructure, loss of lives and livelihoods, increased health risks, and environmental degradation—which have been exacerbated by climate change. I, in my capacity as the Executive Secretary of ADSEMA, will:

❖ **Strengthen Coordination and Preparedness:**

Work closely with the State Government, relevant ministries, hydro-meteorological agencies, United Nations (UN) bodies, International NGOs, Civil Society Organizations (CSOs), and community-based structures to proactively prepare for and respond to disasters.

❖ **Enhance Early Warning Systems:** Ensure that early warning information reaches communities at risk, enabling timely action to mitigate flood impacts and protect lives and property.

❖ **Promote Resilient Disaster Risk Management:** Lead the development and implementation of anticipatory action plans, integrating risk reduction strategies that empower communities to withstand and recover from floods.

❖ **Mobilize Resources and Technical Support:** Advocate for and secure funding, technical expertise, and material support from national and international partners to enhance flood preparedness and response capabilities.

❖ **Encourage Multi-Stakeholder Collaboration:** Foster inclusive partnerships to ensure a coordinated and effective response to floods, leveraging the strengths of government institutions, the private sector, humanitarian agencies, and community leaders.



Dr Celine Laori
Executive-Secretary,
ADSEMA

❖ **Prioritize Sustainable Solutions:**

Champion policies and initiatives that promote climate resilience, including afforestation, improved urban planning, improved drainage systems, and eco-friendly flood mitigation measures.

With this pledge, I reaffirm my commitment to safeguarding the lives and well-being of the people of Adamawa State, ensuring that we move from reactive disaster response to a proactive, anticipatory, and community-driven approach to flood preparedness and resilience-building.

Signed:

Dr Celine Laori

Acronyms

AASC	Anticipatory Action Steering Committee
ADSEMA	Adamawa State Emergency Management Agency
ADSEPA	Adamawa State Environmental Protection Agency
CAAC	Community Anticipatory Action Committee
CDP	Center for Disaster Protection
C2S	Cloud to Street
CRUDAN	Christian Rural and Urban Development Association of Nigeria
CSO	Civil Society Organizations
DTM	Displacement Tracking Matrix
DRR	Disaster Risk Reduction
EAP	Early Action Protocol
EWS	Early Warning System
EWSV	Early Warning System Volunteers
EU	European Union
FBA	Forecast Base Action
FGD	Focus Group Discussion
IGA	Income Generation Activities
IEC	Information Education and Communication
INGOs	International Non-Governmental Organizations
IRC	International Rescue Committee
IOM	International Organization for Migration

Acronyms

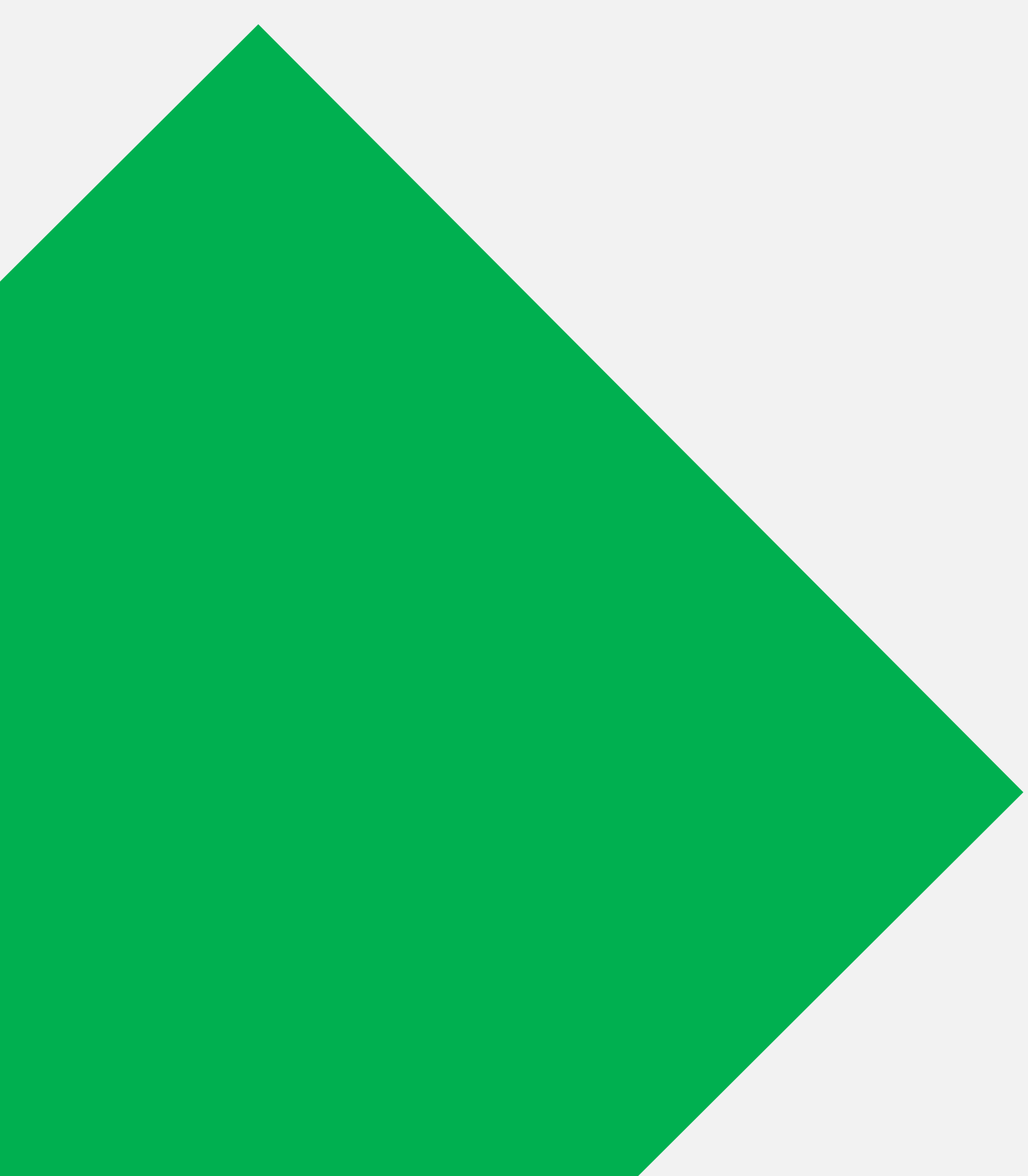
LGA	Local Government Area
MEAL	Monitoring Evaluation Accountability and Learning
NiMet	Nigerian Meteorological Agency
NEMA	National Emergency Management Agency
NIHSA	Nigeria Hydrological Services Agency
NFIs	Non-Food Items
NGOs	National Non-Governmental Organizations
NiMet	Nigerian Meteorological Agency
NRRR&HS	Ministry of Reintegration, Reconstruction, Rehabilitation and Humanitarian Service
RCSI	Reduced Coping Strategy Index
SEMA	State Emergency Management Agency
SMS	Short Messaging System
UBRBDA	Upper Benue River Basin Development Authority
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNHCR	United Nations High Commissioner for Refugees
UNFPA	United Nations Population Fund
UN	United Nations
WMO	World Meteorological Organization

Executive Summary

Hazard	Seasonal flooding and Drought
Potential high-risk areas where the FB/community resilience mechanism could be activated	Adamawa State, especially communities located upstream of River Benue.
Objective	To use Anticipatory Action Protocol as the method to reduce the vulnerability of communities in fragile and conflict-affected contexts to climate shocks.
Prioritized risks/impacts to be addressed by early actions	<ol style="list-style-type: none"> 1. Loss of income and livelihoods (due to destruction of productive assets, insufficient adaptive capacity and awareness, inability of people to take timely safety measures or use climate-resilient practices) 2. Mortality (due to disease outbreaks and pest/insect infestation, and people do not have clean water and mosquito nets, rendering them vulnerable). 3. Household assets damage (due to water intrusion in their houses) 4. Displacement of households affected by flooding
Proposed Early Actions by respective Areas of Focus (AOF)	<ol style="list-style-type: none"> 1. Upper Benue River Basin Development Authority, Nigerian Meteorological Station, and National Institute for Hydrological Station to support with forecast and early warning information dissemination and awareness messaging to the state and local government agencies and on social media, (Local Government Emergency Committee (LEMC), Adamawa State Emergency Management Agency, and the Nigeria Red Cross) 2. The state emergency management agency, Nigeria Red Cross, UN, INGO, and NGOs/CSOs to support local Government and communities to respond to Early Warning Systems and plans to be conducted by communities ahead of the flooding) 3. The state emergency management agency, Nigeria Red Cross, INGO, and NGOs/CSOs to support with Pre-shock cash transfers to households

Executive Summary

<p>Potential beneficiaries</p>	<p>No. of Individuals or households affected by floods or drought including people with disability</p>
<p>Sources of forecast information</p>	<p>Local and International Sources</p> <ul style="list-style-type: none"> • Nigeria Meteorological Agency (NiMet), • Nigeria Hydrological Services Agency (NIHSA), and • Upper Benue River Basin Development Authority (UBRBD) • Open-sourced data: FanFar • Human intelligence: community Leaders and community members • Radio stations • Federal Ministry of Environment • State Ministry of Environment
<p>Trigger statement</p>	<ul style="list-style-type: none"> • Seasonal & Monthly forecasts will be used as soft triggers. Weekly forecasts will be used for hard triggers. • When the forecast shows that the water exceeds 600cm, the people will be alerted of the impending flooding using the NIHSA classification of water level – normal (0-600cm), Yellow(600-1000m) and Red(1000-1400cm). The NIHSA hydrograph will be used to monitor the water level. We expect a lead of 10 days to 1 month. • When the forecast shows that rainfall exceeds 50mm 24hours rainfall, then an alert will be triggered. • When there is release of excess water from Lagdo dam Cameroun, an alert will be triggered.
<p>Responsible focal point for this EAP</p>	<p>Principal: Upper Benue River Basin Development Authority, Adamawa State Emergency Management Agency (ADSEMA), and the Nigeria Red Cross</p>



Executive Summary

State government coordinating agency	<ul style="list-style-type: none">• Adamawa State Emergency Management Agency (ADSEMA),• National Emergency Management Agency (NEMA)• United Nations Office for Coordination of Humanitarian Affairs (UNOCHA) <p>Other line Ministries</p> <ul style="list-style-type: none">• Ministry of Reconstruction, Rehabilitation and Resettlement• Federal Ministry of Environment,• State Ministry of Environment and Natural Resources,• Ministry for Local Government and Chieftaincy Affairs,• Ministry of Water Resources, Local government Councils,• Ministry of Planning commission.• Ministry of Health• Ministry of Livestock• Ministry of Agriculture• Ministry of Information
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- INGOs: International Non-Governmental Organizations
- Adamawa State Ministry of Livestock
- CSOs: Civil Society Organizations
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- United Nations High Commissioner for Refugees (UNHCR)
- United Nations Population Fund (UNFPA)
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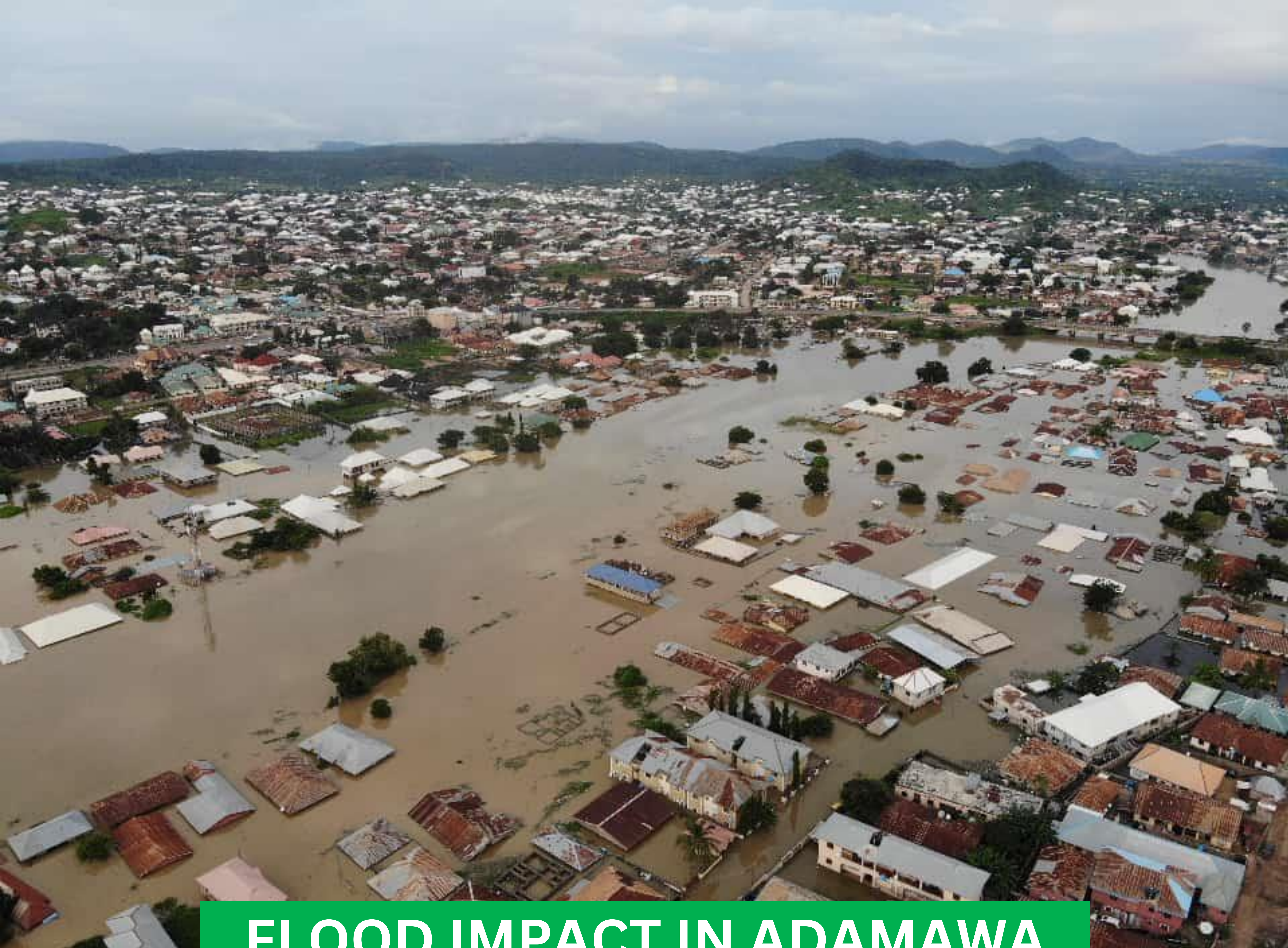
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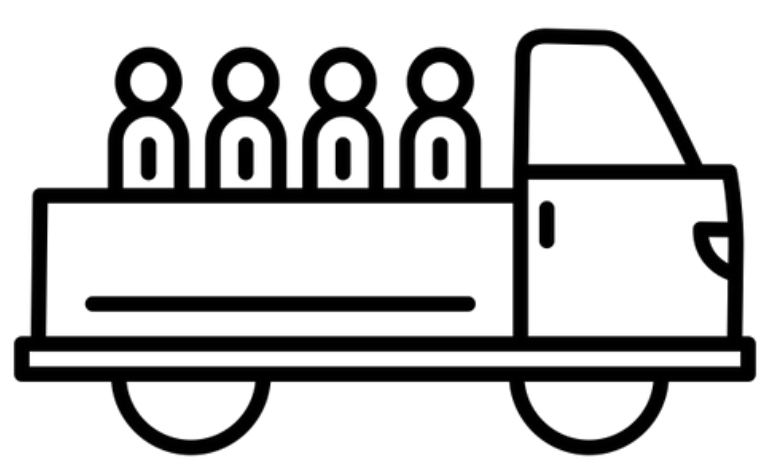


INTRODUCTION

Adamawa State, located in northeastern Nigeria, experiences extreme weather conditions, with floods and droughts posing significant challenges to livelihoods, food security, and infrastructure. Drought occurs due to prolonged dry spells, erratic rainfall, and increasing desertification, affecting agriculture, water availability, and pastoral livelihoods. On the other hand, flooding is exacerbated by heavy rainfall, overflow of major rivers such as the Benue River, and the release of water from dams like the Lagdo Dam in neighboring Cameroon. These climatic hazards lead to displacement, loss of property, and heightened risks of conflict over scarce resources. Addressing these challenges requires proactive mitigation strategies, including improved water management, climate-smart agriculture, and early warning systems to build resilience among vulnerable communities.



FLOOD IMPACT IN ADAMAWA



361,919

Displaced
persons



237

Communities



66,360

Affected
Households



16

Affected
LGAs

Despite these impacts, resource-constrained households continue to live and farm on floodplains, struggling to adapt to seasonal climate shocks. The cyclical effects of flooding and drought have significant impacts on smallholder farmers' livelihoods, increasing the use of negative coping strategies and reducing adaptive capacity to future shocks.



Climate change has increased weather-related disasters, with flooding accounting for 44% of these events in Africa, resulting in 731,747 lives lost and \$5 billion in economic losses (WMO, 2021). In Nigeria's Adamawa state, heavy rainfall and dam releases caused devastating floods in 2012 and 2019, displacing thousands, damaging homes, and destroying livelihoods.

The 2022 floods and drought in Adamawa State, Nigeria, exacerbated the existing humanitarian crisis, particularly for women and girls. A Rapid Needs Assessment (RNA) was conducted to bridge information gaps and support the humanitarian response.

The assessment revealed significant protection concerns, especially for elderly females, who face increased risk of physical and emotional harm during displacement. The top three Local Government Areas (LGAs) affected were Yola South, Larmude, and Yola North.

The data showed that 1,104 females were forcibly displaced, with 22% in the reproductive age bracket. This displacement amplified their vulnerability, positioning them at an elevated risk of Gender-Based Violence (GBV).

The assessment identified 361,919 individuals in 66,360 households affected by the floods. The affected population relied heavily on crop farming as a primary source of income.

The humanitarian response was largely reactive, rather than proactive, limiting support for communities to anticipate and respond to hazards. The assessment emphasized the need for targeted interventions to address the specific needs of affected populations, particularly women and girls. The drought condition led to substantial agricultural losses, with varying degrees of damage reported across the state.

Per the assessment conducted in 2023 by the Adamawa State Emergency Management Agency (ADSEMA), the flooding predicament within the state is predominantly attributable to the protracted heavy rainfall that commenced around the 5th of May 2023 and persisted until approximately the 24th of September 2023. Additionally, the situation was exacerbated by the discharge of water from the Lagdo Dam in Cameroon, resulting in further displacement of residents and the wanton destruction of agricultural plots, storage facilities, and other valuable assets. According to ADSEMA, as of the 19th of September, the dire consequences of this catastrophe have manifested in grim statistics.

Between 28 October and 8 November 2024, the Displacement Tracking Matrix (DTM), in collaboration with the National Emergency Management Agency (NEMA), the Adamawa State Emergency Management Agency (SEMA), and the Nigerian Red Cross Society (NRCS), identified 237 locations in Adamawa State that were impacted by floods. 16 local government areas (LGAs) of Adamawa State were affected, the joint assessment team identified 361,919 individuals in 66,360 households affected by the floods. These individuals included IDPs who were displaced by the floods and residents who were impacted by the floods but remained in their communities.

Fifty-two per cent (52%) of the affected houses were habitable and needed no repair, eighteen per cent were habitable but needed repairs, sixteen per cent were partially damaged and three per cent were destroyed. In 70 per cent of the locations assessed, crop farming was among the primary sources of income.





National Emergency Management Agency (NEMA), the Adamawa State Emergency Management Agency (SEMA), and the Nigerian Red Cross Society (NRCS), 2023, 2024

The goal of this Anticipatory Action Protocol (AAP) is to illustrate how the implementation of anticipatory actions can reduce negative coping strategies posed by climate hazards, support households and communities to build resilience against climate shocks, break the negative cycle of climatic shocks, and continuously increase adaptive capacity. This document will provide the rationale for the prioritization of early actions and provide a step-by-step guide for the selected action(s) to be implemented. This is expected to guide the timely and effective implementation of action towards building community resilience to climatic shocks.

This Anticipatory Action Protocol (AAP) document targets hazards such as floods and drought is triggered by a forecast provided by a model with a low lead time. This AAP provides the rationale for the prioritization of early actions and provides a step-by-step guide for the selected action(s) to be implemented in a particular order when activated. It clearly highlights who takes what action when, where, how and with what funds. This AAP document would be revised and updated by ASEMA and partners as the context changes with time in Adamawa.

This includes providing food aid, non-food items (NFIs), and cash assistance to support household recovery from shocks. However, this support often arrives after the hazard has occurred, when households' coping capacities have already been severely depleted.

Anticipatory Action' cash transfers, early warning systems, messages dissemination- can help reduce community and household vulnerability to the consequences of seasonal flood shocks in both the short term and long term. The severity of the impact of climate shocks depends on the vulnerability and exposure of populations to seasonal climate shocks such as flooding, and dry spell. Measures that can help households and communities manage seasonal climate shocks by addressing vulnerabilities and exposures such as provision of forecast-based cash transfer, forecasted early warning information, community action and climate resiliency messaging can support households to take early actions to reduce negative impacts, diversify their livelihoods and build resilience against seasonal climate shocks.

Overall Objectives of the Anticipatory Action Protocol

- Enhancement of Early Warning Systems
- Improvement of Disaster Preparedness
- Timely Activation of Anticipatory Actions
- Protection of Livelihoods
- Promotion of Inclusive and Gender-Responsive Interventions
- Strengthening Coordination Among Stakeholders
- Development of Clear Roles and Responsibilities
- Increment in Public Awareness and Engagement
- Reduction of the Economic and Social Costs of Disasters
- Improvement of Resilience and Adaptive Capacity

Key Actors

This AAP will be implemented in collaboration with several organizations including Adamawa State Emergency Management Agency, National Emergency Management Agency, Local emergency management committee (LEMC), Nigeria Red Cross, Nigeria Meteorological Agency, Nigeria Hydrological Service Agency, Upper Benue River Basin Development Authority, Ministry of Environment and Natural Resources, Ministry of Reconstruction, Rehabilitation and Resettlement, Ministry of Local Government and Chieftaincy Affairs, Ministry of Water Resources, Local Government Councils, Ministry of Planning Commission, and other relevant stakeholders.

These key factors will ensure that the early actions planned to be implemented are carried out in a timely manner and successfully. The lead implementer for this EAP is the Adamawa State Emergency Management Agency with direct support from the Nigeria Red Cross, other technical partners such as the Hydro met agencies, government agencies, UN, CSOs, and INGOs.



ADAMAWA STATE
ANTICIPATORY ACTION
PROTOCOL

ROLES & RESPONSIBILITIES OF KEY STAKEHOLDERS



Nigeria Meteorological Agency (NiMet)



NiMet is a Federal Government Agency that provides Seasonal Climate Predictions. The agency provides weather and climate information on the onset of the rains, cessation of the rains, length of the growing season, rainfall, and temperature information to all the states in Nigeria (nationwide). NiMet will provide local decadal climate and weather predictions and data on flooding to ADSEMA and ADSEMA will communicate to the relevant agencies (eg LEMC) for onward communication to the target communities residing on the river Benue floodplain. NiMet also ensures knowledge and information sharing with relevant stakeholders

Roles & Responsibilities

- ❖ **Weather Forecasting and Early Warning:** NiMet is responsible for providing accurate and timely weather forecasts, including rainfall predictions and storm warnings, which are critical for triggering anticipatory action protocols.
- ❖ **Climate and Weather Data Collection:** The agency collects and analyzes climate data, identifying trends that could signal potential disasters (e.g., increased rainfall intensity or prolonged dry periods that may lead to droughts).
- ❖ **Development of Seasonal Climate Prediction (SCP):** NiMet produces annual Seasonal Climate Predictions that offer detailed insights into expected weather patterns, including flood risks, which are used to inform preparedness measures.
- ❖ **Dissemination of Weather Information:** NiMet ensures that its forecasts and early warnings are effectively communicated to the public, relevant government agencies, and other stakeholders involved in disaster risk management.
- ❖ **Trigger Early Warning Systems:** NiMet plays a pivotal role in activating early warning systems by issuing timely alerts when adverse weather conditions, such as heavy rains that may cause floods, are predicted.
- ❖ **Collaboration with Other Agencies:** The agency works closely with NIHSA, state emergency management agencies, and other stakeholders to share weather forecasts and ensure coordinated anticipatory actions.



Roles & Responsibilities

- ❖ **Hydrological Forecasting:** NIHSA is responsible for monitoring Nigeria's water bodies, including rivers and dams, to forecast potential flood risks based on water levels, flow rates, and rainfall patterns.
- ❖ **Flood Risk Assessment:** The agency conducts assessments of flood-prone areas, providing critical information on where and when floods are likely to occur.
- ❖ **Annual Flood Outlook (AFO):** NIHSA produces an Annual Flood Outlook, which forecasts areas at risk of flooding based on hydrological data. This outlook informs pre-emptive actions by stakeholders involved in disaster risk management.
- ❖ **Issuing Flood Alerts:** NIHSA is responsible for issuing alerts when river levels rise dangerously, indicating an increased likelihood of flooding. These alerts are vital for triggering anticipatory actions such as evacuation or resource repositioning.



Roles & Responsibilities

- ❖ **Water Resource Management:** The UBRBDA manages water resources in the Upper Benue River Basin, including rivers, dams, and irrigation projects, which are key to flood control.
- ❖ **Dam Operations and Flood Control:** The agency operates dams and reservoirs, regulating water releases to control flooding downstream during periods of heavy rainfall.
- ❖ **Infrastructure Maintenance:** UBRBDA ensures that water infrastructure such as levees, dams, and irrigation channels are well-maintained and capable of handling excessive water flow to prevent flooding.
- ❖ **Flood Risk Mitigation:** By managing water levels in the Upper Benue River Basin, UBRBDA plays a direct role in flood mitigation, ensuring that dams and reservoirs are properly managed to reduce flood risks.
- ❖ **Collaboration with NIHSA and NiMet:** The agency works in tandem with NIHSA and NiMet to use hydrological and meteorological data in water management decisions, ensuring that water releases from dams do not exacerbate flooding. **Community Engagement:** UBRBDA engages local communities in flood-prone areas, informing them about dam operations and flood risks to help them prepare for potential flooding.



Roles & Responsibilities

- ❖ Serve as the primary coordinating body for disaster management activities, including preparedness, response, and recovery efforts across different sectors.
- ❖ Operate the state's early warning system (EWS) in collaboration with meteorological agencies and ensure that communities receive timely and actionable information on floods and droughts.
- ❖ Conduct training for first responders, community leaders, and government agencies on DRR, early action, and emergency response strategies.
- ❖ Coordinate the establishment of evacuation routes, temporary shelters, and relief distribution centers to protect at-risk populations.
- ❖ Lead post-disaster assessments to determine the extent of damage and coordinate recovery activities, ensuring a rapid and effective response.



Roles & Responsibilities

- ❖ Collaborate with meteorological and hydrological agencies to issue timely flood forecasts and alerts.
- ❖ Disseminate early warning information to state and local authorities, communities, and stakeholders.
- ❖ Develop and implement flood contingency plans to enhance national preparedness. Coordination and Response:
- ❖ Lead interagency coordination efforts between federal, state, and local agencies.
- ❖ Support the Adamawa State Emergency Management Agency (ADSEMA) in mobilizing resources and technical assistance for flood preparedness.
- ❖ Provide guidelines and best practices for implementing anticipatory action measures at the state level.
- ❖ Organize training programs and simulation exercises for first responders, government agencies, and communities on flood preparedness.



Ministry of Environment & Natural Resources

Roles & Responsibilities

- ❖ Land Management and Ecosystem Protection
- ❖ Environmental Risk Assessments
- ❖ Climate Change Adaptation Strategies
- ❖ Environmental Restoration
- ❖ Climate Change Monitoring
- ❖ Constructions
- ❖ Monitoring the rate of deforestation in flood prone areas
- ❖ : Recruit protection staff to checkmate deforestation
- ❖ Planting trees along the river areas
- ❖ Create sensitization program in the river rain areas



Roles & Responsibilities

- ❖ Oversee the reconstruction of damaged infrastructure, such as homes, schools, and health facilities, ensuring that rebuilt structures are resilient to future disasters.
- ❖ Develop and implement plans to resettle individuals and communities displaced by floods and droughts in safe locations.
- ❖ Facilitate programs that help affected populations restore their livelihoods, including agriculture, small businesses, and other economic activities, particularly after droughts and floods.



Ministry of Health

Roles & Responsibilities

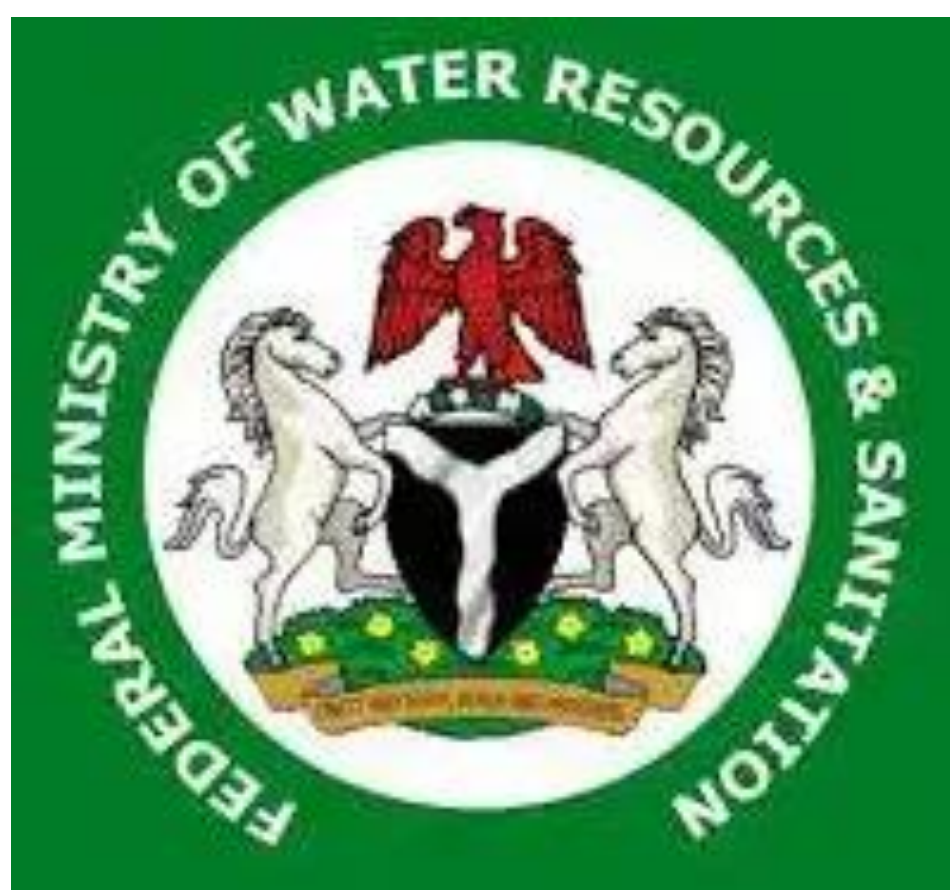
- ❖ Monitor and prevent the outbreak of waterborne diseases (e.g., cholera, typhoid) and vector-borne diseases (e.g., malaria) that may arise during floods.
- ❖ Prepare health facilities, including the provision of emergency medical supplies, mobile health clinics, and safe access routes for patients during disasters.
- ❖ Lead public health campaigns to educate communities on disease prevention, hygiene practices, and the health impacts of droughts and floods.
- ❖ Provide mental health and psychosocial support services for affected communities, including trauma counseling in the aftermath of disasters.



State Ministry of Information

Roles & Responsibilities

- ❖ **Public Communication and Information Dissemination:** The State Ministry of Information plays a crucial role in communicating early warning information to the public through mass media, including radio, television, and social media channels.
- ❖ **Crisis Communication Management:** During periods of heightened disaster risk, the ministry ensures that clear, concise, and actionable information reaches the public, reducing panic and promoting safety measures.
- ❖ **Liaison with Other Ministries and Agencies:** It coordinates with relevant agencies, such as NiMet, NIHSA, and emergency management bodies, to ensure consistent and accurate information is shared with the public.
- ❖ **Early Warning Dissemination:** The ministry ensures that early warning messages from agencies like NiMet and NIHSA are quickly relayed to communities, particularly in flood-prone or high-risk areas.



Ministry of Water Resources

Roles & Responsibilities

- ❖ **Water Resource Management:** Monitor and manage water levels in rivers, dams, and reservoirs, ensuring controlled releases during floods and sustainable use of water resources during droughts.
- ❖ **Flood Control Infrastructure:** Build and maintain flood control structures such as levees, drainage systems, and embankments to protect communities from floods.
- ❖ **Drought Mitigation:** Promote efficient water use and introduce drought-resistant agricultural practices to conserve water resources in times of scarcity.
- ❖ **Emergency Water Supply:** Ensure the availability of clean and safe drinking water for affected populations during both floods and droughts, including emergency water distribution systems.
- ❖ **Community Awareness on Water Conservation:** Educate communities on water-saving techniques and safe water use practices, especially in anticipation of droughts



Ministry of Women Affairs & Social Development



Roles & Responsibilities

- ❖ Conduct Needs Assessment
- ❖ Data Collection
- ❖ Awareness Campaigns
- ❖ Community Engagement
- ❖ Safe Evacuation and Shelter
- ❖ Child Protection Measures
- ❖ Mental Health Support
- ❖ Health Services Access
- ❖ Train Local Women's Groups
- ❖ Awareness Workshops
- ❖ Resource Allocation
- ❖ Coordination of Aid Distribution
- ❖ Impact Monitoring

Nigerian Red Cross



Roles & Responsibilities

- ❖ Humanitarian Assistance
- ❖ Community-Based Early Warning and Health Services in Emergencies
- ❖ Pre-positioning Emergency Supplies
- ❖ Evacuation Support
- ❖ Training Volunteers
- ❖ Disaster Management
- ❖ Disaster Risk Reduction
- ❖ First Aid and Health Services
- ❖ Restoring Family Link (RFL)

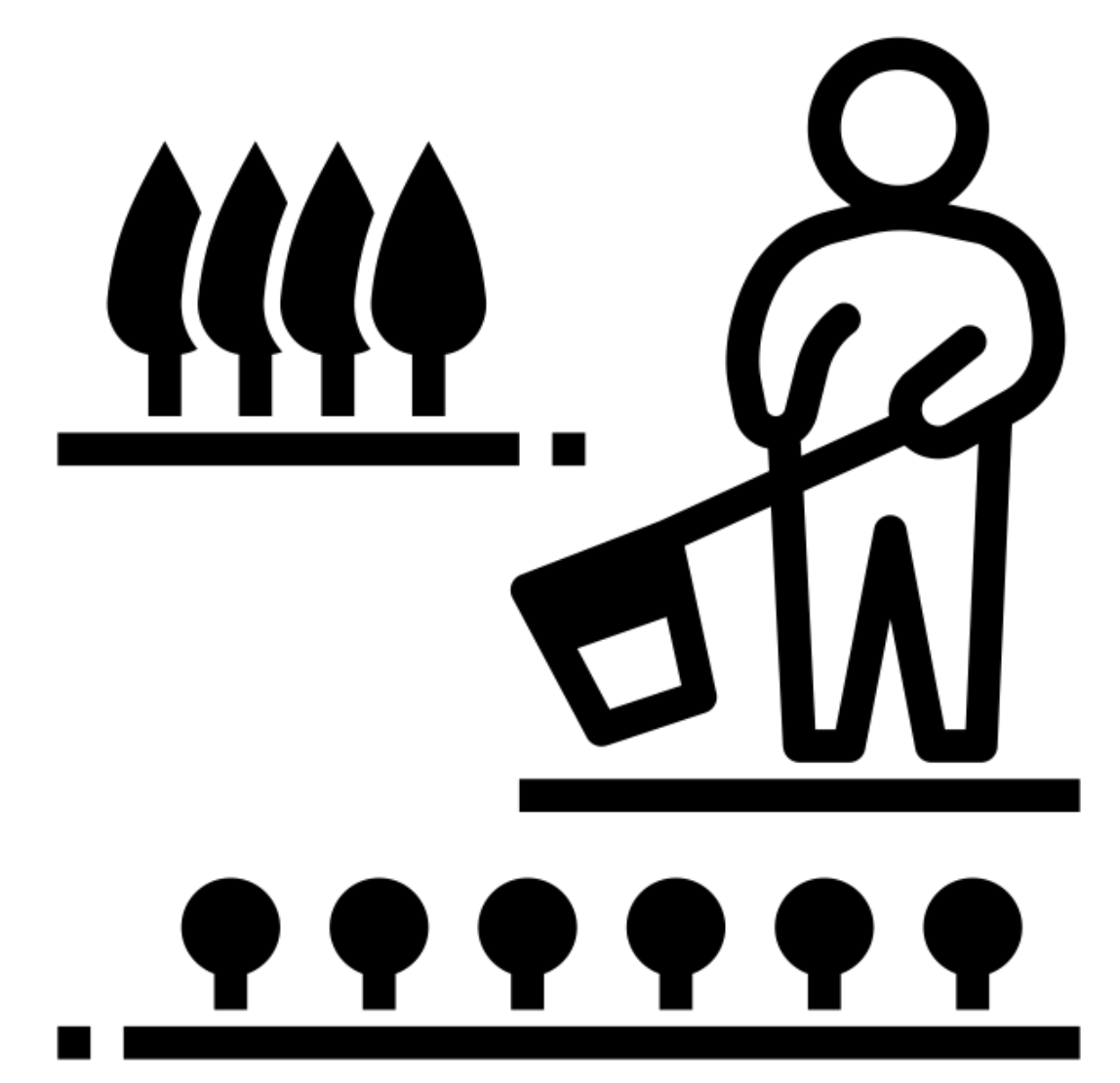


ROLES

- Disaster Education and Awareness in Schools
- School Safety and Preparedness Plans

RESPONSIBILITIES

- School Closures and Evacuations
- Community Awareness through Schools
- Training for Teachers and Staff
- IDP Education
- Resettlement of Teachers/Pupils
- Mobilizes and trains School Based Management Committee and PTA



Roles & Responsibilities

ROLES

- Protection of Agricultural Livelihoods
- Climate-Smart Agriculture
- Coordination of Food Security

RESPONSIBILITIES

- Early Warnings to Farmers
- Supporting Farmers Post-Disaster
- Coordination with Meteorological Agencies
- Disseminate early warning



Roles & Responsibilities

- ❖ Public Awareness and Sensitization
- ❖ Behavior Change Communication
- ❖ Disseminating Early Warning Information
- ❖ Community Engagement
- ❖ Coordination with Local Leaders



**Security Agencies (Police, Nigeria
Security and Civil Defense Corps,
Military, etc.)**

Roles & Responsibilities

- ❖ Maintaining Law and Order
- ❖ Supporting Evacuations
- ❖ Providing Security for Evacuated Areas
- ❖ Traffic Control During Evacuations
- ❖ Security at Shelters and Temporary Camps
- ❖ Protection of Critical Infrastructure
- ❖ Search and Rescue Support
- ❖ Coordination with Disaster Management Agencies



Roles & Responsibilities

- ❖ Environmental Monitoring and Risk Assessment
- ❖ Waste Management and Drainage Maintenance
- ❖ Environmental Education and Awareness
- ❖ Clearing Drainages and Waterways
- ❖ Flood Prevention Infrastructure
- ❖ Erosion Control Measures
- ❖ Environmental Impact Assessments
- ❖ Collaboration with Disaster Management Agencies
- ❖ Public Health Protection

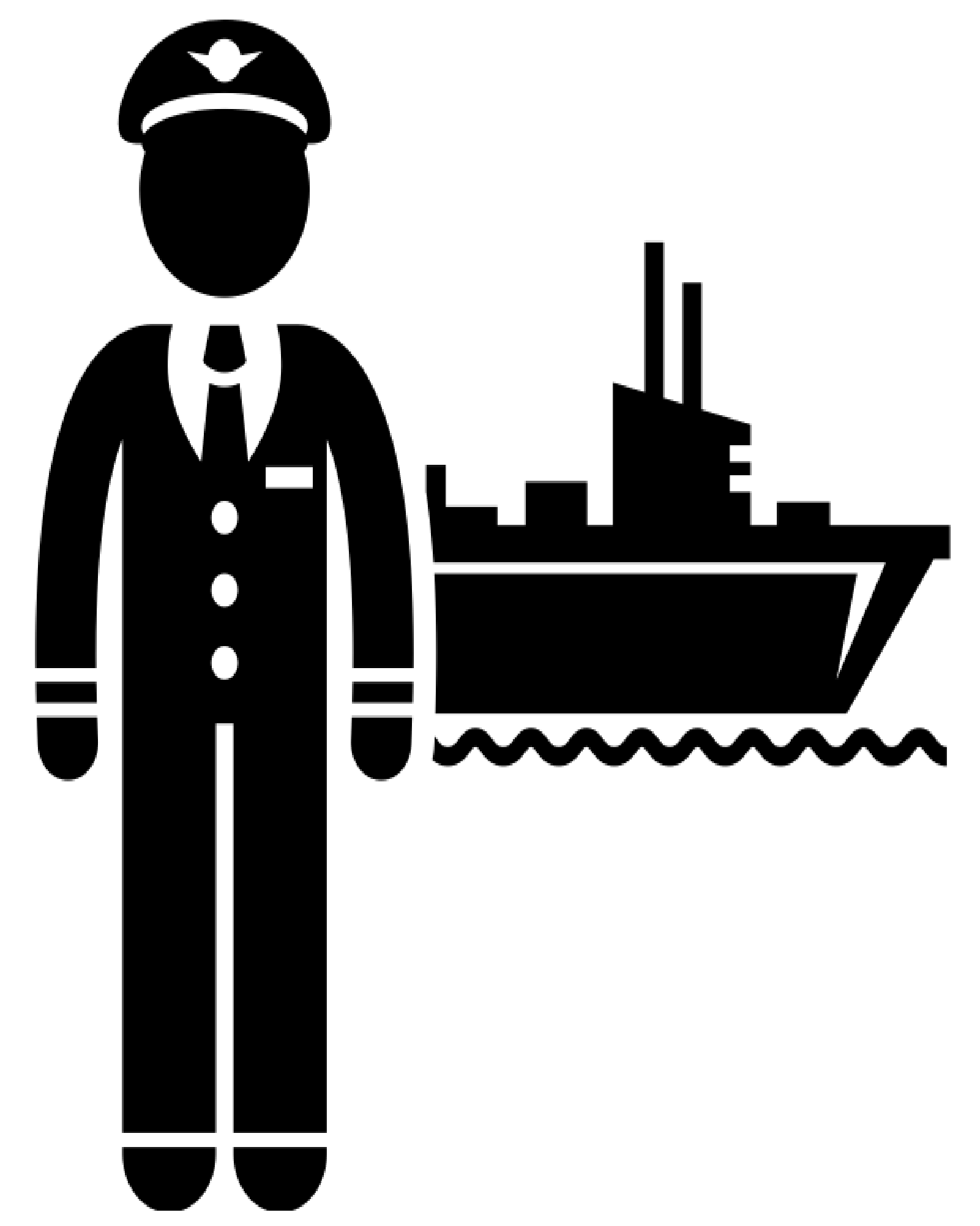


INGOs: International Non- Governmental Organizations

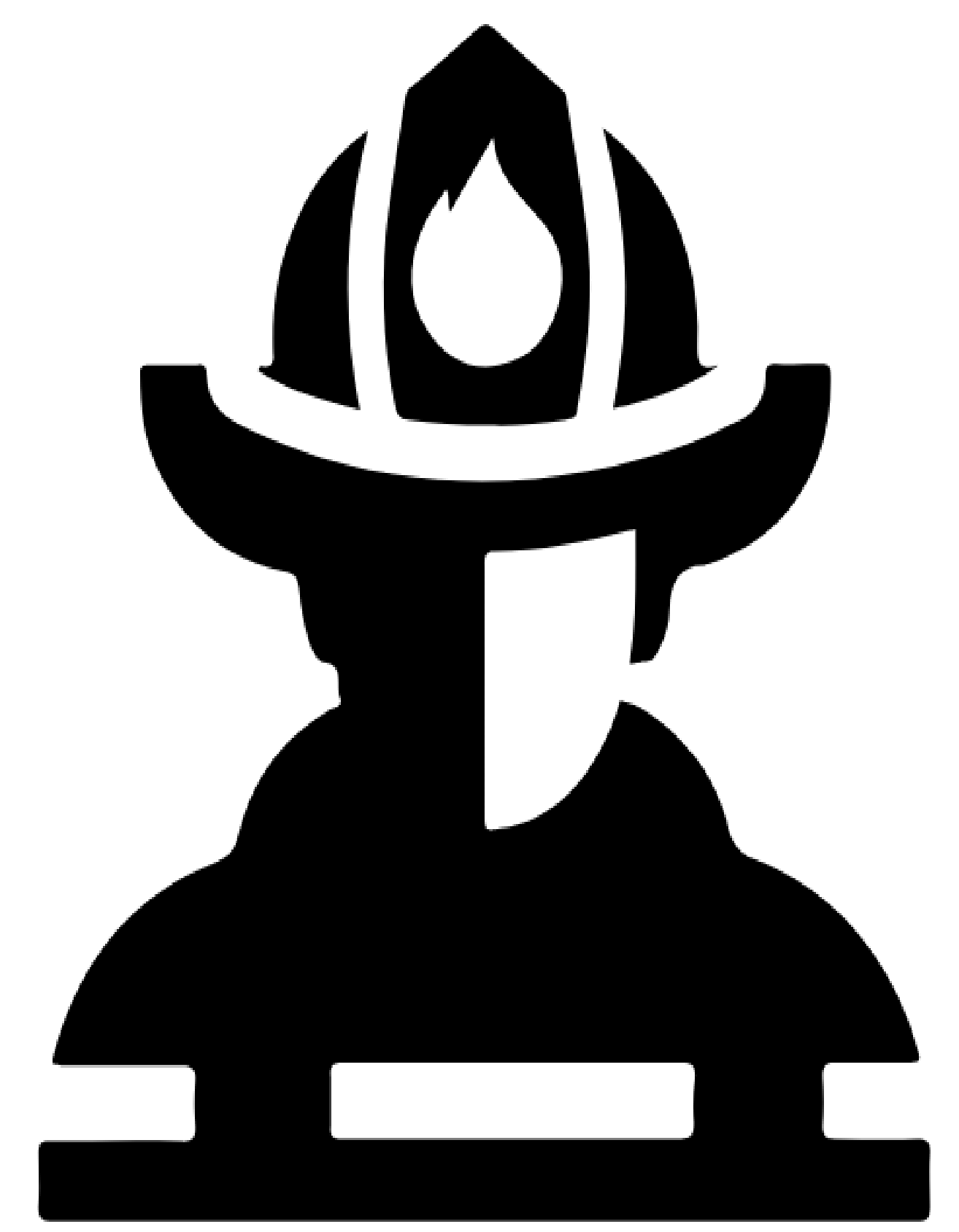
Roles & Responsibilities

- ❖ Resource Mobilization
- ❖ Technical Expertise
- ❖ Capacity Building
- ❖ Advocacy and Policy Influence
- ❖ Data and Early Warning Systems (EWS)
- ❖ Coordination with International Bodies
- ❖ Designing Action Protocols
- ❖ Pre-positioning Resources
- ❖ Implementation Support
- ❖ Monitoring and Evaluation

Roles & Responsibilities



- ❖ **Waterway Safety and Security:** The Marine Police ensure the safety and security of waterways during floods or other water-related disasters, helping with evacuations and rescue operations.
- ❖ **Patrol and Search Operations:** They patrol waterways, especially in flood-prone areas, conducting search and rescue missions and assisting people who may be trapped or stranded by rising water levels.
- ❖ **Evacuation and Rescue Operations:** In the event of flooding, the Marine Police are responsible for evacuating people from waterlogged areas, especially in riverine and coastal regions.
- ❖ **Security of Evacuated Areas:** They also provide security during evacuations, preventing looting or other criminal activities in evacuated zones.
- ❖ **Collaboration with Emergency Services:** The Marine Police work closely with local emergency management agencies, coordinating search and rescue efforts and ensuring safe passage for rescue teams.



Roles & Responsibilities

- ❖ **Emergency Response:** The State Fire Service is one of the first responders during disasters, providing rescue services, flood response, and assistance in areas prone to both fire and floods
- ❖ **Technical Rescue Services:** Fire service personnel are trained in technical rescues, including rescuing people from buildings, flooded areas, and collapsed structures.
- ❖ **Rescue and Evacuation Support:** The Fire Service assists in evacuating people from disaster-prone areas when early warnings indicate imminent risks, especially in urban and semi-urban regions.
- ❖ **Flood Water Management:** They also support flood management efforts by pumping out water from flooded areas and assisting with clearing blocked drainage systems.
- ❖ **Community Training on Fire and Flood Safety:** The fire service conducts public education programs on safety measures during fires, floods, and other emergencies.



Local Emergency Management Committee (LEMC)

ROLES

Community-Level Disaster Preparedness

First Responders

Public Awareness and Education

RESPONSIBILITIES

Activation of Local Anticipatory Actions

Health Infrastructure Preparedness

Public Health Awareness

Psychosocial Support



Adamawa State Ministry of Livestock

ROLES

Coordinate livestock relocation and evacuation to safer areas before flooding occurs.

Disseminate flood early warning information to livestock farmers and pastoral communities. Livestock Protection and Emergency Response

Identify and map safe grazing zones and temporary livestock evacuation sites.

Develop livestock-specific flood contingency plans and promote climate-adaptive livestock management practices

Ensure adequate fodder and water supply in designated safe zones. Stakeholder Engagement and Coordination

Provide veterinary support and emergency feeding programs for displaced livestock.

ROLES

Work with pastoralist associations, local authorities, and herder communities to develop inclusive flood response strategies.

Collaborate with NEMA, ADSEMA, and humanitarian organizations to implement livestock-focused anticipatory action measures.

Assess flood-related livestock losses and develop livelihood recovery programs for affected farmers and herders.

Promote sustainable livestock management practices to enhance resilience to future flooding events

Advocate for policy reforms and funding to support long-term flood adaptation strategies in the livestock sector



Civil Society Organization

Civil Society Organizations CSOs

ROLES

Local Knowledge
Integration

Local Knowledge
Integration

Bridging Gaps

RESPONSIBILITIES

Capacity Building for
Communities

Data Collection and
Local Monitoring

Coordination with
Local Governments

Post-disaster
Recovery Support

ROLES

Conduct displacement tracking assessments (DTM) to monitor flood-induced population movements

Develop early warning alerts for communities at risk of evacuation. Evacuation and Camp Management

Support safe and dignified relocation of flood-affected populations

Improve temporary shelters to prevent overcrowding and disease outbreaks. Livelihoods and Climate Adaptation for Displaced Populations

Implement climate-resilient livelihood programs for displaced communities.

Train communities on disaster risk reduction (DRR) strategies. Coordination with Government and Humanitarian Partners

ROLES

Work closely with national emergency agencies to develop flood response plans.

Provide technical support on human mobility policies related to climate displacement. Collaborative Roles of UN Agencies, INGOs and CSOs

Joint Planning: UN, INGOs and CSOs often collaborate on the design and execution of the anticipatory action protocol, ensuring both global standards and local contexts are considered.

While Government, UN, and INGOs may manage the technical aspects of early warning, CSOs ensure that this information reaches the most vulnerable populations in ways that are easily understood and actionable

Advocacy for Community Inclusion: Both Government, UN, INGOs and CSOs work to ensure that community voices are heard in national and international disaster preparedness forums.

Promotion of localization initiatives by the UN, INGOs and CSOs to ensure sustainability

United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)



- ❖ Lead interagency coordination to ensure timely response to flood risks
- ❖ Advocate for inclusive humanitarian response, ensuring marginalized groups receive adequate support.
- ❖ Facilitate multi-stakeholder engagement with governments, donors, NGOs, and UN agencies. Resource Mobilization
- ❖ Assist governments in policy development to integrate anticipatory action into disaster response plans
- ❖ Advocate for funding through mechanisms like the Central Emergency Response Fund (CERF) for anticipatory action.
- ❖ Ensure timely disbursement of humanitarian assistance for flood preparedness. Policy and Advocacy
- ❖ Bridging Gaps

United Nations Population Fund (UNFPA)



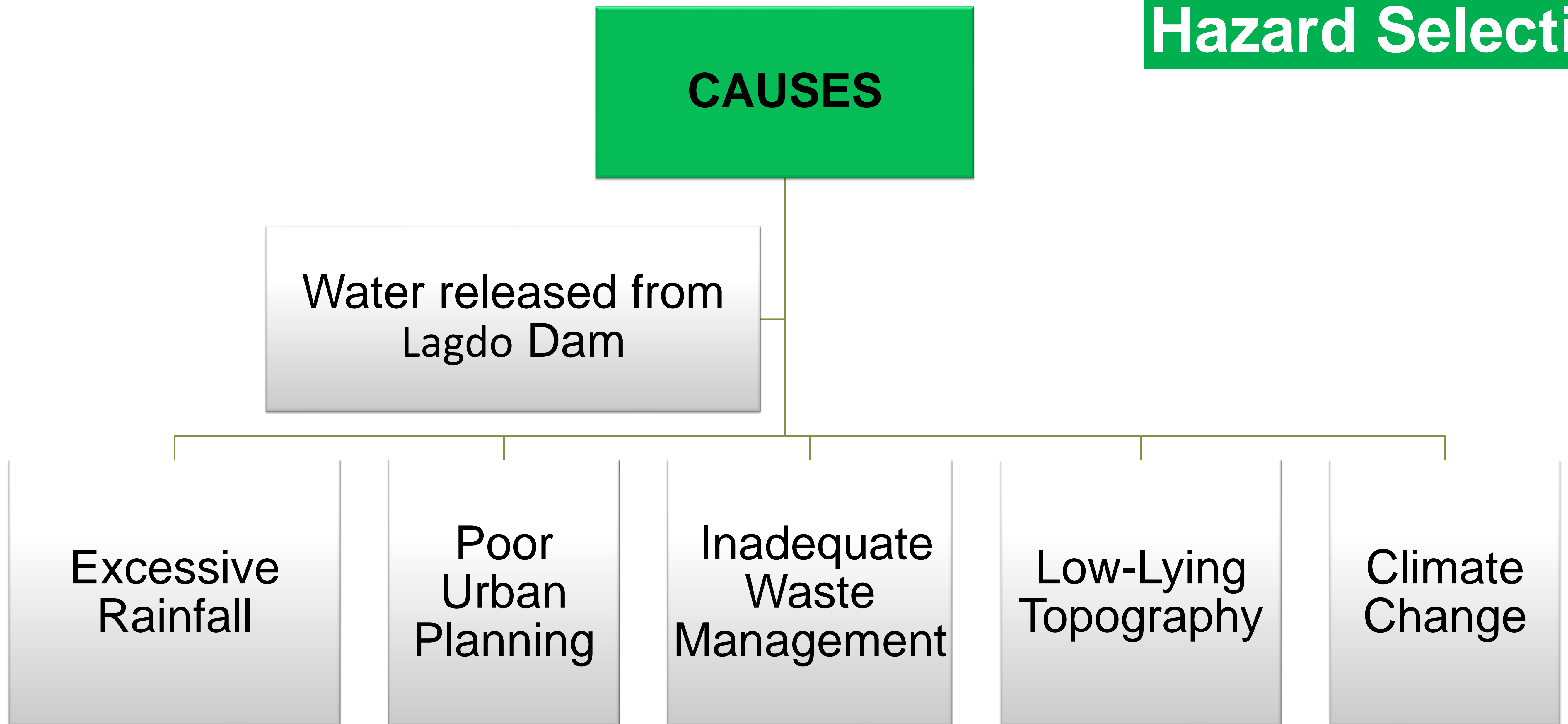
- ❖ Ensure continuity of maternal and reproductive health services in flood-prone areas
- ❖ Preposition and distribute dignity kits for women and girls in affected communities. Gender-Based Violence (GBV) Prevention and Response
- ❖ Establish safe spaces for women and girls at risk during flood displacement.
- ❖ Train first responders and community leaders on GBV risk mitigation. Data Collection and Risk Assessment
- ❖ Conduct gender-sensitive risk analyses to inform flood preparedness planning
- ❖ Ensure data disaggregation to track the impact of floods on women, girls, and other vulnerable populations

- ❖ Identify high-risk displacement camps and preposition emergency supplies.
- ❖ Strengthen flood contingency plans for refugee and internally displaced persons (IDP) settlements.
- ❖ Ensure flood responses prioritize refugees, asylum seekers, and stateless persons.
- ❖ Provide legal aid and documentation support to affected populations.
- ❖ Coordinate flood-resistant shelter construction in high-risk areas.
- ❖ Distribute core relief items (CRIs), including tents, blankets, and hygiene kits.



RISK ANALYSIS

Hazard Selection

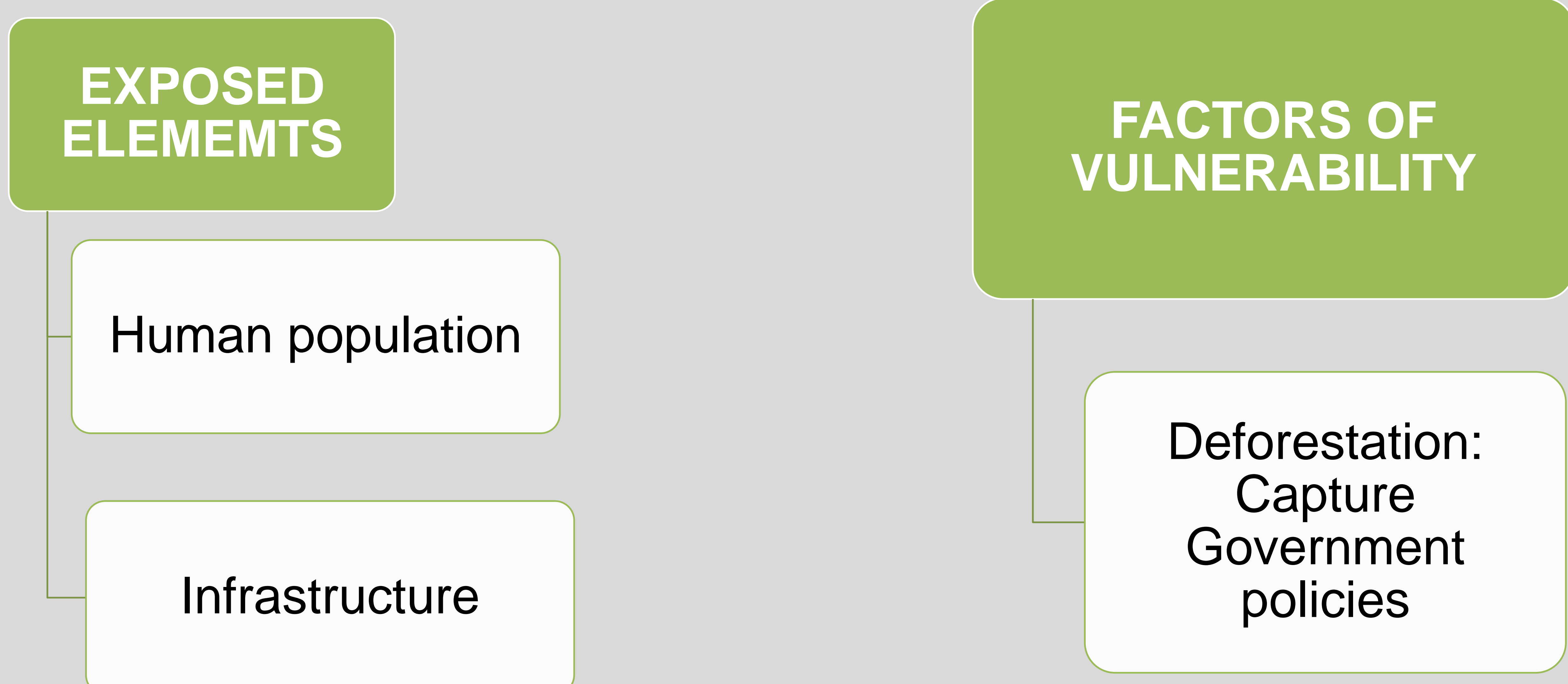
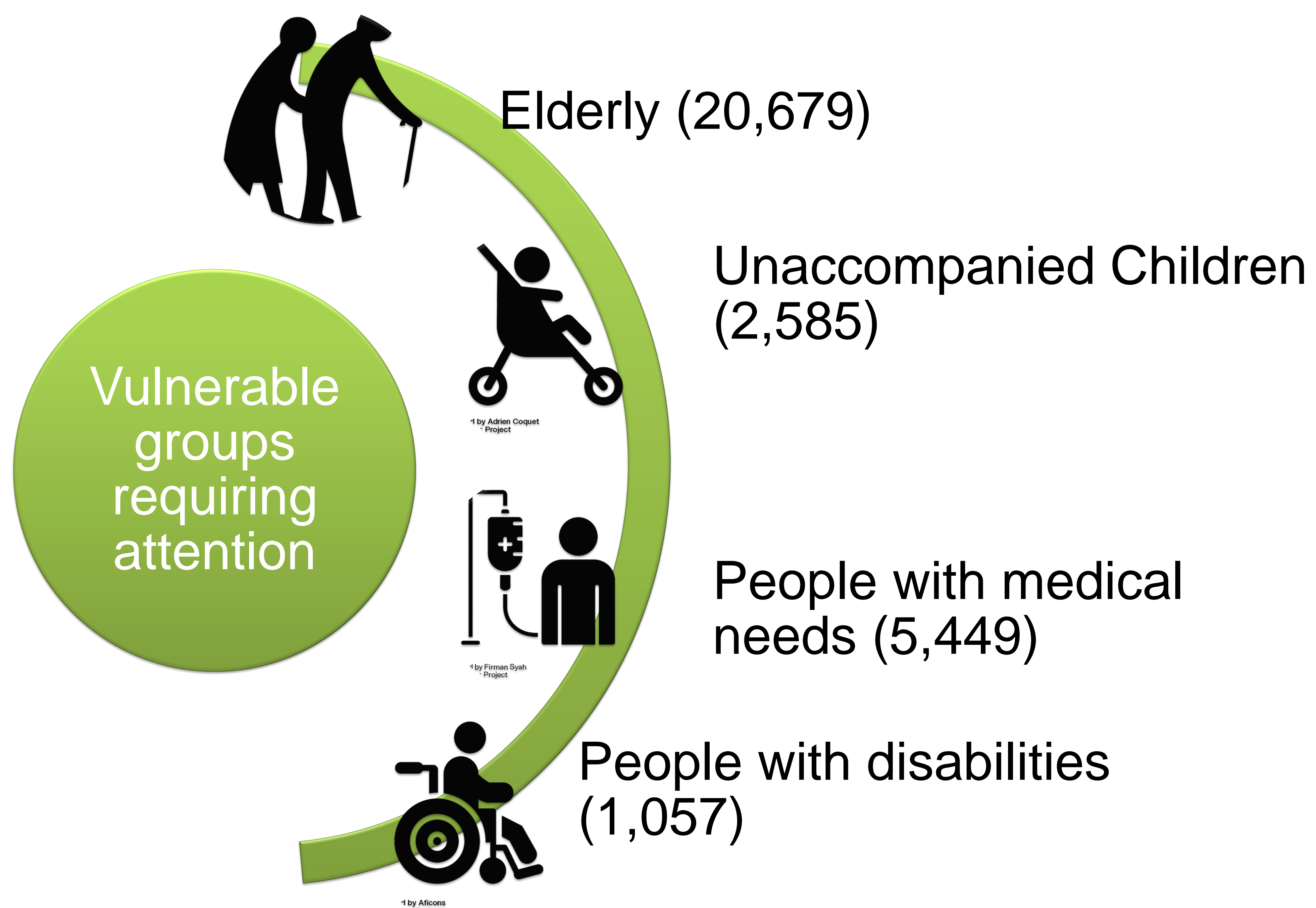


The Aftermath of Lagdo Dam's Water Release in Cameroon

The release of water from the Lagdo Dam in Cameroon has wreaked havoc on multiple sectors, including agriculture, livestock, housing, public health, and education. Reports from ADSEMA in 2023 highlight the dire consequences which spotlight the Anguwanjada culvert and Yebbi bridge have both succumbed to the deluge, collapsing entirely. Moreover, the Wuro-Ngayandi primary health care facility suffered significant damage. Tragically, in Gurin Ward located in Fufore LGA, a boat accident resulted in 7 deaths and 12 survivors. Flooding damaged school infrastructure, disrupting education, and destroyed or partially damaged homes, forcing people into overcrowded conditions. The assessment revealed challenges in sanitation, waste management, and access to safe drinking water. Systemic issues, including poor urban planning and inadequate drainage, contributed to the severity of the flooding. The assessment highlights the need for immediate action to address humanitarian needs and build long-term resilience.

Exposed elements and their vulnerability factors

Flooding poses a significant threat to urban communities, particularly those near floodplains. Understanding exposed elements and vulnerability factors is crucial for effective mitigation strategies. Age-specific statistics show 22% of females are of reproductive age, with 78% between 18-49 years and 22% between 15-17 years. Consultations with affected women and girls revealed concerns about sexual harassment and violence, exacerbated by factors like alcohol abuse, scarcity of resources, and compromised WASH facilities.

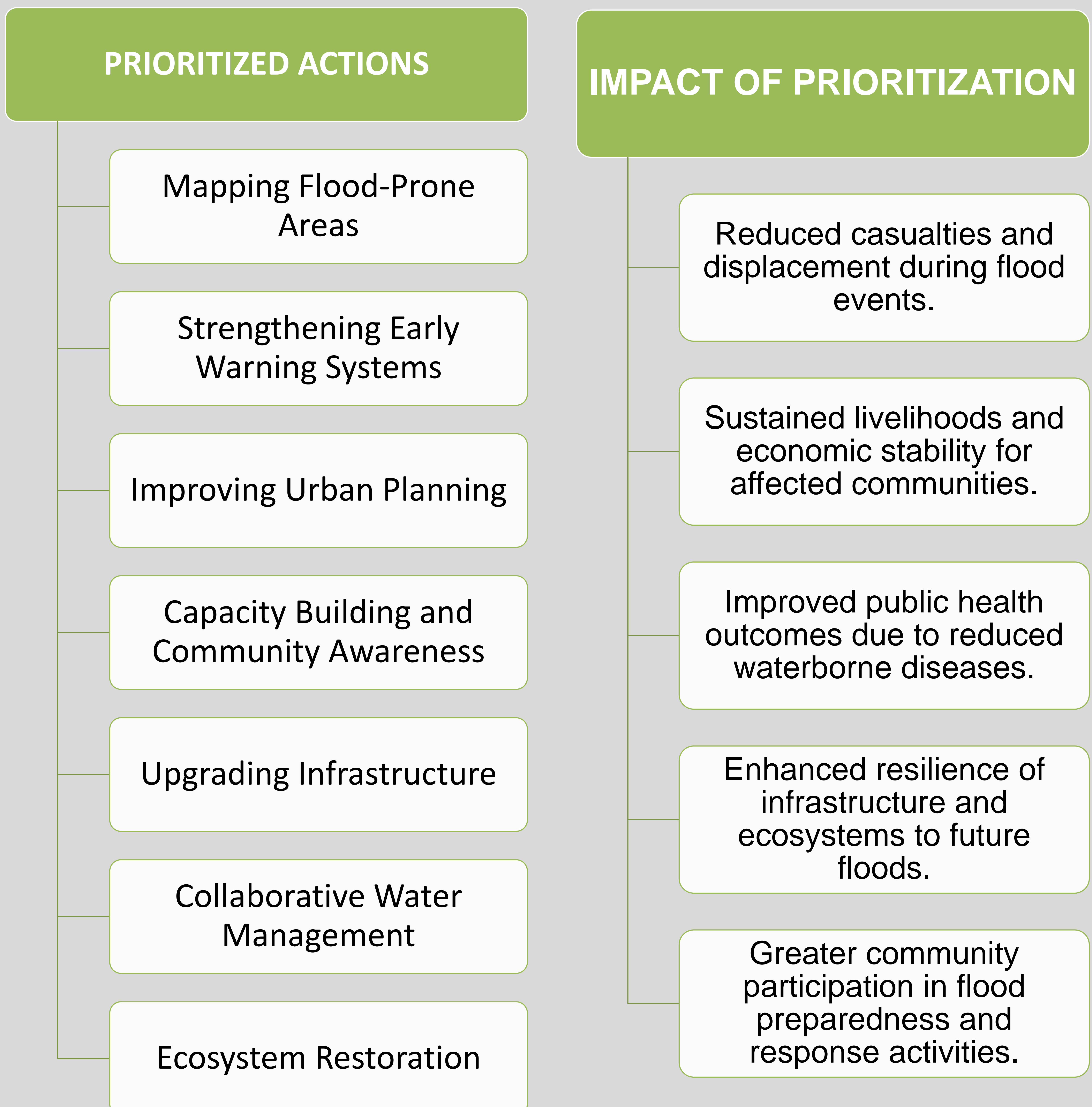


Number of individuals affected by floods in Adamawa State in 2024

LGA	Number of locations	Affected Households	Affected Individuals	Displaced Households	Displaced Individuals	Male Infants (<1 y)	Female Infants (<1 y)
DEMSA	15	5,172	30,862	475	3,288	279	331
FUFORE	25	2,597	11,495	221	1,372	149	257
GIREI	20	6,991	42,767	2,568	18,235	1,071	1,209
GOMBI	10	1,429	8,574	286	1,716	66	92
GUYUK	10	3,127	15,635	0	0	83	133
LAMURDE	20	1,899	11,393	0	0	312	412
MADAGALI	13	6,948	42,785	1,150	6,688	710	826
MAIHA	5	831	4,901	366	1,920	60	98
MICHIKA	4	173	1,110	0	0	20	33
MUBI NORTH	43	7,491	38,132	475	2,131	1,609	1,917
MUBI SOUTH	8	1,108	5,942	157	923	33	30
NUMAN	37	17,625	85,872	3,864	21,209	1,318	1,778
SHELLENG	10	4,143	25,098	1,809	11,055	960	1,670
SONG	5	245	999	0	0	31	48
YOLA NORTH	4	2,339	14,223	5	39	99	120
YOLA SOUTH	8	4,242	22,131	0	0	104	174
Grand Total	237	66,360	361,919	11,376	68,576	6,904	9,128

PRIORITIZED IMPACT AND MITIGATION STRATEGIES

Flooding poses a significant threat to urban communities, particularly those near floodplains. Understanding exposed elements and vulnerability factors is crucial for effective mitigation strategies. Age-specific statistics show 22% of females are of reproductive age, with 78% between 18-49 years and 22% between 15-17 years. Consultations with affected women and girls revealed concerns about sexual harassment and violence, exacerbated by factors like alcohol abuse, scarcity of resources, and compromised WASH facilities.



PRIORITIZED MITIGATION STRATEGIES ON DROUGHT

Mitigation Strategy	Description	Priority Level (High/Medium/Low)
Early Warning Systems & Climate Monitoring	Strengthen meteorological monitoring and community-based drought alerts.	High
Promote climate-smart agriculture, drought-tolerant crops, and irrigation efficiency.	Implement rainwater harvesting, borehole rehabilitation, and water conservation techniques.	High
Food Security & Livelihood Diversification	Support alternative income-generating activities (e.g., agro-processing, poultry farming).	High
Conflict Prevention & Resource Management	Establish resource-sharing frameworks between farmers and pastoralists	Medium
Afforestation & Land Restoration	Promote tree planting, soil conservation, and sustainable land management.	Medium
Health & Nutrition Interventions	Strengthen nutrition programs and improve access to healthcare in affected areas.	Medium
Disaster Preparedness & Policy Support	Develop government-led drought response strategies and integrate drought risk reduction into policies.	Medium

TRIGGER MODEL

The work for the identification of triggers can be very technical and require expert resources. For this process, the Adamawa State Emergency Management Agency and the Nigeria Red Cross will collaborate with technical experts, Hydro-met services, or specialist institutions to get accurate predictions

Trigger statement.

- ❖ When the forecast shows that the water exceeds 600cm, then people will be alerted of the impending flooding using the NIHSA classification of water level – normal (0-600cm, Yellow(600-1000cm) and Red(1000-1400cm). The NIHSA hydrograph will be used to monitor the water level. We expect a lead of 10 days to 1 month.
- ❖ When the forecast shows that rainfall exceeds 50mm of 24hours rainfall, then an alert will be triggered. We expect a lead time of 10 days.
- ❖ An alert will be shared when information is available that the Lagdo Dam is going to be opened.

Forecast Selection

Explanatory note:

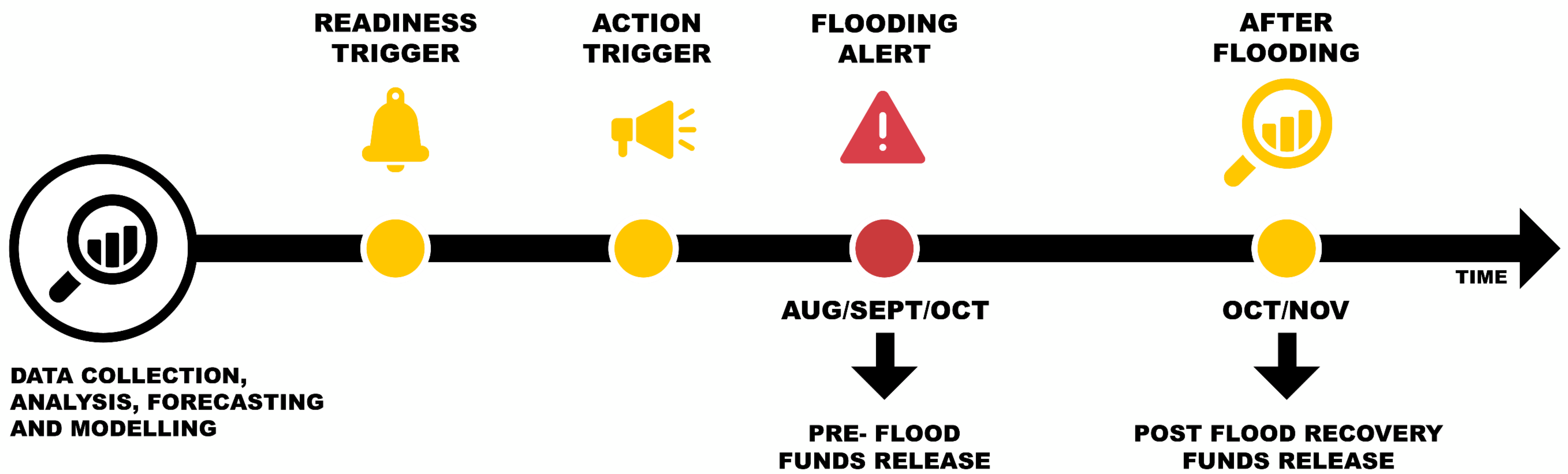
The Hydro-Met agencies will provide information sharing support when a trigger occurs, there must be a certain probability that the extreme event will take place. To safeguard this, it is crucial to select those forecasts that have a certain “skill” level (a certain level of confidence). If observations are used, these can also be included in the table. Note that this information does not need to be calculated by the National Society but can be obtained by working with hydro- meteorological services, research institutions, experts etc.

Required points:

- ❖ State clearly which forecast(s) and observations will be used and why they were chosen. Relevant Government agencies will provide accurate forecasts to be used during the flood and predict damage as a storm approached.
- ❖ Include a table with all available forecasts for your hazard. The table must include the Name of the forecast, Lead time, Source, False Alarm Ratio, and Number of times the forecast has been issued for this hazard in the last 10 years.
- ❖ During the engagement with relevant federal and state agencies, they will provide an inventory of past flooding and a social vulnerability index.

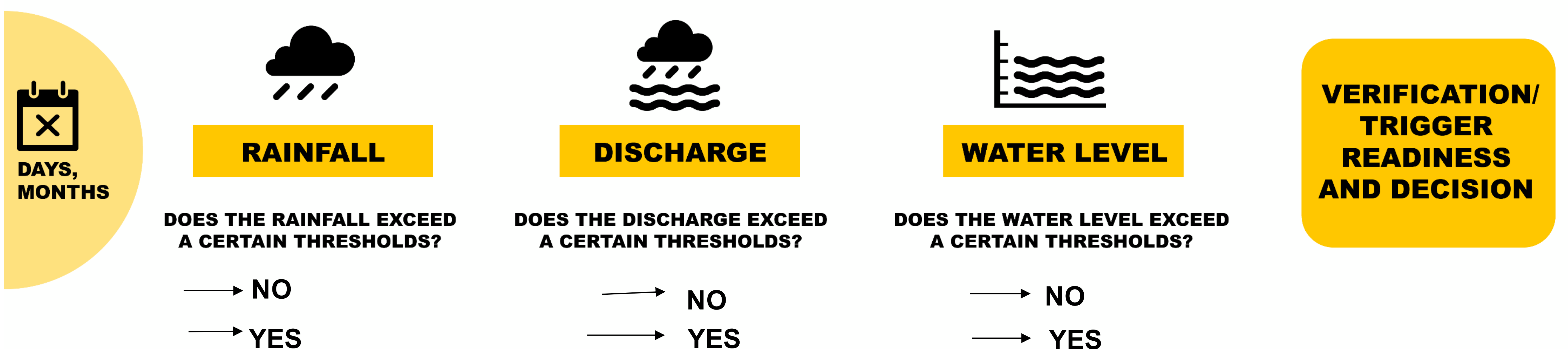
Anticipatory Action Pathway

ANTICIPATORY ACTION PROJECT



Flood Trigger Decision

ANTICIPATORY ACTION PROJECT



Definition and justification of impact level

Flooding is one of the most significant natural hazards affecting Adamawa State, with far-reaching consequences for human lives, livelihoods, infrastructure, and ecosystems. Understanding and categorizing the impact level of floods is essential for designing effective mitigation and response strategies. The impact level of floods in Adamawa State is defined and justified based on the severity of their effects across key dimensions: human, economic, environmental, and social

Definition of Impact Level:

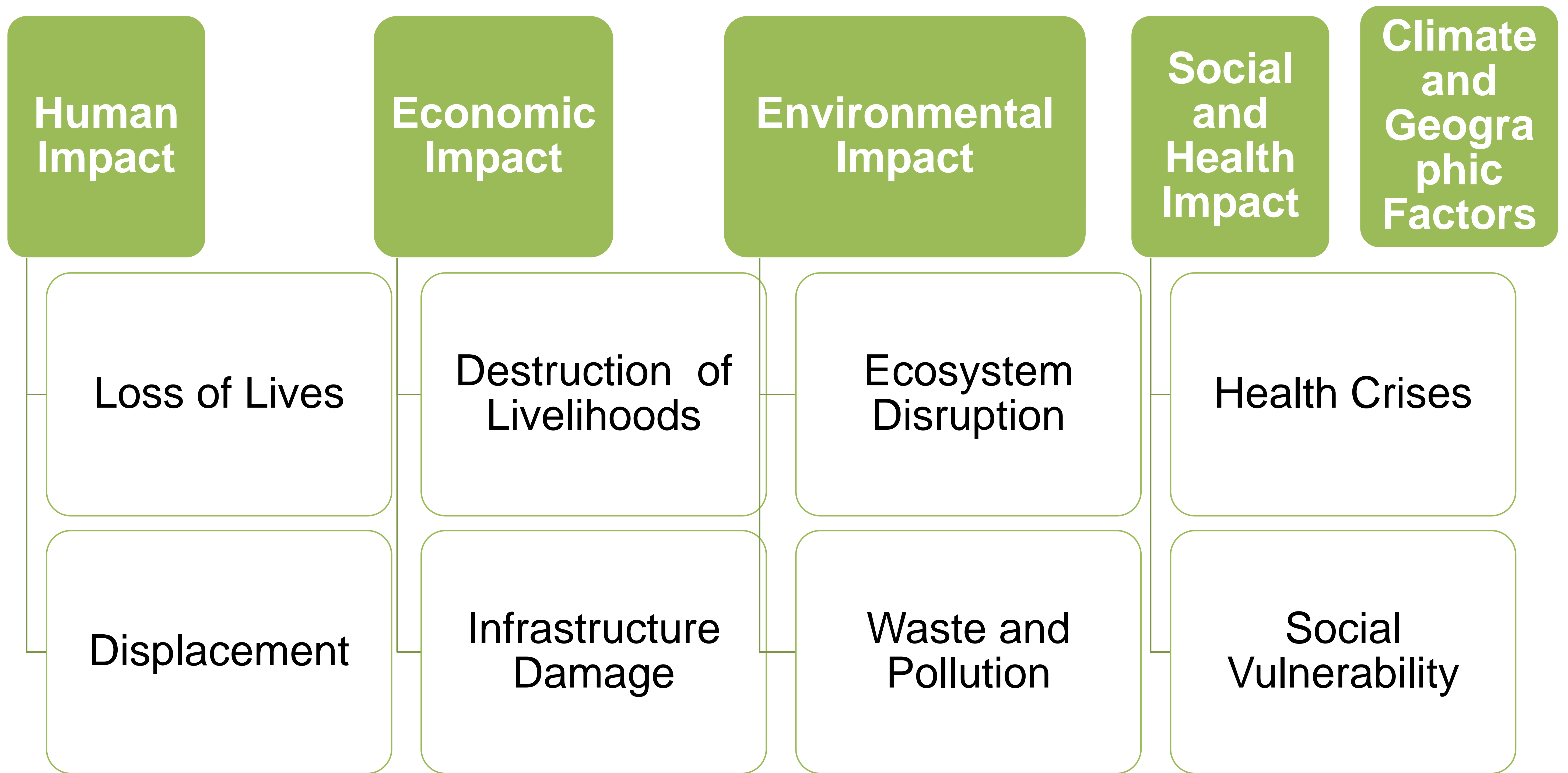
The impact level of floods is classified into three categories—low, moderate, and high—based on:

Geographic Extent: The area affected, ranging from localized flooding to widespread inundation across multiple LGAs.

Intensity: The volume of water, depth, and speed of flood waters.

Duration: The time floodwaters persist, from hours to weeks, affecting recovery efforts. **Severity of Consequences:** The scale of damage to human lives, property, infrastructure, and the environment

Justification of High Impact Level for Adamawa State





EVIDENCE BASE

Adamawa State in northeastern Nigeria is one of the regions significantly affected by recurrent flooding. The evidence base for flooding in the state stems from historical records, research studies, and assessments conducted by governmental and non-governmental organizations. This section provides an overview of documented flooding events, their impacts, and contributing factors.

Historical Records of Flooding in Adamawa State



2012

The release of excess water from the Lagdo Dam in Cameroon combined with heavy rainfall led to one of the worst flooding incidents in the state's history. Over 200,000 people were displaced, with extensive damage to infrastructure, homes, and farmlands



2019

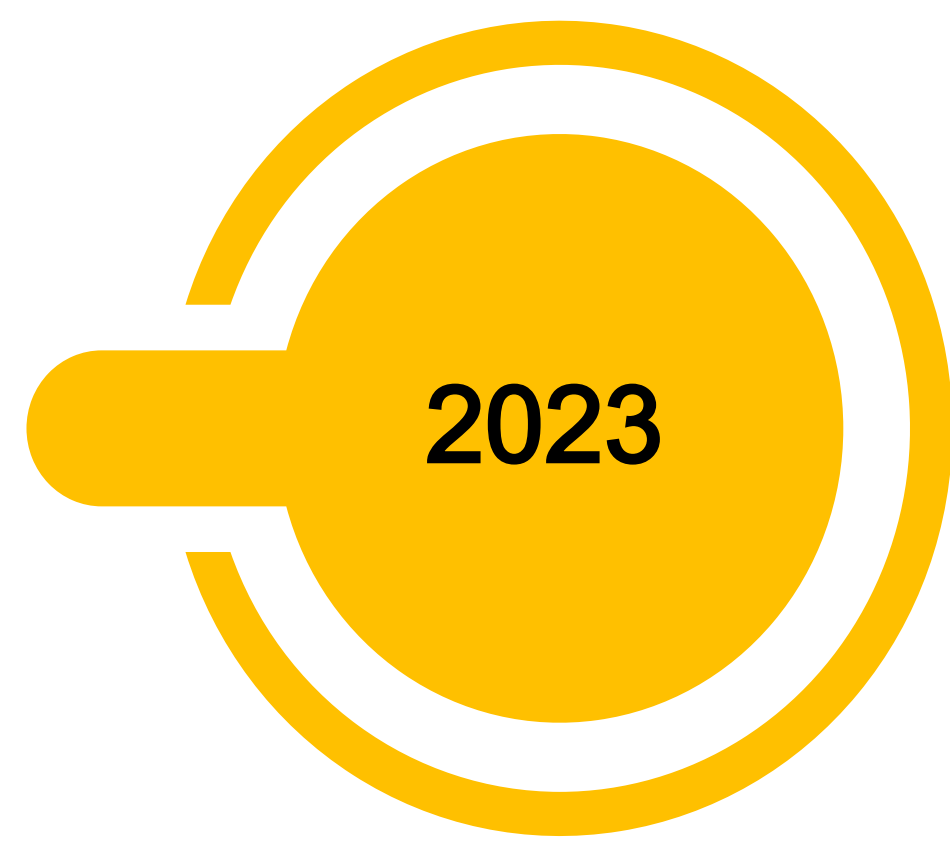
Heavy rainfall and another release of water from the Lagdo Dam caused severe flooding in LGAs such as Numan, Demsa, and Yola South. This event displaced 12,092 people, destroyed 365 water and sanitation facilities, and submerged thousands of hectares of farmland.



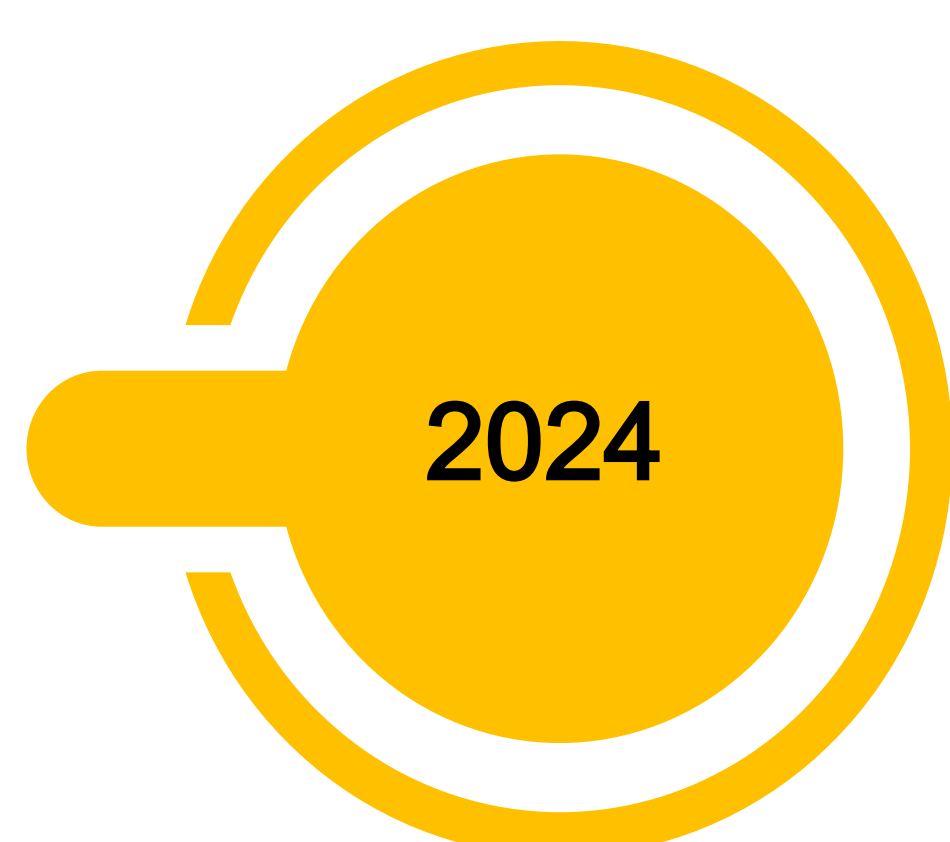
2022

Prolonged rainfall triggered flooding in various LGAs, affecting over 50,000 people. Roads, schools, markets, and health facilities were significantly impacted, exacerbating challenges in accessing essential services.

Historical Records of Flooding in Adamawa State



33 individuals reported as deceased, 22 critically injured, and a staggering 51,043 individuals forcibly displaced. The calamity has affected 214 communities spanning 12 Local Government Areas (LGAs) within Adamawa State, rendering it one of the most severely impacted regions. The affected individuals remain perilously exposed to the ongoing flooding, with approximately 193 square kilometers (19,275 Hectare) of land submerged across the state.



In the 16 local government areas (LGAs) of Adamawa State that were assessed, the joint assessment team identified 361,919 individuals in 66,360 households affected by the floods. These individuals included IDPs who were displaced by the floods and residents who were impacted by the floods but remained in their communities. The affected population included 68,576 displaced individuals in 11,376 households.

Contributing Factors to Flooding

Natural Causes

Seasonal Rainfall Patterns

Topography

Human-Induced Factors

Lagdo Dam Releases

Urbanization

Poor Waste Management

Deforestation

Socioeconomic and Environmental Impacts of Flooding

Human Impact

Loss of Lives

Displacement

Economic Impact

Agricultural Losses

Infrastructure Damage

Health Impact

Disease Outbreaks

Environmental Impact

Soil Degradation

Ecosystem Disruption

Research and Assessments National and Local Reports

- ❖ **Nigeria Hydrological Services Agency (NIHSA):** Annual flood outlooks identify Adamawa as a high-risk state due to its proximity to the River Benue and impact of Lagdo Dam.
- ❖ **Adamawa State Emergency Management Agency (ADSEMA):** Reports detail the scale of displacement, destruction, and humanitarian needs following major floods.
- ❖ The result of IRC's rapid assessments showed that participants wish to receive local and relevant communications such as forecasting, early warning information and general disaster risk reduction advice, and climate-resilient agricultural advice. This can be achieved by providing timely quality early warning information and advisory notes in the communities.

Academic Studies

- ❖ **Ikusemoran et al. (2013):** Highlighted the vulnerabilities of Adamawa State to flooding, emphasizing the need for improved urban planning and disaster preparedness.(Check google with same statement for update)
- ❖ **IPCC (2018):** Discussed the increased frequency and intensity of extreme weather events, including flooding, due to climate change.
- ❖ International Assessments
- ❖ **UNICEF (2021):** Identified Adamawa as a priority state for flood response due to its high number of affected children and vulnerable populations.
- ❖ **World Meteorological Organization (WMO):** Documented the rising trend of weather- related disasters, including flooding in Nigeria, linked to climate change.

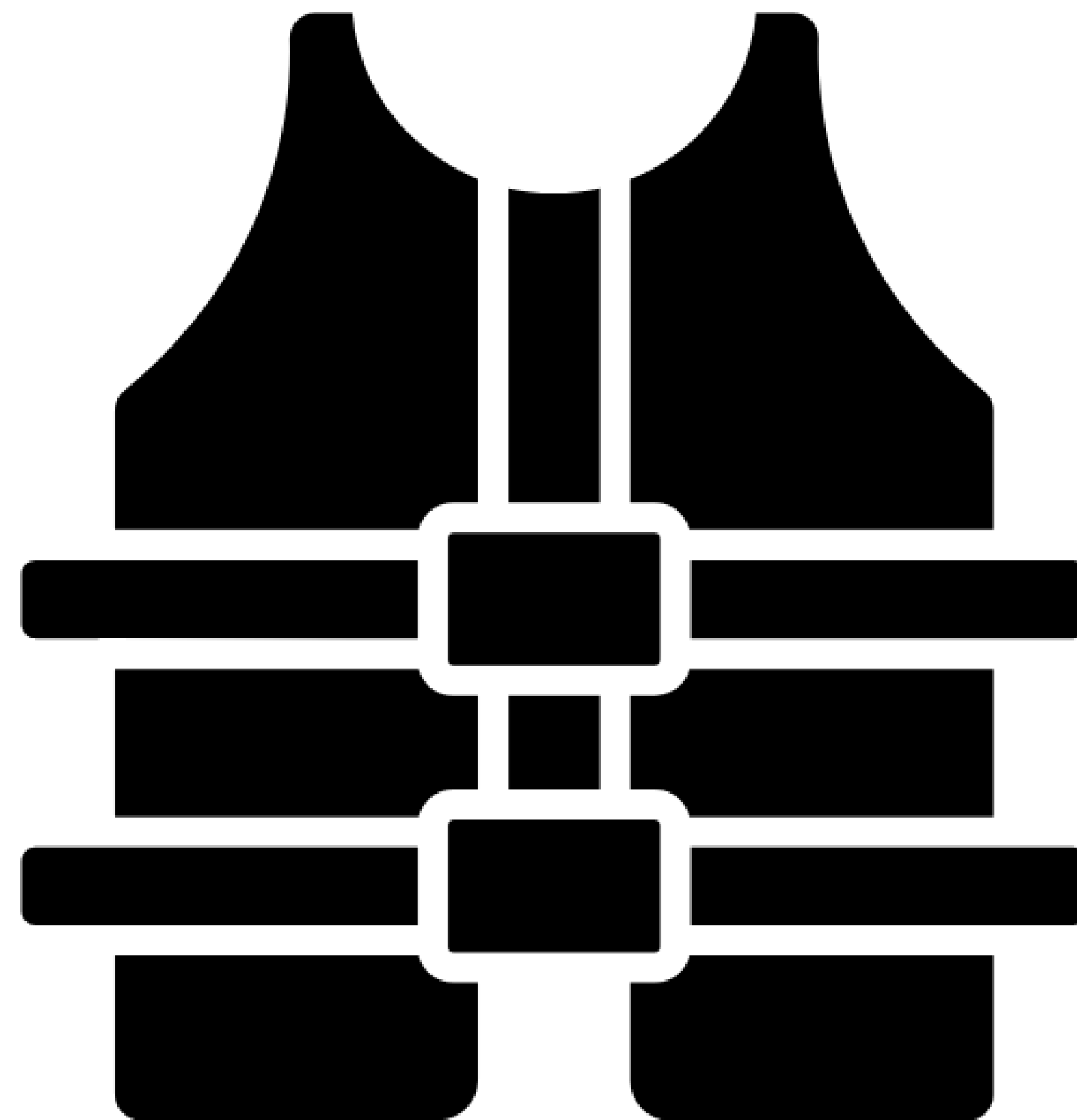
Early Warning Systems



Implementing an early warning system, which includes timely and accurate flood forecasting, will enable authorities to issue early alerts to at-risk communities. Academic research has shown that early warning systems significantly reduce flood-related fatalities and damage by allowing people to evacuate or take appropriate preventive measures in advance. For instance, a study by Liu et al. (2018) found that early warning systems reduced flood fatalities by 18-42%. IRC will set up committees at the local level that will collaborate with the state agencies and oversee the triggering of the EWS.

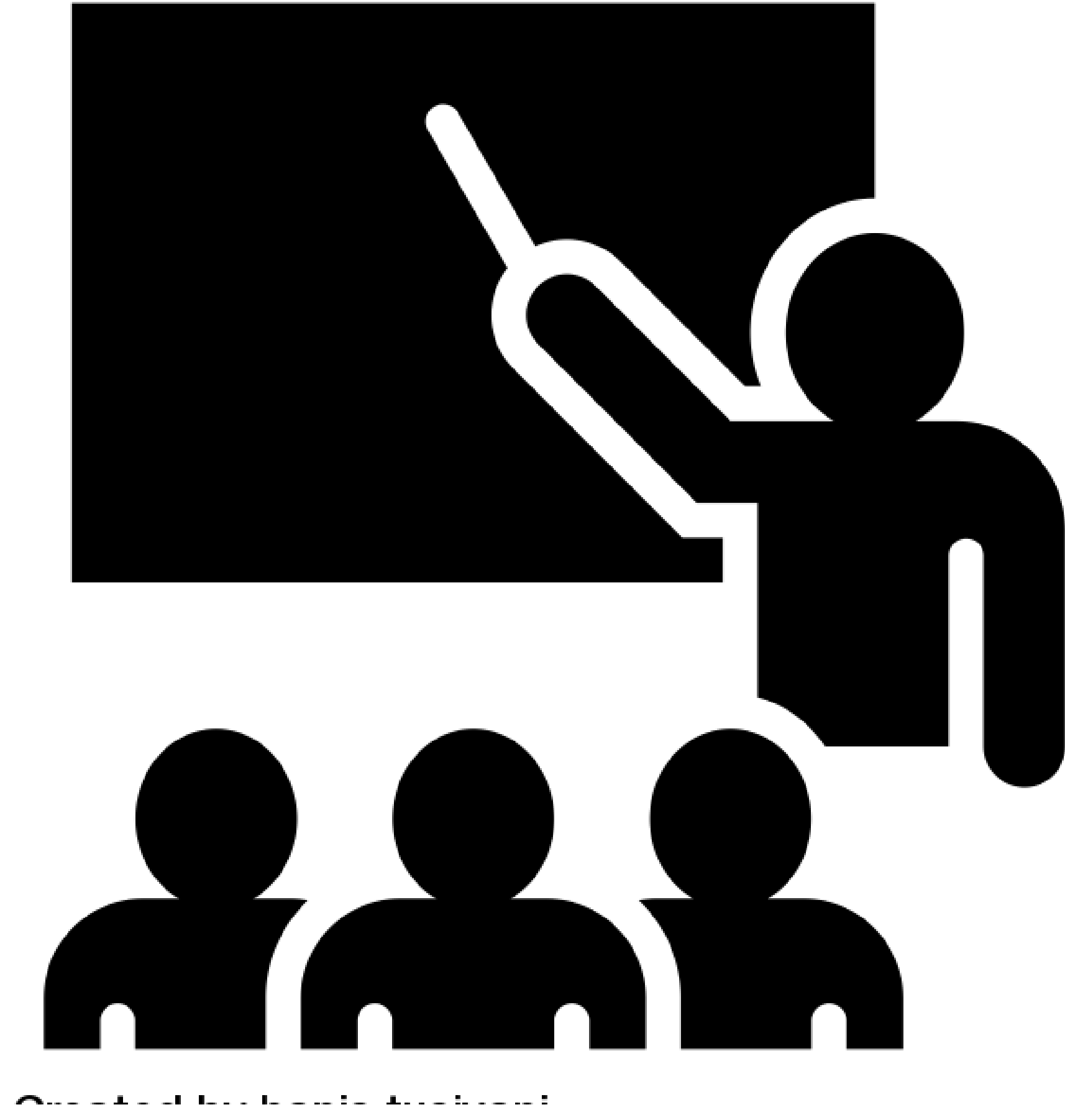
- ❖ World Meteorological Organization (WMO). (2021). Weather-Related Disasters Report.
- ❖ Intergovernmental Panel on Climate Change (IPCC). (2018). Special Report on Extreme Weather
- ❖ International Rescue Committee, 2023.

Flood Management Techniques



Emphasizing natural flood management techniques, such as afforestation, wetland restoration, and sustainable drainage systems, can enhance the environment's ability to absorb excess water and reduce flood risks. Empirical studies have shown that these techniques can help mitigate flooding impacts. For example, a study by Mackay et al. (2020) found that the implementation of natural flood management measures reduced peak flood flows by approximately 20% during storm events, showcasing their potential to mitigate flooding impacts sustainably and cost-effectively. Similarly, research by Dadson et al. (2017) highlights that restored wetlands can increase water storage capacity, delaying and reducing the downstream impact of floodwater. In Adamawa State, where flooding exacerbates vulnerabilities and disrupts livelihoods, integrating these techniques into community-level disaster preparedness plans can significantly reduce risks. ADSEMA, NEMA, Nigeria Red Cross, Ministry of Environment with support from Partners will contribute to this effort by empowering communities with essential tools and resources.

Community-Based Preparedness and Education



Educating local communities is crucial for empowering individuals in flood-prone areas. Research shows prepared communities are more resilient, reducing damage and harm by up to 30%. ADSEMA will collaborate with governments and communities to create awareness and education programs, empowering individuals to take proactive measures and recover quickly from flood events.

- ❖ **Media Campaigns:** Leveraging radio, television, and social media to disseminate flood preparedness messages, including evacuation plans, early warning systems, and practical tips to minimize flood damage.
- ❖ **Community Workshops:** Hosting interactive workshops that educate participants on flood risks, mitigation strategies, and emergency response procedures, with a focus on vulnerable populations such as women, children, and persons with disabilities.
- ❖ **Collaborative Efforts:** Partnering with relevant state agencies, such as NEMA (National Emergency Management Agency), UN Agencies, CSOs, INGOs, to enhance the reach and impact of awareness programs

Development of Crises and Emergency Risk Communication Plan



Understanding crisis patterns helps communicators respond effectively. Every emergency evolves in phases, requiring adaptive communication. Effective emergency communication involves verifying situations, following protocols, and identifying resource needs. A disaster communication plan outlines roles and responsibilities, establishing processes and protocols to ensure a coordinated response and minimize confusion.



Promotion of People's Participation

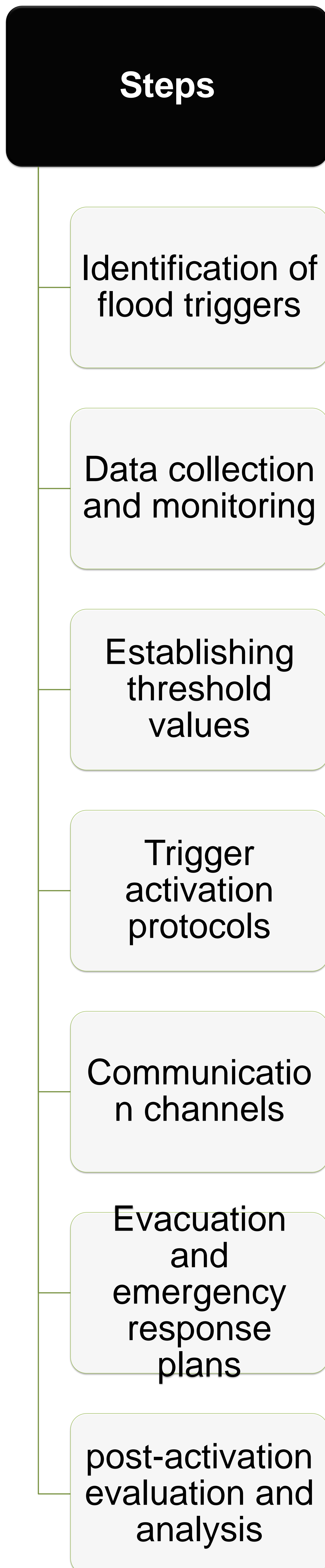


Government agencies such as ADSEMA and NEMA and organizations can publish viewpoints of people from at-risk communities on different approaches to reduce their vulnerabilities and risks and how to facilitate their participation in government and NGO programs. Community participation encourages members of the community to be more engaged in the decision-making processes that have an impact on their local community.

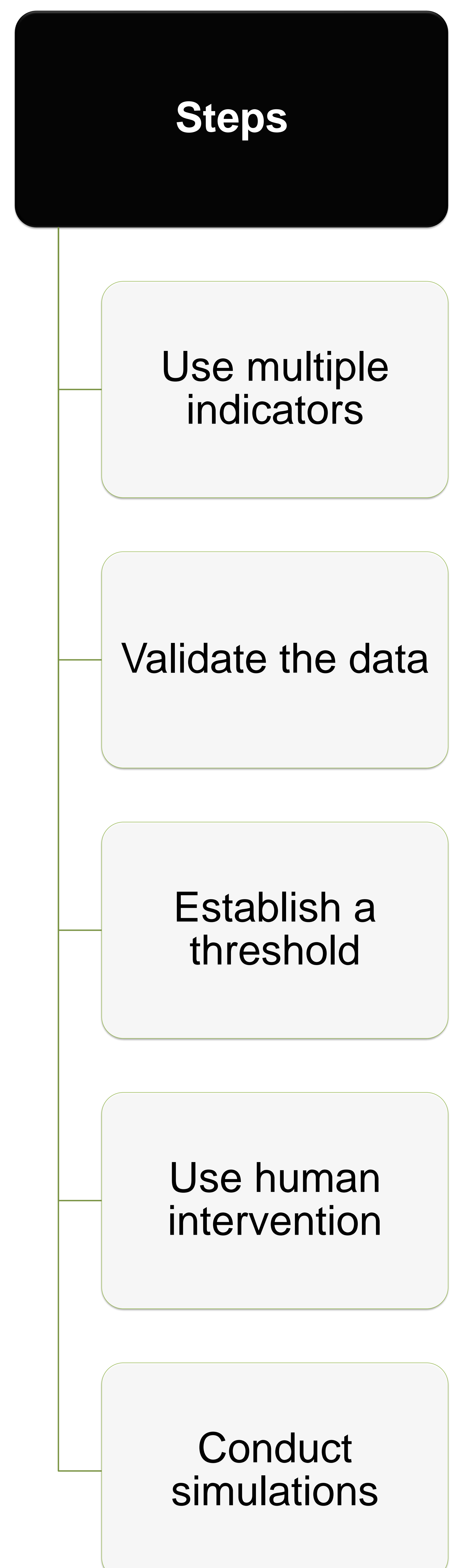
It also serves to advance community members' understanding of how government and NGOs work and confer upon them the capacity to access governmental and NGO decision-making processes. By drawing on the evidence from academic research, empirical studies, and expert opinions, the selected flood trigger actions can be tailored to reduce the expected impacts of floods, leading to more effective disaster risk management and resilience-building efforts.

AAP ACTIVATION PROCESS

Trigger activation system



Stop Mechanism



MONITORING, EVALUATION, ACCOUNTABILITY AND LEARNING (MEAL)

Effective Monitoring, Evaluation, Accountability, and Learning (MEAL) is crucial for ensuring that anticipatory actions and post-flood disaster responses are impactful, efficient, and aligned with community needs. Below is a comprehensive MEAL framework tailored for flood disaster response in Adamawa State

Monitoring

Objective:

To systematically collect data on the implementation of anticipatory actions and post-disaster responses to track progress and ensure alignment with planned activities.

Key Activities:

- ❖ Establish real-time data collection systems to monitor early warning indicators (e.g., rainfall levels, Lagdo Dam water releases).
- ❖ Conduct regular field visits to assess the implementation of preparedness activities, such as drainage clearing, community training, and pre-positioning of supplies.
- ❖ Track the distribution of resources, such as relief materials and equipment, to affected communities.
- ❖ Enhancing stakeholders' capacity

Indicators:

- ❖ The percentage of at-risk communities trained on flood preparedness.
- ❖ Number of drainage systems cleared and functional before the flood.
- ❖ Quantity and type of resources distributed to flood-affected communities.

Example:

A study by Tall et al. (2018) highlights the importance of monitoring early warning systems to ensure timely action during disasters.

Evaluation

Objective:

To assess the relevance, efficiency, effectiveness, impact, and sustainability of anticipatory and post-flood actions.

Key Activities:

- ❖ Conduct baseline, midline, and endline evaluations to measure the success of interventions.
- ❖ Use mixed methods (quantitative and qualitative) to assess the impact of actions on reducing flood risks and losses.
- ❖ Evaluate community feedback to determine the relevance of implemented strategies.

Indicators:

- ❖ Reduction in loss of lives and property compared to previous flood events.
- ❖ The percentage of community members reporting increased preparedness and resilience.
- ❖ Improvement in the functionality of critical infrastructure (e.g., roads, schools, health facilities) post-intervention.

Example:

Evaluations conducted after the 2012 floods in Nigeria revealed gaps in resource allocation and community engagement, emphasizing the need for more inclusive planning (Adelekan, 2012).

Objective:

To ensure transparency and responsiveness to the needs and priorities of flood- affected communities.

Key Activities:

- ❖ Establish feedback and complaint mechanisms, such as toll-free hotlines and suggestion boxes, for affected communities.
- ❖ Facilitate regular town hall meetings to update communities on ongoing actions and collect their input.
- ❖ Develop and disseminate progress reports in accessible formats for stakeholders.
- ❖ Indicators:
- ❖ Number of complaints received and resolved within a specified timeframe.
- ❖ Percentage of community members satisfied with the transparency of interventions.
- ❖ Frequency of community engagement sessions conducted.

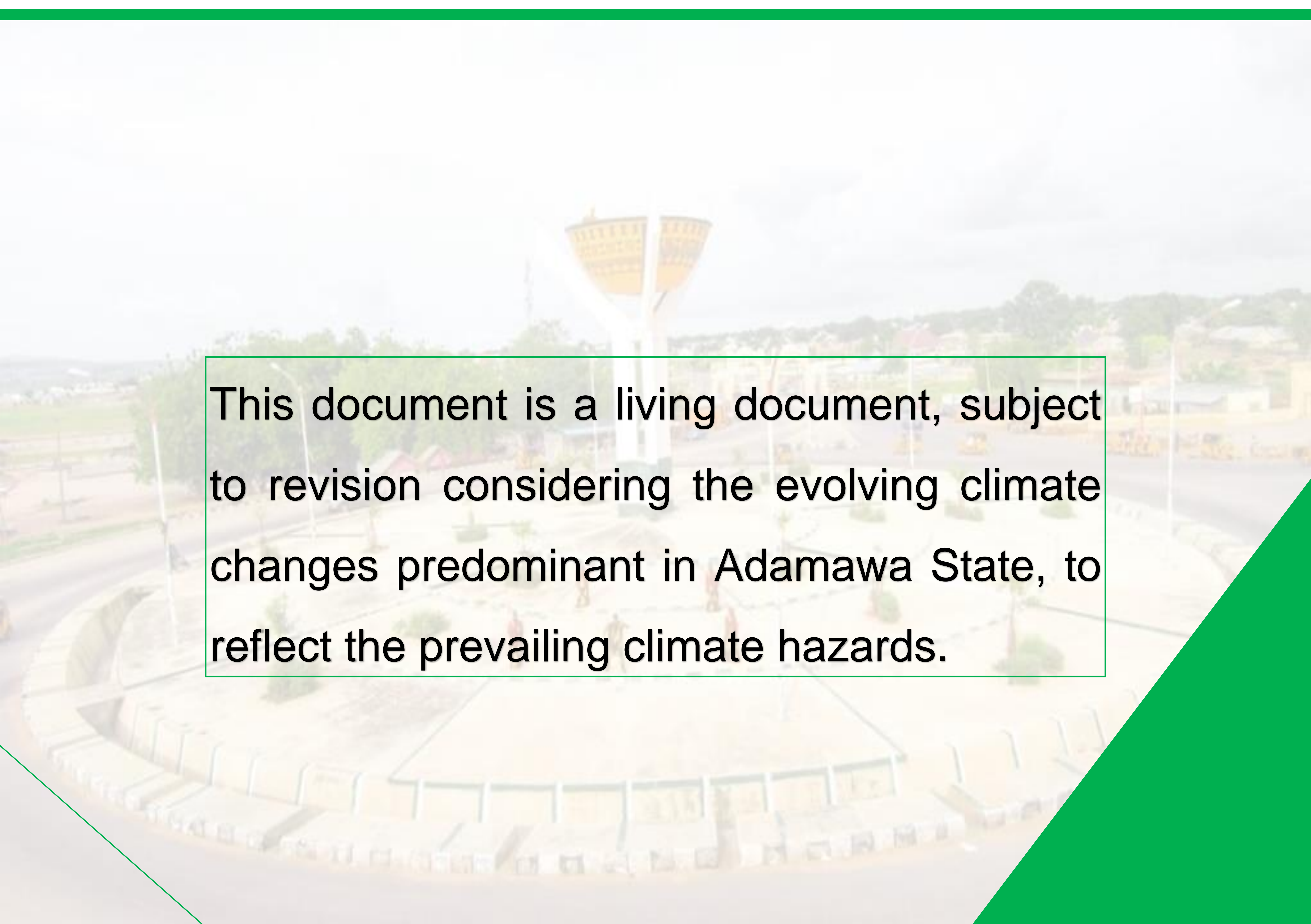
Example:

The Sendai Framework for Disaster Risk Reduction (2015–2030) emphasizes the importance of engaging communities in disaster planning and response to enhance accountability and effectiveness.

MEAL Framework Integration

To ensure the MEAL framework is effective, it should:

- ❖ Be integrated into all stages of the anticipatory action and post-flood disaster response cycle.
- ❖ Involve all stakeholders, including government agencies (e.g., ADSEMA, NEMA), UN, NGOs, and affected communities.
- ❖ Use technology, such as GIS mapping and mobile data collection tools, to enhance monitoring and evaluation.



This document is a living document, subject to revision considering the evolving climate changes predominant in Adamawa State, to reflect the prevailing climate hazards.

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ADAMAWA STATE EMERGENCY MANAGEMENT AGENCY



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