



Undertake cross-border analysis of the gendered impacts of climate-induced hazards in Malawi, Mozambique, and Zimbabwe

Assessment Country: Mozambique

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Contents

1.0	Introduction	5
1.1	Assessment Methodology.....	5
1.2	Multi-hazard Background of the study area	5
1.3	Historical background of the disaster impacts;.....	7
2.0	Key DRR Frameworks and Approach.....	9
2.1	What are the key policies/strategies frameworks in DRR in assessment countries? (Gender responsive DRR policy and strategies – challenges and recommendations	9
2.2	With regards to Early Warning, Prevention and preparedness information, how is this accessed at community level	13
2.3	What are the existing DRM coordination structures at (challenges and recommendations) 22	
2.4	How is the UN/government supporting collection and access to SADD at: (challenges and recommendations).....	30
3.0	Engagement with Stakeholders.....	35
3.1	The main stakeholders in the DRR sector in order of priority.....	35
3.2	UN/Government structures engaging women and women-led organizations in DRR and resilience initiatives.....	41
3.3	Key gaps in gender integration within DRR and resilience-building initiatives	42
4.0	Differential Impacts of Climate-Induced Disasters [Cyclones, Floods, Drought].....	45
4.1	How have climate-induced disasters impacted women and men differently?	45
4.2	What are the different coping mechanisms adopted by women and men to climate-induced disasters? ; (challenges and recommendations).....	50
4.3	key barriers to effective women’s engagement in DRR and resilience building	52
4.4	Recommend strengthening resilience among vulnerable women and girls to climate-induced disasters	54
5.0	Chapter: Focus Group Interview with the community.....	56
6.0	Chapter: Key Findings/ Recommendations for the Women's Resilience to Disaster (WRD) ...	69
6.1	Gendered DRR Frameworks and Approach	70
6.2	Development and deployment of Early warning for all :	72
6.3	Improved Methodology, ICT tools, and stakeholder coordination for Development SADD : 75	
6.4	Improving UN , Government, and Multi-Stakeholder Coordination Mechanisms in DRM and DRR Functionaries.....	77
6.5	Community-level risk-informed gender development approach	77
6.6	SGBV tracking network and dissemination system (Proposed)	78

Acronym :

ARA	Administração Regional de Águas
BCPR	Bureau for Crisis Prevention and Recovery
BRAMS	Brazilian developments on the Regional Atmospheric Modelling System ??
CAD	Computer Aided Design
CAD	Computer Aided Design
CCGC	Conselho Coordenador de Gestão de Calamidades
CCPCCN	Conselho Coordenador de Prevenção e Combate às Calamidades Naturais
CENACARTA	National Centre of Cartography and Remote Sensing
CERUM	Centro de Recursos de Uso Múltiplo
CHS	Community and Household Surveillance
CLGRC	Local Disaster Risk Management Committee (Cômité Local de Gestão do Risco das Calamidades)
COE	Centro Operativo de Emergência
CSA	Country Situation Analysis
CTGC	Conselho Técnico de Gestão de Calamidades
CTGD	Technical Council for Disaster Management (Conselho Técnico de Gestão de Calamidades)
CVM	Mozambique Red Cross
DARIDAS	Division for the development of arid and semi-arid zones (Divisão De Desenvolvimento das zonas áridas e semi-áridas)
DEM	Digital Elevation Model
DINA	National Directorate of Agriculture
DINAPOT	National Directorate of Territorial Planning
DINATUR	National Directorate of Tourism
DMF	Disaster Management Fund (Fundo de Gestão de Calamidades)
DNA	National Directorate of Water
DNG	National Directorate of Geological Survey
DNGRH	Directorate for Water Resources Management (<i>Direção Nacional de Gestão de Recursos Hídricos</i>)
DPCCN	Departamento de Prevenção e Combate às Calamidades Naturais
DPCCN	Departamento de Prevenção e Combate às Calamidades Naturais
DRA	Disaster Risk Assessment
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECMWF	European Centre for Medium-Range Weather Forecasts
ECMWF	European Centre for Medium-Range Weather Forecasts
EDM	Mozambique Electricity Company
EIA	Environmental impact assessment
FAO	Food and Agriculture Organization of the United Nations
FEWS NET	Famine Early Warning Systems Network
FEWS NET	Famine Early Warning Systems Network
FIVIMS	Food Insecurity and Vulnerability Information Mapping System
GACOR	Reconstruction Coordination Office
GeoSFM	Geospatial Stream Flow Model
GeoSFM	Geospatial Stream Flow Model
GFS	Global Forecast System

GIS	Geographic Information Systems
GPS	Global Positioning System
GRIP	Global Risk identification Programme
GRIP	Global Risk identification Programme
GTZ	German Technical Cooperation, now German Agency for International Cooperation
HFA	Hyogo Framework for Action
IG	Insufficient Growth
IIAM	Mozambique Institute of Agrarian Research
INAHINA	National Institute of Hydrography and Navigation
INAM	National Institute of Meteorology
INAVE	National Institute of Veterinary
INE	National Institute of Statistics
INGC	National Institute for Disaster Management
INGD	National Disaster Management Institute (<i>Instituto Nacional de Gestão e Redução do Risco de Desastres</i>)
LBW	Low Birth-Weight
LBW	Low Birth-Weight
NDRFS	National Disaster Risk Finance Strategy
PDPMCN	Master Plan for Prevention and Mitigation of Natural Disasters (Plano Director para Prevenção e Mitigação das Calamidades Naturais)
PDRRD	National Disaster Risk Reduction Master Plan 2017-2030 (Plano Director para a Redução do Risco de Desastres 2017-2030)
UNAPROC	PQG Government's Five-Year Program (Programa Quinquenal do Governo) National Civil Protection Unit/Agency (Unidade Nacional de Protecção Civil)

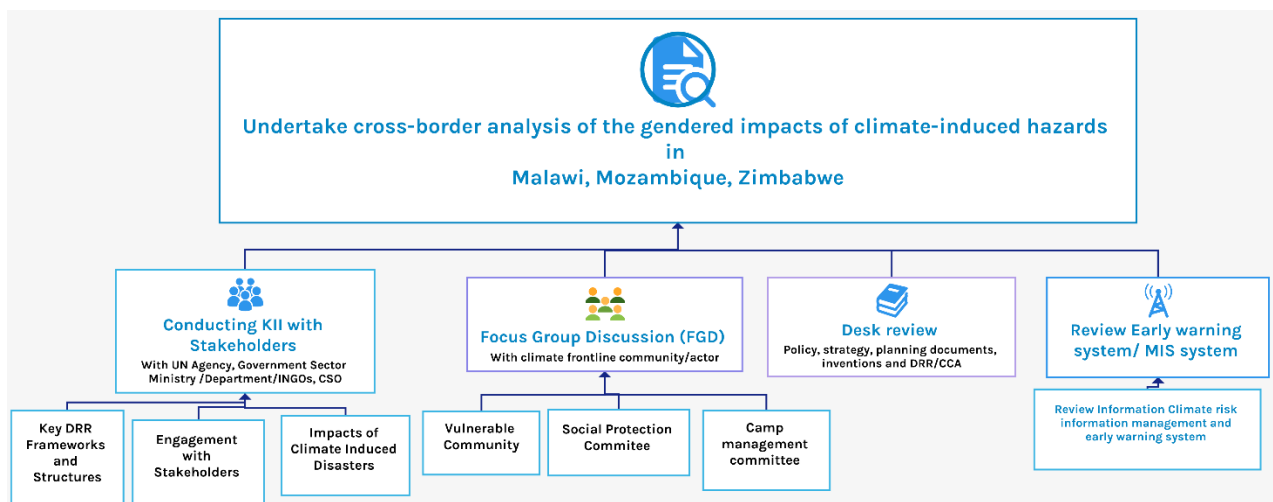
1.0 Introduction

The cross-border assessment is intended to analyze the gendered impacts of climate-induced hazards in Malawi, Mozambique, and Zimbabwe and seeks to explore how gender groups (women, girls, children, persons with disability, men, and elderly) in Southern Africa are differently impacted by climate change in terms of the physiological, political, economic and societal causes for the differences experienced; the current coping and adaptation strategies and capacities to climate-induced disasters and variability the group adopts; the capacity of women and men be strengthened to better adapt to climate change and climate variability; explore the role of women and women-led organizations in disaster preparedness and response planning and to; review key DRM policies in target countries and identify key entry points for gender integration.

1.1 Assessment Methodology

The methodological approaches of assessment follow through several strategic tools, e.g., semi-structured Key Informant Interview (KII) interviews with key stakeholders of sector ministries/departments, UN Agencies, INGOs, and CSOs for investigating the Key DRR Frameworks and Structures in place, what the stakeholder engagement and coordination mechanisms are, analyzing the Impacts of Climate-Induced Disasters on the gendered group, etc.

Focus Group Discussion (FGD) with semi-structured conducted with climate frontline vulnerable community in remote vulnerable areas and investigate the Impacts of Climate-Induced Disasters on the gendered group (women, girls, children, persons with disability, men, and elderly), etc. Desk review of all policy strategies and Review of early warning ICT and MIS systems relating to disaster risk management and informed planning.



1.2 Multi-hazard Background of the study area

The Mozambican geographical & geological settings, terrain topography, and positioning over the Sub-tropical climatological zone made the country highly vulnerable to hydrometeorological hazards.

Any sudden occurrence of heavy rainfall is likely to trigger flash flooding in downstream settlements. Climate risk and vulnerability are being factored in for the following reasons.

- Proximity of the Indian west coast of the Indian Ocean: Vulnerability to western Indian Ocean tropical cyclones. The Indian Ocean is spawning strong and deadly tropical cyclones.
- Positioning of Intertropical Convergence Zones or Doldrums area: Largely impacted by ICTZ, subtropical metrologies, Subtropical climatology, El Nino -During the October-November-December (OND) season, erratic rainfall alternated between below-average patterns in the region, etc. Several studies indicate

that the warm Mozambique Channel becomes favorable for the development of tropical cyclones due to specific synoptic conditions.

Buildup of settlement structures and other elements in lower flood-prone areas causes a larger loss and damage for the rapid onset

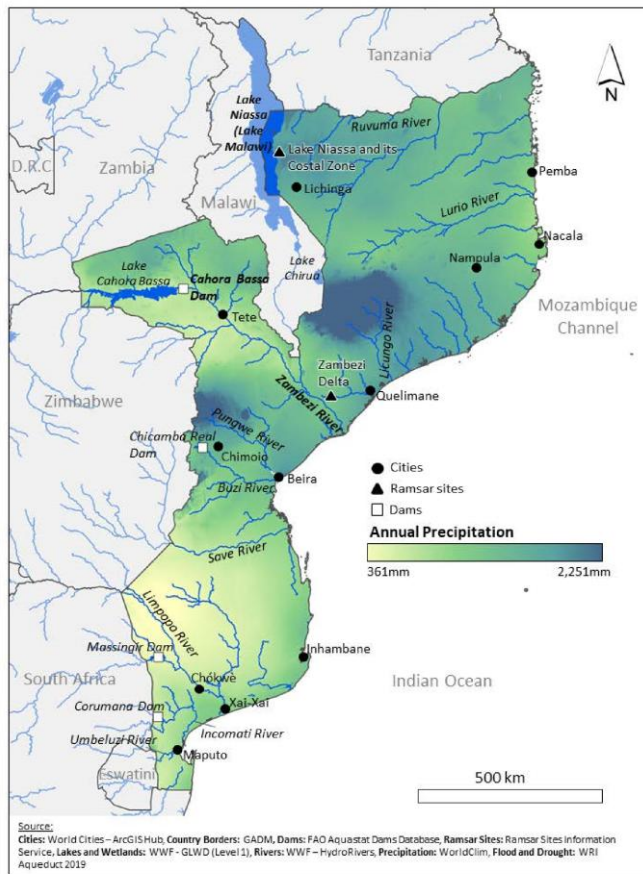
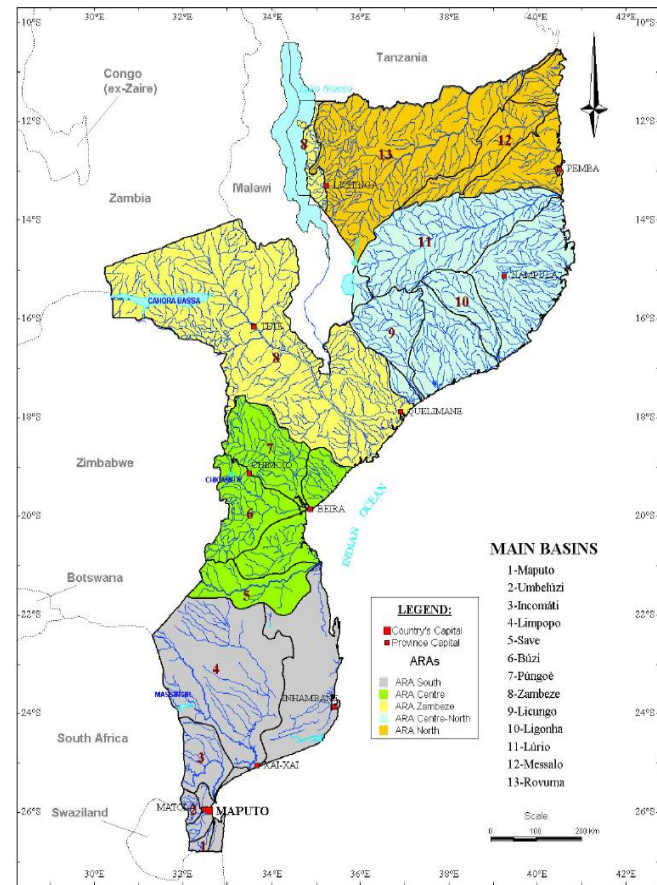


Figure : Mozambique precipitation distribution



Mozambique's main basins Source: JNF da Costa 1999, adapted from Serviços Hidráulicos, Bacias Hidrográficas (1976)

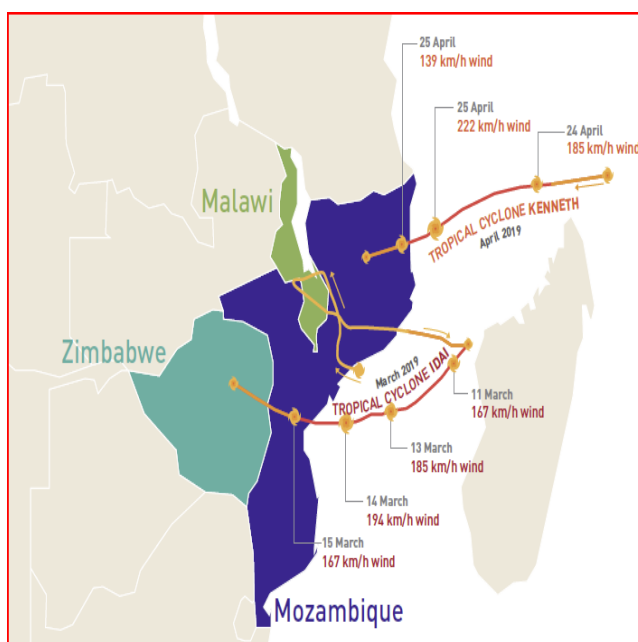


Figure: Major disaster

1.3 Historical background of the disaster impacts;

Mozambique has been experiencing increased frequency, intensity, and magnitude of extreme weather events. Since 1975, over 50 disasters have been triggered by hydrometeorological events, and the ripple effects of floods cause secondary disasters (disease/outbreaks). The table below shows the disaster events;

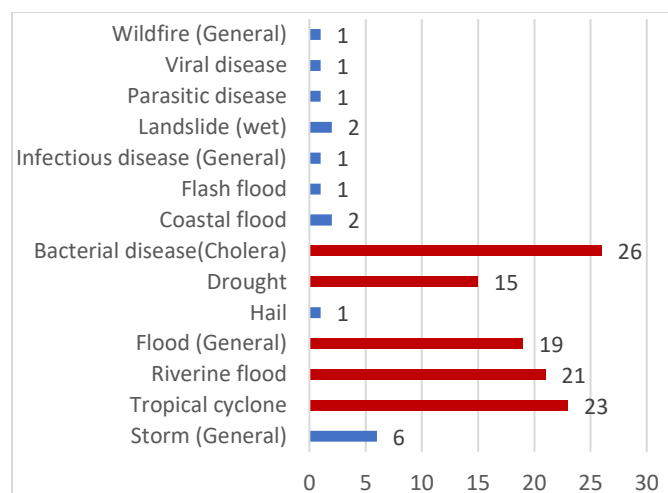


Figure: Mozambique Disaster events (1975-2023) : Source EM-DAT

The above disaster distribution graph shows that over the last 48 years, Mozambique has experienced tropical cyclones, floods, droughts, and incidentally, post-cyclone/flooding-induced cholera/diarrheal outbreaks, which also cause mortalities of children, women, and youth due to inadequate emergency WASH and hygiene services at the last mile.

Statistics from the INFORM Risk Management Index 2018 indicate that Mozambique is ranked 19th highest-risk country among 191 countries.¹, 46th in terms of risk and exposure, 11th in terms of vulnerability, and 31st in terms of lack of capacity to deal with the impact of climate change. In this context of increased vulnerability, the possible impact of climate change on health can only be mitigated by preparing, adapting, and strengthening health systems.

Mozambique has 13 major river basins (nine are transboundary) and 22 smaller basins scattered along the coastline. The northern region contains most of the smaller coastal basins, in addition to major basins such as the Lurio, Licungo, and Rovuma Basins. The major transboundary basins are the Pungoe, Buzi, Save, and Zambezi Basins in central Mozambique. The Zambezi is the largest, spanning eight countries, and it has headwaters in Angola. Southern Mozambique features the Limpopo Basin, which spans four countries, including the Save, Incomati, Umbeluzi, and Maputo Rivers. The Zambezi River constitutes around 58 percent of renewable surface water, followed by the Rovuma River (13 percent).^{1,3} Most rivers have high water flow between December and March and low flow for the rest of the year. Mozambique also has more than 1,300 small lakes and six main artificial reservoirs. The two main lakes are Lake Niassa (Lake Malawi), shared with Malawi and Tanzania, and Lake Chirua (Lake Chilwa), shared with Malawi.

Hydrometeorological Hazards in Mozambique is vulnerable to the impacts of extreme weather-, water-, and climate events. On average droughts impact every 3 to 4 years. Floods of different magnitude, every year, in some part of the country, which are exacerbated by the fact that Mozambique is downstream 9 of the 15 major river basins in Southern Africa with more than 50 % of the territory covered by international river basins and more than 50% of the total annual runoff originating outside the country. Being a downstream country makes Mozambique is also vulnerable to reduced river flows in cases of drought due to the use of water by upstream countries. Additional elements that contribute to the countries' vulnerability to floods include the geomorphological characteristics with approximately 40% of the countries topography under less than 200 m above sea level, changes in land use and vegetation cover. The biggest floods recorded recently were those of

¹ <https://climhealthafrica.org/news-mozambique-vulnerability-and-adaptation-assessment/>

the year 2000, which caused the death of 700 people, affected 2 million people and caused economic damages estimated at USD 600 million; and the floods of 2015. With a long coastline of 2700 km in the Southwest Indian Ocean, the country is in the path of tropical cyclones formed or that cross the western part of the of the Indian Ocean basin.

The Gender development Index 2022 ranked Mozambique 183 Out of 193 which represents the poverty, inequality and inadequate stakeholder's interventions for gender empowerment.

2.0 Key DRR Frameworks and Approach

2.1 What are the key policies/strategies frameworks in DRR in assessment countries? (Gender responsive DRR policy and strategies – challenges and recommendations)

Respondent: Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

Mozambique has a handful of DRM-related planning and strategies relating to Disaster and climate change e.g., The National DRR Master Plan (2017-2030); The law establishing the legal framework for disaster management was adopted in 2014 (2014 DRM Law) but was repealed in 2020, National Strategy for Adaptation and Mitigation to Climate Change (2013-2025); Mozambique adopted the National Policy on Disaster Management (NPDM) in 1999. National Drought and Desertification Plan.

Challenges :

- Inadequate national risk management coordination framework to integrate NAP, DRR, CCA, and NDC goals at the sectoral and stakeholder levels for integrated DRR/CCA intervention planning and implementation.
- Ministry of Local Government of Zimbabwe, access to funds to support the overall response.
- Ministry of Local Government of Zimbabwe, comprehensive climate risk and vulnerability (CRVA) tailored sectoral information, similarly multi-hazard risk profile of every district, risk atlas, and repository database (disaggregated) to support decision DRR/CCA planning and decision making.
- Equipment and capacity building (Logistics, Information management)
- Involvement of the private sector for an adequate response.
- Timely access to DRR Funds, both national and international. Reflections:
- The government's five-year programme (Programa Quinquenal do Governo 2015-2019), which advocates for the integration of guidelines on DRM and climate change adaptation (CCA) into national, sectoral, and local development plans²
- The Provincial Disaster Risk Management and Reduction system comprises the following Bodies: Provincial Technical Council for Disaster Risk Management and Reduction, Provincial Emergency Operational Center;
- DRR is handled by different ministries and institutions (INGC/MAE and MICOA): coordination and cooperation between the two need to be strengthened

Recommendations :

- Development of a national risk management coordination framework to integrate NAP, DRR, CCA, NDC goals sectoral and stakeholder levels for integrated DRR/CCA intervention planning and implementation
- In general, the national mechanism for coordinating and guiding policies on disaster risk reduction is multisectoral and interdisciplinary, with public, private, and civil society participation.
- Reinforce the alignment of DRR issues in the main public policies.
- Support and invest more in preparedness at all levels: National, provincial, and district levels;
- Update and operationalization of DRR database.
- Ensure the integration of disaster management and reduction in governance processes at all levels;
- Approve the risk subsidy for employees and state agents when deployed in operations of emergency;
- define the attributions, competences, composition, organization, and functioning of the:
- Improving technical coordination among multi-stakeholders of gender responsive Disaster Risk management

Respondent: Ministry of Gender, child, and social action

MGCAS - Ministry of Gender, Children and Social Action, DPGCAS - Provincial Directorate of Gender, Children and Social Action, SDGCAS – District Services for Gender, Children and Social Action

Challenges :

² Plano Director para a Redução do Risco de Desastres (PDRRD), page 20. See also PIROI, page 14.

- The current set of DRM policies and planning is inevitably gender responsive and adequately defined gender integration in sectoral and stakeholder-based DRR and resilience building
- District-level contingency plans inadequately address gender allocation, targets in allocations, and mobilizing contingencies for women and women-headed households.
- Inadequate gendered risk-informed tools to support gender inclusivity in provincial, district, and administrative post-level DRR planning and interventions.
- Lack of a gendered disaster risk management framework, a risk information repository to inform DRM, and the DRR Planning process.
- Inadequate legal framework for mandating stakeholders in gender responsive DRM planning, annual budgetary allocation for implementation of DRR interventions for women, girls, and single mothers, livelihood resilience building
- Inadequate gender access in sectoral DRM policy, strategy, programme, and decision making
- Bureaucratic masculinity barriers identified in gender inclusion to policy, strategy, decision making, disaster preparedness planning, contingency preparations, DRR interventions, etc.

Recommendations :

- Revising/amending legislation and DRM laws and mandating sector department stakeholders for gender inclusivity in the DRM planning process.
- Gender DRM framework
- Gender Disaster and Climate change information network, database development for informing planning
- Gendered risk-informed tools to support gender inclusivity in provincial, district, and administrative post-level DRR planning and interventions.
- legal framework for mandating stakeholders in gender responsive DRM planning, annual budgetary allocations for implementations of DRR interventions for women, girls, and single mothers resilience building
- Gender responsive action specific contingency plan, Gender responsive contingency plan, gendered DRR action
- Liberalization of government land management regulations, policy for giving women/single adolescent mothers access to fertile land for income-generating activities(IGA)

Respondent : CSO “Fundacao para o Desenvolvimento da Comunidade (FDC)” (key policies/strategies frameworks in DRR)

- Inadequate CSO led DRR coordination platform for multi-stakeholder coordinated DRR, CCA interventions at the community level.
- DRM policy and strategies are inadequately mandated and do not coordinate stakeholders/actors in gender responsive DRM planning and intervention at the local level.
- DRM policies are gender affirmative and inadequately address the stakeholder coordination roadmap, which is responsible for governing gender inclusivity and gendered DRR interventions at the local level.
- Inadequate gender DRM framework, Gendered climate risk information system to inform gendered DRM intervention and priorities.
- Inadequate Coordination with the sector ministry and national parliaments to improve the annual development planning, DRR planning, and budgeting.
- Inadequate Local Government DRR Budgetary allocations at province, district, administrative post, and village level for more DRR interventions for women-headed households (30% of women-headed households)
- Inadequate National gendered DRM framework, DRR gender Group for influencing the sector ministry for gender responsive DRR planning and budgetary allocations.
- Lack of a National gendered adaptation framework
- Lack of a National DRM framework for the youth group

Recommendations

- Improve gender machinery, gendered climate risk network, gendered DRM framework for influencing advocacy for policy platform on more gendered DRR interventions for developing gendered growth
- Develop CSO DRR platform to coordinate with donors, UN Agencies, and Government sector ministries/departments.

- Develop climate risk-informed Gender DRR strategies
- Coordination with sector ministry and national parliaments to improve the annual development planning on DRR and begetting.
- Budgetary allocations at province, district, administrative post, and village level for more DRR interventions for women-headed households (30% of women-headed households)
- National gendered DRM marker, DRR gender Group for influencing the sector ministry for gender responsive DRR planning and budgetary allocations.
- National gendered adaptation goals
- National DRM youth group
- The funds allocated to the Annual Contingency Plan have routinely been insufficient to cope with disaster events
- Develop a CSO DRR coordination platform for multi-stakeholder coordinated DRR, CCA interventions at the community level.
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- Develop climate risk-informed Gender DRR strategies
- Coordination with sector ministry and national parliaments to improve the annual development planning on DRR and begetting.
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- National gendered adaptation goals
- National DRM youth group
- The fund allocated to the Annual Contingency Plan has routinely been insufficient to cope with disaster events

Respondent : COALIZAO(key policies/strategies frameworks in DRR)

- Inadequate DRM policy narratives, roadmap, stakeholder coordination structure, and sectoral coherent structure to formulate gender responsive DRM planning at the local level.
- Inadequate INGD DRM framework at the province, district, administrative post, and village, inclusive of your group DRR capacity development, capacity development of your DRM/DRR and volunteering group.
- Inadequate INGD humanitarian structures for mobilizing gender need-based humanitarian assistance.

Recommendations :

- DRM intervention framework for awareness raising of Youth groups, girls in multi-hazard risk management

Respondent : Sofala Agency for Economic Development (ADEL Sofala) (key policies/strategies frameworks in DRR)

- Improve gender machinery, gendered climate risk network, gendered DRM framework for influencing advocacy for policy platform on more gendered DRR interventions for developing gendered growth
- Develop CSO DRR platform to coordinate with donors, UN Agencies, and Government sector ministries/departments.
- Develop climate risk-informed Gender DRR strategies
- Coordination with sector ministry and national parliaments to improve the annual development planning on DRR and begetting.
- Budgetary allocations at the province, district, administrative post, and village level for more DRR interventions for women-headed households (30% of women-headed households)
- National gendered DRM marker, DRR gender Group for influencing the sector ministry for gender responsive DRR planning and budgetary allocations.
- National gendered adaptation goals

Respondent : Girl Child Rights (GCR) (key policies/strategies frameworks in DRR)

- Inadequate level of decentralization of government sector departments to the province, district, and administration post level for delegating and delivering DRM/DRR services to the community level
- Poor institutional settings, Governance process for developing gendered DRM policy and strategies and stakeholder coordination.
- Lack of a gendered DRM action plan for interplay and supporting coherent inter-ministerial policy
- Inadequate coordination structure, coordination framework for engagement of all stakeholder are working in DRM/DRR process.
- Inadequate stakeholder coordination map and guidelines for coordinating INGD
- Lack of interplay among Ministry of gender and social action, and other climate vulnerable sector ministries to develop gendered DRM framework and coordination structure for developing policy , program and strategies, actionable planning for gendered DRR
- Instrumentalizing DRM policies for more gendered climate risk integration, Socioeconomic gendered risk integration, gendered DRR and resilience framework development and Empowerment with value chain, INGO/Donors to effective with AVC/Market, promising factor.
- Mozambique faces significant DRR funding gaps for disaster response, leading to reliance on international emergency aid Mozambique currently lacks a strategic and comprehensive approach to financing disaster preparedness, response, recovery, and reconstruction, which results in significant funding gaps. .

Respondent :: Instituto Nacional de Estatística (INE)/ National Institute of Statistics (key policies/strategies frameworks in DRR)

- The master plan for the reduction of the disaster risk 2017-2030 inadequately articulated stakeholder map and coordination structures, inter-ministerial and inter sector coordination structure over to for formulating coherent actional DRR planning. The master plan also inadequately addressed gender visionary targets and roadmap , inter-ministerial coordination map, structure and process for gender responsive actional DRR planning and interventions.
- Inadequate policy guidelines on preparation of gendered inclusive contingency plans for province, district, administrative post , village level so that contingencies being gender responsive. Government annual contingency plan 2019 not adequately narrated spatial demographic as well as elements specific climatic risk profile and statistical risk profile over the annual contingency plan.
- INE having delegation at province level and not presence all district level which hurdles government surveying and data collection process

Recommendations :

INE essentially to decentralize at district level with human resources, data collection tools and capacity of statistician staff essential to support census survey and disaggregated sectoral data collection.

Respondent : National Emergency Operative Center (CENOE);

- Indagate number of COE at Province, District and Administrative post level Emergency Operational Center (COE) to support local level DRM and DRR interventions.
- Standard Operating Procedures for multi-stakeholder coordination, data and information exchange with COE at different level.

Recommendations:

- Setup of Emergency Operational Center (COE) at Province, District and Administrative post level

Respondent : INGD (Key DRR Frameworks and Approach)

Key Challenges

- Institutional capacity enhancement of INGD with staffing, tools, instrument, ICT communication System, risk screening tools, risk interpretation capacity for precision for generating level early warning, forecast based contingency preparations and forecast based anticipatory early action planning.
- Central government need to develop gender responsive more coherent DRM/DRR policy for the state and non-state actors engagement in DRM/DRR actions at local level
- Capacity development of human resources development – strengthening the DRR, DRM programme at local level
- Network development – South-South cooperation In order to scale up DRR measures, coherent and concerted inter-institutional and interregional

Respondent : Respondent : Instituto Nacional de Estadística (INE)/ National Institute of Statistics

- Enhancement of INE Institutional capacity with staffing, tools, instrument, ICT communication System and installation to District, administrative post at level coordination for enhancing INE operational capacity mainly up to province level and need to expand to all district level having 100 human resources in 11 Provinces
- Till to date no survey conducted to estimate how many % of people having understanding about early warning system.
- Last census conducted in 2017, sector specific disaster risk information collection.

Recommendations :

- INE Installations of INE setup at the district, administrative post and Capacity development volunteering network at village level.
- Development of multi-stakeholder data and information exchange INE and other sector development to gather data
- Provide distant climate change, DRR/CCA education to (Radio/TV) 87% women are involves in agriculture.

2.2 With regards to Early Warning, Prevention and preparedness information, how is this accessed at community level

Background : EWS Process – First of all, the National Meteorology Institute (INAM) produces a meteorological warning based on satellite imagery, radar, and observation network data. Then, the Institute of Social Communication (ICS) disseminates these alerts through its network of 70 community radios and trained community brigades that warn at-risk communities, leading them to safety before an extreme weather occurrence. INAM trained community brigades for door to door warning communication. Some of urban areas people are using mobile phone community Radio, speak to people, TV as well, SMS for getting early warning.

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk management and Reduction - INGD),

Challenges :

- Information flow at different levels and coordination between different actors remains a critical issue. Additionally, funding for contingency planning is still too limited.
- The main challenges are that committee members do not have the motivation to continuously engage in DRR mainstreaming in their communities on a voluntary basis. There is a high turnover partly due to migration and a lack of incentives and information flow between the national level and communities. The committees' duties are concentrated on disaster response rather than on DRR. Settlement patterns (dispersed households) and migration in drought prone areas have made interventions very challenging.
- The committees comprise 15-18 local people, each with clear roles and responsibilities before, during and after a disaster.
- In traditional cyclone forecasting system, CENOE/INAM make phone call to Madagascar weather office to trace the current status cyclonic landfall status at Madagascar, however INAM/CENOE need to access meteorological La Reunion tropical storm warning center for latest updates.
- Local Committees for Disaster Risk Management (CLGR) Coordinating Council for Natural Disaster Prevention and Mitigation (Conselho Coordenador de Prevenção e Combate as Calamidades Naturais –CCPCCN).
- Inadequate tools for Coordinating Council for Disaster management (Conselho Coordenador de Gestão de Calamidades – CCGC) of National Institute for Meteorology (INAM) and other sector department to interpret impact based weather forecasts and multi-hazard early warning.
- National Directorate for Water Resources Management (DNGRH)
- Insufficient weather RADAR in coastal cities

Recommendation :

- Capacity enhancement of Provincial Technical Council for Disaster Management (Conselho Técnico Provincial – CTP), while districts have District Technical Council (Conselhos Técnicos Distritais – CTD). The technical councils work as DRR platforms. They are the only institution that brings together state, NGO/CSO and private sector actors to discuss matters related to DRR.
- Capacity enhancement of Directorate for the Development of Arid and Semi-arid areas (DÁRIDAS) for risk assessment of drought and collection of sectoral data. DARIDAS as directorates of INGC's, currently leading and coordinating actions in about 28 arid and semi-arid districts (out of Mozambique's 128 districts). In order to develop the arid and semi-arid areas, the Government established Multiple Use Resource Centres (Centros de Recursos de Uso Múltiplo – CERUMs) in highly drought prone districts, where people can learn and receive government assistance for drought management such as: Disaster Risk Assessment (DRA) in Mozambique National Risk Assessment (NRA)/ NGC, National Centre of Cartography and Remote Sensing (CENACARTA), National Directorate of Geological Survey (DNG), DNA, Famine Early Warning Systems Network (FEWS NET) Mozambique, IIAM.
- Establishment of the National Institute for Disaster Management and enabling policy frameworks
- Setup EOC in every province level (currently having on 3 provinces)
- More FM community radio at local level
- Effective and timely EWS
- Free SMS, IVR, Cell broadcasts for rural people.
- Strong coordination of NMHS
- More decentralization of INGD delegation at all administrative layer with sufficient structures, installations, tools and process to support last mile DRM and DRR process.
- Very difficult to say that, talking about color orange level, still doubts about the category level.

World Food Programme

- AA - WFP is collaborating with government actors, such as INGD, INAM, and the Ministry of Agriculture (MADER) to establish a drought early warning system.
- WFP is working with relevant stakeholders to ensure that these efforts link up to a broader risk management framework led by the government to better anticipate and respond to disaster risk, as well as to social protection programmes and systems to ensure the most vulnerable are reached with anticipatory assistance (WFP, 2020).

Respondent : Respondent : Ministry of Gender child and social action

- Installation of District-level communication equipment and EOC for serving the early warning system at the district level
- Networking village chief/headman/leader for community warning awareness raising

Respondent : COALIZAO;

- Frontline vulnerable, please do not clearly understand INGD sms, for overcome the challenges, INGD/INAM/Red Cross and other agencies need to transmit messages in the local language
- People use traditional knowledge and understanding of the impending cyclone warning and need to depend on radio/TV broadcasts in every radio; the coordinator also has no knowledge of how to access
- People at the frontline still doubt about the cyclone category level

Respondent : Respondent : Sofala Agency for Economic Development (ADEL Sofala)

Challenges :

- Early warning messages reaching out to the remotest vulnerable corner of Mozambique, as National AM radio and TV broadcasts in local languages are not sufficient. Lack of recurrent broadcast early, e.g., 10-15 minutes, during a cyclone about to make landfall.
- INAM disseminates forecasts in hourly updates from the national broadcasting system, but it needs to broadcast every 10-15 minutes during a cyclone about to make landfall.
- The community still depends on traditional knowledge about cyclone hazards and still needs awareness and understanding about the multiple impacts induced by the high impact of Cyclones.
- Each village has a DRM committee, and they need more capacity in disaster preparedness (conducting forecast-based early action)
- Developing and disseminating impact-based forecasts

Respondent : Girl Child Rights (GCR)

- People still use their own indigenous knowledge and perception for the rapid onset early warning.
- Inadequate dissemination mechanism of early warning, which falls under systemic barrier of not timely broadcasting by government mass media, dissemination of EWS going through the DRM committees and taking time, community not accessing EWS in their local language.
- There are some 46 local languages, and the government needs to provide early warning on at least 20 languages for geographical coverage, which hinders community warning and awareness
- The local DRM committee needs to warn people in a timely manner to go to a safe shelter.

Respondent : Respondent : Instituto Nacional de Estatística (INE)/ National Institute of Statistics

- Setup of EOC(COE) at every province, district, and administrative post level and coordination with standard operating procedures of impending multi-hazard risk information dissemination, sectoral risk and

- vulnerability assessment, and maintain risk and vulnerability information of households and other basic service deliveries
- Enhance the capacity of EOCs with instruments, tools, technology, and methodology for working as an information hub

Respondent : National Emergency Operation Center (CENOE);

The three telecommunication operators in the country, Movitel, Vodacom, and Mcel, have reported using Cell Broadcast for one or several purposes, including isolated cases to help INGC spread alerts (Vodacom, 2018) (Movitel, 2018). NMHS (National Water Resources Management Administration) needs to link with those cell phone operators for disseminating instant weather warning messages.

Challenges on Multi-Hazard Early Warning Systems in Mozambique

- For the monitoring and forecasting of meteorological extreme weather events, a dense network of meteorological observation stations is required.
- It also needs weather radars and a lightning detection system.
- Inventory and evaluation of the existing EWS (Early Warning and Early Action) in the affected region, including training to the local communities.
- Immediate Installation of multi-hazard EWS (new design required to fit with new SOPs and updated mapping systems) / technical recovery of affected flood and cyclone early warning systems.
- Updating of the Multi-Hazard risk maps and scenarios, assessing new exposure and vulnerabilities caused by the catastrophe.
- Establishment of an integrated national Multi-hazard (flood, cyclone, heat Health, storm surge etc.) with detailed SOP in line with the DRR Master Plan 2017-2030.
- Early Warning Early Action Protocols and Early Warning Systems (technology)
- Anchoring all regional early warning systems with CENOE for providing an integrated EWS for all.
- WhatsApp ground-based early warning is effective for urban areas and people with Android cell phones. But the mass remote households have no cell phone or Android phone to receive the message
- Text message service is useful, but it should be easily understandable and well narrated in all local languages to help people understand the message clearly.
- Community radio has a frequency limitation and is not accessible to remote rural households.
- Challenges on Multi-Hazard Early Warning Systems in Mozambique for the lack of high-density monitoring stations and impact-based weather forecasting, operational weather forecasts for the sectors of the meteorological extreme weather events, a dense meteorological observation station is required.
- More installation of weather radars, lightning detection systems in every city/town
- Inventory multi-hazard events
- Developing Early Warning and Early Action in the affected region, including training to the local communities.
- Immediate Installation of multi-hazard EWS (new design required to fit with new SOPs and updated mapping systems) / technical recovery of affected flood and cyclone early warning systems.
- Updating of the Multi-Hazard risk maps and scenarios, assessing new exposure and vulnerabilities caused by the catastrophe.
- Further develop feedback mechanisms to monitor and act on community concerns, rumors, and misinformation during public health emergencies
- Develop specific procedures and referrals for comprehensive and holistic care for survivors of sexual and gender-based violence (SGBV), including clinical management of rape, clinical response and protective care, referrals, and procedures

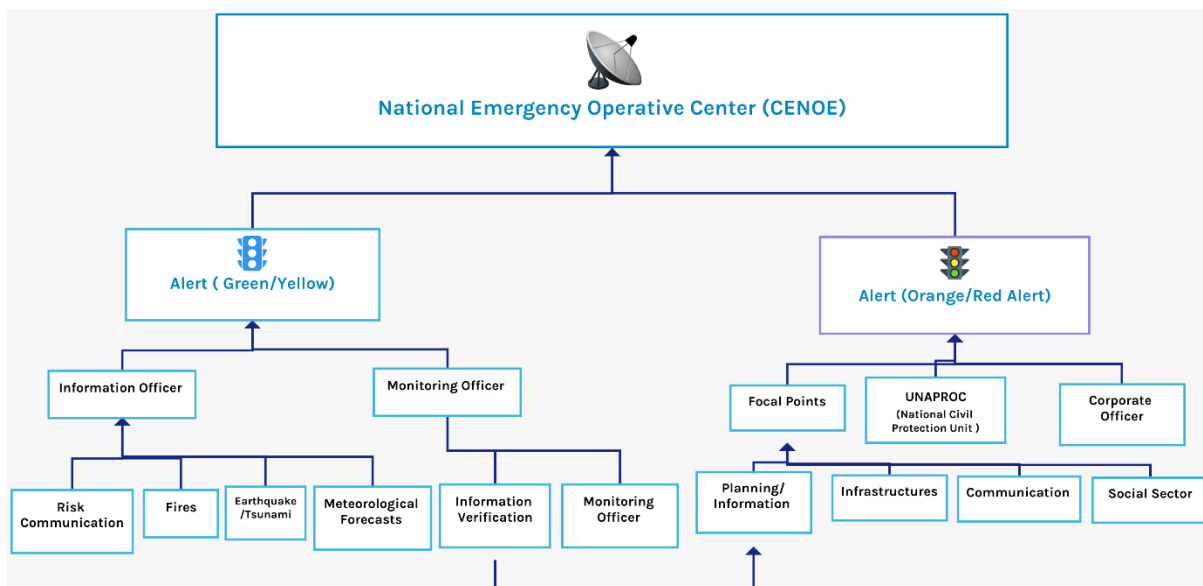


Figure : Organogram of National Emergency Operations Center .

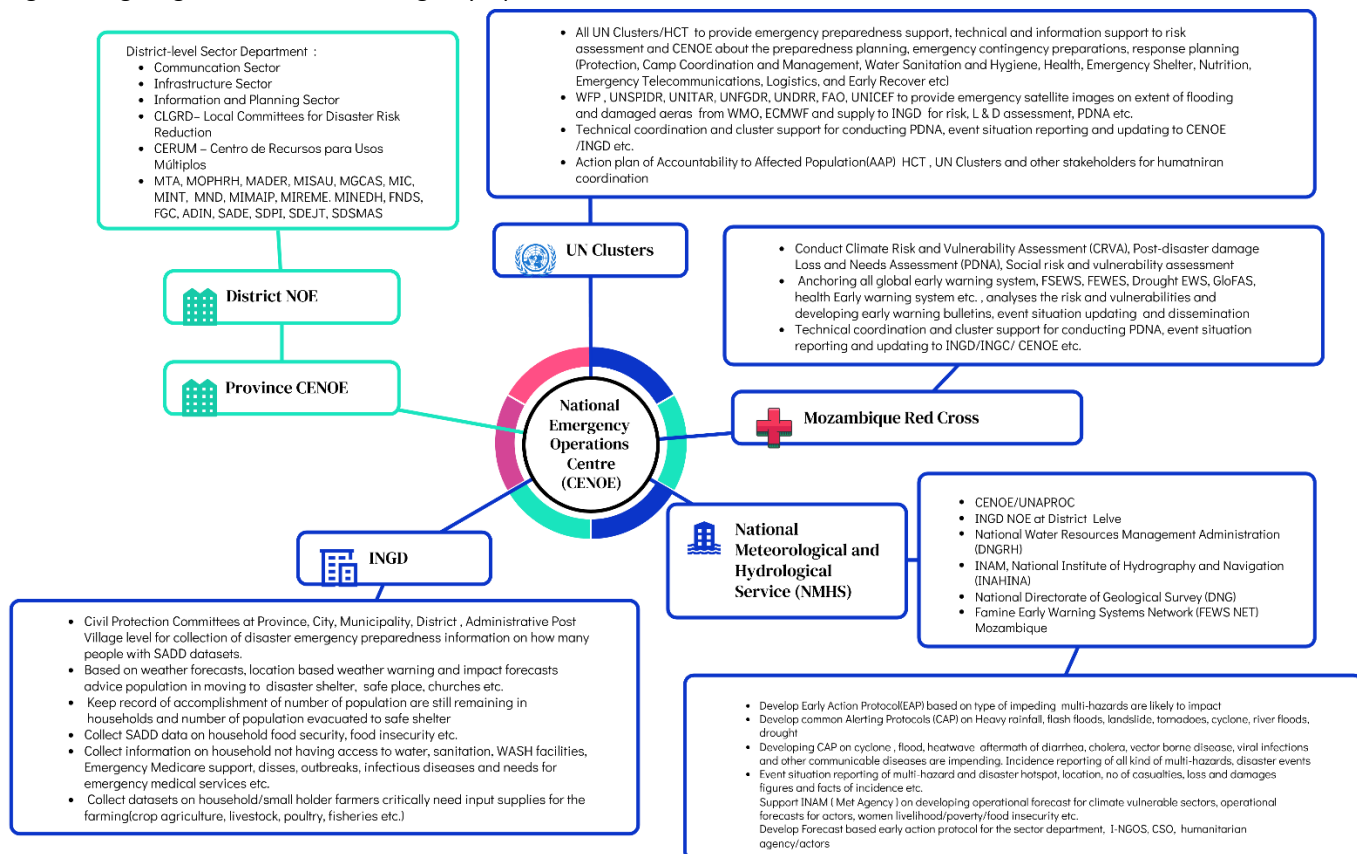


Figure : Proposed CENOE functional structure and process

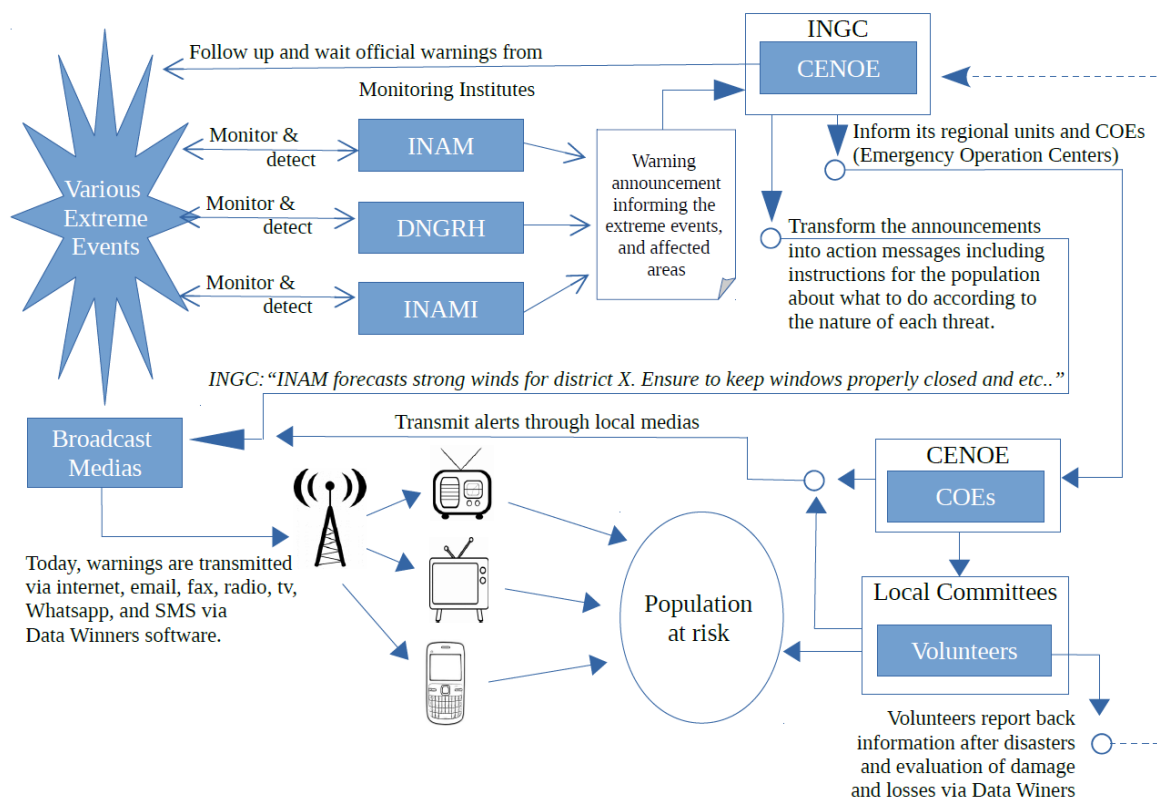


Figure : CENOE warning dissemination process

CENOE need to activate Early action protocol (EAP) for cholera outbreaks.

- Provide assistance and protection services to people migrating or displaced as part of the delivery of emergency and non-emergency work
- Collect and analyze data on specific community perceptions and concerns regarding the issues and needs of migrants, displaced persons and host communities
- Conduct integration and social inclusion activities, with consideration for host communities
- Undertake effective advocacy, humanitarian diplomacy, and partnership building in support of migrants and displaced people

CENOE needs to develop impact-based Forecasting/Operational Forecasts:

Jointly by the National Institute of Management and Reduction of Disaster Risk (INGD), the National Institute of Meteorology (INAM), the Directorate of National Water Resources Management (DNGRH), the Agriculture Ministry, and other climate-vulnerable sector departments, Mozambique PDNA was carried out by GREPOC, Post-Cyclone Idai Reconstruction Office (GREPOC), etc.

Respondent : UNDP

- Installation of EOC/NOEs at the province and district levels
- Anchoring all early warning systems/networks with CENOE's e.g., Climate Risk Early Warning System (CREWS) in partnership with African Ministerial Conference on Meteorology (AMCOMET), African Ministers Council on Water (AMCOW), Anchoring Africa Risk Capacity (ARC), United Nations Office for Disaster Risk Reduction (UNDRR), early warning networks, etc.
- Operational forecast and impact-based forecasts for women and women entrepreneurs/smallholders

Respondent : Mozambique Red Cross Society

- Local disaster committees, with support from Mozambique Red Cross Society community volunteers, work with communities to map local resources and identify real and perceived risks and traditional coping mechanisms. The committees are responsible for alerting and preparing communities to face hazardous weather conditions through an early warning system.
- Mozambique Red Cross Society volunteers were also active, visiting local schools and communities before the cyclone hit to warn parents and teachers to keep their children at home.
- HF radios provided to each Mozambique Red Cross Society district branch through the community-based disaster preparedness programme ensured communication and coordination between Mozambique Red Cross Society staff and volunteers, and were a significant improvement on previous disaster preparedness and response operations, where communication was unreliable.
- The Government has established three main bodies in the country to manage disaster risk and emergency preparedness and response, as follows:

Respondent : Met agency(INAM) :

Mozambique needs a Meteorological Observation Network for monitoring and forecasting extreme weather events, such as cyclones, windstorms, and floods. A dense ground-based meteorological observation network is required. In Mozambique, this is one of the main constraints. The climatic observation network is mostly manned and not well distributed. During the two tropical cyclones, many areas were affected by heavy rains with 300 millimeters of rainfall in less than 6 hours, which could not be measured.

- Installations of automatic weather stations, radar, equipment for improving observation
- Challenges of development precision level weather forecasts: Met agency(INAM) needs to develop more specialization in developing high-resolution seasonal, decadal, weekly, 3-day, 5-day weather forecasts, needs to develop a dynamic and statistical downscale model rapidly developing thunderstorm (RDT of Meteo France) for predicting heavy rainfall and thunderstorms.
- Challenges: Limited surface observation system: Set up more RADAR systems at coastal cities for tracking the rapidly developing weather conditions.
- Challenges Developing impact weather forecasting: WMO having tools and methodology and guidelines on how to organize forecast briefing with guidelines on who will be the participants, how to interpret the risks by organizing discussion and analyzing weather model/outlook subject matter specialists (*Agrometeorologist, hydrologist, geomorphologist, water resource engineer, Plant scientist, Agri engineer, drought experts, landslide expert, agroecologist, ecologists, meteorologist, synoptic engineers, geomorphologist, etc.*) along with forecasters(long, medium, short range), Numerical Weather Prediction(NWP) engineers/specialists, Synoptic Engineer and organize the forecast beliefs/discussion about the anticipatory impacts, risk and vulnerability and eventually developing impact forecasts. The multi-hazard risk analysis over the elements and development, customized tools, methodology, guidelines on impact-based forecasts, operational forecasts for the sector, sectoral elements, lives, and livelihood elements on the ground. Analysis of weather phenomena and interpretation of risks and vulnerabilities.
- The Met agency(INAM) needs to develop high-resolution gridded forecasts and analysis of the damaging and beneficial impacts of impending weather parameters on the lives and livelihoods of elements. The Met agency needs to develop a pool of Technical experts/specialists(*agrometeorologists, hydrologists, geomorphologists, water resource engineers, Plant scientists, Agri engineers, drought experts, landslide experts, agroecologists, ecologists, meteorologists, synoptic engineers, etc.*) for interpreting the extreme weather phenomena being forecasted. Developing methodology, tools, and guidelines on transplantation and interpretation of risk and vulnerabilities of predicted impending weather phenomena/parameters. Detailed analysis of Impacts and effects of ongoing onset weather events and developing bulletins. Developing special weather bulletins for women, the elderly, girls, and youth groups on the onset of tornadoes, thunderstorms, heavy rainfall, cyclones, flash flooding, landslides, etc.
- Challenges of developing consensus on technical specialists of sector departments to work with the Met agency(INAM) for the interpretation of extreme/abnormal weather parameters triggered risks over the elements (livelihood, natural, and hydrological).

-
- Map of Zimbabwe**
- Legend:**
- * Cities
 - Rivers and streams
 - Province
- Scale:** 0 to 7,200 Miles
- Neighboring Countries:** Zambia, Botswana, Mozambique, Madagascar
- Major Cities:** Harare, Bulawayo, Gwelo, Masvingo, Manicalaya, Mashonaland, Midlands, Matabeleland, and Zimbabwe.
- Provinces:** Harare, Bulawayo, Gwelo, Masvingo, Manicalaya, Mashonaland, Midlands, Matabeleland, and Zimbabwe.

- Developing methodology, tools, guidelines on transplantation and interpretation risk and vulnerabilities of predicted impending weather phenomena/parameters. Detailed analysis of Impacts and effects of ongoing onset weather events and developing bulletins. Developing special weather bulletins for women, the elderly, girls, and youth groups on the onset of tornadoes, thunderstorms, heavy rainfall, cyclones, flash flooding, landslides, etc.
- developing impact-based weather forecasts on damaging weather phenomena over agriculture (seedling, sapling, and standing crops, soil moisture, soil water holding capacity, soil dryness, agriculture droughts) , water stress (ground and surface water level), vegetation index, heatwave, dry spell, flash drawings impacts on surface water resources, etc.
- develop high resolution gridded forecasts and analysis damaging and beneficial impacts of impending weather parameter's over the lives and livelihoods(elements). Met agency need to develop a pool of Technical experts/specialists(*Agrometeorologist, hydrologist, geomorphologist, water resource engineer, Plant scientist, Agri engineer, drought experts, landslide expert, agroecologist, ecologists, meteorologist, synoptic engineers, geomorphologist, etc.*) for interpreting the extreme weather phenomena being forecasted. Developing methodology, tools, guidelines on transplantation and interpretation risk and

vulnerabilities of predicted impending weather phenomena/parameters. Detailed analysis of Impacts and effects of ongoing onset weather events and developing bulletins. Developing special weather bulletins for women, the elderly, girls, and youth group on the onset of tornadoes, thunderstorms, heavy rainfall, cyclones, flash flooding, landslides, etc.

- developing consensus on technical specialists of sector departments to work with the Met agency for the interpretation of extreme/abnormal weather parameters triggered risks over the elements (livelihood, natural, and hydrological).
- developing precision level forecasts and interpretation of risks over the livelihood elements (water, Agriculture, landscape, vegetation, crop agriculture, soil conditions, damaging winds, damaging heavy rainfall /hailstorms, thunderstorms, damaging flooding/flash floods
- Developing operational forecasts for the sectors, women, and girls on the damaging impacts of onset hazards on the lives and livelihoods of women, girls, and youth groups. When, where, and how they will take shelter to safe ground, what evacuation route, and how long, etc.
- Implantation of community-based automatic flood forecasting and early warning
- Installation and operationalizing energy operations center: Installations of Specialized communication instruments (Cell Phone, UHF, VHF, HF radio links, Wireless local loops with CPC situation room at local level) , Live communications with Radio station(AM/FM) and CPC to send datasets on how many people are trapped by flooding at the neighborhoods, communication with emergency shelter/camps for updating humanities needs and priorities, local civil protection committees need to report hazard data to EOC and EOC to broadcasts information through SMS, Radio etc. Data Linkage with Meteorological Department and accessing forecasts and interpretations of what would be intensity of hazards at next level .

Anchoring all regional early warning system, with Met-Agency (INAM) and EOCs at province and district level e.g., anchoring The Famine Early Warning Systems Network (FEWS NET), drought early warning system(Divisao De Desenvolvimento das zonas aridas e semi-aridas), Food Security early warning system, Anchoring Integrated Early Warning and Early Action System Initiative of FAO, CREW initiatives, RIMES, GloFAS, Regional weather forum of SADC region (SAFCOM) CBEWS on flood forecasts etc., and provide supports for operational weather forecasting, impact weather forecasts for the elements etc.

- Assess the existing community-based EWS initiatives, including flood EWS needs of the community to inform the next stage of the CBEWS project and development, printing and dissemination of national standard guidelines for CBEWS;
- Develop an early action protocol (EAP) for cholera outbreaks: Develop Methodology, tools, and guidelines on forecast-based EAP on what emergency anticipatory humanitarian responses are needed to be conducted based on the type/intensity/frequency of impending multi-hazards affecting the locality. Technical specials/experts on comprising meteorologists, forecasters, disaster risk management professional, Sector technical specialist, humanitarian actors/stakeholders (Red Cross, WFP, UNICEF, WHO, UNCHR, IOM under the cluster system and I-NGOs, CSOs) to develop digital(online) EAP for each district for conducting anticipatory humanitarian actions, forecasts based early action for the sector and sectoral elements of the locality.
- Review of the existing EOC strengthening initiative and development of an action plan for the upgrading of the National and District Emergency Operation Centers(EOC)/NOE
- Development of operational guidelines/ Standard Operating Procedures (SOPs) for EOCs at the district and national level.
- The government needs to mandate national AM/FM Radio stations & TV to broadcast dangerous weather bulletins every 15-30 minutes and pop-up bulletins on heavy rainfall occurring at any time in a given location for rapid evacuation to safe ground.

Respondent : Girl Child Rights (GCR)

Recommendations :

- Government need to provide free radio set to every household and need to broadcast early warning message recently as special weather bulletin for getting remote households and women headed household warned about the message.
- Operational forecast for women-headed households and a detailed bulletin to be broadcast via national radio/TV on what to do in very changing conditions of hazards.
- Impact-based weather forecasts for each target group, sectors

- Community leaders and CPC members need to always be updated about the weather patterns and warnings, and be aware of the community in a timely manner.
- Women's early warning group with tools for warning women-headed households
- Community radio to broadcast a Special weather bulletin
- Toll-free cell phone communication for the CPC member
- Free IVR, Cell broadcasts

2.3 What are the existing DRM coordination structures at (challenges and recommendations)

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

The structure of natural disaster coordination has at the top the Disaster Management Coordinating Council CCGC which is chaired by the Prime Minister and includes all Ministers from the sectors that intervene directly in the event of natural calamities. The Technical Council of Disaster Management (CTGC) is chaired by the General Director of the National Institute of Management Calamities (INGC) and is made up of the national directors of the relevant sectors, appointed by the Ministers who are members of the CCGC. The CTGC is responsible for coordinating sectoral warning and early warning systems regarding imminent calamities of meteorological origin.

In order to merge DRR and CCA, the Government established the GIIMC (inter-institutional group for climate change), a structure that includes actors working on DRR and on CCA

a) National level

Disaster Risk Management and Reduction Technical Council (CTPGD):

CTDGD is a multisectoral body that coordinates disaster management and reduction, including representatives from Government institutions, United Nations agencies, other partners, and civil society organizations.

The Disaster Risk Management and Reduction Technical Council is chaired by the representative of the disaster entity. disaster risk management and reduction and includes directors and representatives from the following areas e.g., Disaster Risk Management and Reduction, Meteorology, State Administration, Water Resources, Geology, Health Agriculture Education, Environment, Social Action, Public Works, Water Supply, Defense and Security, Housing, Energy, Sanitation, Industry, Commerce, Transport and Communications, Economy and Finance, Business. Foreigners and Cooperation, Fisheries, Tourism, Sports, and representatives of other entities relevant to the pursuit of objectives that contribute to the disaster risk management and reduction process.

Technical Council for Disaster Risk Management (CTGC) is chaired by the General Director of the National Institute of Management Calamities (INGC) and is made up of the national directors of the relevant sectors and the government's national platform for disaster management (Karadan et al. 2017).. The CTGC is responsible for coordinating sectoral warning and early warning systems regarding imminent calamities of meteorological origin. The CTGD handle the portfolios of drought and the Division for the development of arid and semi-arid zones (Divisão de desenvolvimento das zonas Áridas E Semi- Áridas - DARIDAS) focuses more on development issues around arid and semi-arid lands rather than emergency response which is under the mandate of the National Center for Emergency Operations (CENOE), which is the operative arm of the INGD.

Disaster Emergency Coordination Mechanism:

The Disaster Risk Management and Reduction Technical Council is a multisectoral technical advisory body that coordinates matters related to disaster risk management and reduction within the Council on Disaster Risk Management and Reduction. **Disaster risk management and reduction** and includes directors and representatives from the following areas:

Disaster Risk Management and Reduction, Meteorology, State Administration, Water Resources, Geology, Health, Agriculture Education, Environment, Social Action, Public Works, Water Supply, Defense and Security, Housing, Energy, Sanitation, Industry, Commerce, Transport and Communications, Economy and Finance, Business Foreigners and Cooperation, Fisheries, Tourism, Sports and representatives of other entities relevant to the pursuit of objectives that contribute to the disaster risk management and reduction process.

National DRR Platform (Proposed)

The technical councils work as DRR platforms. INGC receives technical support from the Disaster Management Technical Council (CTGC), composed of representatives of the different ministries that make up CCGC. The CTGC also has representatives of NGOs, the private sector and civil society organizations. Under the leadership of INGC, the CTGC meets ordinarily four times a year and provides information and advice to CCGC leaders, so that they make sound and timely decisions. The provinces have similar structures in the form of the Provincial Technical Council for Disaster Management (Conselho Tecnico Provincial – CTP), while districts have District Technical Council (Conselhos Tecnicos Distritais – CTD). The technical councils work as DRR platforms. They are the only institution that brings together state, NGO/CSO and private sector actors to discuss matters related to DRR.

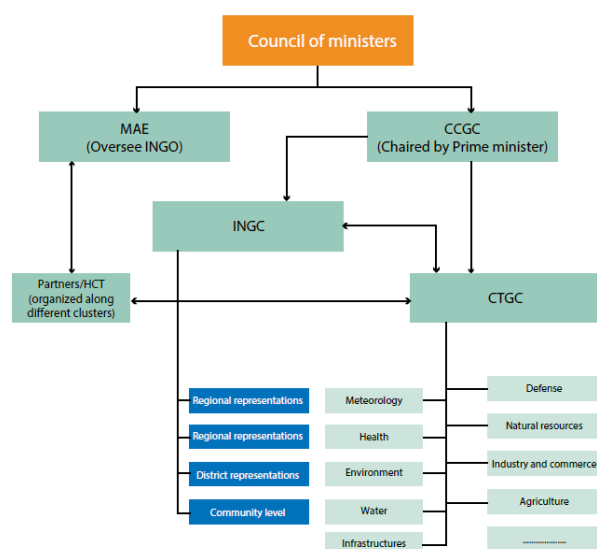


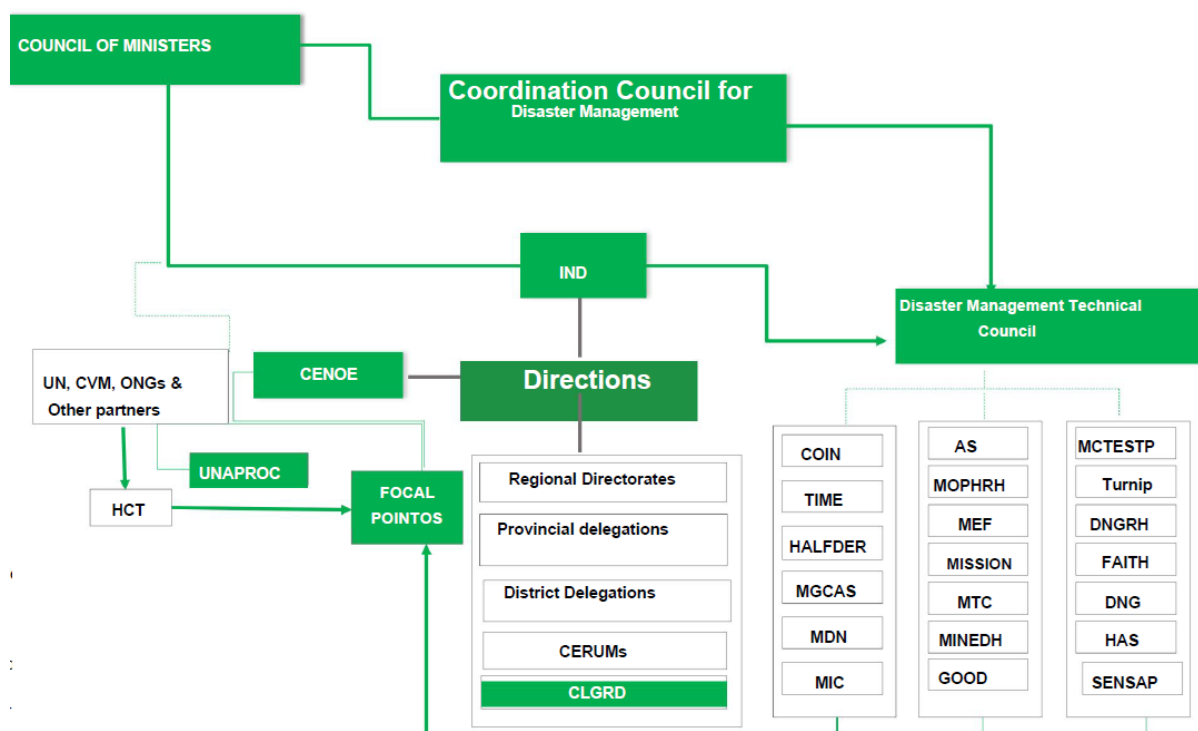
Figure : DRR management structure in Mozambique , INGC 2006

National Emergency Operational Center (CENOE)

The National Emergency Operation Center (CENOE) is a multisectoral coordination and decision-making structure where representatives of institutions, Civil Society and groups of actors who participate directly in disaster response operations converge. The objective of CENOE is to provide all those involved in preventing, mitigating and responding to disasters with a guiding instrument with procedures, tasks and actions for scientific and technical monitoring, issuing warnings, controlling operations, activating and deactivating emergency operations.

National Emergency Operations Centre (CENOE) - a multi-sector coordination and decision-making structure where representatives from different Government sectors, HCT and key stakeholders meet to ensure coordination and response planning. All these bodies are replicated at provincial and district levels. The HCT is supported at the operational level.

INGD- International organization coordination mechanism:

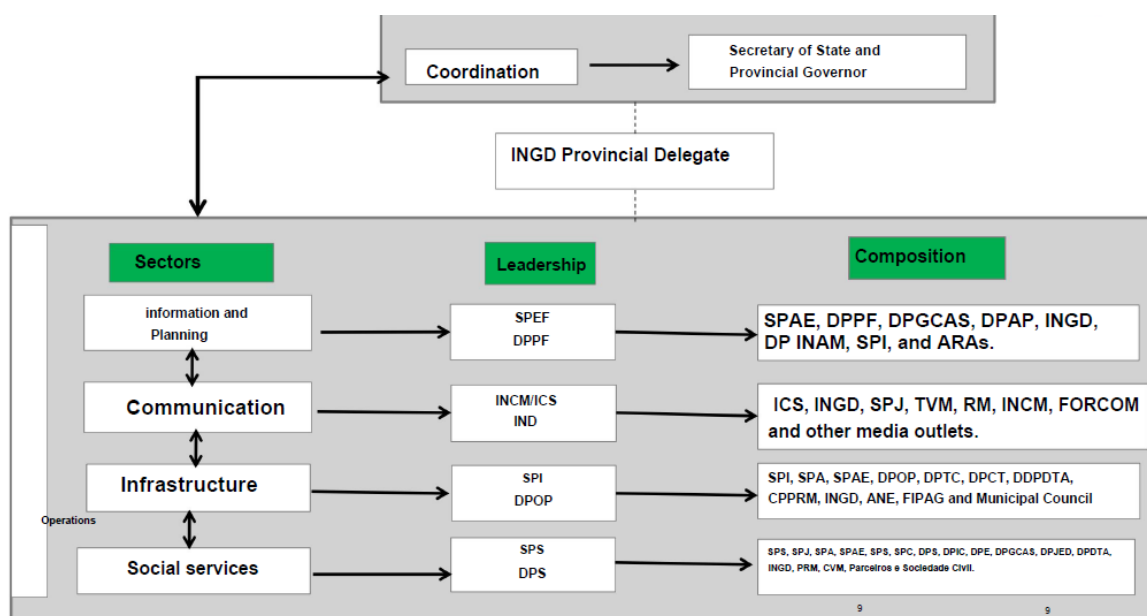


- ❖ HCT – Country Humanitarian Team
- ❖ CENOE – National Emergency Operational Center
- ❖ COE – Emergency Operational Center
- ❖ CERUM – Centro de Recursos para Usos Múltiplos
- ❖ CLGRD– Local Committees for Disaster Risk Reduction

The Provincial Disaster Risk Management and Reduction system CTPGD:

Provincial Technical Council for Disaster Risk Management and Reduction operates Provincial Emergency Operational Center (COE), currently in three provinces Maputo, Beira, Nakala. As part of the Cyclones Kenneth and Idai responses, humanitarian clusters have been activated to support the Government line ministries and ensure optimal coordination. For the Cyclones Kenneth and Idai responses, at provincial level, the Government has activated four coordination hubs – Pemba, Beira, Chimoio and Quelimani. Humanitarian partners have established presences in each of these locations to facilitate operational coordination and support the Government-led response.

Coordination Structure at the Province level :



Provincial Decentralized Governance Bodies GRRD :

The Provincial Disaster Risk Management and Reduction system comprises the following Bodies. Provincial Technical Council for Disaster Risk Management and Reduction.

- The Governor Province of Determine and monitor, in coordination with the Secretary of State in the Province, preventive or relief measures in the event of the imminent or occurrence of a serious accident and/or extreme events, without prejudice to measures taken by the central bodies of the State.
- Determine preventive or relief measures, in the event of the imminent or occurrence of a serious accident or calamity, mobilizing and instructing public or private civil defense services, in particular military and paramilitary conjunction with decentralized entities.
- CTPGRRD integrates the Directors of Provincial Services, Provincial Directors, Presidents of the Councils Local authorities, where applicable, integrating representatives from the following areas relevant to the pursuit of the objectives that contribute to the disaster risk management and reduction process.
- Therefore, the CTPGRRD is chaired by the Provincial Representative for Management and Risk Reduction of Disasters.

Provincial Emergency Operational Center :

During the emergency period, when the Emergency Operational Center (COE) is activated and chaired by the Secretary of State in the Province and includes the Governor of the Province, Representative of the Coordinating entity of Disaster Risk Management and Reduction, members of the State Representation Council in Pronunciation and members of the Provincial Executive Council.

Risk Information communication and early warning dissemination:

- Carry out continuous monitoring of phenomena that caused the disaster
- Ensure in a coordinated way the efficient and effective COE intervention avoiding duplication of efforts and resources.
- Provide timely information about a disaster or emergency in order to facilitate DRM, preparedness and contingency planning and decision-making
- Provide resources for assistance operational in a disaster or emergency.
- Discloser of multi-hazard information about the phenomenon, prevention actions, disaster mitigation and response or emergency.

District Level Disaster Response Committee :

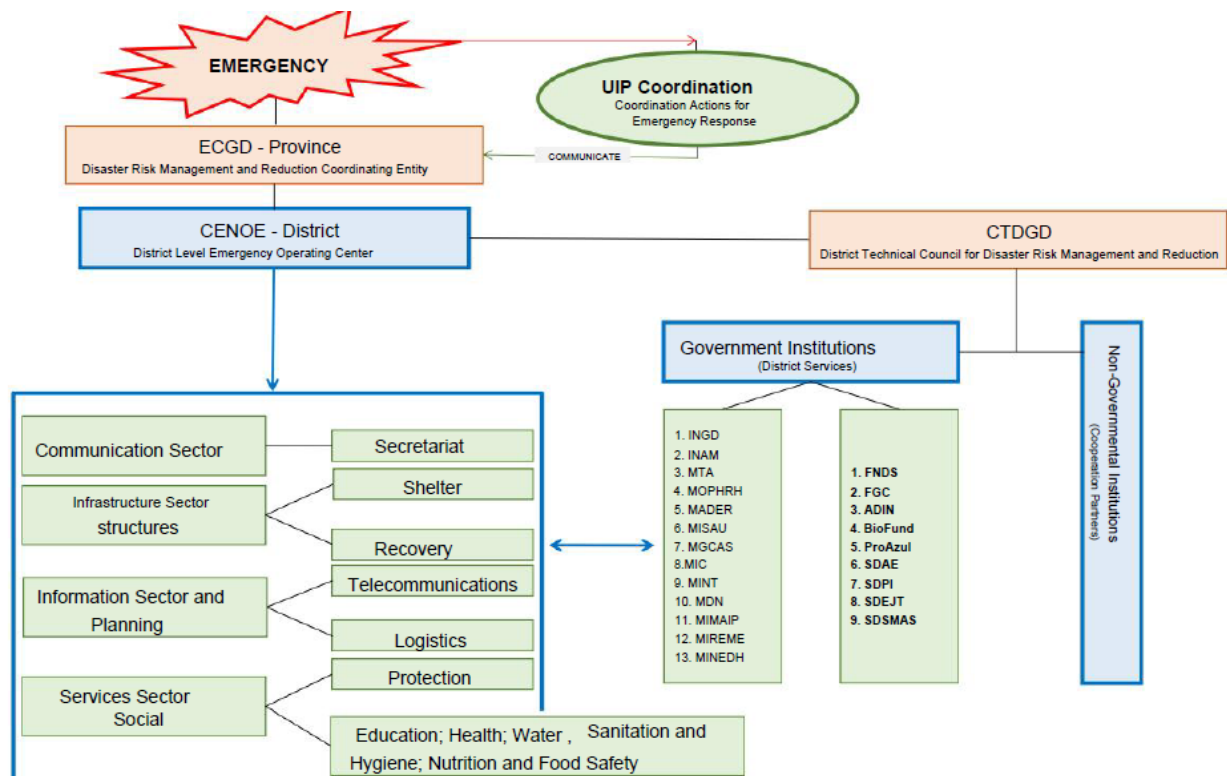
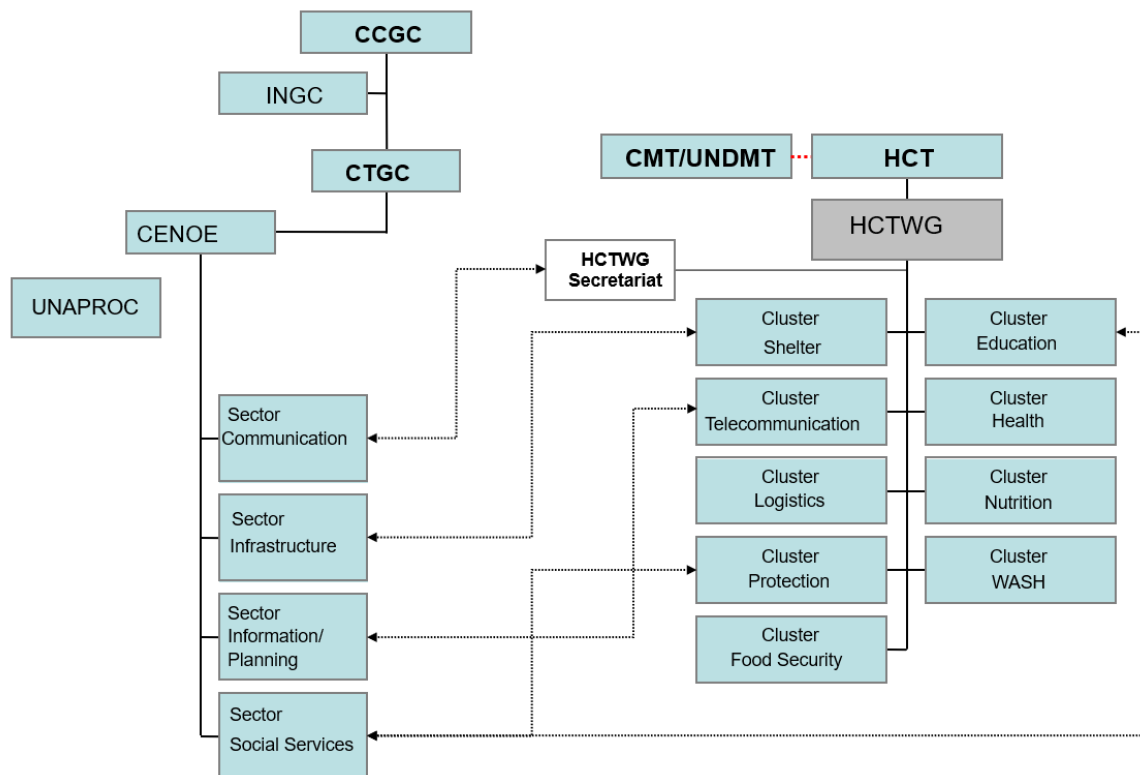


Figure : Coordination mechanism for emergency response in district level



Respondent : Ministry of Gender child and social action

Recommendations :

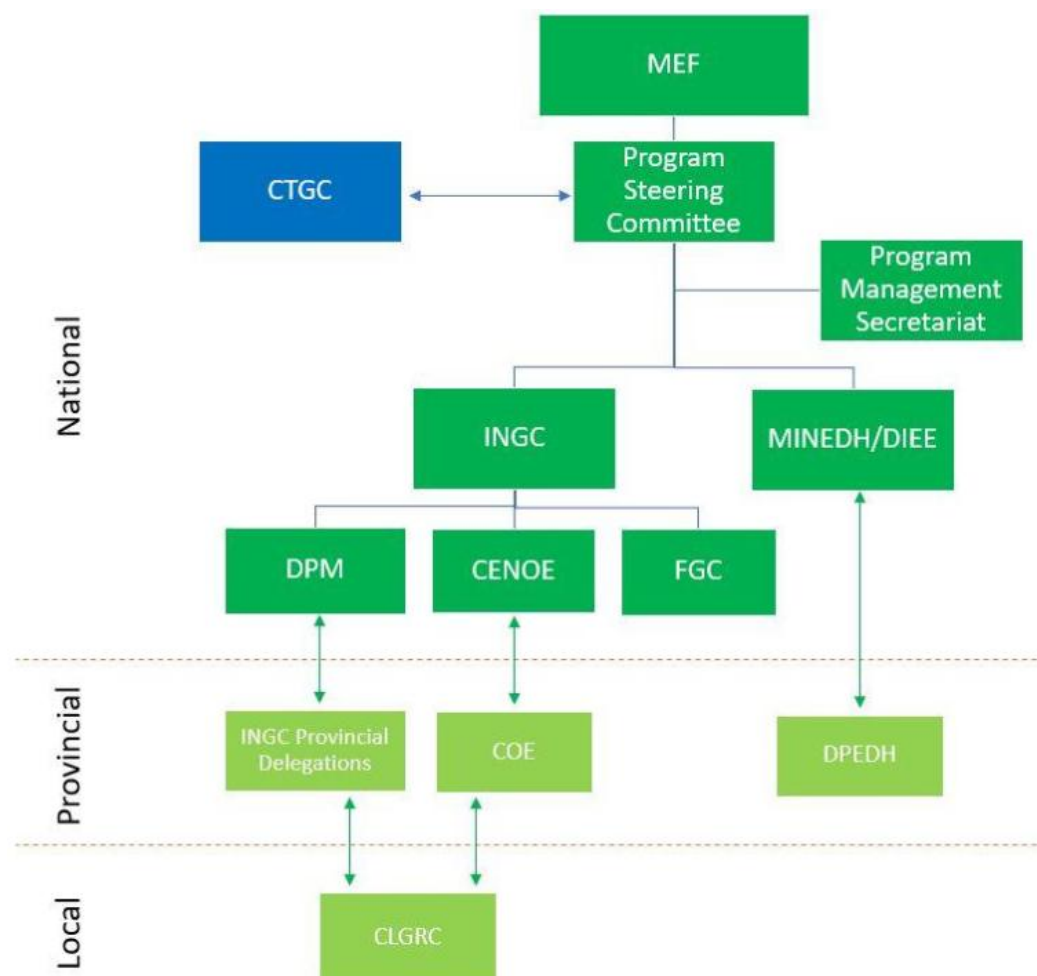
- Strengthening Multi-stakeholder coordination structures Province and district level DRM coordination structure and Social protection is managed by the National Institute of Social Action (INAS), which is part of the Ministry of Gender, Children and Social Action (MGCAS). INAS implements three cash transfer programmes that are part of the National Basic Social Security Strategy 2016-2024 (ENSSB II).
- Direct Social Support Programme (PASD) which has two components, one providing in-kind support and a second focused on post-Emergency Cash Transfers (PASD-PE). ENSSB II includes objectives related to climatic shocks.

Respondent : Respondent : Ministry of Gender child and social action

- State and nonstate actors/stakeholder coordination gap in DRM and DRR project planning and implementation, most of the DRR finances goes urban areas and less funding goes to remote rural areas.
- Inadequate Gender integration in Planning.
- Employment of Women directorate District administrator – and inclusive participation to Consultative council
- Recommendation gender inclusive planning
- Government INGD need to coordinate province , district and local level emergency DRM interventions etc.
- Gaps of emergency Preparedness and response and recovery

Respondent : Respondent : Sofala Agency for Economic Development (ADEL Sofala)

Inadequate stakeholder coordination (Government, UN Agencies, INGOs, NGOs, CSOs) Cluster – Agency , organization, Cluster – Agency , organization in DRM/DRR planning.



Source : Document of The World Bank - Mozambique Disaster Risk Management and Resilience Program - Technical Assessment Report February 20, 2019

a) Level of political decision, formed by Ministers members of the Calamity Management Coordinating Council (CCGC), chaired by the Prime Minister, or which may be convened in its partial or total composition depending on the complexity of the emergency. Technical Council for Management of Natural Calamities (CTGCN).

CENOE integrates the National Civil Protection Unit (UNAPROC) as an operational instrument to search for and help victims of calamities.

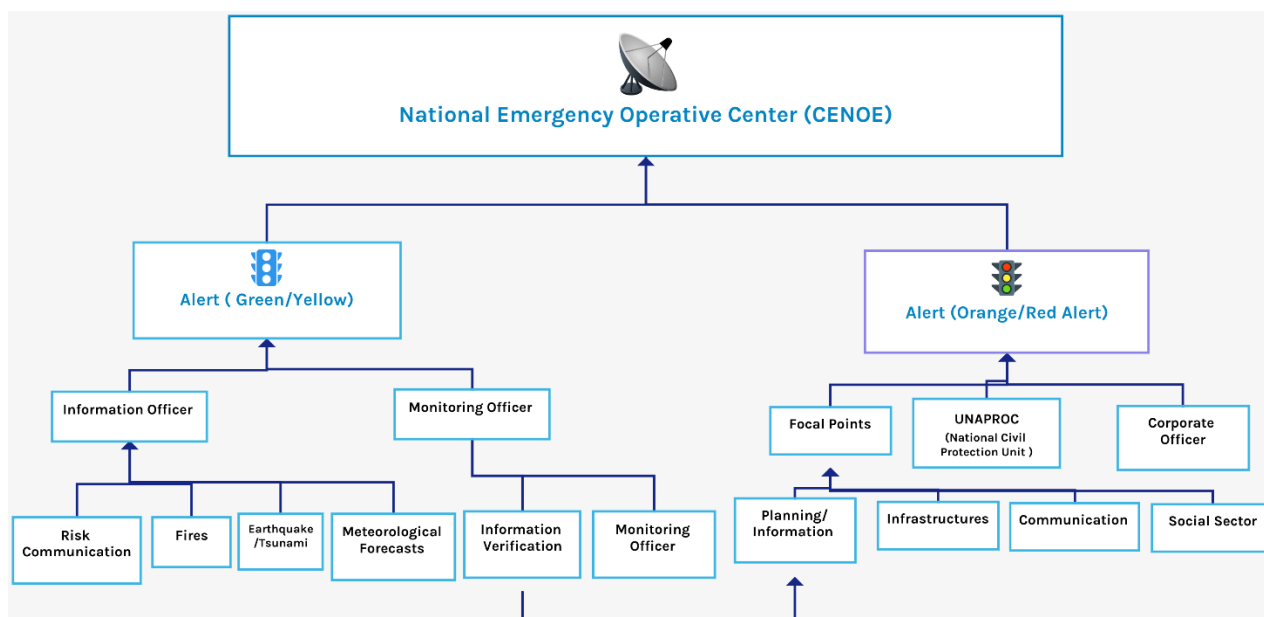


Figure : Organogram of National Emergency Operations Center

National Civil Protection Unit (UNAPROC) :

The INGD consists of five main bodies: the Board of Directors, the Advisory Board, the Supervisory Board, the DRM/DRR Technical Board, and the Technical Board. There are also thirteen specialized divisions (units), including the Post-Disaster Reconstruction Coordination Division, dedicated explicitly to disaster recovery operations. This Division is responsible for several recovery-related activities, including guaranteeing the resettlement and rapid replacement of infrastructure and essential social services after disasters, ensuring the planning and use of land in disaster-risk areas, and promoting the construction of infrastructure resistant to disasters. Other units within the INGD that have specific responsibilities in disaster recovery are the Prevention and Mitigation Division, which is responsible for, among other things, ensuring humanitarian assistance and rapid recovery of disaster survivors, and the National Civil Protection Unit, which ensures the rapid restoration of essential socio-economic emergency services. Emergency Operations Centres at the national, provincial, and district levels coordinate multisectoral actions to rehabilitate damaged infrastructure, build resilience, and adapt to climate change, among other things.

- The Disaster Recovery Framework³ Promotes the establishment of consultation forums with civil society to strengthen its engagement in Mozambique's recovery process.
- However, the specific responsibilities of non-state actors in disaster recovery do not appear to be outlined in the documents reviewed. As mentioned above, the 2014 Law was replaced by the 2020 DRM Law (including the institutional arrangements established in the previous law), which was in force when Cyclone Eloise struck the country. The 2020 DRM Law outlines the current institutional framework for DRM in Mozambique, as outlined in Article 8, which stipulates that the DRM system comprises central and local-level bodies. At the central level, the main bodies consist of the following: a. the government; b. the DRM Coordinating Council; c. the Technical Council for DRM; and d. the DRM Coordinating Entity.
- The DRM Coordinating Council and the Technical Council for DRM established by the 2020 DRM Law replaced the National Council for Disaster Management Coordination and the Technical Council for Disaster Management established by the 2014 DRM Law. The DRM Coordinating Entity is the INGD (National Institute for Disaster Risk Management and Reduction), which falls under the supervision of the Council of Ministers, replacing the previously existing INGC (National Institute for Disaster Management).
- The INGD was established by Article 10 of the 2020 DRM Law, which states that it is the government's responsibility to define the entity's competencies, composition, organization, and functioning.⁵⁸ The INGD

³ https://disasterlaw.ifrc.org/sites/default/files/media/disaster_law/2023-02/Mozambique%20-%20Final.pdf

has a comprehensive mandate encompassing all aspects of DRM, including the coordination of post-disaster reconstruction and the overall strengthening of DRM and resilience programmes.

2.4 How is the UN/government supporting collection and access to SADD at: (challenges and recommendations)

Mozambique's National Institute for Disaster Management (INGC) is the nodal agency entrusted with the Disaster Risk Management (DRM) agenda in Mozambique. The country still does not have a designated functional committee to conduct climate risk and vulnerability assessment and sectoral multi-hazard and climate change impact disaggregated datasets. However, the IOM, having an IT system on Displacement Tracking Matrix (DTM) teams, conducted a Disaster Risk Assessment at the locality level (localidade), corresponding to the lowest administrative level in the country. In jointly collaborative efforts of INGC/INGD and IOM, a single level of survey is conducted for displacement tracking and risk assessment. The designated INE still does not have delegates/directorate at every District level, and they have presence at some province level which hinders institutional capacity in conducting the census survey, collection of age, sex, and disability disaggregated data (SADD), sectoral disaggregated datasets on climate vulnerable sectors (Agriculture, water, fisheries, livestock, agroforestry and environment)

Basically, the impact of IDAI will increase multidimensional poverty in Mozambique. After Cyclone Idai, the INGC established a post-Cyclone IDAI Recovery Program (PREPOC), and under the leadership of GREPOC, with the support of development partners, the Government of Mozambique carried out a Post-Disaster Assessment (PDNA) for Cyclone Idai. A Post-Cyclone Reconstruction Program (PREPOC) was approved by the Government in August 2019 to guide the financing, implementation, monitoring, reporting, and assessment of the effects of recovery and reconstruction over the next five years. SADC RVAA and FAO Mozambique In-depth assessment;

Mozambique still does not have a methodology, tools, guidelines, roadmap, stakeholder map, or process. To conduct the CRVA and collection of SADD at the community level. INGC receives technical support from the Disaster Management Technical Council (CTGC), composed of representatives of the different ministries that make up CCGC. The CTGC also has representatives of NGOs, the private sector, and civil society organizations. Under the leadership of INGC, the CTGC meets ordinarily four times a year and provides information and advice to CCGC leaders, so that they make sound and timely decisions. The province level has the Provincial Technical Council for Disaster Management (Conselho Técnico Provincial – CTP), while districts have the District Technical Council (Conselhos Técnicos Distritais – CTD). The technical councils work as DRR platforms. They are the only institution that brings together state, NGO/CSO, and private sector actors to discuss matters related to DRR.

DADD data collection Challenges ;

- Inadequate level of risk-informed planning without having SADD database and tailored informed tools
- Disaster emergency response plans, based on updated hazard maps
- Mozambique still to have a designated climate and disaster risk assessment entity; however, the INGC is aligning the legal and institutional framework with the NCCAMS;

Recommendations :

- 1) *Number of functional local DRM Committees in risk-prone areas established or strengthened:* At the local level, Local Committees for Disaster Risk Management (CLGRC) play a key role in community preparedness and early response to disasters. The local DRM Committees need to be operationalized

with necessary ICT tools, ICT network, data collection instruments/equipment and training for conducting SADD

- 2) To ensure gender parity, the Program will also support strengthening the participation of women in local DRM committees, aiming to achieve a female participation of 50 %. INGC needs to organize a local committee for SADD information collection.
- 3) Strengthening the IOM-DTM-based SADD data collection mechanism on humanitarian needs and priorities, DRR needs DTM provides key information and critical insights into the situation on internally displaced persons (IDPs), affected populations, and returning populations across cyclone Idai-affected areas. DTM implements three main components: daily tracking, baseline, and multi-sectoral assessments.
- 4) Through the baseline locality assessments, DTM tracks the locations and sizes of the three core target population categories, building an understanding of the main internal displacement patterns and dynamics in the affected region.
- 5) The disaster risk assessment was carried out through key informant interviews by DTM enumerators and SDPI (Service at District Level for Planning and Infrastructures) focal points. Risk to natural disasters was not assessed based on geophysical conditions, but based on local authorities' knowledge of past exposure to disastrous events
- 6) There is a Technical Working Group led by DARIDAS, which is meant to work on the establishment of the drought EWS and link it to anticipatory action (AA) and encourage harmonization. The group brings together stakeholders. Following stakeholders and agencies need to work together to develop the SADD database at the local level

- INE and INGC/INGD at the province level
- Ministry of Gender, Children and Social Action (MGCAS), - Provincial Directorate of Gender, Children and Social Action(DPGCAS),– District Services for Gender, Children and Social Action (SDGCAS)
- Emergency Operations Center (COE)
- Technical Council for Disaster Management Committee (CTGC)
- Local Disaster Risk Management Committee (CLGRC)
- National Civil Protection Unit (UNAPROC)
- Disaster Management Coordination Council (CCGC)
- Local Disaster Risk Management Committee(CLGRC) (Cômité Local de Gestão do Risco das Calamidades)
- Technical Council for Disaster Management (CTGD) (Conselho Técnico de Gestão de Calamidades)
- Division for the development of arid and semi-arid zones(DARIDAS) (Divisao De Desenvolvimento das zonas aridas e semi-aridas)
- DMF Disaster Management Fund (Fundo de Gestão de Calamidades)
- DNGRH Directorate for Water Resources Management (Direção Nacional de Gestão de Recursos Hídricos)
- INGD National Disaster Management Institute (Instituto Nacional de Gestão e Redução do Risco de Desastres)
- **UNAPROC** National Civil Protection Unit/Agency (Unidade Nacional de Protecção Civil)

Respondent : National Institute for Disaster Management (INGC) :

Challenges :

- There are also gaps in the process to collect disaster damage and loss data following a disaster to guide recovery efforts, as well as difficulties in tracking disaster-related expenditure due to disparate sources of funding and off-budget assistance. Moreover, the low capacity of some sectors involved in post-disaster recovery and reconstruction to effectively and timely execute their budget allocations is another challenge, often induced by lengthy procurement processes. In 2013 and 2014, the overall execution of funds allocated to post-disaster recovery and response only reached 29 percent.
- Inadequate financial and human resources and infrastructure capacity to routinely produce and make use of data in policy making

Recommendations :

- Capacity enhancement of Provincial Technical Council for Disaster Management (Conselho Técnico Provincial – CTP), while districts have District Technical Council (Conselhos Técnicos Distritais – CTD). The technical councils work as DRR platforms. They are the only institution that brings together state, NGO/CSO, and private sector actors to discuss matters related to DRR.
- Capacity enhancement of the Directorate for the Development of Arid and Semi-arid areas (DÁRIDAS) for risk assessment of drought and collection of sectoral data. DARIDAS as directorates of INGC's, currently leading and coordinating actions in about 28 arid and semi-arid districts (out of Mozambique's 128 districts). In order to develop the arid and semi-arid areas, the Government established Multiple Use Resource Centres (Centros de Recursos de Uso Múltiplo – CERUMs) in highly drought-prone districts, where people can learn and receive government assistance for drought management, such as: Disaster Risk Assessment (DRA) in Mozambique, National Risk Assessment (NRA)/ INGC, National Centre of Cartography and Remote Sensing (CENACARTA), National Directorate of Geological Survey (DNG), DNA, Famine Early Warning Systems Network (FEWS NET) Mozambique, IIAM.
- The Immediate Response Mechanism (IRM)¹⁰ of the World Bank's Contingent Emergency Response Component (CERC)¹¹
- CVM FbF project and volunteers disseminated warnings
- and reached out to vulnerable populations as part of a first test activation of the cyclone protocol

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

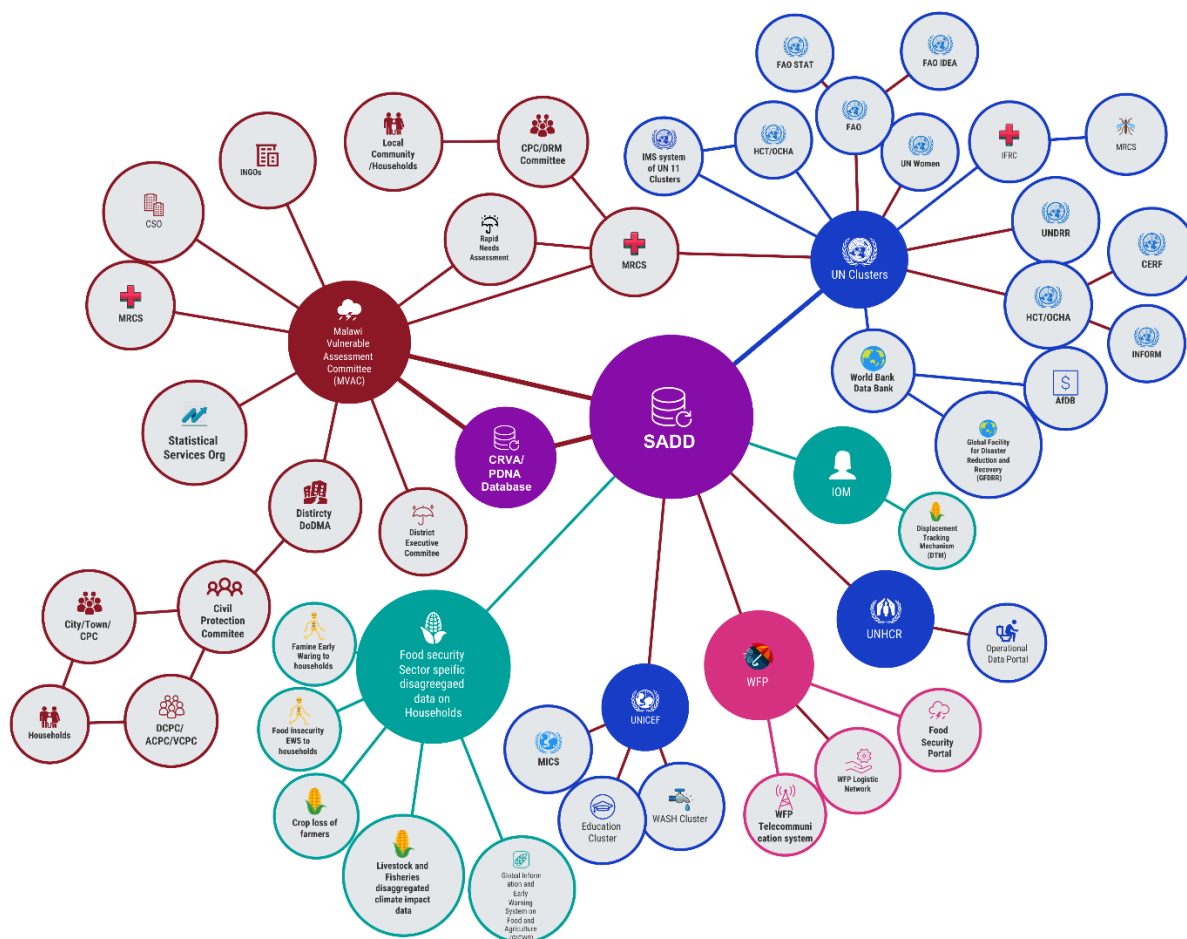
- Inadequate establishment and decentralization to the district level, inadequate data collection and structure, coordination of INE for SADD data collection the local level
- Inadequate coordination structure, Stakeholder map, and enhanced capacity of INGC/INE and other sector departments, stakeholders in development methodology, tools, and guidelines of conducting climate risk and vulnerability (CRVA) and multi-hazard risk at the local level
- Lack of institutional collaboration, mandate, Standard methodology tools and guidelines of INGC stakeholders, and capacity in developing risk-informed district development plan and budgeting, development of risk-informed DRM plan.

Recommendations :

- Adequate institutional collaboration, mandate, Standard methodology tools and guidelines of INGC stakeholders, and capacity of INGC and other stakeholders for conducting SADD at the local level.
- INE needs to lead the SADD process with institutional collaboration, mandate, Standard methodology tools, and guidelines to conduct census and SADD data collection at regular intervals in socioeconomic data, poverty, HIES data for informing the disaster emergency planning process
- Enhance Capacity, tools, guidelines, and processes for Local Committees for Disaster Risk Management (CLGRC) for conducting SADD.
- The Government's main tool to mainstream
- DRR is the Coordinating Council for Disaster management (Conselho Coordenador de Gestão de Calamidades – CCGC). It
- National Institute for Meteorology (INAM)
- National Directorate for Water Resources Management (DNGRH)

Respondent : National Emergency Operation Center (CENOE);

- Adequate institutional collaboration, mandate, Standard methodology tools, and guidelines for provincial CENOE's Maputo , Beira, Nakala, and other hubs at the province and district level to contact SADD
-



Respondent : Respondent : Ministry of Gender child and social action

- INE , INGC, and other stakeholders to develop tools, guidelines, processes, provide instrument, roadmap on engagement of stakeholders in SADD data collection
- District Service Department of Planning and Infrastructure (SDPI) needs to carry out a quarterly population head count at every district, administrative post, and village level.

Respondent : COALIZAO;

- INE , INGC, INGOs, IOM, national NGOs, and women-led organizations need to coordinate all stakeholders at the province and district levels to develop tools, guidelines, processes, and a roadmap on engagement of stakeholders for conducting SADD data collection
- Capacity development of the youth group in the SADD data collection
- INGD needs some fundraising for the support, site assessment, and SADD consideration. What things are required?

Respondent: Respondent : Sofala Agency for Economic Development (ADEL Sofala)

- INGD, Red Cross, IOM, Women-led organization, province and district level organization to all stakeholders at province and district level to provide development tools, guidelines, process, and roadmap on engagement of stakeholders for conducting SADD data collection
- SADD data collection for women and single-mother-headed households
- WLO has no funding

SADD data collection

The District Service Department of Planning and Infrastructure (SDPI) needs to carry out a quarterly population headcount across nine sites in the Mueda and Montepuez districts

Respondent : Instituto Nacional de Estatística (INE)/ National Institute of Statistics at Maputo (Central),

- Strengthening INE's institutional capacity and installations of INE at every province, district level for comprehensively conducting census, SADD data collection, sectoral disaggregated data collection, etc.
- The Mineral Resources Ministry has gender data that needs to be incorporated into the disaster risk management information system
- INE needs government mandate and coordination on age, sex, disability, and disaggregated (SADD) data collection mechanism, socioeconomic vulnerability data, HIES, household-level risk and vulnerability datasets for informing DRR planning. Engaging educational institutes, religious institutes, CSO, and charities in SADD data collection
- Improvement of the National Archives of Micro Data – a catalogue of surveys produced by INE but will also contain surveys produced by institutions belonging to the National Statistical System
- Develops the National Data Archive with the purpose of promoting the effective use of data from surveys and censuses and to encourage their use for analysis and research.
- The National Data Archive accomplishes these objectives based on legislation on the National Statistical System and the United Nations Statistical principles, according to which microdata cannot be disclosed due to confidentiality or other reasons.

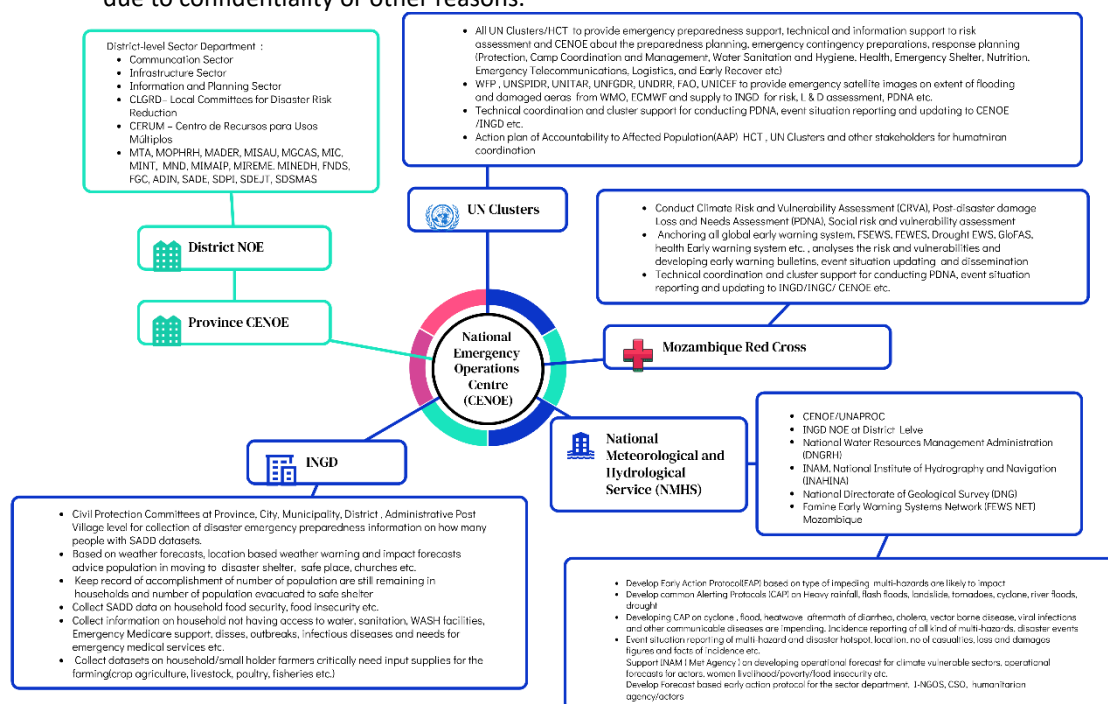


Figure : Proposed EOC at district level to facilitate SADD data collections

3.0 Engagement with Stakeholders

3.1 The main stakeholders in the DRR sector in order of priority

During disaster onset CENOE's play role as National Civil Protection Unit (UNAPROC) :

The Emergency Operational Center (COE) represents the deployment of CENOE in the provinces and is coordinated by the province's INGC. CENOE is subdivided into four sectors, namely the Planning and Information, Infrastructures, Social and Communication. The preparation of the National Contingency Plan is led by INGC and follows the principle of participation of government sectors and the National Humanitarian Team, which brings together the United Nations system, NGOs and Civil Society Organizations and bilateral partners.

- ❖ CENOE is a multisectoral coordination and decision-making structure where representatives of Government institutions, Civil Society, and groups of actors who participate directly in disaster response operations converge. CENOE's objective is to implement actions to prevent, mitigate, and respond to disasters, including monitoring extreme events and managing emergency operations.
- ❖ CENOE is coordinated by INGC and has its headquarters in Maputo and operational representations in Vilanculos (Inhambane), Caia (Sofala), and Nacala (Nampula). In the provinces, the Emergency Operational Centers (COEs) represent the offshoot of the CENOE.
- ❖ The National Civil Protection Unit (UNAPROC) is CENOE's intervention body in emergency operations, and its main mission is to carry out search, rescue, and humanitarian assistance operations. Health Resources and Services Availability Monitoring System (HeRAMS)

National Centre of Cartography and Remote Sensing (CENACARTA)

- Institution specialized in the treatment of geographic information of Mozambique that is involved in the whole process from data acquisition (aerial photography, satellite imaging, Global Positioning System (GPS)) prior to analysis and mapping complex applications development.
- Responsible for the direction, coordination, and implementation of activities of geo-mapping and remote sensing at the national level, dissemination of remote sensing techniques in the country, the acquisition, handling, processing, and distribution of images and geo-mapping data obtained via satellite
- Reference topographic data

National Directorate of Water (DNA)

- Responsible for the country's water resources management, carries out surface water quality and groundwater monitoring.
- Coordinates with regional institutions in the management of the international rivers
- Operates own flood-forecasting model. Implements hydrology modelling and flood-risk assessments
- Hydrological reference data

National Directorate of Geological Survey (DNG)

- It is the National Geological Survey of Mozambique
- Responsible for all the research work in the field of geological studies (main activities: Conducting geological and mining surveys; Offering research projects to scholars and students; Conserving geological and mineralogical resources; Publishing journals and research papers related to geological studies)
- Promotes studies in geological sciences and develops the geological base of the country's Official seismic data

Famine Early Warning Systems Network (FEWS NET) Mozambique

- An information system of the United States Agency for International Development (USAID) in Mozambique

- Identifies problems in the food supply system that potentially lead to famine or other food insecurity conditions; to provide timely and rigorous early warning and vulnerability information on emerging and evolving food security issues
- Collects, analyzes, and distributes national and sub-national information to decision-makers about potential or current famine or other climate hazard-, or socio-economic-related situations, allowing them to authorize timely measures to prevent food insecurity conditions;
- Monitors and analyzes data and information in terms of its impacts on livelihoods and markets to identify potential threats to food security (<http://www.fews.net/ml/en/info/Pages/default.aspx?l=en>)
- Reference data on vulnerability to food insecurity/famine

Mozambique Institute of Agricultural Research (Instituto de Investigação Agrária de Moçambique -IIAM)

- Ensures that technologies, land management practices, and information on land resources are useful and accessible to farmers
- Supports research collaborating with the government and interested organizations (including higher education institutions) in delivering results to address specific problems affecting the agricultural sector
- Hosts the reference database on soil resources (http://www.iiam.gov.mz/index.php?option=com_content&task=view&id=136&Itemid=186)

Instituto Nacional de Meteorologia (INAM)

- Coordinates the meteorological activity in all areas, chiefly in applied meteorology, with particular emphasis on climatology, agro-meteorology, aerospace, marine, and air quality monitoring, and encourages the exploitation of resources of climatic origin
- Issues an opinion in the field of meteorology, international relations, and with regard to cooperation agreements and international conventions
- Monitors weather events using regional and global numerical weather prediction (NWP) models such as BRAMS, HRM, SWAS_UM-12, the European Centre for Medium-Range Weather Forecasts (ECMWF), the Met Office Unified Model (UK Met-UM), and the Global Forecast System GFS.
- Collects and exchanges meteorological data (drought, floods, and windstorms, including cyclones) through GTS and its weather radar network with the South Africa Weather Service (SAWS) radars
- Reference meteorological data (<http://www.inam.gov.mz>)

National Institute of Hydrography and Navigation (INAHINA)

- Concerns navigation aid as a means of transport
- Collects regularly, processes, and analyses systematically data on tides, sea currents and bathymetric data for various applications
- Together with data from other institutions, these data are required for the implementation of risk assessments, particularly for climate change.

Instituto Nacional de Estatística (INE)

- A total of 164 Districts in Mozambique, INE does not have staff at the district level, with a total of 100 human resources placed over the 11 Provinces, which hampers census, survey, and data collection activities.
- Possesses the National Archives of Micro Data – a catalogue of surveys produced by INE, but will also contain surveys produced by institutions belonging to the National Statistical System
- Develops the National Data Archive with the purpose of promoting the effective use of data from surveys and censuses and to encourage their use for analysis and research.
- The National Data Archive accomplishes these objectives based on legislation on the National Statistical System and the United Nations Statistical principles, according to which microdata cannot be disclosed due to confidentiality or other reasons.

National Institute for Disaster Management (INGC)

- The disaster relief agency of Mozambique, geared toward coordination of all disaster management efforts (disaster prevention, disaster preparedness versus search/rescue, humanitarian aid) – Decree No. 37/99

- Responsible for conducting mitigation efforts (such as collection and analysis of data), undertaking preparedness measures (e.g. awareness campaigns), and coordinating disaster response (including distribution of food, tents, and other supplies)
- Since June 2008, also responsible, through the Reconstruction Coordination Office (GACOR), for the resettlement of persons displaced by natural disasters
- Prepares for and responds to both natural disasters (droughts, floods, and tropical cyclones) and man-made disasters (UNDP, 2006; UNICEF, 2007)

Technical Secretariat for Food Security and Nutrition (SETSAN)

- A multi-sectoral body across several ministries, coordinated by the Ministry of Agriculture (MINAG) and receives support from the United Nations Children's Fund (UNICEF), the Food and Agriculture Organization of the United Nations (FAO), and FEWS NET (www.setsan.org.mz)
- Conducts regularly Food Security and Nutrition Assessments and promotes food and nutrition security, acting as facilitator through initiatives to improve availability and quality information on vulnerability and food and nutrition insecurity, for informed decision-making (Abdula and Taela, 2005)
- Hosts Community and Household Surveillance (CHS) data and food insecurity data

Mozambique Red Cross (CVM)

- Assistance to vulnerable groups in collaboration with Government agencies (MINAG, MISAU, and INGC), vulnerability reduction, and disaster prevention
- Implements, but prior to disaster, plans activities and focuses on promoting access to water and food; in post-disaster phases, supports the provision of health care
- Empowers communities (program of Disaster Preparedness) with the abilities needed to reduce the negative effects of disasters and be able to better cope with the consequences of disasters when they occur (Abdula and Taela, 2005)

National Centre of Cartography and Remote Sensing (CENACARTA):

- Institution specialized in the treatment of geographic information of Mozambique that is involved in the whole process from data acquisition (aerial photography, satellite imaging, Global Positioning System (GPS)) prior to analysis and mapping complex applications development.
- Responsible for the direction, coordination, and implementation of activities of geo-mapping and remote sensing at the national level, dissemination of remote sensing techniques in the country, the acquisition, handling, processing, and distribution of images and geo-mapping data obtained via satellite
- Reference topographic data

Respondent : Sofala Agency for Economic Development (ADEL Sofala) (stakeholders in the DRR sector)

- Inadequate stakeholder coordination in DRM, DRR, and humanitarian response planning
- International organizations' interventions are mostly prioritized and mobilized in urban areas and less prioritized in rural areas (isolated and hard-to-reach areas)
- Lack of gender machinery, Gender DRM framework for gendered DRM interventions in the community

Recommendations –

- Gender integration in Planning
- Women directorate at the Province and District levels for supporting gendered DRM/DRR planning.
- District administrator – Consultative council to prioritize gender dimension as DRM/DRR implementation at the district level.
- Recommendation: gender-inclusive DRM/DRR planning at the local level.

Respondent : Girl Child Rights – GCR (stakeholders in the DRR sector)

- Inadequate local government coordination structure in DRM planning and interventions

- Inadequate state, non-state actors (CSO) coordination in disaster emergency management
- Local disaster management committee approaches in disaster emergency response are biased in community selection. The local community leader practices nepotism in beneficiary selection, and the village chief decides and prepares the beneficiary list.
- Inadequate in the DRM gender framework, Formulation of the District Gender Risk Management Framework/ District Women Resilience Framework
- Gendered climate risk-informed tools gaps in gender integration to DRR/resilience building
- Inadequate Capacity of service providers in DRR interventions
- Lack of awareness of the community to understanding about climate change, multi-hazards, and disasters

Recommendations :

- Each local DRR committee member needs to access instant national Radio & TV broadcasts of special weather bulletins and immediately disseminate /message to the community with megaphones, drums to spread the message within their community.
- This ensures that even illiterate members of the community are also informed on time. Having received prior training from the DRR committee, the community then knows how to respond. The members of the evacuation team use risk maps, which have been developed through a participatory process, to bring the community to safer ground.
- Multi-stakeholder coordination

Respondent : Mozambique Red Cross Society

- The basic strategy of the community-based disaster preparedness programme is for the Mozambique Red Cross Society⁴ to facilitate the creation of local disaster committees in each target community, trained and equipped to improve disaster response; this includes the establishment of community-based early warning systems.
- Warning dissemination: Local disaster committees, with support from Mozambique Red Cross Society community volunteers, work with communities to map local resources and identify real and perceived risks and traditional coping mechanisms. The committees are responsible for alerting and preparing communities to face hazardous weather conditions through an early warning system.
- Mozambique Red Cross Society volunteers were also active, visiting local schools and communities before the cyclone hit to warn parents and teachers to keep their children at home. HF radios provided to each Mozambique Red Cross Society district branch through the community-based disaster preparedness programme ensured communication and coordination between Mozambique Red Cross Society staff and volunteers and were a significant improvement on previous disaster preparedness and response operations, where communication was unreliable.

⁴https://preparecenter.org/wp-content/sites/default/files/cs-ewea-mozambique-en_0.pdf

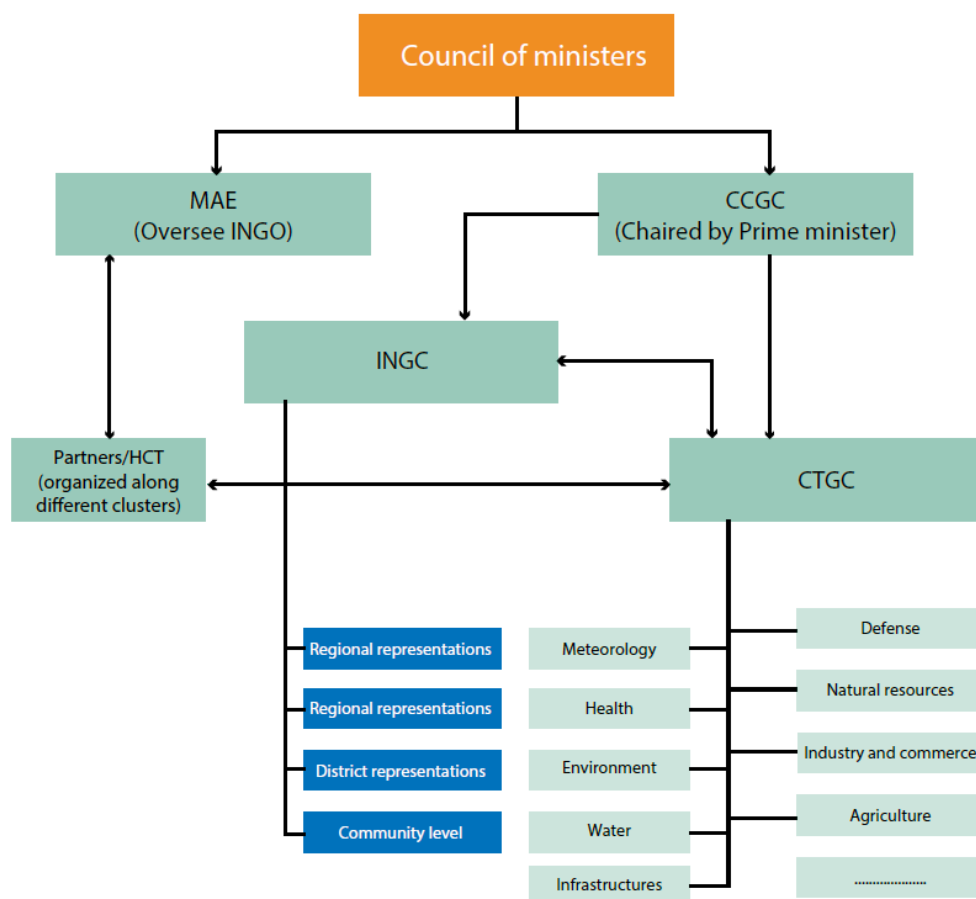


Figure : DRR Management structure in Mozambique, Source INGC 2006

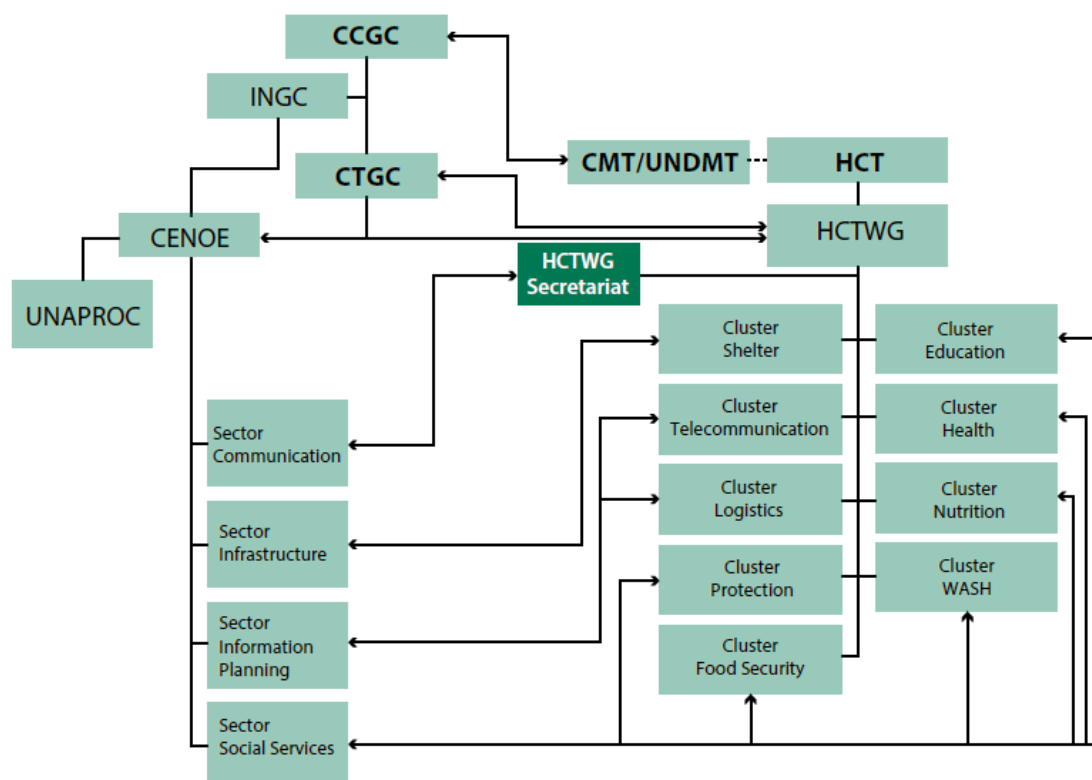


Figure : Interface of government and international actors in emergency response , source INGC 2006

District Level Disaster Response Committee :

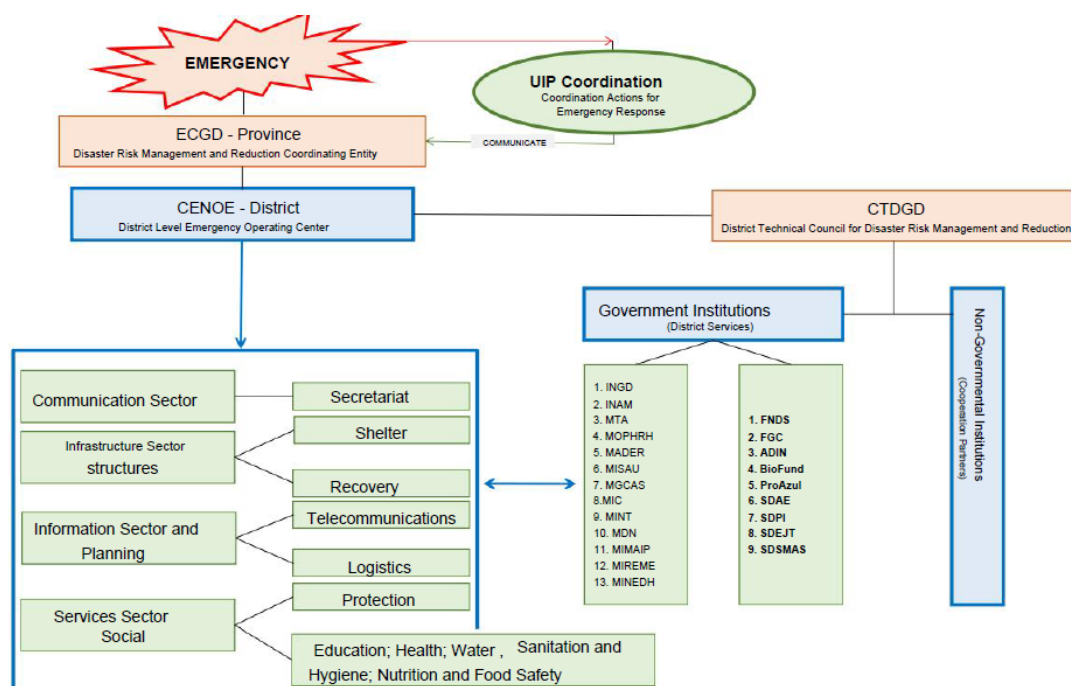


Figure : District level Coordination Mechanism for emergency response in the intervention

The above diagram shows the stakeholder structure at central and district level. INGD coordinate government sector/clusters and CSOs (INGOs, National NGOs). UN Clusters, INGOs mostly work independently and some extent update d about the humanitarian response.

Long term community based DRR schemes for productive asset intensification being undertaken while external grants (donor) being mobilized for DRR recovery. INGOs and UN Agencies implement some community based DRR schemes from their own DRR funds.

Observations & Recommendations

- More policy and advocacy for annual fiscal DRR budgetary allocation for creating more GDP growth from the rural growth sector (Agriculture, fisheries, livestock and poultry, agroforestry & fruit gardening, small business and value chain development)
- Government sector-specific NAP localizations strategy, DRR/CCA project design, mobilize external/internal funding, stakeholder engagement, and scheme implementation for DRR resilience building.
- Development Women inclusive DRR from Green climate Fund (GCF)

3.2 UN/Government structures engaging women and women-led organizations in DRR and resilience initiatives

Mozambique has significant gender inequalities in essential areas like economic opportunities, health, and education, and in making more room for women's voices in politics and their agency over crucial life choices. The country has one of the highest rates of child marriage and adolescent pregnancy in the world: More than half of girls in Mozambique are married before they turn 18, and almost half between the ages of 15 and 19 have already started having children. Mozambique has made progress in increasing enrollment and reducing gender gaps in primary education, but the gender gap widens in secondary school, with girls dropping out at higher rates than boys.

UN Cluster

WFP Mozambique project to scale up drought Anticipatory Action (AA) programme for food security nationwide, with a focus on Gaza and Tete provinces, is being implemented. In order to institutionalize AA, WFP is collaborating with government actors, such as INGD, NAM, and the Ministry of Agriculture (MADER) to establish a drought early warning system. This is being achieved by strengthening drought monitoring and forecasting capacities, including crop monitoring, and supporting contingency planning for anticipatory action to mitigate the impacts of drought on vulnerable, food-insecure populations living in the two provinces.

- CARE International, Catholic Relief Services Mozambique, DNAAS, Dorcas, FHI360, Food for the Hungry, IOM, Kukumbi, Mozambique Red Cross, NOS Saúde, Oxfam, Peace Winds Japan, Solidar Suisse, UNFPA, UN-Habitat, UNICEF, We World - GVC Onlus, World Vision.

FOOD SECURITY

- ACTION AID, ADRA, Caritas Diocesana de Quelimane, CIP, Conselho Empresarial de Zambézia - CEPZ, COSV, FAO, ForAfrika, Mani Tese, MSF, Save the Children International, Tzu Chi Foundation, WFP

EDUCATION

- ADPP, Associação Apoio Psicococial ao
- Domicilio, HelpCode, Malhalhe, Plan International, Save the Children International, UNICEF CHILD

PROTECTION

- AAMAZ, ACTION AID, REPSSI, Save the Children International, UNICEF HEALTH ADPP, CUAMM, FGH, IOM, IPAS, Kukumbi, Mozambique RED Cross, MSF, NOS Saúde, Pathfinder, UNFPA, UNHCR, UNICEF, VILLAGERIACH, WFP, WHO, World Vision NUTRITION DPS, UNICEF, WFP GBV
- UNFPA, NAFESA, Save the Children CCCM International, UNFPA
- IOM SHELTER CARE International, For Afrika, IOM, Mozambique RED Cross, Peace Winds Japan, UNHCR
- AAMAZ, ACTION AID, CARE International, UNHCR

3.3 Key gaps in gender integration within DRR and resilience-building initiatives

Mozambique has the 10th highest child-marriage rate and one of the highest adolescent pregnancy rates in the world ⁵ 4.9 children per woman, cementing poverty⁶, Low education, weak education, and the health of children and women, while female labor force participation (77 %) ⁷ agriculture (63 %) and are largely underpaid. substantially increase women and girls' access to sexual and reproductive health services, eliminate the gender gap at all levels in education, tackle head-on gender based violence, and address the gender disparities in employment opportunities.7.7 Women development planning Access to Mozambique Primary Health Care Strengthening Program to improve reproductive and maternal health; Few girls finish primary school (46%), even fewer finish secondary school (22%), and 56% of women are illiterate (upwards of 70% in rural areas) ⁸ Though women comprise the bulk of the unskilled workforce, especially in agriculture (63%), Feed the Future Mozambique Improved Seeds for Better Agriculture.

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

- Inadequate sectoral coherence, coordination gaps in developing climate and multi-hazard risk-informed DRM and DRM policy, strategy, interventions relating to gendered resilience and empowerment.
- Inadequate gendered disaggregated data and tailored informed tools for developing gendered (women, girls, and youth)needs and priority inclusive disaster emergency preparedness, contingency plan, and humanitarian assistance mobilization.
- Inadequate gendered disaggregated data (women, girls, and youth) , localized climate and multi-hazard risk and vulnerability information for quantifying the climate risk and vulnerability over the gender group, women-headed households, and livelihood assets.
- Inadequate climate risk information for the gender group, lack of operational forecasts for women, girls, and youth. children, the elderly, and the disabled age group for getting them prepared for the impending multi-hazards
- Lack of AAP Framework for monitoring and creating accountability of actors /stakeholders in sectoral DRR interventions
- Insufficient gendered climate risk and vulnerable information, informed tools to define gender entry point in risk-informed DRR /LDP planning because of sector departments inadequately being informed by the gender disagreed and gender differentiated climate and multi-hazard risk and vulnerability information
- Inadequate tailor-made informed tools on multi-hazard risk and vulnerability information on differential gendered impacts and developing risk-informed GiHA in EAP, EWEA, Forecast-based early schemes and interventions
- Violence against women tracking network, deployment of Forecast-based SGBV, PSEA, SEA incidence reporting
- People's mindset, Culture, religion, and patriarchal paradigm discourage women from speaking and let their voices be heard. Women's participation in the local-level decision-making process is being discouraged. Women have less influential capacity
- Promoting Women's education, developing a legal framework mandating women's education, and cash for female-headed households
- Access to Assets, women should own the land, economic decision of use of land by women,

Respondent : Ministry of Gender child and social action

⁵ <https://www.worldbank.org/en/news/opinion/2021/03/08/time-for-bold-action-to-advance-gender-parity-in-mozambique>

⁶ <https://www.worldbank.org/en/news/opinion/2021/03/08/time-for-bold-action-to-advance-gender-parity-in-mozambique>

⁷ <https://www.worldbank.org/en/news/opinion/2021/03/08/time-for-bold-action-to-advance-gender-parity-in-mozambique>

⁸ PEPFAR Mozambique Gender Analysis Country Operational Planning 2016, pgs 8-9.

3 Perfil de Género de Moçambique, 2016, pg 9.

Challenges :

- The national fiscal budget system focus on social cash transfer programme for the food security.
- Lack of base case scenarios, Gender action plan in every cluster,
- Lack of gendered recovery plan, gender information, informed tools (with local languages), gender integration, INGDC officers promoted to director, training
- National budget: Not having a systematic national risk financing mechanism over the national budgetary system for prioritizing the DRR interventions at the local level
- Lack of a risk-informed gender development plan at the District level
- Inadequate institutional structure, limited decentralized governance (climate) mechanism, inadequate participatory scope of women, girls, and youth access to local DRM/CPC, and local authority level decision-making process.
- Lack of gender machinery, gendered network /Gendered climate risk information network for supporting local government cluster(department) for gender risk consideration in gender responsive DRM/DRR-related scheme implementation process.
- Inadequate tools, methodology, and process for conducting post-disaster gendered rapid needs assessment, identify the loss and damage. Needs and priorities of women-headed households, girls, and youth groups.
- National policy and strategy highly focus on the Common Programme Framework (CPF) and place less emphasis given on gendered unprivileged groups (women, Girls, Youth, elderly, and disable population

Respondent : COALIZAO;

- Inadequate gendered (women, Girls, Youth, elderly, disabled population) inclusive participatory local governance system at the Province, District, administrative Post, and Village level for local development.
- Centralization of DRM/DRR interventions and Inadequate local level value chain support for women-led green entrepreneurship development (Improving income, strengthening market access, IGA, key value chain, Women on agriculture, children's medication).
- Extreme Poverty, inequality, education, knowledge, and understanding gap about the frequency and intensity of multi-hazards, inevitable understanding about rapid onset multi-hazards and disasters.
- Lack of a women's resilience framework. Inevitable legislation, laws, mandates for Women and girls having access to government power structures, governance system, gendered inclusive participation at the local level DRR and development planning and financing decision making, I
- Inadequate and multilingual improved early warning system is being disseminated through national Radio broadcasts, development of forecast-based early action for women, and operational forecasts for women
- Lack of a women DRM network at the district level to inform local level DRM/DRR planning and interventions

Recommendations :

- Multilingual improved early warning system being disseminated through national Radio broadcasts, development of forecast-based early action for women, and operational forecast for women.
- women DRM network at the district level to inform local level DRM/DRR planning and interventions.
- Gender responsive/inclusive local DRM/DRR/CCA/climate resilient plans (GiHA, Emergency preparedness, Response, recovery, CCA
- Gender action plan in every cluster, Risks and recovery plan, gender information, gender integration, employment of Sectoral gender officers for gendered DRR interventions.
- Capacity building and training for stakeholders in awareness at district, gender segregated gender tools (English and need to be translated into local languages)

Respondent : Ministry of Social Affairs (gender integration in DRR):

- Inadequate sectoral coherence, coordination gaps in developing climate and multi-hazard risk-informed DRM and DRM policy, strategy, interventions relating to gendered resilience and empowerment
- Inclusive financing mechanism for Women Smallholder farming - Agricultural Innovation Project (AIP), training to beneficiaries – Nutrition, WASH water, manure for agriculture, promote farming AIP.
- District development plan, village development plan, and budgeting issues should consider allocation for women and girls.

- Special DRR package for women-headed households (incentives, agri-inputs, social cash transfer, INGD social cash transfer) based on organic farming, poultry, and livestock farming support.
- Post-disaster recovery – any financing package for WLO entrepreneurship, cash transfer for business
- Women-headed households have access to receive a grant.
- Women's empowerment district allocation for the women
- Women's participation in the Local Government finance committee to oversee the DDP and budgeting process
- Program urban poor for livelihood income-generating program, training on cash transfers sustainability programme.
- Post-disaster recovery – any financing package for WLO entrepreneurship, cash transfer for business

Respondent : COALIZAO;

- Youth group recommended conducting a multi-hazard and climate change education awareness campaign through electronic media
- Developing the Youth gender focused risk financing projects and interventions
- Financing mechanism of Early warning improvements for the youth group?
- Youth engagement in gender responsive local planning

Respondent : Respondent : Sofala Agency for Economic Development (ADEL Sofala)

Key gaps :

- Inadequate gendered disaggregated data and tailored informed tools for developing gendered (women, girls, and youth)needs and priority inclusive disaster emergency preparedness, contingency plan, and humanitarian assistance mobilization.
- Inadequate gendered disaggregated data (women, girls, and youth) , localized climate and multi-hazard risk and vulnerability information for quantifying the climate risk and vulnerability over the gender group, women-headed households, and productive livelihood assets.
- Inadequate institutional structure, limited decentralized governance mechanism, inadequate participatory scope of women, girls, and youth access to local DRM/CPC, and local authority-level decision-making process.
- Lack of gender machinery, gendered network /Gendered climate risk information network for supporting local government cluster(department) for gender risk consideration in gender responsive DRM/DRR-related scheme implementation process.
- Inadequate tools, methodology, and process for conducting post-disaster gendered rapid needs assessment, to identify the loss and damage. Needs and priorities of women-headed households, girls, and youth groups.
- National policy and strategy highly focus on the Common Programme Framework (CPF) and place less emphasis on the gendered unprivileged groups (women, Girls, Youth, elderly, and disable population)
- Inadequate climate risk information for the gender group, lack of operational forecasts for women, girls, and youth. children, the elderly, and the disabled age group for getting them prepared for the impending multi-hazards

Respondent : Respondent : Instituto Nacional de Estadística (INE)/ National Institute of Statistics

1. Lack of structure and process of the existing early warning system (EWS), identify the gaps in developing and disseminating EWS to the local level, capturing the overall recommendations for improving the DRM structure and process, and a community-understandable EWS for all.
2. Develop and implement a national strategy with the participation of all sectors of society to guide and implement curricular reform to integrate disaster risk reduction subjects at all levels of formal education, as well as in university training.

4.0 Differential Impacts of Climate-Induced Disasters [Cyclones, Floods, Drought]

4.1 How have climate-induced disasters impacted women and men differently?

Persistent vulnerability factors	Vulnerable Group	Gender	Differential Impacts			Recommendations
			Cyclones	Floods	Drought	
Disaster-induced displacement/emergency evacuation	Women and Girls		Not having gender privacy-friendly provisions/facilities in evacuation shelters and shared accommodations for accessing ablution and bathing facilities with men and boys, and the risk of sexual abuse.	Not having gender privacy-friendly provisions/facilities in evacuation shelters and shared accommodations for accessing ablution and bathing facilities with men and boys, and the risk of sexual abuse.	Crop loss, food insecurity, water insecurity, famine.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
			Pregnant women do experience challenges accessing clinics as a result of impassable roads, flooded rivers, and this has resulted in home births with untrained birth attendants, increasing the risk of complications in birth, aftercare of the mother, and newborn babies	Pregnant women do experience challenges accessing clinics as a result of impassable roads, flooded rivers, and this has resulted in home births with untrained birth attendants, increasing the risk of complications in birth, aftercare of the mother, and newborn babies	Crop loss, food insecurity, water insecurity, famine.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
	Women and Children		Some women and children are travelling multiple times a week and long distances, averaging 10km to access food packs and Non-Food Items (NFIs), and are abused.	Pregnant women do experience challenges accessing clinics as a result of impassable roads, flooded rivers, and this has resulted in home births with untrained birth attendants, increasing the risk of complications in birth, aftercare of the mother, and newborn babies	Crop loss, food insecurity, water insecurity, famine.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
	Women, single mothers, widows, and adolescent girls		Without having adequate privacy and protection, living and basic utility services, girls are systematically falling victim to Gender Based Violence, Sexual exploitation by the male partners	Pregnant women do experience challenges accessing clinics as a result of impassable roads, flooded rivers, and this has resulted in home births with untrained birth attendants, increasing the risk of complications in birth, aftercare of the mother, and newborn babies	Crop loss, food insecurity, water insecurity, famine.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Pushing evacuees from the schools just after 2-3 weeks for reopening the school and stopping the emergency humanitarian food supply	Women, single mothers, widows, and adolescent girls		Systemic discriminatory approaches from the stakeholders will not continue humanitarian food support after 2/3 weeks, and also pushing from the schools to go back home, while their shelters are	Systemic discriminatory approaches from the stakeholders will not continue humanitarian food support after 2/3 weeks, and also pushing from the schools to go back home, while their shelters are		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset

Persistent vulnerability factors	Vulnerable Group	Gender	Differential Impacts			Recommendations
			Cyclones	Floods	Drought	
			completely /partially destroyed and can not build back better until they get any financial support. Those systemic discriminatory approaches push Women, single mothers, widows, and adolescent girls to engage in transactional sex in exchange for money.	completely /partially destroyed and can not build back better until they get any financial support. Those systemic discriminatory approaches push Women, single mothers, widows, and adolescent girls to engage in transactional sex in exchange for money.		for the frontline vulnerable gender group
Accessing humanitarian assistance	Women, Children, and Adolescent Girls		Difficult for women, single mothers, and widows to have emergency humanitarian support from crowded service trigger point, and subsequently being deprived and pushed to adopt transactional sex for having emergency food and NFI items from the emergency trigger points	Difficult for women, single mothers, and widows to have emergency humanitarian support from crowded service trigger point and subsequently being deprived and pushed to adopt transactional sex for having emergency food and NFI items from the emergency trigger points		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Cultural norms, male domination over the household, and irresponsibility of male family members to stay away from home and letting every pain holders to female family members of the family	Women, Girls, and Children		The irresponsibility of male members to support their family members in difficult times, and the hopelessness and trauma experienced by female members when it comes to emergency preparedness and evacuations, just ahead of the disaster trail starting in the locality.	The irresponsibility of male members to support their family members in difficult times, and the resulting hopelessness and trauma among female members, hinder their ability to take emergency preparedness and evacuations seriously as the disaster approaches.		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Cultural norms, irresponsibility of male family members to stay away from home for a longer time every week/month aftermath of disaster events	Women, Girls and Children		Stay away from home for long, sometimes not supporting, sometimes living alone with the family forever, and let every mother become the custodian running the family with no means of livelihood and pushing the family into persistent poverty and hunger.	Stay away from home for long, sometimes not supporting, sometimes living alone with the family forever, and let every mother become the custodian running the family with no means of livelihood and pushing the family into persistent poverty and hunger.		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Drop of schooling	Girls and Children		After the aftermath of a cyclonic disaster, the family falls into another vicious cycle of poverty and hunger. As a result, school-going children often need to support their families to ensure food and water security, which can lead to them becoming child laborers to feed themselves throughout the year.	After the aftermath of the flood disaster, the family falls into another vicious cycle of poverty and hunger. As a result, school-going children need to support their families to ensure food and water security, leading them to become child labor to feed themselves throughout the year.		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Recently became a victim of incident of SGBV	Single mother, widow, adolescent mother,		After the aftermath of the cyclone-induced trail of disaster destroyed the basic lifeline	After the flood, the aftermath of the flood induced a trail of disaster that destroyed		To reduce human tolls, Emergency contingencies, prepositioning life-

Persistent vulnerability factors	Vulnerable Group	Gender	Differential Impacts			Recommendations
			Cyclones	Floods	Drought	
	children , adolescent girls, disabled.		services (drinking water, WASH, Healthcare, food, etc.), the adolescent girls and women need to travel a long way to get drinking water every day, and are being sexually abused.	the basic lifeline services (drinking water, WASH, Healthcare, food, etc.). The adolescent girls and women need to travel a long way to get drinking water every day, and are being sexually abused.		saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Falling in epidemic, outbreaks/diseases/infections and loss of lives	Single mother, widow, adolescent mother, children , adolescent girls, youth, disabled group .		Aftermath of cyclone induced trail of disaster, another ripple effect of epidemic starts for destroying all drinking water resources, and people are subject to drinking polluted water, which causes epidemic outbreaks/diseases/infections and loss of lives. The most vulnerable members of the family, e.g., children, youth, and women, are the largest victims, followed by youth and men, because of a lack of immunity and malnutrition, a lack of awareness, and a lack of water treatment kits at the household level. The public healthcare services are inevitable for saving lives.	Aftermath of cyclone induced trail of disaster, another ripple effect of epidemic starts for destroying all drinking water resources, and people are subject to drinking polluted water, which causes epidemic outbreaks/diseases/infections and loss of lives. The most vulnerable members of the family, e.g., children, youth, and women, are the largest victims, followed by youth and men, because of a lack of immunity and malnutrition, a lack of awareness, and a lack of water treatment kits at the household level. The public healthcare services are inevitable for saving lives.		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Discrimination in accessing post-disaster humanitarian assistance	Single mother, widow, adolescent mother, children, adolescent girls, youth, disabled group.		The social norms, patriarchal dominion, irresponsible paternity, sometimes lead male members to unethically sell relief items and stay away from home, and subsequently, the female heads become hopeless and fall into extreme hunger and poverty.	The social norms, patriarchal dominion, irresponsible paternity, sometimes lead male members to unethically sell relief items and stay away from home, and subsequently, the female heads become hopeless and fall into extreme hunger and poverty.		To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Male ownership of agricultural lands	Single mother, widow, adolescent mother, children , adolescent girls, youth, disabled group .		Since all control of assets is falling in male hands and leaving females powerless, as a result, systemic laws and norms put women in peril of poverty tangles and encourage a persistent culture of male domination over females.	Since all control of assets is falling in male hands and leaving females powerless, as a result, systemic laws and norms put women in peril of poverty tangles and encourage a persistent culture of male domination over females.	Since all control of assets is falling in male hands and leaving females powerless, as a result, systemic laws and norms put women in peril of poverty tangles and encourage a persistent culture of male domination over females.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group

Persistent vulnerability factors	Vulnerable Group	Gender	Differential Impacts			Recommendations
			Cyclones	Floods	Drought	
Loan defaulter	Single mother, widow, adolescent mother, children , adolescent girls, youth, disabled group .		In most cases, the aftermath of a cyclone disaster, families need to depend on microcredit facilities and access mobile money. In this case, the male member withdraws the money and leaves home, leaving the family in a state of hunger and poverty, making the women the loan defaulters.	In most cases, the aftermath of a cyclone disaster, families need to depend on microcredit facilities and access mobile money. In this case, the male member withdraws the money and leaves home, leaving the family in a state of hunger and poverty, making the women the loan defaulters.	In most cases, the aftermath of a cyclone disaster, families need to depend on microcredit facilities and access mobile money. In this case, the male member withdraws the money and leaves home, leaving the family in a state of hunger and poverty, making the women the loan defaulters.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Discrimination in accessing government sector department services	Single mother, widow, adolescent mother, children, adolescent girls, youth, disabled group.		Systemic institutional description for Single mothers, widows to access government subsidies, agriculture input facilities, and get market prices for the women smallholder farmers.	Systemic institutional description for Single mothers, widows to access government subsidies, agriculture input facilities, and get market prices for the women smallholder farmers.	Systemic institutional description for Single mothers, widows to access government subsidies, agriculture input facilities, and get market prices for the women smallholder farmers.	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Inadequate access to inclusive finance for homestead-based IGA	Single mother, widow, single mother, adolescent mother, children, adolescent girls, youth		The banking system and credit operators ask for collateral guarantees for access to loans, in which poor Single mothers and widows are not able to access, and become entrepreneurs	The banking system and credit operators ask for collateral guarantees for access to loans, which poor Single mothers and widows are not able to access, and become entrepreneurs	The banking system and credit operators ask for collateral guarantees for access to loans, which poor Single mothers and widows are not able to access, and become entrepreneurs	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group
Limited scope and access to education, agricultural lands, and agroecology, as well as limited access to other governmental services, particularly for women, due to having climate refuge status.	Single mother, a widow, single mother, adolescent mother, children, adolescent girls, youth		The current disaster incidence creates persistent poverty, displacement, and a climate refugee status, leaving individuals without access to education and agricultural land, thereby making their livelihoods resilient to climatic shocks.	The recurrent disaster incidence creates persistent poverty, tangled social issues, persistent internal displacement, and a climate refugee status, without access to education and agricultural land, making livelihoods resilient to climatic shocks.	The recurrent disaster incidence creates persistent poverty, tangled social issues, persistent internal displacement, and a climate refugee status, without access to education and agricultural land, making	To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group

Persistent vulnerability factors	Vulnerable Group	Gender	Differential Impacts			Recommendations
			Cyclones	Floods	Drought	
					livelihoods resilient to climatic shocks.	
Access to life-saving unity services			44.7 % households are collecting water from boreholes/manual pumps) and 49.3 % households from rivers in an unsafe condition) drinking water			To reduce human tolls, Emergency contingencies, prepositioning life-saving food items, medical kits, water treatment kits, and rainwater harvesting kits during disaster onset for the frontline vulnerable gender group

4.2 What are the different coping mechanisms adopted by women and men to climate-induced disasters? ; (challenges and recommendations)

Mozambique coping strategies :

After the cyclones Idai and Kenneth which hit the country in March and April 2019, and Cyclone Eloise in January 2021, many families lost everything –their homes, their livelihoods and productive family members– and this has heightened the risks of adopting negative coping strategies, including pushing women and children into child labour, child trafficking, child early forced marriage and survival sex, to survive in the months ahead. Concurrently, the cyclones drastically weakened the response capacities of the social welfare and justice sectors, causing large numbers of pre-existing and emergency-related protection cases to go unaddressed.

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

Coping mechanism in climate-induced disaster:

- Peace work, business
- Working in a fish culture farm, an agricultural firm, a livestock firm
- Selling productive assets
- Transactional sex
- Charcoal making and selling firewood

The positive coping mechanism :

- Piecework - Day labor, casual job, South Africa to feed the households
- Small business
- Post-disaster recovery Basic Social Subsidy Program (Programa de Subsídio Social Básico – PSSB) by INGD
- Support from relatives
- The Food Subsidy Program
- Mozambican plans for poverty reduction

Negative coping mechanism:

- Cutting trees and making charcoal, selling firewood etc.
- Selling productive assets, belongings, etc.
- Transactional sex
- Adolescent girls are being forced into early marriage
- Trafficking of girls and children
- Migration
- Selling of humanitarian assistance, hygiene kits/food bag, selling stuff,

Respondent : Respondent : Ministry of Gender child and social action

Coping mechanism in Climate induced disaster:

- Peace work, business
- Working in fish culture farm, agricultural firm, livestock firm
- Selling productive assets
- Transactional sex
- Charcoal making and selling firewood

The positive coping mechanism :

- Piecework - Day labor, causal job, south Africa to feed the households
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- The Food Subsidy Program
- Mozambican plans for poverty reduction

Negative coping mechanism:

- Cutting trees and making charcoal, selling firewood etc.
- Selling productive assets, belongings etc.
- Transactional sex
- Adolescent girls are being forced into early marriage
- Trafficking of girls and children
- Migration
- Selling of humanitarian assistance, hygiene kits/food bag, selling stuff,

Respondent : COALIZAO;

The positive coping mechanism :

- Piecework
- Day labor
- Small business

Negative coping mechanism:

- Limited funding of contingency plans
- Limited preparedness beyond rural areas and natural hazards
- Cultural barriers and the “wait and see” approach:
- Mozambique has difficulties following recommendations from the contingency plans because of sociocultural barriers, such as group pressure, land ownership, and power relations, which, altogether, still lead to the reactive and dangerous “wait and see” attitude.
- Asset losses are the implementation of community-based disaster risk reduction (CBDRR), mainly for flood response
- Motivation and dropping out of committee members
- Emergency preparedness kit management
- Cutting trees and making charcoal, selling firewood etc.
- Selling productive assets, belongings etc.
- Transactional sex
- Adolescent girls are being forced to early marriage
- Trafficking of girls and children Migration

Respondent : Respondent : Sofala Agency for Economic Development (ADEL Sofala)

The positive coping mechanism :

- Piecework
- Day labor
- Small business

Negative coping mechanism:

- Cutting trees and making charcoal, selling firewood etc.
- Selling productive assets, belongings etc.
- Transactional sex
- Adolescent girls are being forced into early marriage
- Trafficking of girls and children Migration

Respondent : Girl Child Rights (GCR)

The positive coping mechanism :

- Piecework
- Day labor
- Small business

Negative coping mechanism:

- Cutting trees and making charcoal, selling firewood etc.
- Selling productive assets, belongings etc.
- Transactional sex
- Adolescent girls are being forced into early marriage
- Trafficking of girls and children Migration

Respondent : Respondent : Instituto Nacional de Estatística (INE)/ National Institute of Statistics

The positive coping mechanism :

- Piecework
- Day labor
- Small business

Negative coping mechanism:

- Cutting trees and making charcoal, selling firewood etc.
- Selling productive assets, belongings etc.
- Transactional sex
- Adolescent girls are being forced into early marriage
- Trafficking of girls and children Migration

4.3 key barriers to effective women's engagement in DRR and resilience building

Respondent : Ministry of Gender, child, and social action

- Ministry of Gender, Child and Social Action is currently in advocacy with the Ministry of Land and Environment for the development of gender-focused national adaptation and mitigation planning and localization of climate.
- INDG developed DRM master plan and annual contingency plan
- After the aftermath of cyclones Idai and Kenneth, there is some advocacy on ensuring the safeguarding of women and girls.
- The ministry emphasized the gender response contingency plan, defined the role of women in service deliveries, and ensured gender responsive humanitarian action
- Reinforcement of legal issues and mandates over the humanitarian laws for adopting gender discrimination in the distribution of humanitarian assistance , post-disaster early recovery support, disaster response, and recovery support

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

Challenges & Recommendations :

- The national fiscal budget system focus on social cash transfer programme for the food security.
- Lack of base case scenarios, Gender action plan in every cluster,
- Lack of gendered recovery plan, gender information, informed tools (with local languages), gender integration,
- Lack of a systematic national risk financing mechanism over the national budgetary system for prioritizing the DRR interventions at the local level
- Lack of a risk-informed gender development plan at the District level
- Inadequate institutional structure limited decentralized governance (climate) mechanism, inadequate participatory scope of women, girls, and youth access to local DRM/CPC, and local authority level decision-making process.
- Lack of gender machinery, gendered network/Gendered climate risk information network for supporting local government cluster (department) for gender risk consideration in gender responsive DRM/DRR-related scheme implementation process.
- Inadequate tools, methodology, and process for conducting post-disaster gendered rapid needs assessment, to identify the loss and damage. Needs and priorities of women-headed households, girls, and youth groups.

Respondent : Respondent : Ministry of Gender, child and social action

- Inadequate sectoral coherence, coordination gaps in developing climate and multi-hazard risk-informed DRM and DRM policy, strategy, interventions relating to gendered resilience and empowerment
- Inclusive financing mechanism for Women Smallholder farming - Agricultural Innovation Project (AIP), training to beneficiaries – Nutrition, WASH water, manure for agriculture, promote farming AIP.
- District development plan, village development plan, and budgeting issues should consider allocation for women and girls.
- Special DRR package for women-headed households (incentives, agri-inputs, social cash transfer, VSLA) based on organic farming, poultry, and livestock farming support.
- Post-disaster recovery – any financing package for WLO entrepreneurship, cash transfer for business
- Women-headed households have access to receive a grant.
- Women's empowerment district allocation for the women
- Women's participation in the Local Government finance committee to oversee the DDP and budgeting process
- Program urban poor for livelihood income-generating program, training on cash transfers sustainability programme.
- Post-disaster recovery – any financing package for WLO entrepreneurship, cash transfer for business

Respondent : COALIZAO;

- Youth group recommended conducting a multi-hazard and climate change education awareness campaign through electronic media
- Developing the Youth gender focused risk financing projects and interventions
- Financing mechanism of Early warning improvements for youth group?
- Youth engagement in gender responsive local planning
- Disaster Civil Protection Committee of Blantyre District

Key gaps :

- Inadequate gendered disaggregated data and tailored informed tools for developing gendered (women, girls, and youth)needs and priority inclusive disaster emergency preparedness, contingency plan, and humanitarian assistance mobilization.
- Inadequate gendered disaggregated data (women, girls, and youth) , localized climate and multi-hazard risk and vulnerability information for quantifying the climate risk and vulnerability over the gender group, women-headed households, and productive livelihood assets.
- Inadequate institutional structure, limited decentralized governance mechanism, inadequate participatory scope of women, girls, and youth access to local DRM/CPC, and local authority-level decision-making process.
- Lack of gender machinery, gendered network /Gendered climate risk information network for supporting local government cluster(department) for gender risk consideration in gender responsive DRM/DRR-related scheme implementation process.
- Inadequate tools, methodology, and process for conducting post-disaster gendered rapid needs assessment, to identify the loss and damage. Needs and priorities of women-headed households, girls, and youth groups.
- National policy and strategy highly focus on the Common Programme Framework (CPF) and less emphasis is given on gendered unprivileged groups (women, Girls, Youth, elderly, and disable population)
- Inadequate climate risk information for the gender group, lack of operational forecasts for women, girls, and youth. children, the elderly, and the disabled age group for getting them prepared for the impending multi-hazards

Respondent : Girl Child Rights (GCR)

- Reducing SGBV, early child marriage
- More DRR programmes in Diversified livelihood options, alternative livelihoods
- Development of a Local gendered DRM committee for Preparedness and response

4.4 Recommend strengthening resilience among vulnerable women and girls to climate-induced disasters

Respondent : Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD),

- Revisioning DRM Policy/strategy: Retrofitting DRM policy, action planning from much emphasized Annual Contingency Planning and post-disaster humanitarian mobilization to ex-ante and longer-term DRR interventions at the local level.
- Climate risk-informed DRR planning for the local level sector department.
- DRM risk-management framework for the local government
- Gendered climate risk management framework
- Revisioning the government's annual fiscal budgeting system and budgetary allocations for DRR risk-informed and targeting Women-led DRR and resilience growth, inclusive annual DRR schemes for achieving multiple objectives, e.g., DRR and resilience building, inclusive household-level green growth, and small and medium-sized entrepreneurship development.
- Gendered risk financing framework for ex-ante DRR financing to women-led green entrepreneurship development, smallholder farming, etc.
- Risk transfer inclusive Women-led DRR/Green entrepreneurship development at the local level.
- GoM's inadequate policy action, planning tools for mobilizing ex-ante resources to respond to disasters, and key challenges persist in institutional and technical capacity to effectively prepare for, respond to, and recover from disasters.
- Inadequate government coherent institutional policy action, sector engagement approach, coordination between relevant ministries and agencies through the Technical Council for Disaster Risk Management (CTGC), and, as needed, the National Emergency Operations Center (CENOE).
- Enhancing INGC capacity at the province and district levels for DRM and DRR service deliveries.

Respondent : Respondent : Ministry of Gender, child and social action

Challenges :

- Inadequate Technical Working Group(TWG) for action planning
- Lack of access to funds to support the overall response; Getting specific data to support decision making; Equipment and capacity building (Logistics, Information management); Involvement of the private sector for an adequate response; Timely access to DRR Funds, both national and international;
- OFF enhances beneficiary countries' capacity by harnessing the operational experience of advanced National Meteorological and Hydrological Services (NMHS). Operating and maintaining observing networks and internationally exchanging data is a complex undertaking, particularly for countries with limited human and institutional capacity and challenging national circumstances.

Recommendations :

- Enhance safe and dignified site management to improve the living conditions of displaced and host communities.
- Strengthen community participation to enable displaced communities to play a central role in decision-making
- Reinforce site-level coordination to facilitate access to critical services and assistance.
- Develop capacity among authorities, partners, and displaced populations so that CCCM and protection principles are at the forefront of the response.
- The National Directorate for Gender Inclusion to DRR / DRM -policy/strategy in Mozambique needs to develop DRM gender strategies, roles, and responsibilities, including the identified barriers to gender inclusion in policy, strategy, decision making, disaster preparedness planning, contingency preparations, DRR interventions, etc.
- Second in-person meeting organized with the Team Leader on Climate Change of UNDP and discussed the UNDP support on the DRM & DRR related INGD and other duty bearer capacity building, etc. Visited the National Emergency Operative Center (CENOE) of INGD and discussed the emergency operations center (EOCs).

Respondent : Respondent : Sofala Agency for Economic Development (ADEL Sofala)

- Expanding Women's Opportunities in Agriculture
- Promoting Health for Women, Girls, and Families
- Helping Women and Adolescent Girls Affected by HIV
- Addressing the Needs of Orphans and Vulnerable Children
- Women lead and participate in decision-making at all levels

- Women, especially the poorest and most excluded, are economically empowered and benefit from development
- To increase women's leadership in peace, security, and humanitarian response
- National planning and budgeting processes promote stronger institutional accountability to gender equality commitments

Respondent : Girl Child Rights (GCR)

- Closing the gender gap in girls' access to education & incentives
- Government gender strategy at every administrative Country> Province > District > Administrative Post > Community level
- Policy mandates and an actionable gender strategy for women's access to agriculture and fisheries resources, because eighty Percent of the population of Mozambique cannot afford an adequate diet. Almost half of the children are considered chronically malnourished.
- Women's representation in the legislative body, the decision-making process

Respondent : UNDP

- Strengthening Local Risk Management and Mainstreaming Disaster Risk Reduction (DRR)
- Strengthen national capacities at all levels to reduce the risk of disasters and mitigate their impacts on vulnerable populations in the country.
- Policies and norms developed for humanitarian response, DRR, and vulnerability reduction.
- DRR mainstreamed in national development plans and programmes.
- Central, provincial and district level institutions strengthened for disaster risk reduction, contingency planning, and emergency preparedness and response;
- Inter-sectoral co-ordination capacity for DRR and emergency preparedness strengthened at central provincial and district levels;
- Participatory projects implemented to engage communities in disaster risk and vulnerability reduction and emergency preparedness
- Early warning system strengthened for natural hazards at central, provincial and district level;
- Information sharing and knowledge management strengthened between the different sectors for preparedness, contingency planning, response and early recovery.
- Develop gender-based methodologies and carry out research to combat the feminization of poverty gender-sensitive policies, and data collection, and supporting initiatives that improve women's health and expand their choices in life. (UNFPA)
- Displacement
- Lack of designated disaster shelter :GBV
- Limited Access to GiHA
- opportunities to borrow money to start a business
- opportunities to learn without harassment so that they can focus on their schoolwork.
- Local Resource based women entrepreneurship

5.0 Chapter: Focus Group Interview with the community

Organized field visit and Focus Group Discussion (FGD) in the resettlement area of flood victims in Boane District (Maputo Province) and discussed with Local Disaster Risk Management Committees (CLGRC) and the vulnerable community in Boane. The FDG conducted a semi-structured questionnaire to identify the community risk/vulnerability and coping strategy over the past disaster preparedness, response, and recovery in the locality. What are the root causes of food insecurity and protracted livelihood options, coping capacity, at what level their voice being heard, the level of community participation in local disaster management committee, what are the emergency supports (Food and NFI) they receive during disaster emergency, the responsibility of local organizations/stakeholders/ WLO in DRR, the understandability of EWS and what are the recommendations for their resilience building etc.



Figure : Boane District (Maputo Province) and discussed with Local Disaster Risk Management Committees (CLGRC) and vulnerable community in Boane

1) How do communities receive early warning of cyclones, floods, and droughts, and is the information understandable?

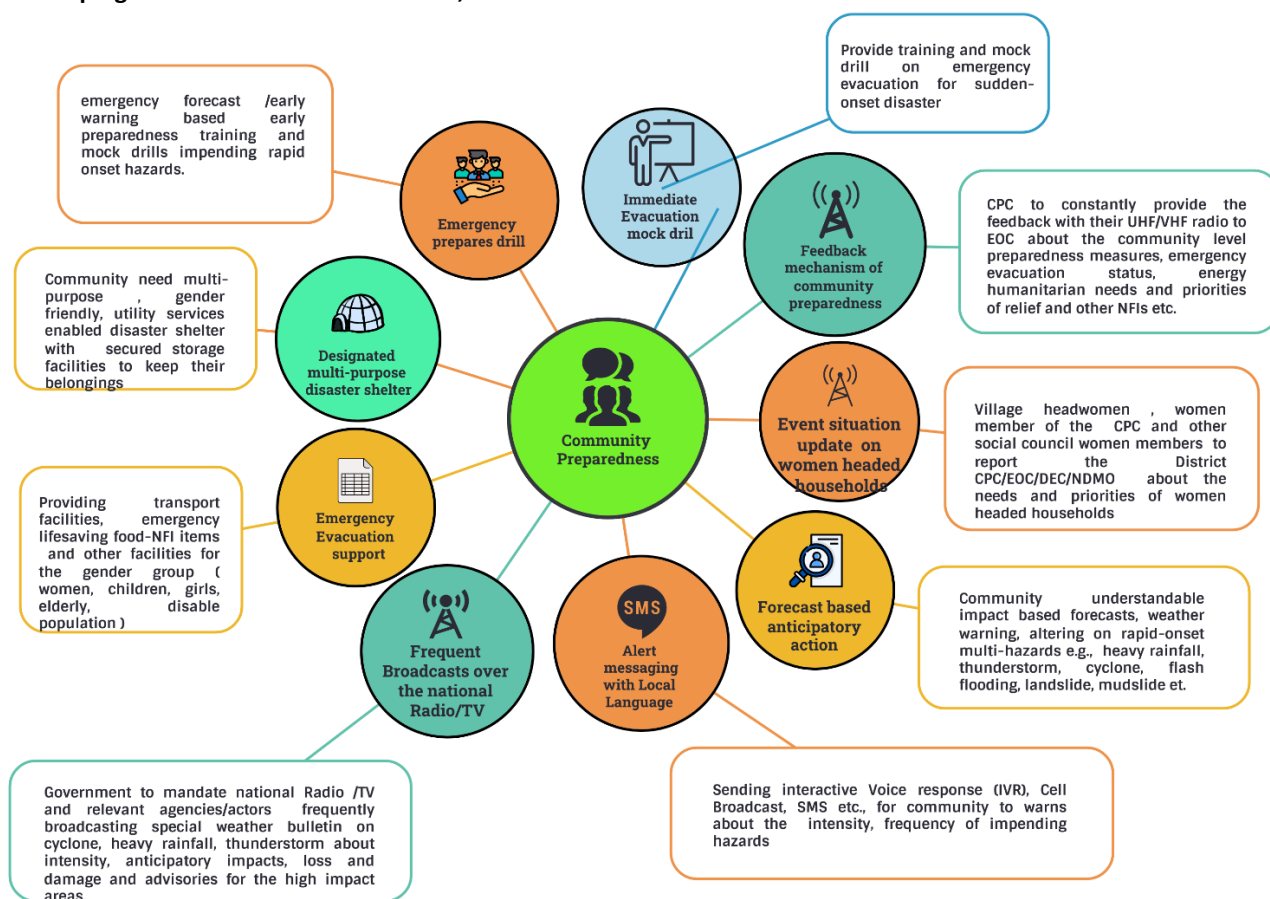
- During cyclone onset, CENOE works for 24 hours
- All the agencies and groups at the contingency plan meet at CENOE, The community representative calls at CENOE and provides updates, compiles info, briefing notes, and based on this, the Council of Ministers assesses and provides an orange alert for the situation getting more dangerous The Council of Ministers informs the president, then the president issues red alert
- INGD at the community level has a megaphone, the members of local councils, but the critical districts have dedicated staff at high-risk districts.
- Prepositioning relief items at the remote close of every district

- The **UNAPROC**, or the civil protection national unit, is subordinated to the CENOE and is considered a very important element of response. When natural hazards that can provoke a disaster occur, the CENOE is activated according to the institutional alert levels:

Alert Level	Definition	Functioning	CENOE response
Green	Normal situation	Surveillance without alert	Surveillance and monitoring of possible disaster risks. Prevention, mitigation and preparedness activities. Response plans actualization and spreading.
Yellow	Imminent emergency	Surveillance/ Partial Alert	Permanent situation monitoring, prepare response activation according to specific protocols, communication to population and to Coordinating Council. Activation of Local Risk Management Committees.
Orange	Imminent Disaster with possible reversion	Partial Alert	Partial Activation. Mobilization of material and equipment to risk zones. Inform and recommend communities to seek for safe shelter. Communication to population, keeping it aware of alerts. Communication to the Council of Ministers.
Red	Disaster, decreed by the President of the Republic	Total Alert	Total activation of the CENOE and UNAPROC. Seek for donations. Coordinate immediate response, privileging search and rescue and humanitarian assistance. Convoke CCGC members. Communication to population on response activities. Gather damage information.

Source : Adapted from INGC (2006), Estabelecimento e Funcionamento do CENOE

Developing on real-time radio broadcasts, weather bulletin and advisories:



The traditional participatory consultation process (Chieftainship) being practiced for forecasted weather risk interpretation and early warning dissemination decisions remains pending until the CPC meeting is called by the village headman & Village headman and decides on evacuations to safe ground/evacuation center, which is taking time for emergency and time-critical evacuation decisions in a traditional participatory decision-making way. In

the traditional warning dissemination system, INGD and the Water Resources Department (WRD) jointly analyze the multi-hazard risk and vulnerabilities of the met agency issuing bad weather forecasts, and accordingly, deliver the early warning message through social networks (WhatsApp, Facebook).

Mozambique Red Cross Society

- Local disaster committees, with support from Mozambique Red Cross Society community volunteers, work with communities to map local resources and identify real and perceived risks and traditional coping mechanisms. The committees are responsible for alerting and preparing communities to face hazardous weather conditions through an early warning system.
- Mozambique Red Cross Society volunteers were also active, visiting local schools and communities before the cyclone hit to warn parents and teachers to keep their children at home. HF radios provided to each Mozambique Red Cross Society district branch through the community-based disaster preparedness programme ensured communication and coordination between Mozambique Red Cross Society staff and volunteers and were a significant improvement on previous disaster preparedness and response operations, where communication was unreliable.
- Capacity enhancement of Provincial Technical Council for Disaster Management (Conselho Técnico Provincial – CTP), while districts have District Technical Council (Conselhos Técnicos Distritais – CTD). The technical councils work as DRR platforms. They are the only institution that brings together state, NGO/CSO and private sector actors to discuss matters related to DRR.
- Capacity enhancement of the Directorate for the Development of Arid and Semi-arid areas (DÁRIDAS) for risk assessment of drought and collection of sectoral data. DARIDAS as directorates of INGC's, currently leading and coordinating actions in about 28 arid and semi-arid districts (out of Mozambique's 128 districts). In order to develop the arid and semi-arid areas, the Government established Multiple Use Resource Centres (Centros de Recursos de Uso Múltiplo – CERUMs) in highly drought-prone districts, where people can learn and receive government assistance for drought management such as: Disaster Risk Assessment (DRA) in Mozambique, National Risk Assessment (NRA)/ NGC, National Centre of Cartography and Remote Sensing (CENACARTA), National Directorate of Geological Survey (DNG), DNA, Famine Early Warning Systems Network (FEWS NET) Mozambique, IIAM.

Recommendations from Local Disaster Risk Management Committees (CLGRC):

One of the most significant barriers is identified as the early warning dissemination process, which is characterized by a cascading, push-messaging style, and the warning sensitization process, resulting in a domino effect on the group-based interaction process (Civil Protection Committee), leading to delays, inefficiency, and ineffectiveness in awareness. The traditional, cascading, human channel-driven multi-hazard and disaster warning system often creates confusion about the warning.

During the organized meeting with committee members (Local Disaster Risk Management Committees (CLGRC) and the vulnerable community in Boane), it was explicitly mentioned that the delay in receiving the cyclone early warning was due to the system used, which was based on a WhatsApp group, and was not timely or accurate at the individual level. National media outlets (Radio, TV) ideally play a role in raising swift and sufficient mass awareness about impending multi-hazards and extreme weather events by not broadcasting cyclones, heavy rain, tornadoes, and thunderstorms too frequently. The critical complaints from the community are that the national media outlets broadcast cyclone early warnings after the news, which leads to mass mortality in the vulnerable community, not aware of the intensity of the cyclone, and accompanied by thunderstorms, triggering immediate flash flooding and immediate consequences for households and settlements located along the water runoff drainage channel and downstream. The community demanded an understandable, impact-based, multi-hazard early warning system being broadcast through national electronic media (radio TV/SMS/ Cell Broadcast/, IVR, etc.).

The committee demanded a free radio set, a precision level, and timely early warning. The committee demanded household-based inclusive finances for disaster recovery and household income-generating activities, food, and livelihood security.

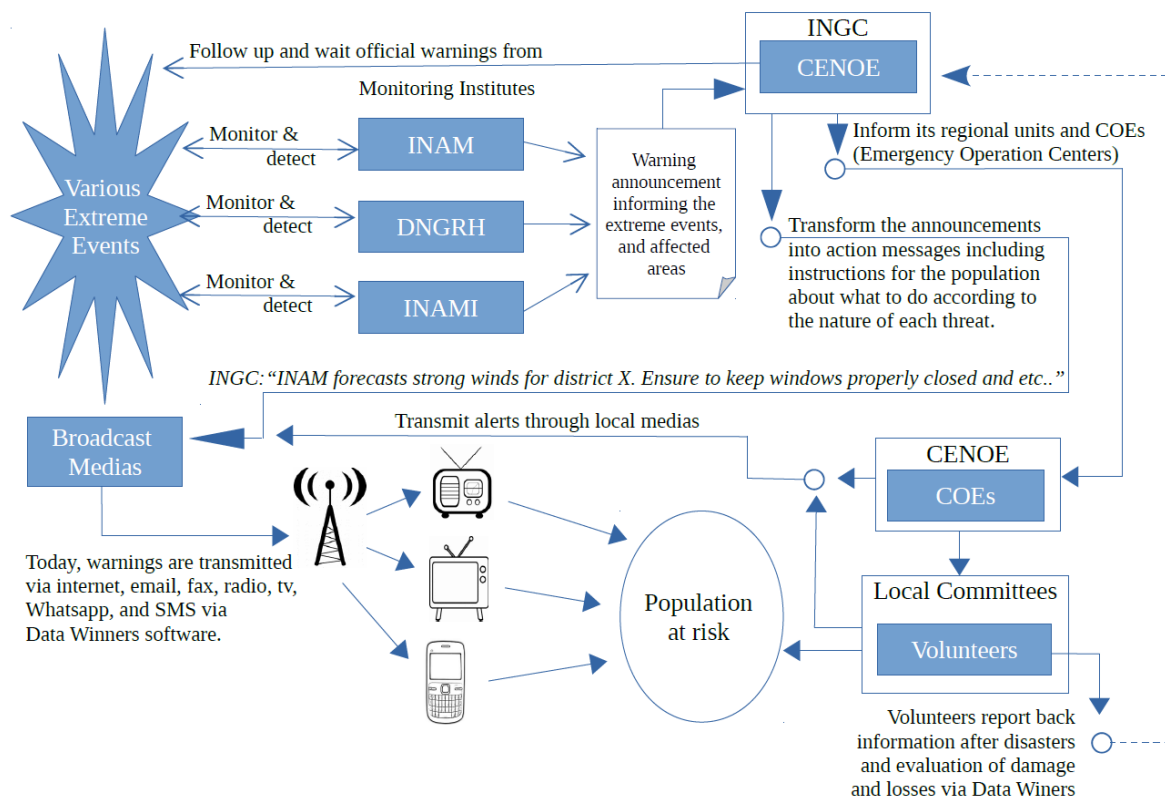


Figure : Early warning transmission and dissemination process

- Designated multi-purpose disaster shelter.
- The community needs a multi-purpose, gender-friendly, utility services-enabled disaster shelter with secured storage facilities for its belongings.
- Providing transport facilities, emergency lifesaving food-NFI items, and other facilities for the gender group (women, children, girls, elderly, disable population)
- Emergency forecast /early warning based on early preparation training and mock drill before the hazard makes landfall/disasters are highly likely to occur.
- CLGRC will constantly provide feedback to CENOE/NOE with their UHF/VHF radio about community-level preparedness measures, emergency evacuation status, energy humanitarian needs and priorities of relief, and other NFIs, etc.
- Feedback mechanism of community preparedness
- Event situations update on women-headed households
- Emergency prepares drill.
- Emergency Evacuation support
- Community impact-based forecasts, weather warnings, altering on rapid-onset multi-hazards, e.g., heavy rainfall, thunderstorms, cyclones, flash flooding, landslides, mudslides, etc.
- Government to mandate national Radio /TV and relevant agencies/actors frequently broadcasting special weather bulletins on cyclones, heavy rainfall, thunderstorms about intensity, anticipatory impacts, loss and damage, and advisories for the high-impact areas.
- Instant Messaging with Local Language
- Interactive Voice Response, Cell Broadcast, SMS, etc. so that community can understand the intensity of hazards
- Vulnerable communities need precision-level cyclone early warning. This shortcoming is that the community deliberately ignored and was not aware of the TCF early warning, which contributed to high mortality.
- The CLGRC member mentioned getting messages in delay because messages are being transmitted through the nested loop.
- Vulnerable communities have less understanding of the intensity, frequency, and anticipatory loss and damage level of the warnings they are receiving.
- National AM/FM Radio/TV needs to broadcast the special weather bulletin every 10-15 minutes during the cyclone's arrival at the Mozambican coast and its approach to the locality. The bulletin needs to be broadcast in all local languages.

- The government needs to mandate that the national cell phone transmit SMS very frequently in most of the local languages.
- The early warning for heavy rainfall triggered flash flooding recently, which was activated only in riverine flood-prone districts of Mozambique.

Flood Forecasts:

- Community-based flood forecasts and early warnings are in place in most flood-vulnerable districts, but impact-based flood forecasts, forecast-based anticipatory action, and preparedness are still required.

Recommendations:

- Households and Communities demanded free radio sets (solar PV power, winding) to access radio broadcasts based on early warning.
- Community radio/national radio will broadcast multi-hazard early warnings in all local languages in a timely manner.
- Demanded toll-free cell phone communication/messages by CLGRC members.
- Toll-free IVR/ cell broadcasts
- Livestock and Fisheries disaggregated climate impact data.
- Community to listen to Radio /TV broadcasts for emergency preparedness until CLGRC in group meeting advises on sheltering
- Technical capacity to understand the warning.
- In FGDs with the CLGRC :
- Enhance awareness of Women, girls, and the early warning
- Women need to decide when, where, and how to take shelter on safe ground.
- Community radio, National radio, Toll-free cell phone communication, IVR, Cell broadcasts on humanitarian situations, awareness about SGBV, etc.

2) What suggestions would you propose to the government about (improving) early warnings for cyclones, floods, flash floods, heavy rainfall, and drought?

Preparedness:

- Emergency forecast /early warning-based early preparedness-related training and mock drills before the hazard makes landfall/as disasters are highly likely to occur.
- Provide training and a mock drill on emergency evacuation for sudden-onset multi-hazards and disasters (heavy rainfall, flash flooding, landslides, thunderstorms, tornadoes, etc.) that may impede.
- CLGRC will constantly provide feedback to NOE/EOC with their UHF/VHF radio about community-level preparedness measures, emergency evacuation status, emergency humanitarian needs, priorities of relief and other NFIs, etc.
- Village headwomen, women members of the CLGRC, and other social council women members to report the District INGD/NOE about the needs and priorities of women-headed households
- Community needs multi-purpose, gender friendly, utility services enabled disaster shelter with secured storage facilities to keep their belongings.
- Installation of a gender-friendly multi-purpose evacuation center
- Transport facility for emergency evacuation
- Emergency prepositioning of Food during difficult situations (energy biscuits, dry foods, etc.)
- Emergency water treatment tablets, WASH kits, and rainwater harvesting systems in every household

Early Earning :

Recommendation :

- District administration, director, safer areas,
- Megaphone, safer place,
- Move to a safer place, a Safer building, agriculture affected- women /girls are affected there livelihoods
- Comprehensive operational forecast and risk management are required.
- Community impact-based forecasts and weather warnings, responding to rapid-onset multi-hazards, e.g., heavy rainfall, thunderstorms, cyclones, flash flooding, landslides, mudslides, etc.
- Interactive Voice Response, Cell Broadcast, SMS, etc., so that the community can understand the intensity of hazards

- The government must mandate national radio/TV and relevant agencies/actors to frequently broadcast special weather bulletins on cyclones, heavy rainfall, thunderstorms about intensity, anticipatory impacts, loss and damage, and advisories for high-impact areas.
- **Mobile network operators Movitel, Vodacom, and Mcel to provide** free SMS in the local language to the community
- Households and Communities demanded free radio sets (solar PV power, winding) for accessing radio broadcasts based on early warning
- Mandating national radio and Community radio stations to broadcast cyclone early warning and multi-hazard early warning in all local languages recurrently. The government mandates that media outlets broadcast special weather bulletins on heavy rainfall and anticipatory flash flooding
- CMC committees demanded toll-free cell phone communication/message - Toll-free IVR/ cell broadcasts
- Community needs to access emergency weather bulletins recurrently coming from national radio/TV media outlets about extreme weather events (heavy rainfall and induced flash flooding and landslides) for swift and preemptive evacuation and preparedness (individual and group-based). The forecast-based early actions should exclusively follow emergency decisions; they should be delegated by the Chieftaincy, with decisions being agreed upon by the energy community meetings.

Emergency Excavation drill

- Emergency evacuation drills need to be conducted at the village and TA community levels. Given the circumstances, flash floods are likely to trigger the aftermath of heavy rainfall accumulation and cause flash flooding through changes in slope and lower drainage, potentially damaging adjacent settlements.

Transportation support:

- Providing transport facilities, emergency lifesaving food-NFI items , and other facilities for the gender group (women, children, girls, elderly, disable population)

Prepositioning of lifesaving emergency food and NFI :

UN agencies, INGOs, NGSS, and CSOs supply the most urgent lifesaving kits, considering the physical road/waterways communication disruption.

3) In what ways climate induced disasters impact?

- Direct impacts of climate shocks: Most of the respondents mentioned human, food, and livelihood insecurity due to persistent poverty, the recurrent incidence of extreme weather events, hydrometeorological hazards, and impacts over the terrain of Mozambican topography and geographical settings.
- **Direct impacts of climate shocks:** Mozambique's topography, riverine floodplains, geographical settings, and recurrent incidence of extreme weather events, and already persisted extreme poverty factored in the hydrometrical hazards and impacts. Most of the respondents mentioned human, food, and livelihood insecurity. The anomalies in weather patterns (droughts, flash-droughts, agricultural droughts, hydrometeorological droughts, flooding, heatwaves, thunderstorms, etc.) impact agriculture, leading to recurrent crop failures, yield losses, and droughts, sometimes accompanied by flash floods and thunderstorms, which continue to hamper agricultural cropping and leave households with food insecurity.
- The anomaly of weather patterns (droughts, flash-droughts, agricultural drought, hydrometeorological drought, flooding, heatwaves, thunderstorms, etc.) impacts agriculture and recurrent incidence of crop failure, yield loss, drought, sometimes flash floods, thunderstorms, continuing to impact the agriculture cropping and leaving households with food insecurity.
- **Ripple/domino/residual effects of cyclone, flood, drought-induced hazards /disaster: Aftermath of flooding, flash flooding, cyclones, heatwaves, etc., there is another level of hazards that triggers drinking water crisis-induced outbreaks of cholera, diarrheal, and other waterborne diseases, vector-borne infectious diseases, and viral infections.** Malaria, infectious fever, etc., cause significant mortalities, and incidentally, a large number of victims are women, children, and girls.
- Drought causes agricultural yield loss, food insecurity, and famine.
- Chronic Food Insecurity: Multiple levels of multi-hazard events, such as floods, flash floods, droughts, and heat waves, damage crops, delay the cropping season, cause yield loss, and stress surface and groundwater bodies.
- Water is scarce, and the community does not have water harvesting techniques for homestead gardening.
- Protracted Poverty, Hunger, Famine:
- Internal displacement (IDP), climate refugee status entitles less access to state and non-state running basic service deliveries

A] Impact over Women _____:

- Longer time living in a Tent/shelter (until rebuilding/repair of houses): The community demanded a longer time livable camp/shelter for the vulnerable group because the government intended to reopen schools weeks after the disaster events, where most of the isolated community shelters were disrupted, and disrupted schooling and education.
- Social insecurity, victim of SGBV, and psychosocial trauma :
- Being forced to use negative coping mechanisms:
- Vulnerable to human trafficking
- Living as a single mother due to her husbands left away
- Highest level of divorces
- Highest level of child marriage
- Highest level of adolescent motherhood (after Cyclone Freddy)
- Level of child trafficking
- Highest level of SGBV, PSEA, SEA, transactional sex for survival
- The highest level of women loan defaulters because husbands take all their wallets (mobile money) and take them away from home, and systematically put them in peril
- The highest level of disaster of public health services reaching out to doorsteps due to poor and no access to WASH facilities and drinking water access (during flooding), which leads to higher levels of female and child mortality.
- The highest level of social, political, and economic discrimination against women, as they are being systematically exploited by the social power structure group, the social elite, and socially constructed norms and inequalities.
- All those persistent and recurrent climates induced crisis, protected poverty, social inequalities, social injustice, patriarchal dominion led to deprivation, a socially constructed inequality paradigm putting women in peril and entangling them then unequivocally.
- Women's access to agricultural, livestock, and fisheries value chain input supplies, government-led subsidies, and support are inadequate, and the inbuilt patriarchal-masculinity muscle, sociocultural norms, and discriminatory approaches essentially hinder/deprive women and single mothers from accessing services.

Ripple/domino/residual effects of cyclone, flood, drought-induced hazards /disaster:

- Aftermath of flooding, flash flooding, cyclones, heatwaves, etc., another wave of hazards triggers drinking water crisis-induced outbreaks: cholera, diarrhea and other waterborne diseases, vector-borne infectious diseases, viral infections, malaria, infectious fever, etc. Those cause significant mortalities, and incidentally, a large number of victims are women, children, and girls.
- Pregnant women face difficult situations during disaster-induced forced displacement and living in evacuation centers without having neonatal services, healthcare services, nutrition, food, etc.
- Drought causes agricultural yield loss, food insecurity, and famine
- Chronic Food Insecurity: Multiple levels of multi-hazard events, such as floods, flash floods, droughts, and heat waves, damage crops, delay the cropping season, cause yield loss, and stress surface and groundwater bodies.
- Water is scarce for home gardening
- Protracted Poverty, Hunger, Famine:

SGBV Paradigm triggers the aftermath of a disaster

- The persistent poverty, hunger, famine, inbuilt social inequality, cultural factors already (single mother, widow, single adolescent mother), in tangles of all discrimination, and additionally the climate change impacts further worsening them over the fragile livelihood cycle contribute to the incidence of SGBV events.
- After the disaster, the most vulnerable groups become completely hopeless because of losing every asset due to the disaster to take care of several dependents, and then being systematically pushed to transactional sex and being systematically harassed by the social elites and economically enabled groups.
- Due to the disturbance of the natural ecosystem and polluted surface water bodies/water sources, women-headed families need to travel longer to fetch drinking water and other necessities and become victims of SGBV and the highest level of unwanted adolescent pregnancies.

B] Impact on adolescent girls _____:

- ❖ The highest level of unwanted adolescent pregnancies due to the above reasons.

- ❖ Pregnant women face difficult situations during disaster-induced forced displacement and living in evacuation centers without having neonatal services, healthcare services, nutrition, food, etc.
- ❖ Early marriage, divorces, birth-related complications, maternal mortality, malnutrition, and single motherhood.
- ❖ Mortality due to health disasters due to poor and no access to WASH facilities and drinking water access (during flooding), which leads to higher levels of female and child mortality.
- ❖ **Drop of Education:** Highest level of educational dropouts at the secondary and postsecondary and elementary levels of students because of climate crises, supporting families for food and water security, famine, poverty & inequality, SGBV, human trafficking, etc.

a) Persistent dependency on lifesaving humanitarian assistance and IDP shelters/tents

- ❖ Lack of Adolescent girls-friendly emergency Shelter: Gender-friendly emergency safe shelter for the most vulnerable groups (Women, children, girls, youth, elderly, persons with disability).
- ❖ Protracted food insecurity and hunger
- ❖ The multiple factors are tangled and trapped in the Protracted and vicious cycle of food insecurity and hunger in around the year
- ❖ The anomaly of the rainy season seriously impacts cropping and yield losses and puts households in famine, hunger, and uncertainties of food security.
- ❖ State and nonstate food supplies are inadequate, and followed by the disaster recovery external assistance, which do not come as regular interventions, so far frontline community has to depend on the growing season

C] The Men _____

- Pushed to migrate as laborers for a long time to feed their families as migrant workers/casual labor
- Climate refuge, IDP status, and for a longer period
- **Longer term dependency on humanitarian support:** In most cases, the community will not be able to, weeks after building a livelihood, better the poverty, Loss, and damaged houses and belongings return to their houses. Extreme poverty-stricken women-headed households, particularly single mothers, widows, and divorces, do not have any means of livelihood assets. A productive livelihood asserts the ability to feed their family and other dependents in the event of a catastrophic disaster (such as a cyclone or flooding); the community demands humanitarian support and startup capital for rebuilding their homes and starting an IGA.

D] Persons with disability _____

- Lack of disability-friendly shelter, lack of transport for evacuations, inadequate government support for disability IGA

E] The Elderly _____

- Lack of elderly-friendly shelter, lack of transport for evacuations, and lack of adequate government support for IGA. Lack of startup capital for home-based IGA activities (crafting, small business)

4) In what ways can the protection of women after disasters be enhanced ?

- ❖ Access to inclusive finance for startup livelihood activities
- ❖ Training on productive assets development farming
- ❖ Technical and vocational training (animal husbandry, poultry rearing, fruit growing)
- ❖ Technical Training in SMES development (food processing, small business, marketing, input value chain supplies for livestock, agriculture, poultry, vegetables, fruits, etc.)
- ❖ Technical and vocational training for the lean period works
- ❖ Startup capital for running a small business
- ❖ Engaging women in the agriculture value chain development
- ❖ Inclusive financial support for group/cooperative women-led green entrepreneurship development(Integrated Farm Management, Fenced area development for livestock farming, Poultry farming, mini-pond-based fish farming, Fruit gardening, agroforestry development, high-value cropping, etc.)
- ❖ Technical training on climate adaptive farming, rainwater harvesting, soil health improvements, IFM, FYM, INM, etc., for round-the-year cropping.
- ❖ Vocational training on agroforestry development
- ❖ Green financing for group/cooperatives-based green entrepreneurship development
- ❖ Support for Women rebuilding their destroyed houses within weeks/months and having no other place to live.
- ❖ Longer-term recovery support for Women in food security, social security, and startup capital for starting IGA
- ❖ Protection from SGBV, social security, and psychosocial support for IDPs

- ❖ Inclusive financial support for the startup of IGA (bank account for women, social cash transfer, cash grant, VLSA, microcredits, mobile money for development, etc.), agriculture inputs supply, support for livestock and poultry, fish culture etc, for livelihood restoration, starting household-based IGA for generating productive assets,
- ❖ Capacity building training for IGA activities, group/cooperative-based smallholder farming, , green shed for round the year homestead-based gardening,
- ❖ Access to agricultural land, surface irrigation facilities, drip irrigation facilities, rainwater harvesting facilities, veterinary services for poultry/livestock, seedling/sapling support
- ❖ Department of Agriculture, livestock and Fisheries and other NGOs/CSOs to set up Farmer's Field schools for the climate-vulnerable community, women lead farmers, and women smallholder farmers to access in all agricultural input supplies (seeds, seedlings, saplings, drip irrigation, organic fertilization, IFM, etc) , plot demonstrations of climate tolerant varieties, early harvesting varieties, high-value cropping, livestock farming, poultry farming, fish culture etc.
- ❖ Set up a climate kiosk for women smallholder farmers.

5) What coping mechanisms were adopted by the gender group?

Positive coping mechanism:

- Peace work – from casual labor
- Causal labor, seasonal labor, construction workers, technician jobs to other countries
- Starting livelihood income-generating activities (maize cropping, fruit trees, poultry, livestock to some extent, etc.
- It depends on the government running the food supply in the aftermath of cyclones and floods.
- Depends on Village Savings and Loan Associations (VSLAs)

Negative coping mechanism:

- Sales of productive assets (poultry, livestock, belongings)
- Transactional sex in exchange of money, support
- Cutting trees and making charcoal, selling charcoal, and selling firewood are contributing to deforestation

Recommendations :

- Need technical and vocational training for income-generating support: Welding, electrician, plumbing, and mechanical technician training,
- Agriculture support – Seasonal cropping, seedling, and sapling of winter vegetables
- Support for small businesses
- Support for growing season (Winter season) cropping – Input supply (irrigation, fertilizer, seedling, sapling)
- Financial/seedling/sapling Support for livelihood productive assets

Table : Seasonal hazard calendar (to be maintained by herders)

Types of Hazards	Month Name												Impacts
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Day labor													
Farming land as labor													
Homestead agriculture													
Making charcoal													
Construction works in town													
Food insecurity/hunger													
Others													

- Agriculture support – Seasonal cropping, seedling, and sapling of winter vegetables
- Support for small businesses
- Support for farming (Winter season) cropping – Input supply (irrigation, fertilizer)
- Financial/seedling/sapling Support for livelihood productive assets
- AIP support for productive farming

a) Women _____

Positive coping mechanism:

- Peace work – from casual labor is hardly a Negative coping mechanism:
- Sales of productive assets (poultry, livestock, belongings)
- Transactional sex in exchange for money, support
- Cutting trees and making charcoal, selling charcoal, and selling firewood are contributing to deforestation and environmental degradation

b) Men

Positive coping mechanism:

- Peace work – from casual labor hardly

Negative coping mechanism:

- Sales of productive assets (poultry, livestock, belongings)
- Cutting trees and making charcoal, selling charcoal, and selling firewood are contributing to deforestation

Recommendations :

- Need technical and vocational training for income-generating support: Welding, electrician, plumbing, and mechanical technician training.
- Extra care for children
- Pregnant women – water cholera, diarrhea, and the emotional distress of losing everything
- A person with a disability needs support
- Normally, over 200 people shelter in a makeshift shelter; houses collapse and

6) To enable affected communities recover faster, what would your priority needs be?

- a) Capacity development of Human capital
- b) Access Financial capital
- c) Access to Natural Capital
- d) Access to inclusive finance for startup livelihood activities
- e) Training on productive assets development farming
- f) Technical and vocational training (animal husbandry, poultry rearing, fruit growing)
- g) Technical Training in SMES development (food processing, small business, marketing, input value chain supplies for livestock, agriculture, poultry, vegetables, fruits, etc.)
- h) Technical and vocational training for the lean period works
- i) Startup capital for running a small business
- j) Engaging women in the agriculture value chain development
- k) Inclusive financial support for group/cooperative women-led green entrepreneurship development(Integrated Farm Management, Fenced area development for livestock farming, Poultry farming, mini-pond-based fish farming, Fruit gardening, agroforestry development, high-value cropping, etc.)
- l) For round-the-year cropping, Technical training on climate adaptive farming, rainwater harvesting, soil health improvements, IFM, FYM, INM, etc..
- m) Vocational training on agroforestry development

7) What are the key barriers in recovery here at the community level?

- a) **Government regulatory measures over land and water management :**
 - Inadequate institutional decentralized technical supports for the remote rural community to boost growth from the productive rural sector, e.g., Water supply and irrigation for Agriculture and drinking, Livestock farming, Poultry farming and fish culture, agroforestry development, homestead gardening, value chain development, etc.
 - Government-controlled land management, land ownership, and land control policies are the most institutional barriers to getting rural communities access to agricultural land for cropping, companion land for agroforestry development, fruit gardening, and other productive farming.
 - Again, the most indicative barrier is the inadequate irrigation infrastructure, integrated water resource management infrastructure and services, and drainage network for producing surface irrigation access to rural farming.

- Mozambique has many freshwater bodies (rivers, channels, lakes, wetlands) but inadequate rainwater harvesting structures, rural water control structures, drainage networks, and services for rural communities to access surface irrigation and boost rural agriculture.

b) Access to finance :

- Inclusive financial support for group/cooperative women-led green entrepreneurship development(Integrated Farm Management, Fenced area development for livestock farming, Poultry farming, mini-pond-based fish farming, Fruit gardening, agroforestry development, high-value cropping, etc.)
- Startup capital for running a small business
- Engaging women in the agriculture value chain development
- Access to inclusive finance for startup livelihood activities
- Access Financial capital
- Access to Natural Capital

c) Inadequate disaster recovery framework for the rural productive sector :

- Inadequate intervention package for the individual farmers, smallholder farmers
- Inadequate sectoral climate risk and vulnerability assessment, local agroecology, soil health, ecology based DRR/CCA scheme design, plot demonstration, and commercial farming
- Inadequate/insufficient DAE/Agriculture/water sector initiative for essential irrigation support
- Inadequate farmers' field school (FFS) and horticulture development in every village, and supporting individual and stallholder farmers for round-the-year subsistence and conservational farming
- Inadequate disaster risk finance, incentives, subsidies, financial package, green shed/greenhouse structure support for marginalized farmers for round-the-year cropping, etc.

d) Inadequate Sectoral support for the productive farming :

- Lack of farmers' field school, horticulture, and agriculture input supply trigger points for supplying seeding and saplings to remote rural communities for subsistence and conservative farming.

e) IGA Capacity building:

- Technical Training in SMES development (food processing, small business, marketing, input value chain supplies for livestock, agriculture, poultry, vegetables, fruits etc.)
- Training on productive assets development farming
- Technical and vocational training (animal husbandry, poultry rearing, fruit growing)
- Technical and vocational training for lean period works
- Technical training on climate adaptive farming, rainwater harvesting, soil health improvements, IFM, FYM, INM, etc., for round-the-year cropping.
- Vocational training on agroforestry development
- Technical training for the development of Human capital

f) Inadequate knowledge and understanding of the changing climate and impending multi-hazards

- There is a lack of government mass education campaigns (media outlets—radio/TV-based) to raise knowledge and awareness among marginalized rural communities about DRR/CCA and resilience building.

g) Inadequate Gender Resilience Framework :

- Lack of organizational interventions for marginalized women in scheme design, scheme financing, value chain development, and cooperatives framing for more GDP contribution from the productive rural growth sector (*Agriculture, Livestock and Fisheries, Poultry farming, small business, and entrepreneurship development*)

8) What climate-induced disasters impact women, men, girls, and boys differently? Justification

- Lessons from Idai release that the patriarchal domination over the critical evacuation also contributed to women and children's larger casualties.
- women and vulnerable members lack awareness and understanding of the intensity and destructive nature of cyclone flash floods in their locality because government /organization-driven awareness campaigns are quite insufficient
- The inadequate warning message and untimely dissemination factored in the high impacts, loss, and damages to livelihoods, properties, and mortality.

9) What are your key recommendations for enhancing resilience opportunities for women and girls?

- Access to a climate and multi-hazard risk information system

- Access to DRR/CCA planning and decision-making process
- Access to inclusive finance
- Access to Agroecology, agricultural land, and farming
- Access to the Farming value chain and inputs
- Access to the Disaster and Climate Risk management Governance system
- Social Protection, reducing SGBV and Safety Nets
- Access to climate change and multi-hazard education and knowledge
- Development of the Gender climate risk network
- Development and implantation of GiHA



Figure: Proposed community-level resilience framework for women/girls

- Access to climate and multi-hazard risk-information system – Access to c
- Access to DRR/CCA planning and decision-making process -
- Access to inclusive finance
- Access to Agroecology, agricultural land, and farming
- Access to the Farming value chain and inputs
- Access to the Disaster and Climate Risk management Governance system
- Social Protection, reducing SGBV and Safety Nets
- Access to climate change and multi-hazard education and knowledge
- Development of the Gender climate risk network
- Development and implantation of GiHA

10) What would you like to suggest to the government for making your household resilient to disasters and climate change?

- Village Savings and Loan Associations – access to microcredit facilities
- Improved farming methodologies :

- Strengthen WLOs
- Enhance access and linkages to the market
- Enhance access to clean energy facilities at the domestic level
- Social Protection and Safety Nets
- Development and implantation of GiHA

11) In what ways can your voice be better heard by the authorities to enhance prevention to disasters?

- a) Development of Women DRM network and action plan
- b) Development of impact weather forecasts, operational forecasts for women, children, and girls
- c) Develop evidence-based tools and dissemination: Develop impact-based extreme weather forecasts and bulletins and sensitize stakeholders, agencies, and actors about the consequences of impending multi-hazards, spill effects, secondary shocks and outbreaks, and anticipatory human disasters. Losses and damages are likely.
- d) Developing forecast-based early action protocol: Let government humanitarian actors understand the level of gender groups are vulnerable to impending cyclones, floods, flash floods, droughts, landslides, outbreaks, and diseases (cholera, diarrhea, infectious diseases, malaria, yellow fever, and other communicable diseases)
- e) Developing a forecast-based financing protocol and sensitizing humanitarian actors about the need to mobilize anticipatory finance and humanitarian assistance.
- f) Develop forecasts for early action on medium-slow-onset hazards, such as hydrometeorological drought, agricultural drought, flash drought, water stress situation, and drinking water crisis.
- g) Develop a gender DRM network/framework for supplying tailor-made information to sector ministries, departments, and other state and non-state actors for risk-informed gendered DRM/DRR/CAA action planning targeting the most vulnerable women-headed rural households.

6.0 Chapter: Key Findings/ Recommendations for the Women's Resilience to Disaster (WRD)

Females are the larger part of society and contribute significantly to the agricultural domestic GDP (in 2022, agriculture contributed around 26.73 percent to Mozambique's GDP). This contribution is still substantial in the context of climate change hardship, and women are often living on the climate frontline. The state and non-state actors' efforts to lift women out of protracted poverty, which is often induced by food and livelihood insecurity, are largely insignificant due to the impacts of climate change.

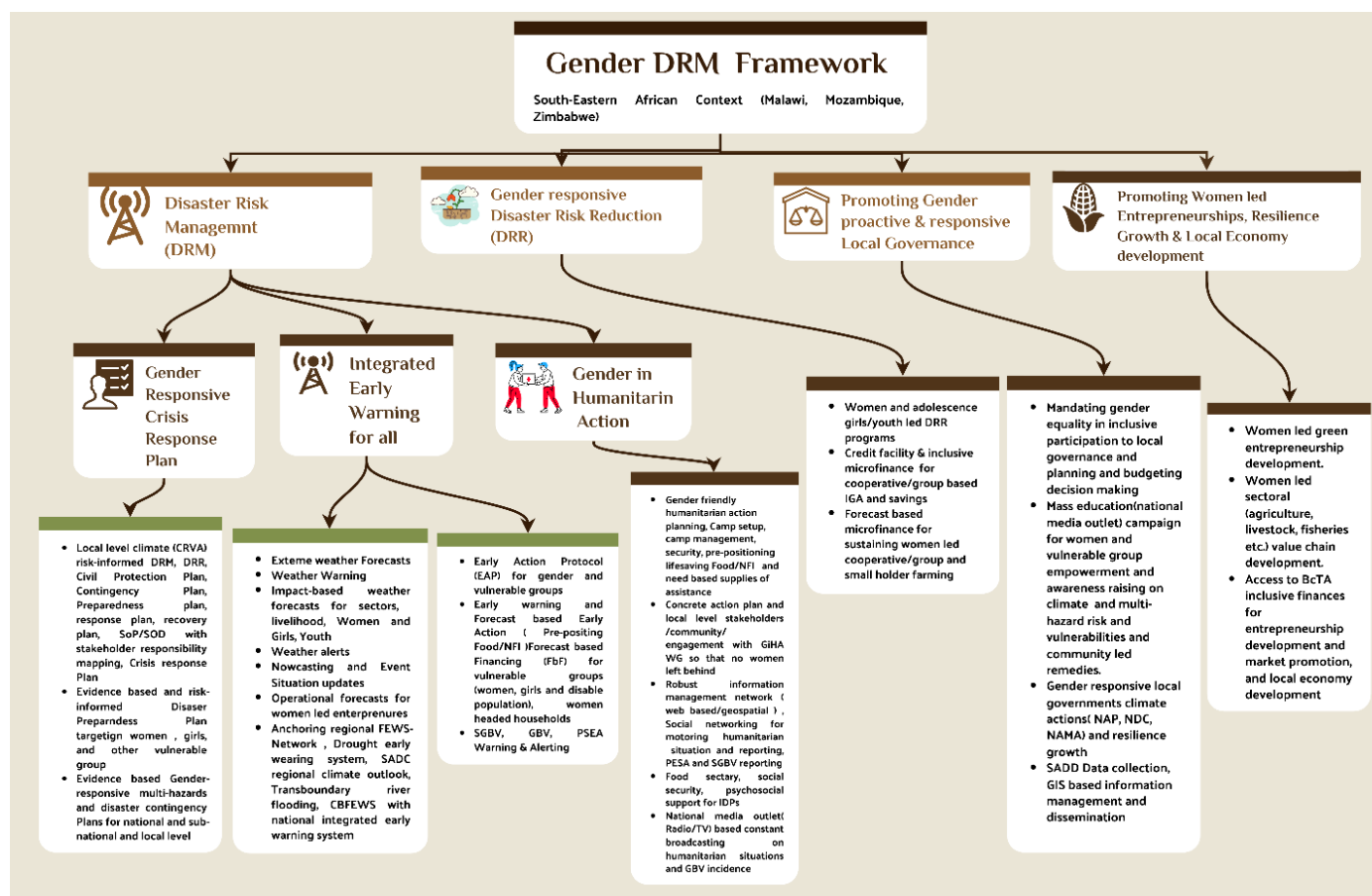
The process of decentralization mostly to handing over the governments administrative layers/post and some sector departments at district level, however the persistent centralized governance tangles still to decentralized budget and fiscal autonomy at district level government development perception still need stronger political will, and commitment and budgetary and fiscal facility for gender empowerment, gender engaged individual and stallholder farming, local agroecology based rural economy development and boosting local resilience.

Typically, districts are recognized as local development domains; however, the local governments in the given countries are not fully decentralized and lack local electoral government bodies to govern local government machinery and legislate on local development, planning, budgeting, resource allocation, and government functions. However, the colonial bureaucracies are still controlling the local government system and, to some level, have set up at the province level and not being fully decentralized, resulting in a Distinct level, which results in a lack of structure of stakeholder coordination gap to mastermind the district-centric multi-stakeholder coordinated DRM and DRR actionable and coordinated planning and interventions being hindered. On the other hand, the paradigm local level planning decisions are being biased by central bureaucracies and power-structured political elites, masculinity. In these given circumstances, with the absence of structured gender machineries, gender dimensions, gender DRM/DRR framework, gendered climate risk-informed tools, gendered socioeconomic vulnerability-tailored and evidence-based informed tools to inevitably influence the government planning and budgeting entities to identify the entry point of inclusivity of gendered responsive DRM/DRR planning and an inclusive budgetary process. However, to date the central government strides in gender inclusivity to local planning and DRR development process comes as generic and reactive manner with some narratives not as indispensable agenda of considerations of the larger size of population and potential the GDP contribution from the rural growth sector (*agriculture, aquaculture, fisheries, livestock, agroforestry, SMEs, food processing etc.*) to contribute hugely to local and national economy.

However only designating the gender professionals at some sectoral level can hardly influence the persistent bureaucratic dimension of power and decision making process at the District and down level, rather the gender machinery, government mandates, climate risk-informed tools, gender socioeconomic vulnerability, climate risk information network and gender DRR/DRM network can advocate gender fitness all administrative process, local development planning, DRM, DRR, CCA planning process.

Creating the sense of ownership in central(National/Provincial) and local level(Province /District/ Administrative Post/Village) level over the paradoxical bureaucratic governance pattern, where women's voices are hard, we need clear evidence-based and gendered climate risk-informed tools for fostering the planning and budgeting processes.

6.1 Gendered DRR Frameworks and Approach

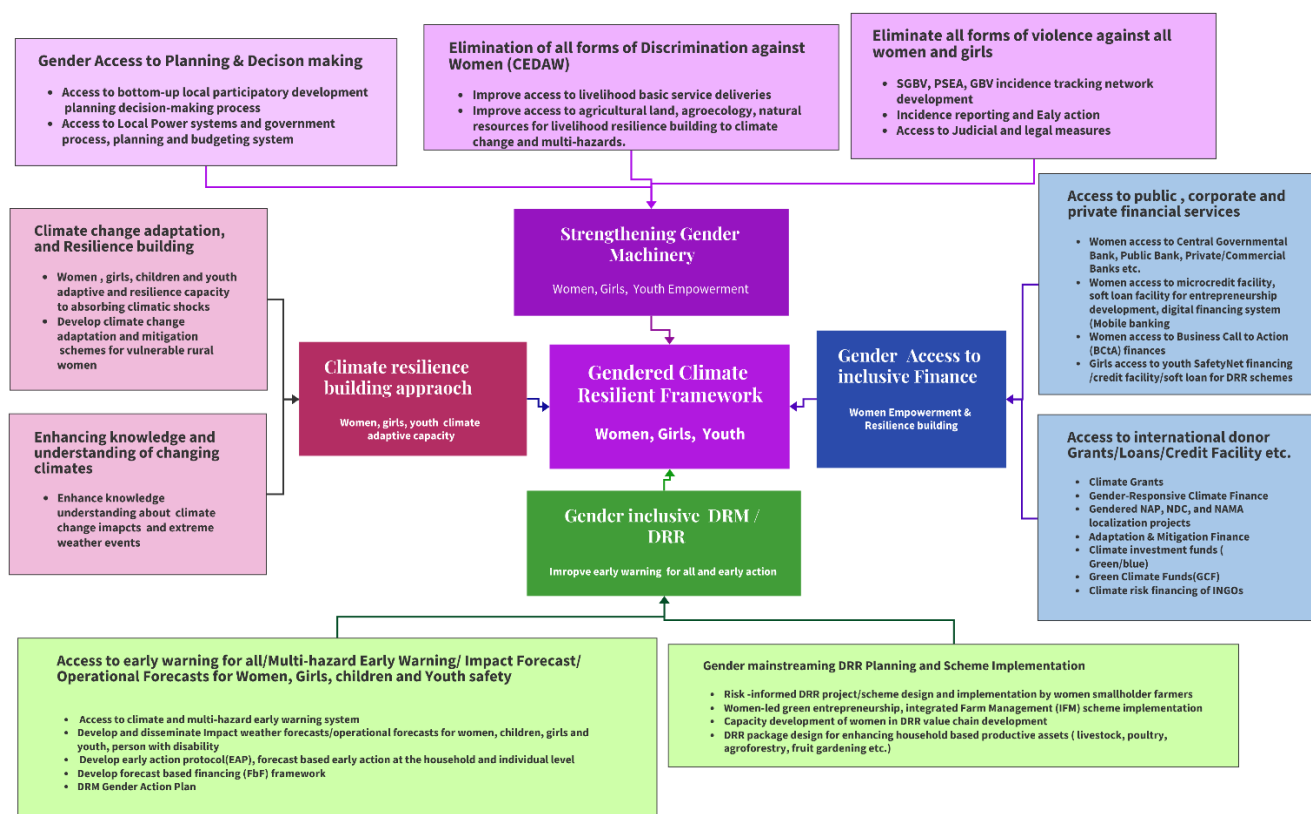


(Figure : Proposed Gender DRM Framework)

a) Establish DRM gender framework :

Without having the gendered DRM framework supported by the gendered climate risk information, it is apparently difficult to find the entry point and advocacy tools of making tangled bureaucratic system understand the importance of gender dimension in local economy development, potential gendered productive sector eg., agriculture, livestock, poultry, fisheries, agroforestry, high-value cropping, food process enterprises, local green entrepreneurship, NAP localization, and full-scale climate adaptive rural growths can largely be driven by the large women population living at the frontline.

The proposed gendered climate resilient framework outlined the functional components of local-level functionalities.



- Establishment of a Gendered Risk Management Network (Framework)
- Improving Gender machinery Gendered DRM coordination at the local level
- District-level Gendered DRM Information Network
- District-level SGBV information network

b) Strengthening the government planning Ministry, the Planning Commission in risk-informed planning, strategy development, and decision-making process

- Risk-informed Policy, strategy, planning, and institutional capacity of the Planning Ministry, Planning Commission, and planning officials.
- DRR/CCA program planning by relevant line ministries and sector line departments.
- Identification of the Entry point for the Differential gendered impact of multi-hazard and climate risk and vulnerability integration in the planning process

c) Women Resilience Framework / DRM governance pattern:

- Risk consideration in Resilient Physical infrastructure (climate, multi-hazard, and disaster proof) , basic service delivery, structural development planning
- The level planning process strongly considers the magnitude, frequency, intensity, and damage level of basic infrastructure, services, critical structures, and facilities that were heavily damaged in past disasters through CRVA/PDNA risk ranking, considering the Highest Flooding level and damage level.
- District development plan, Village development plan, District and Village level sectoral development plan
- Standard Operating Procedure (SOP)
- DRM Plan, Risk contingency plans at the national and sub-national levels

d) Mozambique Red Cross Recommendations on improving the national recovery plan

- elaborate specific recovery interventions to address the most common disasters experienced in the country;
- set out the specific roles and responsibilities of different actors and stakeholders (including government agencies in various sectors and at all levels, Mozambique Red Cross, nongovernmental organizations, civil society organizations, communities, individuals, the private sector, and development partners);

- establish a recovery-specific multi-sectoral and multi-agency coordination mechanism or platform to be activated once a disaster has occurred, to ensure that all relevant actors and stakeholders are able to coordinate and share information;
- establish recovery-specific financing mechanisms to ensure the availability of sufficient funding in disaster recovery (for short-, medium- and long-term interventions);
- set out arrangements for the regular monitoring and assessment of recovery operations, including mandating regular progress reports;
- set out a strategy for ensuring the continuity of essential services to those affected by the disaster (e.g., sanitation, health, education);
- set out a strategy for the expeditious repair and reconstruction of housing and infrastructure to be resilient to future climate and disaster risks;
- set out clear measures to address cross-cutting issues in disaster recovery such as the protection of vulnerable groups and environmental protection, building on the existing commendable efforts; and
- promote policy coherence and strengthen linkages between disaster recovery, disaster risk reduction, climate change adaptation, and sustainable development.

6.2 Development and deployment of Early warning for all :

The assessment country does not have clear road map of Sendai framework of Early warning for all functional process development, as result impact forecast development, forecast broadcasting, transmission and dissemination is being done haphazardly which leading to some level of untimely dissemination and precision level detailed adatories also an improvement issues that being entrusted to NMHS and other sector department to work together to develop integrated forecasting. The proposed roadmap of EWS for all working in the following diagram ;

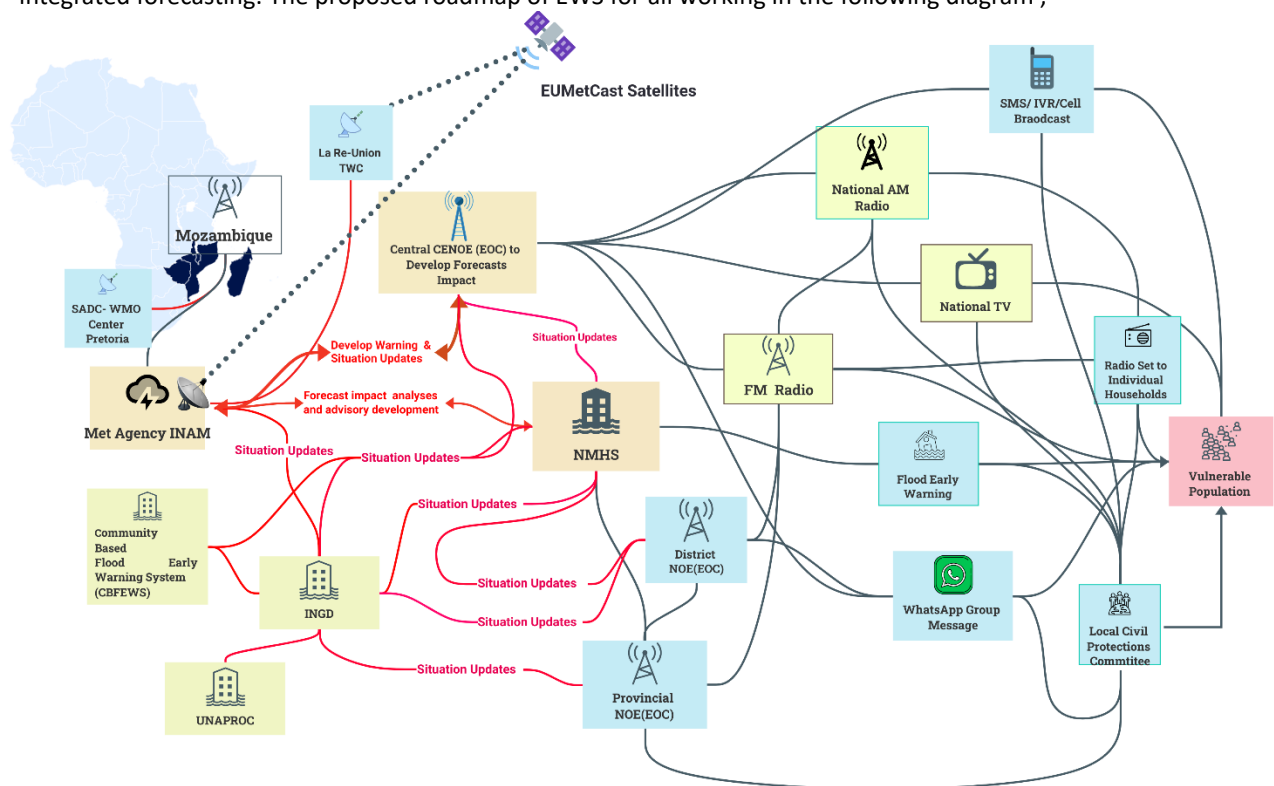


Figure : Diagram of EWS development and dissemination process

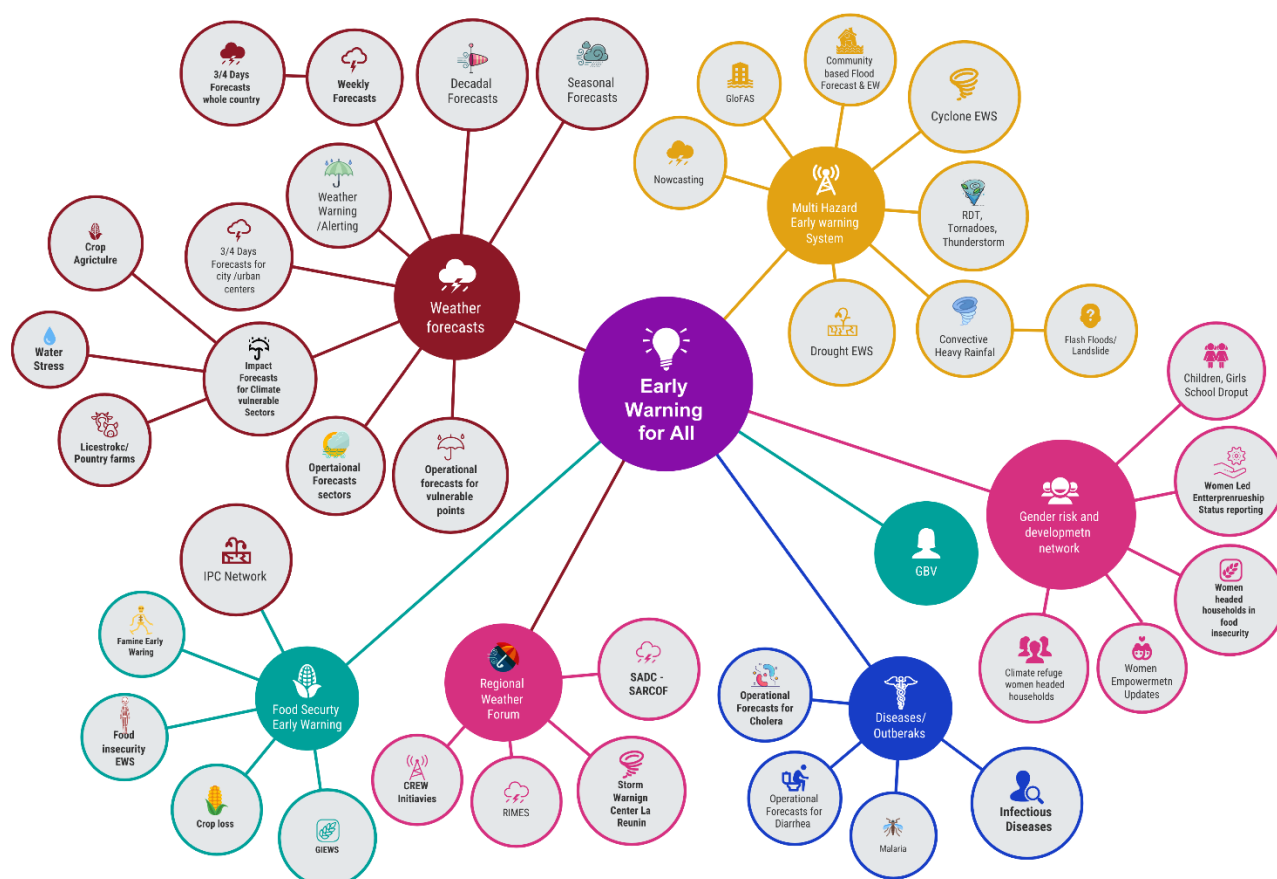


Figure: Proposed EWS for all value chains to be handled jointly by the National Institute for Meteorology (INAM), National Directorate for Water Resources Management (DNGRH), National Civil Protection Unit (UNAPROC) NOE(EoC) of INGD, and other sectoral ICT Units

a) Improving ICT-driven DRM governance at all levels (national, provincial, district, administrative post, village) :

The current DRM governance mechanism is inadequate for managing a disaster emergency response paradigm in the context of integrated multi-hazards, disaster, and climate change impacts, as well as DRR, CCA, and NAP portfolios, and multi-stakeholder coordination.

- ❖ There is a lack of development of gender response and multi-stakeholder coordination in the DRM framework at all levels (national, district, province, ward, village). Strong multi-stakeholder coordination and gender response DRM structures for gendered DRR and resilience building. Challenges:
- ❖ Paradigm shift and transitioning from the existing DRM coordination process to undertake post-disaster emergency response-based ad-hoc interventions by the Civil Protection Committee to risk-informed multistakeholder coordination of DRM and DRR for local-level gender empowerment and development.
- ❖ Enhancing the capacity of INGD based on the current mandate (civil protection/ emergency preparedness and response)
- ❖ Improving DRM governance at provincial and district levels through DRM staffing and capacity building.
- ❖ Develop DRM planning at the Provincial and district level by clearly defining the multi-stakeholders map (*state, nonstate, UN agencies, INGOs, national NGOs, CSOs, Charities, Private Sectors, Local Institutions, academia, youth girls' organizations, WLO, local charities etc.*)
- ❖ Installation of Emergency Operations Center and SOP for supporting all early warnings, operational forecasts, EWS for women, girls/ youth groups, children, disabilities
- ❖ Sector and sectoral elements specific, farmers, Women-led category of entrepreneur's specific special impact weather forecast, operational forecasts.
- ❖ Structural DRM support for the women smallholder farmers (water access, drainage system, agricultural land access, surface water /irrigation, solar PV powered irrigation, AVC inputs, horticulture supports, access to market

etc.) . Develop Local agroecology-based DRM and DRR projects and pilot demonstration in every village and community level horticulture for supplying all agricultural inputs for promoting community-based DRR scheme.

b) Setup EOCs at the province district level and improve the Multi-hazard early warning system:

- Development precision-level weather forecasts: The Met agency needs to specialize more in developing high-resolution seasonal, decadal, weekly, 3-day, and 5-day weather forecasts. It also needs to develop a dynamic and statistical downscale model for rapidly developing thunderstorms (RDT of Meteo France) for predicting heavy rainfall and thunderstorms.
- **Improving surface observation system:** Upgrading INAM - Instituto Nacional de Meteorología weather observations system, acquisition of 5km grid data sets on surface observation, installing more AWS with synoptic conditions tracking sensors, drone radar, laser ceilometer, radiosonde, rain gauging instrument, uses of EUMETCast lightning sensor data for tracking thunderstorm, Flood level gauging from the river system, flood forecasting and modeling.
- Development of impact-based weather forecasts and operational forecasts: Develop methodology and guidelines on how to organize forecast briefing with guidelines on who will be the participants, how to interpret the risks by organizing discussion and analyzing weather model/outlook subject matter specialists (*Agrometeorologist, hydrologist, geomorphologist, water resource engineer, Plant scientist, Agri engineer, drought experts, landslide expert, agroecologist, ecologists, meteorologist, synoptic engineers, geomorphologist, etc.*) along with forecasters(long, medium, short range), Numerical Weather Prediction(NWP) engineers/specialists, Synoptic Engineer and organize the forecast beliefs/discussion about the anticipatory impacts, risk and vulnerability and eventually developing impact forecasts. The multi-hazard risk analysis over the elements (which is not a designated responsibility of EOC operators) is group work, and the outlined specialists need to develop customized tools, methodology, guidelines on impact-based forecasts, and operational forecasts for the sector, sectoral elements, lives, and livelihood elements on the ground. Analysis of weather phenomena and interpretation of risks and vulnerabilities.
- INAM - Instituto Nacional de Meteorología needs to develop high-resolution gridded forecasts and analyze damaging and beneficial impacts of impending weather parameters on the lives and livelihoods(elements). Meteorological agencies need to develop a pool of technical experts/specialists (Agrometeorologist, hydrologist, geomorphologist, water resource engineer, Plant scientist, agri engineer, drought expert, landslide expert, agroecologist, ecologist, meteorologist, synoptic engineer, etc.) for interpreting the extreme weather phenomena being forecasted. Developing methodology, tools, and guidelines on transplantation and interpretation of risk and vulnerabilities of predicted impending weather phenomena/parameters. Detailed analysis of impacts and effects of ongoing onset weather events and developing bulletins. Developing special weather bulletins for women, the elderly, girls, and youth groups to alert them to the onset of tornadoes, thunderstorms, heavy rainfall, cyclones, flash flooding, and landslides.

c) Develop a national risk financing framework.

- Lack of national risk financing framework: The government budget is managed through the Budgets Department of the Ministry of Finance and Economic Development, which has a mandate to consolidate and analyze budget requests submitted from state institutions, communicate approved budgets, and monitor the implementation of approved budgets.
- **Inadequate Local authorities' planning and budgets:** Local authorities' budgets are separate from the central Government budget, these being composed of local revenue. When a disaster occurs at the urban authority level, the urban council is responsible for responding to the disaster. Suppose the magnitude exceeds the urban council's capacities. In that case, the urban council submits a request for assistance to INGD, which can use the National Contingency Fund (or request additional funds from the Ministry of Finance) for emergency humanitarian support.
- **Inadequate Urban council planning and budgets:** Urban councils do not have a budget for disaster risk management.

d) Strengthen the National DRM Framework

- Apply an integrated approach to response, recovery, reconstruction, risk reduction, and preparedness based on sound disaster risk assessment and mainstream DRM in all sectors through formulation/revision and enactment of a DRM Bill, development of a DRM Policy, and development of a DRM Strategy in line with the Sendai Framework for Disaster Risk Reduction.

- **Institutional Strengthening and Capacity Development:** Enhancing INGD's capacity based on the DRM, recovery, and resilience mandate (emergency preparedness, response, risk reduction, recovery, and resilience). This entails increasing capacities at the central level in terms of staff, technical capacity, and resource reinforcement.
- **Improving Cyclone and Flood Forecasting and Early Warning:** Enhance forecasting and early warning for cyclone and flood events through a strengthened real-time observation network, an early warning system, and capacity development for INAM - Instituto Nacional de Meteorologia.
- **Anchoring SARCOF** Southern Africa Region Climate Outlook Forum with INAM - Instituto Nacional de Meteorologia and CENOE at Maputo and Provincial CENOE and District NEC.

6.3 Improved Methodology, ICT tools, and stakeholder coordination for Development SADD :

SADD on demographic, socioeconomic, and sectoral multi-hazard and climate risk information data collection, collation, and the development of tailor-made, informed tools is an essential component for risk-informed DRM, DRR, and CCA planning projects. Mozambique lacks a clear roadmap, methodology, guidelines, or tools for systematically collecting data from households. A clear roadmap, stakeholder map, and responsibilities, headed by the INGD, INE, National Statistical Office, and other local government organs and CSOs, need to mobilize the SADD data collections for support of gender-responsive and risk-informed development. The following proposed diagram shows the stakeholder coordinating structure governing the SADD process.

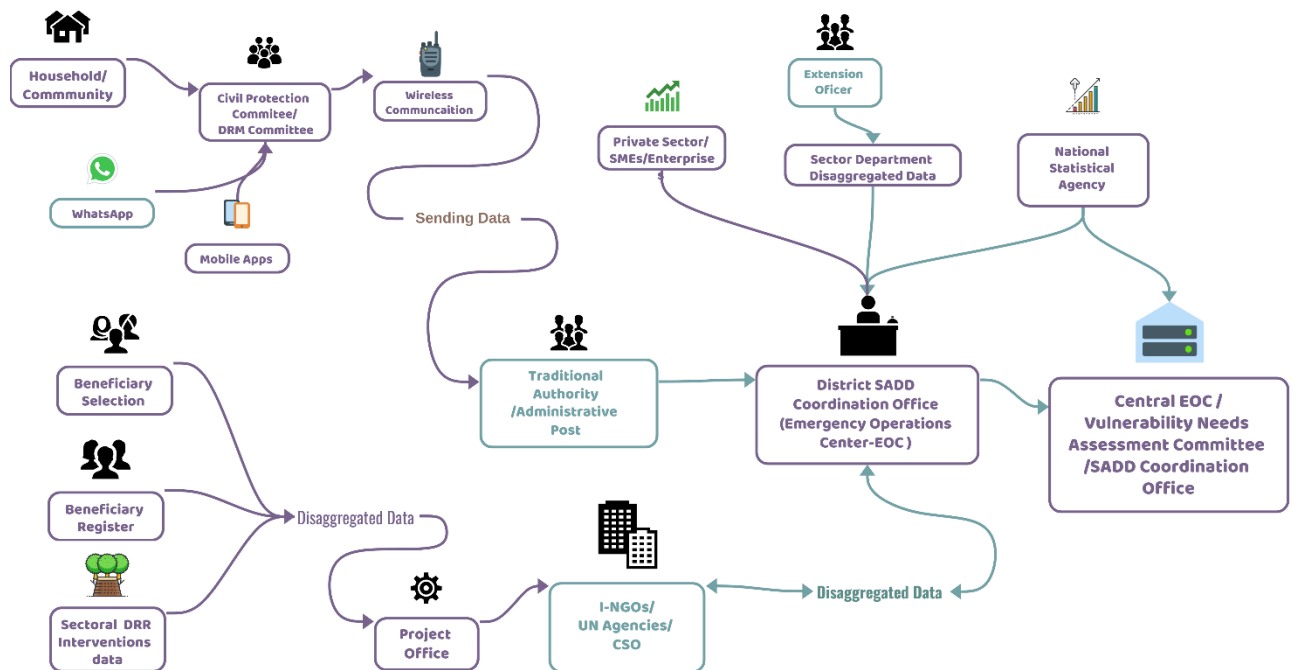


Figure : SADD Data collection mechanism

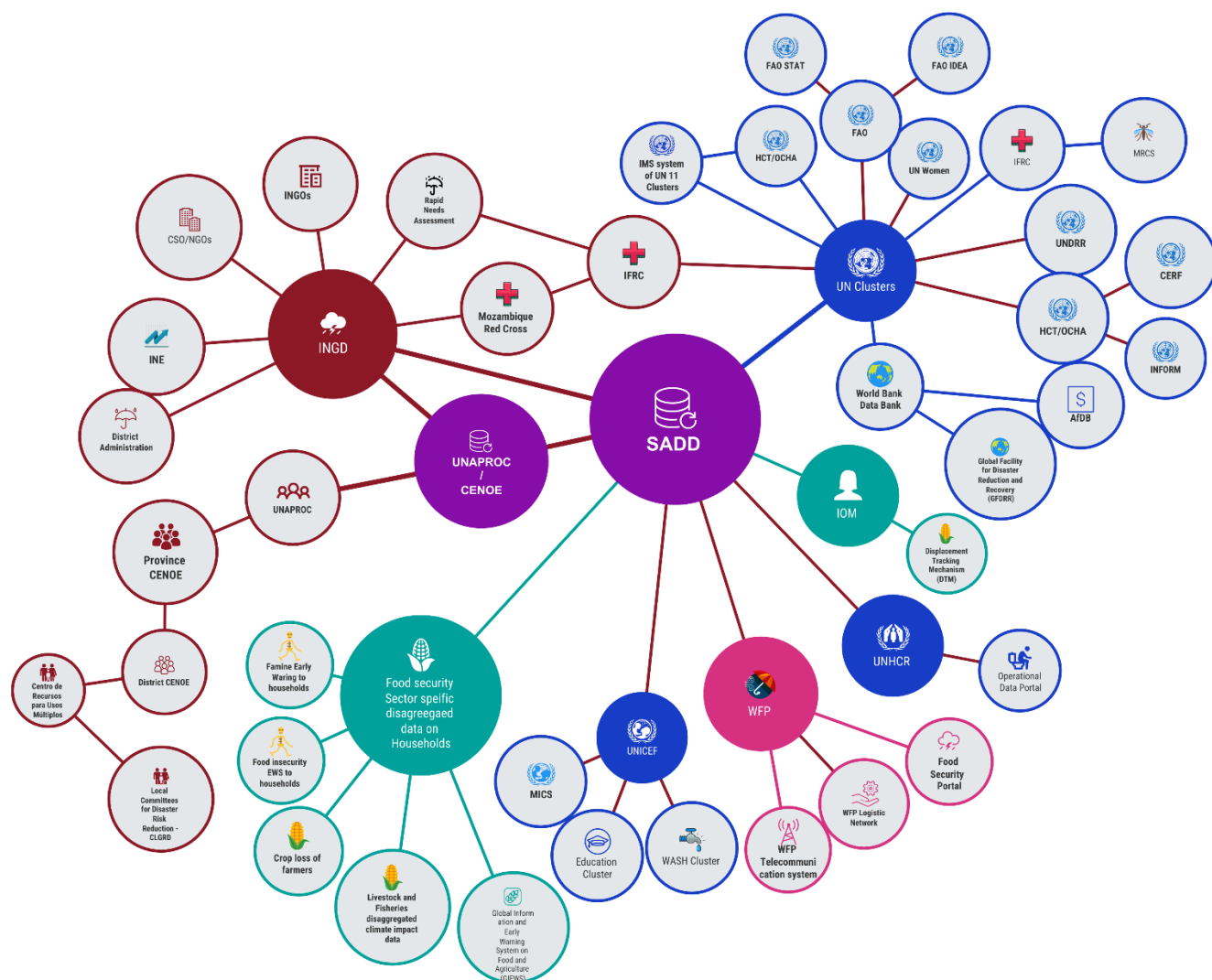


Figure: Proposed Stakeholder coordination, data and information exchange mechanism, and SADD data collection functional process

Recommendations:

- Informed tools for gendered risk analysis, gender inequalities in DRR/DRM/CCA planning, considering the local level
- Develop Methodology, tools, and guidelines of CRVA, community risk assessment, PDNA, JNA, Rapid Impact and Needs Assessment (RINA) & Initial assessment by INGD/Sector department/humanitarian agency in first 1-6 hours, 12 hours, 24 hours, 48 hours for saving lives (utilization of drone, satellite image, UAV, GIS maps, CRVA maps and elements database)
- Methodology, tools, and process for analyzing gender impacts after conducting CRVA, PDNA, RINA, JNA, and other assessments using SADD, tools, and methods for clearly defining the differential effects on exposure, risk, vulnerability, and sensitivity over gender for better preparedness, operational planning, and capacity building.
- Capacity of the national Statistical Office, sector departments, and relevant R&D organizations in gender impacts disaster and multi-hazard and climate risk and vulnerability SADD data collection, and GIS-based informed tools processing, identifying where informed tools are needed and generating additional data that captures gender issues, including by organizational and household surveys.
- Evidence-based planning and gender-responsive planning capacity of the planning department, sector department
- Capacity development of the National Statistical Office (INE), INGD, CENOE, relevant line ministries, and government officials at national and subnational levels to understand the importance of collection, analysis, and use of disaggregated data for DRR policy and planning; and (UN Women in collaboration with the UNDRR) develop the capacity of governments to collect, analyze and report on sex, age, and disability disaggregated data) (Without gender analysis and SADD, the disaster vulnerabilities and impacts of disasters on women and girls are often rendered invisible, and this deprioritizes their needs and capacities in disaster risk management and humanitarian response.

- Tailormade SADD for gender analysis in the necessary information to integrate gender perspectives into disaster risk reduction, climate change, risk-informed development, and resilience laws, policies, strategies, plans, programmes, and projects
- Utilization of SADD data in planning efficient disaster risk reduction, resilience, and risk-informed development strategies, programs, and projects that address both men's and women's needs and reduce inequalities.

6.4 Improving UN , Government, and Multi-Stakeholder Coordination Mechanisms in DRM and DRR Functionaries

The assessment identified key gaps in UN, Government, and multi-stakeholder coordination mechanisms in DRM, DRR, and related actional planning, programming, intervention design, and implementations. The UN HCT coordination is mainly limited to mobilizing emergency post-disaster humanitarian assistance. The government is still to develop a climate risk management framework, an actionable coronation structure, and localization of gender-responsive DRM, DRR, and CCA interventions at the local last mile.

Proposed diagram showing the coordination structure and risk-informed tools to be incorporated for gender-responsive planning and intervention implementation.



Figure : Diagram Proposed UN-Government Coordination Structure for DRM Process

6.5 Community-level risk-informed gender development approach

To sketch a roadmap to WRD process from the assessment that has thoroughly investigated the existing systemic government structure, long-term perspective planning, medium-term planning, and strategies(5 years), and actionable short-term planning(Annual Development Program -ADP), strategies and identified that the in-place government system and top-down approaches are inadequately gender responsive and been strategic approaches in policy, planning and multi-stakeholder engagement. However, to bridge the last-mile bottom-up participatory gendered risk-governance gap, the assessment proposes the following risk-informed community-level gendered climate governance and action-oriented intervention implementation process.



Figure: Community-level risk-informed gender development approach

- Climate-resilient green entrepreneurship development
- Women's Access to green finances
- Women's Access to forecast-based finances
- Women/single mothers/adolescent girls' leadership role in local civil protection and DRM community
- State, nonstate, and CSO's roles/responsibilities, accountability to the affected population (AAP) at the local level
- Women's leadership in local-level DRR/CCA intervention planning and scheme implementation
- State, nonstate and CSOs running GBV reporting network
- Women-led agricultural value chain development
- Women improve access to local government sectoral services deliveries
- Climate information network and information services for women entrepreneurship, awareness raising of girls, and youth groups.
- Access to impact-based weather forecasts, forecast-based early action services
- Distance learning mass media-based climate education, adaptive/conservative and subsistence agricultural practices at the local level.
- Climate-resilient green entrepreneurship development

6.6 SGBV tracking network and dissemination system (Proposed)

- Robust information management network & violence reporting (web-based/geospatial), Social monitoring, networking, women-led policing for reducing PESA and SGBV incidence
- National media outlet(Radio/TV) based constant broadcasting on humanitarian situations and GBV incidence

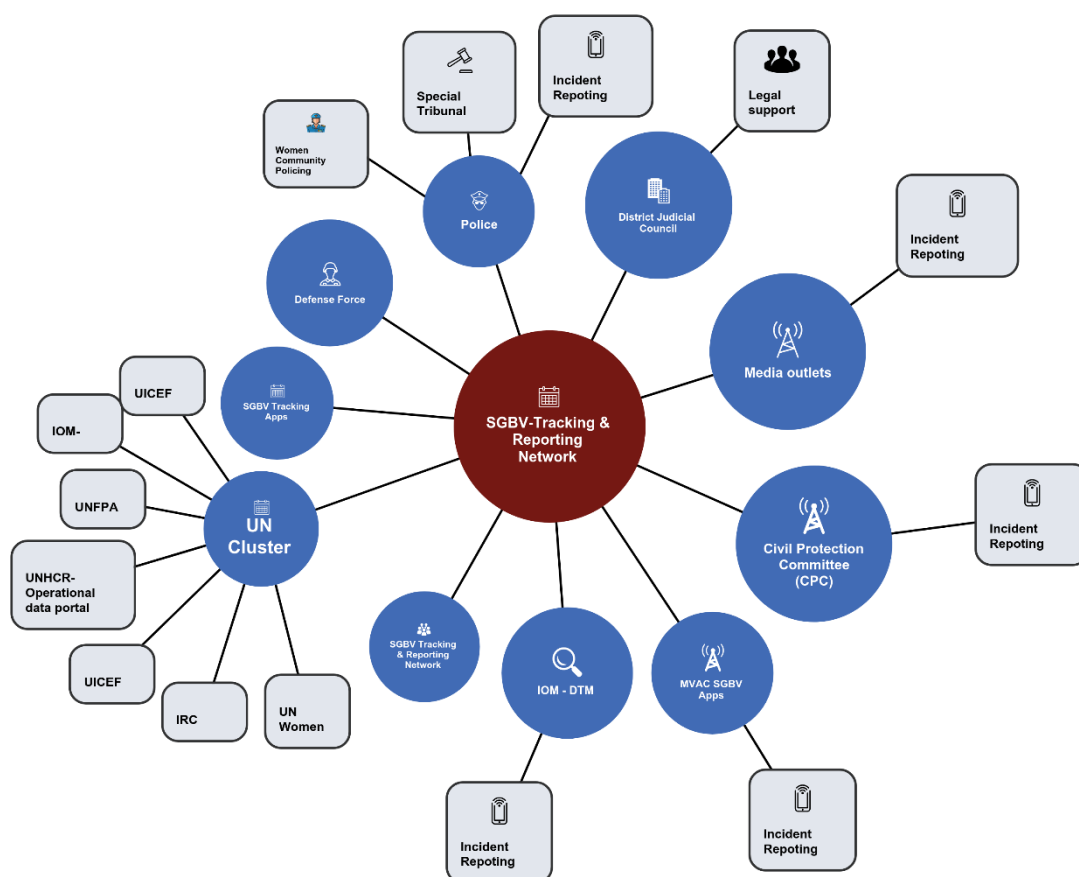


Figure : Proposed SGBV tracking and reporting network

- Gender Action Plan (GAP III)⁹
- GAP Gender Action Plan
- GBV Gender-based violence GCG
- Gender coordination Group GEWE
- Gender equality and women's empowerment

..... The End

⁹ European Union (EU)

List of Respondents Mozambique :

Day 1: 12- February , 2024 :

- 1) Meeting with Mr. Boaventura Veja, UN Women Programme Advisor
- 2) Organized Meeting with Fundacao para o Desenvolvimento da Comunidade (FDC)-Mozambique;
 - Director –Mr. Dunezio, Partnerships and Resource Mobilization Department, FDC
 - Mr. Olivairan , Director – Advocacy and Knowledge Management , FDC
 - Ms. Mesatendo , Nutrition officer, FDC
 - Ms. Zena Seto, Coordinator -Women Peace Movement, FDC
 - Ms. Anatosa, Gender Specialist FDC
 - Dr. Nassimento, Head of Community Development (DRR) of FDC
 - Ms. Feratania, Renewable Energy Officer , FDC
- 3) Organized Meeting with COALIZAO; Ms. Jeiambe Como, Margarida, Programme Officer - Coalizão - Mozambican Youth Coalition Association

Day 2: 13- February, 2024 :

- 1) Organized Meeting with Sofala Agency for Economic Development (ADEL Sofala) ; Mr. Moses, Project Coordinator ADEL Sofala at Beira
- 2) Organized Meeting with Girl Child Rights (GCR)- Direitos da Rapariga; Mr. Nyararai Magudu, Project Coordinator, GCR

Day 3: 14- February, 2024 :

- 1) Organized Meeting with Instituto Nacional de Estatistica (INE)/ National Institute of Statistics ; Gender Focal Point
 - Ms. Juara Gomes , Head of Department of INE
 - Mr. Fraucisco Mauguaua
 - Mr. Dionisia Khosa , Technical Statistical Officer
 - Mr. Joao Mangue, Technical Statistical Officer
 -
- 2) Organized Meeting with Instituto Nacional de Gestao e Reducao do Risco de Desastres (National Institute for Disaster Risk Management and Reduction - INGD), Mozambique; Directorate of Social Statistics and Environmental Safeguard
 - Mr. Adlelto Americo Chambela, Manger, Soocial and Envirometanl Safegurds, INGD, Maputo, Mozambique
 - Mr. Torcano Siloe, INGD Maputo Province
 - Mr. Manuel Americo Jose, INGD Maputo Province

Day 4: 15- February , 2024 :

- 1) Conducted Focus Group Discussion (FGD)in the Resettlement Area of Flood Victims in Boane, Maputo Province; Local Disaster Risk Management Committees (CLGRC) community in Boane

Day 5: 16- February , 2024 :

- 2) Organized Meeting with Ms. Neide Des Santos- National Director to National Directorate for Gender under the Ministério do Gênero, Criança e Ação Social (MGCAS)
- 3) Organized Meeting with INGD; Deputy National Director - National Emergency Operative Center (CENOE)
- 4) Organized Meeting with UNDP; Team Leader on Climate Change, Ms. Eunice Mucache



Figure : Focus Group Local Disaster Risk Management Committees (CLGRC) in Boane, Maputo Province



Figure: Meeting with Department Gender Affairs



Figure: Meeting with INGD Adlelto Americo Chambela, Manger, Soocial and Envirometanl Safegurds, INGD, Maputo, Mozambique



Figure 3: Meeting with Ms. Laura Duarte, Chief of the Department, National Statistical Institute, Mozambique

Key Informant Interview

Purpose: This assessment seeks to explore: a] how women and men in Southern Africa are differently impacted by climate change; b] the physiological, political, economic and societal causes for the differences experienced; c] the current coping and adaptation strategies and capacities to climate induced disasters and variability; d] the capacity of women and men be strengthened to better adapt to climate change and climate variability; e] explore the role of women and women led organizations in disaster preparedness and response planning and to; f] review key DRM policies in target countries and identify key entry points for gender integration

Tool Notes: This tool uses the format of semi-structured interviews.

Geographic Location:

Name (optional):

Interview date:

Place of interview:

Translation necessary for the interview:

Introduction

1. Thank the participant(s) for the interview
2. Explain the objectives and expectations of the interview
3. Outline the amount of time interview will take
4. Obtain the informant's consent to record the interview and/or take pictures

Sex of key informant: Male Female

Institution of key informant:

Key informant's role in the Institution:

Part 1: Key DRR Frameworks and Structures

Question 1: What are the key policies/strategies frameworks in DRR in Mozambique? (Gender responsive DRR policy and strategies – challenges and recommendations)

a] _____

b] _____

c] _____

Question 2: With regards to Early Warning, Prevention and preparedness information, how is this accessed at community level by; (Challenges of developing disseminations of timely and precision level early warnings)

a] Women _____

b] Men _____

c] Persons with disability _____

d] The Elderly _____

Question 3: What are the existing coordination structures at; (challenges and recommendations)

- a] National level _____
- b] District level _____
- c] TA level _____

Question 4: How is the UN engaged at these levels?

- a] National level _____
- b] District level _____
- c] TA level _____

Question 5: How is the UN/government supporting collection and access to SADDD at: ; (challenges and recommendations)

- a] National level _____
- b] District level _____
- c] TA level _____

Part 2: Engagement with Stakeholders

Question 6: In your opinion who are the main stakeholders in the DRR sector in Mozambique in order of priority?

- a] _____
- b] _____
- c] _____

Question 7: How are the UN/Government structures engaging women and women led organizations in DRR and resilience initiatives? ; (challenges and recommendations)

- a] _____
- b] _____
- c] _____

Question 8: What do you consider are the key gaps in gender integration within DRR and resilience building initiatives? ; (challenges and recommendations)

- a] _____
- b] _____
- c] _____

Part 3: Impacts of Climate Induced Disasters [Cyclones, Floods, Drought]

Question 9: How have climate induced disaster impacted women and men differently?

Women

- a] _____
- b] _____
- c] _____

Men

- a] _____
- b] _____
- c] _____

Question 10: What are the different coping mechanisms adopted women and men to climate induced disasters? ; (challenges and recommendations)

Women

- a] _____
- b] _____
- c] _____

Men

- a] _____
- b] _____
- c] _____

Question 11: What are the key barriers effective women's engagement in DRR and resilience building?
; (challenges and recommendations)

- a] _____
- b] _____
- c] _____

Question 12: What would you recommend strengthen resilience among vulnerable women and girls to climate induced disasters?

- a] _____
- b] _____
- c] _____