Internal displacement in Mozambique

Data driven preparedness and anticipatory action to support recover and resilience

International Organization for Migration (IOM)
The UN Migration Agency

HUMANITARIAN SECTOR

709,529
INTERNALLY DISPLACED PERSONS AT THE END OF 2023

SEX BREAKDOWN

44% | 56%

IDPS BY LOCATION TYPE

65% HOST COMMUNITY | 35% CAMP

AGE DISTRIBUTION OF IDPS

0 - 17	53%
18 - 59	42%
60+	5%

SOLUTIONS PATHWAY STOCK FIGURE

632,408
TOTAL NUMBER OF RETURNEES AT THE END OF 2023

SEX BREAKDOWN

44% | 56%

AGE DISTRIBUTION OF RETURNEES

0 - 17	60%
18 - 59	35%
60+	5%

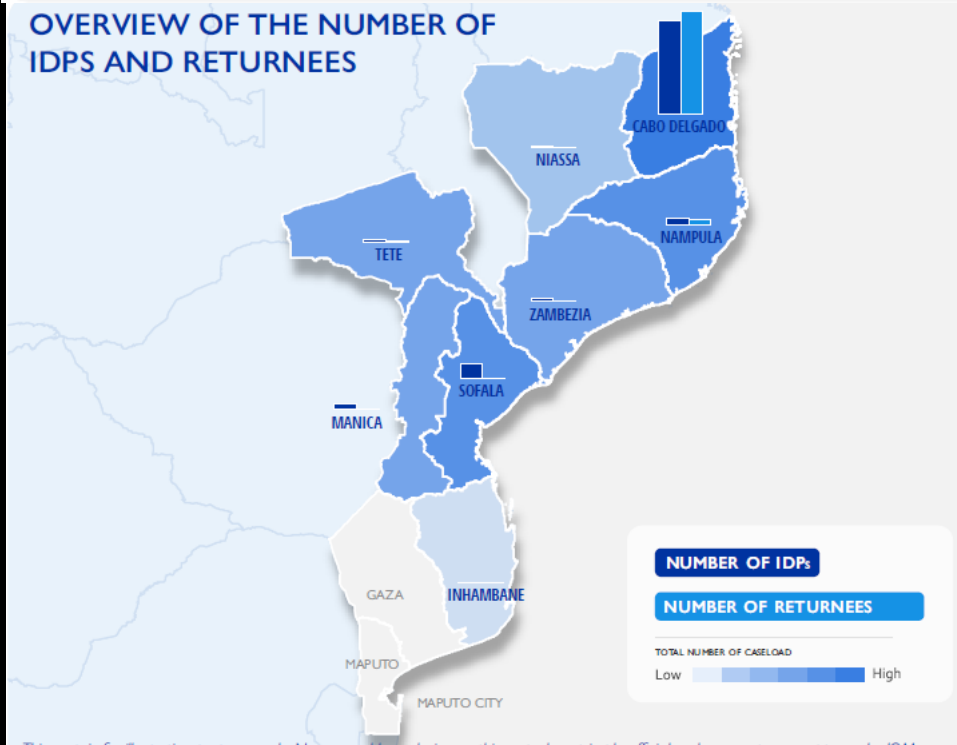
[1]The distinction between the humanitarian and solutions pathway stock figure is based on recommendations from the Data for Solutions to Internal Displacement (DSID) task force, established by the Office of the Special Advisor on Solutions to Internal Displacement, to advance the UN Action Agenda on Internal Displacement.

NUMBER OF IDPS AND RETURNEES

Disclaimer: Please note that all data previous to Q1-2023 solely encompassed Northern Mozambique, while after, Q1-2023 included four more provinces in Central Mozambique and Q4-2023 also included additional provinces in southern Mozambique.

DATA SOURCE: DTM Mozambique — Mobility Tracking Assessments — Rounds 1 to 20 (April 2020 - December 2023)

OVERVIEW OF THE NUMBER OF IDPS AND RETURNEES



This map is for illustration purposes only. Names and boundaries on this map do not imply official endorsement or acceptance by IOM.

DATA SOURCE: International Organization for Migration (IOM), Feb 16 2024. DTM Mozambique Crisis - Mobility Tracking Assessment Dataset Round 20 - Public Dataset. IOM, Mozambique.

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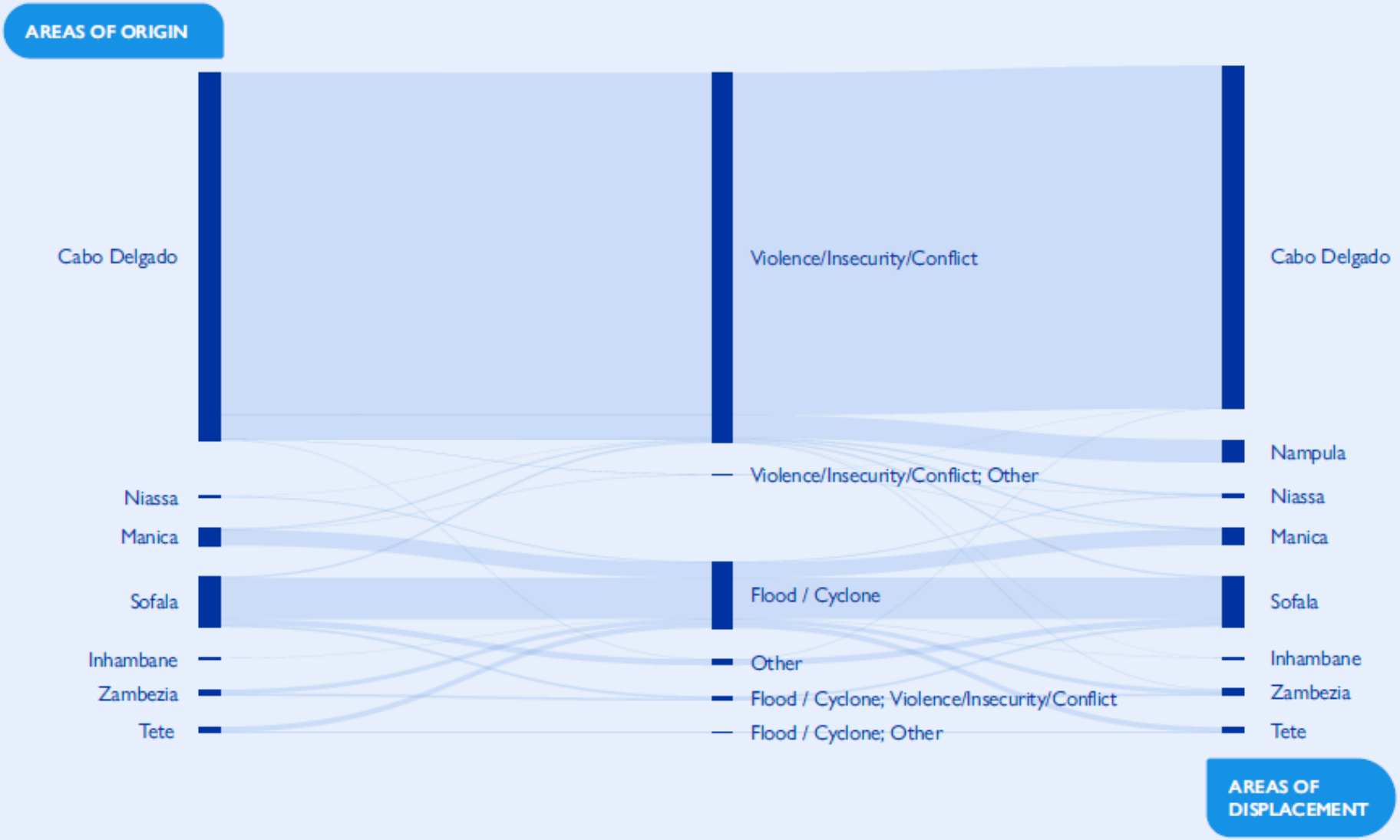
The UN Migration Agency

MOZAMBIQUE AREAS OF ORIGIN AND DISPLACEMENT

IOM UN MIGRATION | GLOBAL DATA INSTITUTE DISPLACEMENT TRACKING MATRIX



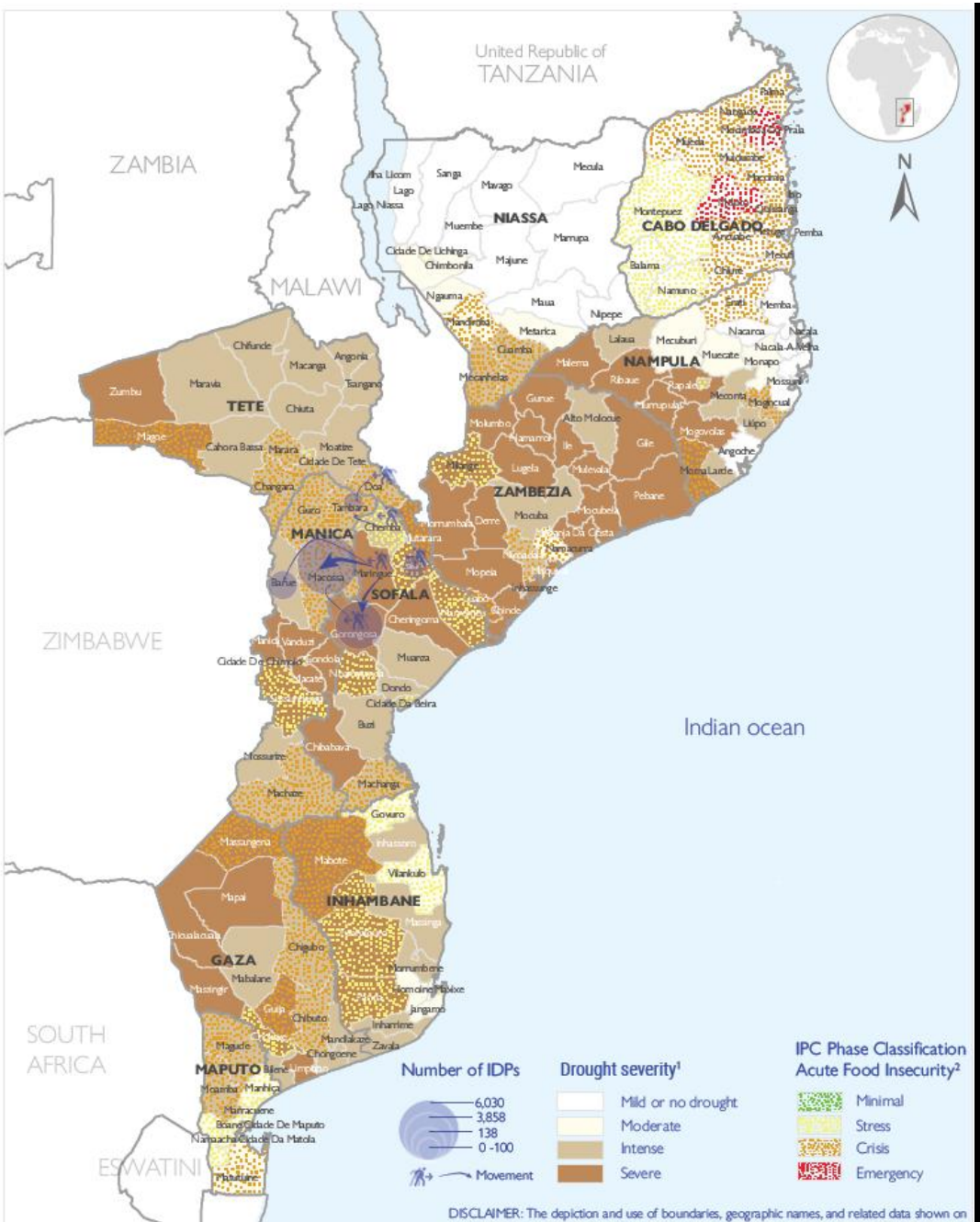
Disclaimer: Please note that areas of origin and displacement data are collected based on the answer given by the largest group of IDPs in that location. The largest group of IDPs does not always represent the majority of IDPs in that location as site composition can be varied.

Note: Answers on reasons for displacement were multiple choice. Other reasons for displacement included evictions from land by private and public companies, lack of food and epidemic/disease.

DTM IOM DISPLACEMENT TRACKING MATRIX

MOZAMBIQUE | DROUGHT DISPLACEMENTS

17 APRIL 2025



- 4.89 million affected
- 1,893 HH displaced
- 10,155 individuals displaced

International Organization for Migration (IOM)

The UN Migration Agency

Approach

- Not predicting internal displacement
- Specifically, IOM aims to develop or expand current AA frameworks to be more inclusive of IDPs.
- Often AA systems, where available do not cover areas where there is significant IDP presence, or, compensate for the vulnerabilities IDPs often face (Multi-hazard).
- IDPs are usually more vulnerable than other populations.
- Often face compound risks with no financial, economic, social, legal safeguards.
- Often displaced from conflict but then reside in areas with climate risks.
- Mitigating these effects is needed to ensure IDPs are put on a path of durable solutions and to decrease vulnerabilities that lead to perpetual displacement.

Approach

- We hope to compliment current frameworks with additional analytical methods both from AA and preparedness perspective.

- Both for trigger development, but also, forecast analysis for operations, preparedness, informed discussion making.

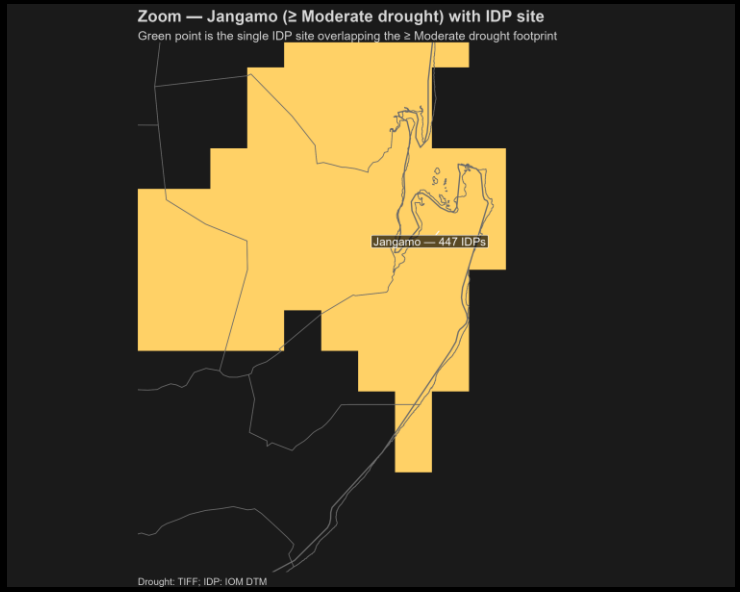
- Our focus, adds a human impact component of key populations at risk (grided populations as well as IDP locations)

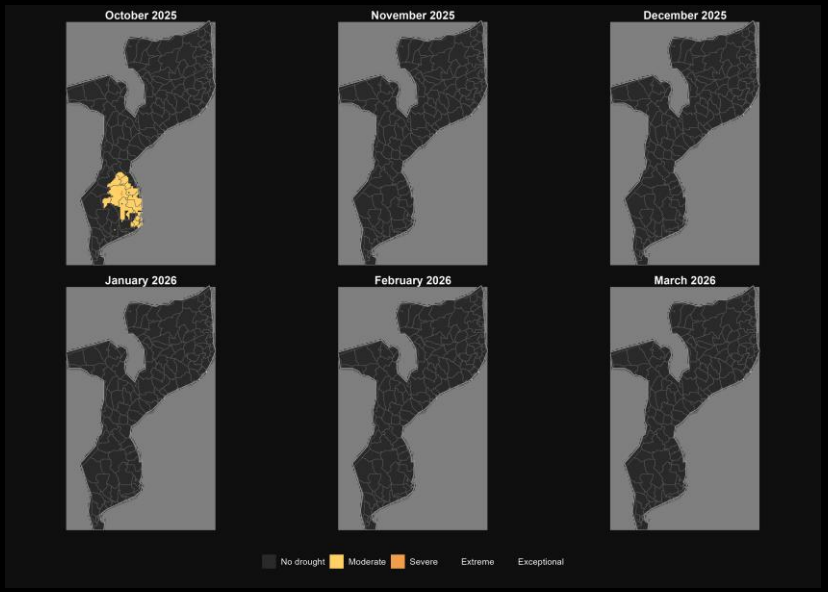
- And how these populations at risk interest with other vulnerabilities need to be incorporated
  - Geographical (agricultural land, grazing land etc.)
  - Household level (food security, livelihoods, shelter, wash, etc.)

IOM's Drought analysis

- Hydro-climatic simulations from NASA Center for Climate Simulations (ensemble means).
- Horizon: up to 6 months ahead.
- Definition: m^3 of water per m^3 of soil.
- Directly reflects plant-available water; more informative than precipitation-only indices *(University of Santa Barbera – Climate Hazard Centre)*
- Chosen as the most meaningful indicator of drought occurrence. Eventually complement with e.g. Standardised Precipitation Evapotranspiration Index (SPEI).
- Coupled with human impact of people and IDPs at risk in given cell projection.

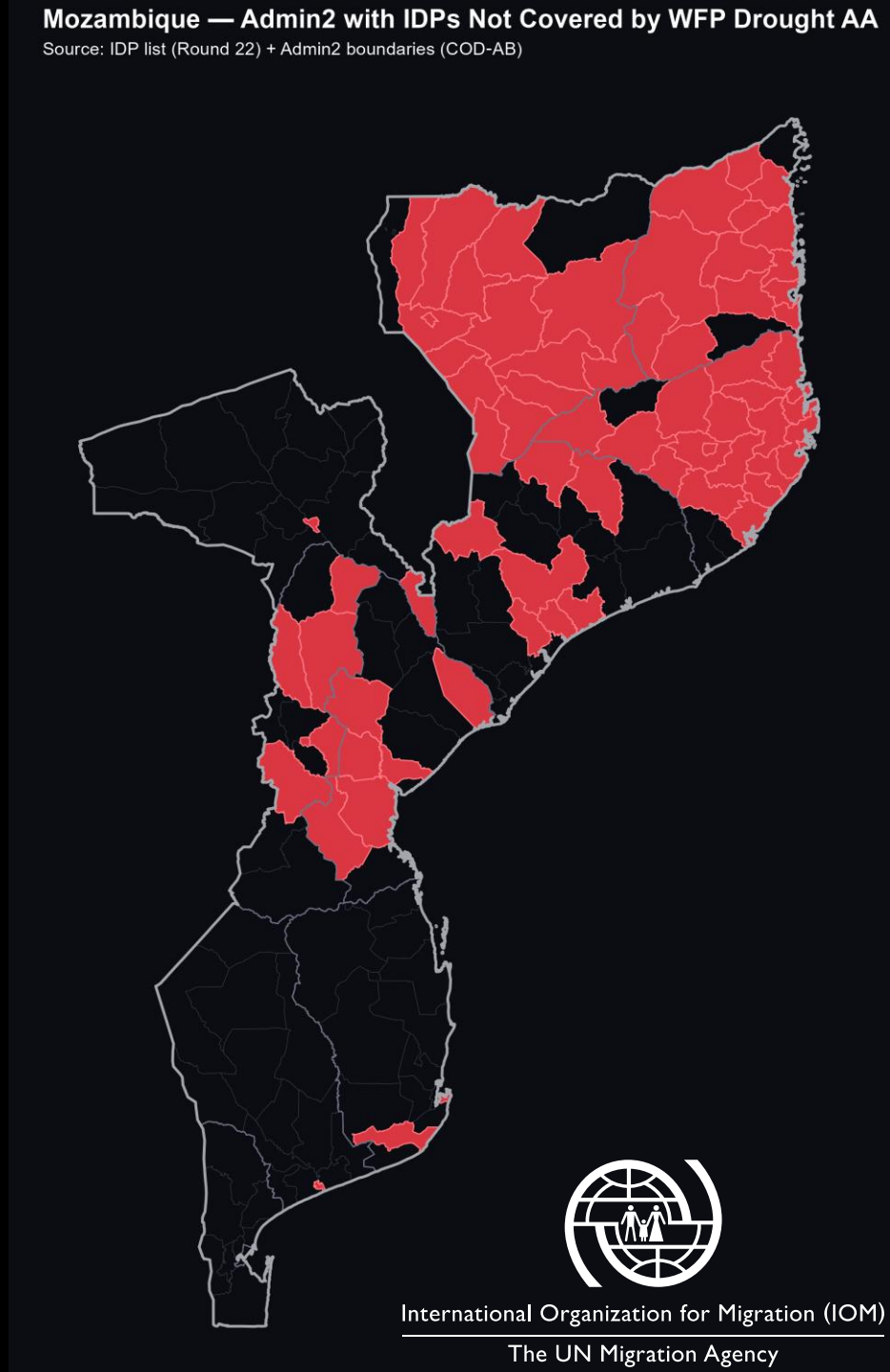
Category	Z-score range
Wet	z > +1.0
Not dry	+1.0 to −0.49
Abnormally dry	−0.50 to −0.79
Moderate drought	−0.80 to −1.29
Severe drought	−1.30 to −1.59
Extreme drought	−1.60 to −1.99
Exceptional drought	z ≤ −2.0





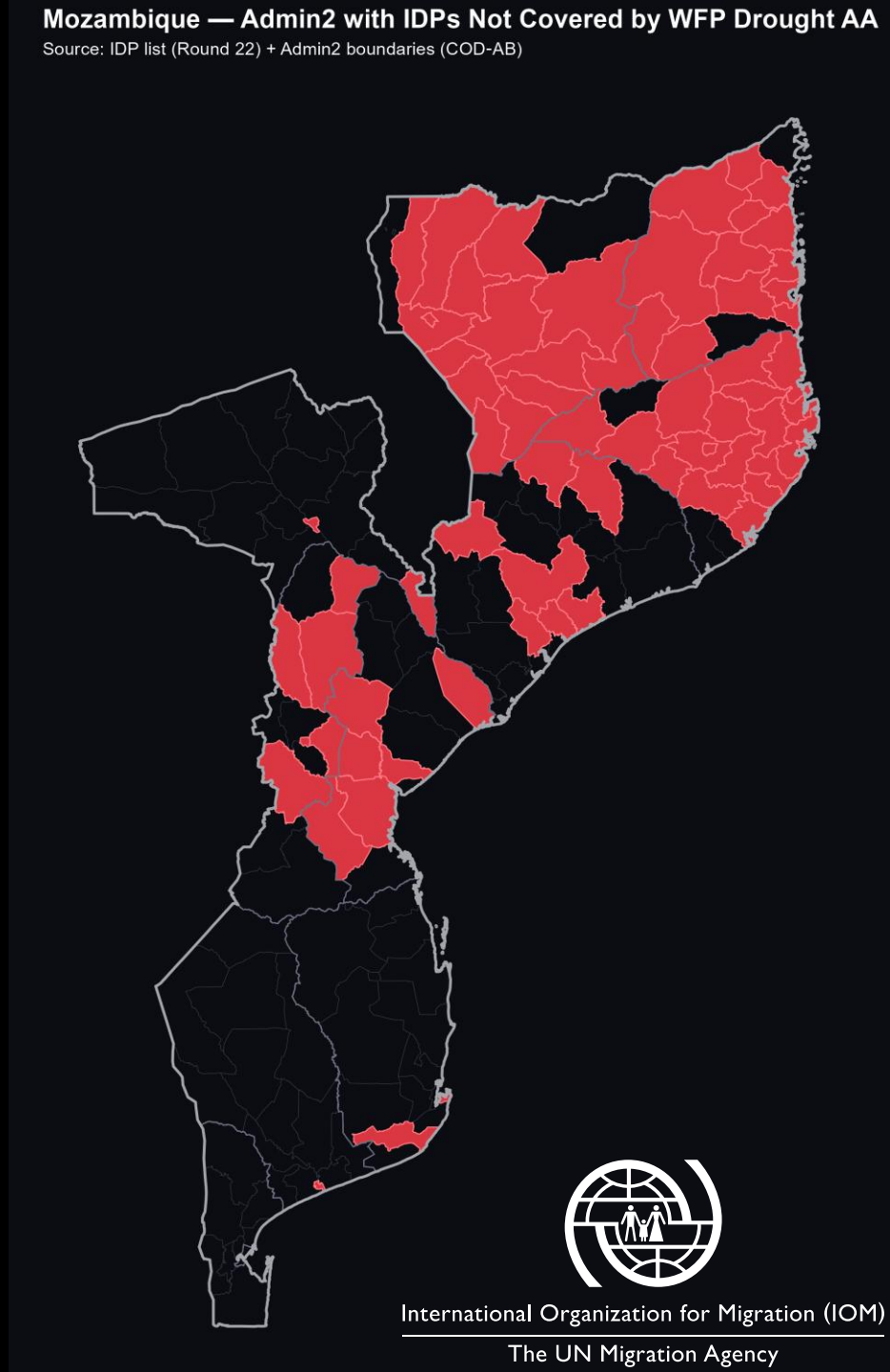
Analytical expansion

- Given that there is already a drought activation in place we are not looking to replace, rather provide additional analysis.
- Can we add to current activations, assessing longer forecasts or improve accuracy?
- Can we expand the current location to include areas where IDPs are (95% of IDPs are not covered by the current activation)
- What data are available that can assist in understanding IDP vulnerabilities in areas with shock forecasts?
- Ideally utilize DTM as well as existing WFP data (or other household data) to build further understanding of key local and communal vulnerabilities to target ‘most in need’.



Trigger development?

- What are soil moisture levels' impact on population livelihoods?
- For each location which are the months of the year during which soil moisture conditions are relevant for farming?
- After identifying the relevant months for farming and pastoralist populations, we will define trigger thresholds and activation levels.



Flood

Use risk mapping and historical analysis to see overlap of areas where IDPs reside in high-risk spaces (Frequency, depth, history of flood displacement)

Historical and forecast maps: GLOFAS, JRC, Floodscan, VIIRS data, LISFLOOD, Seasonal forecasts

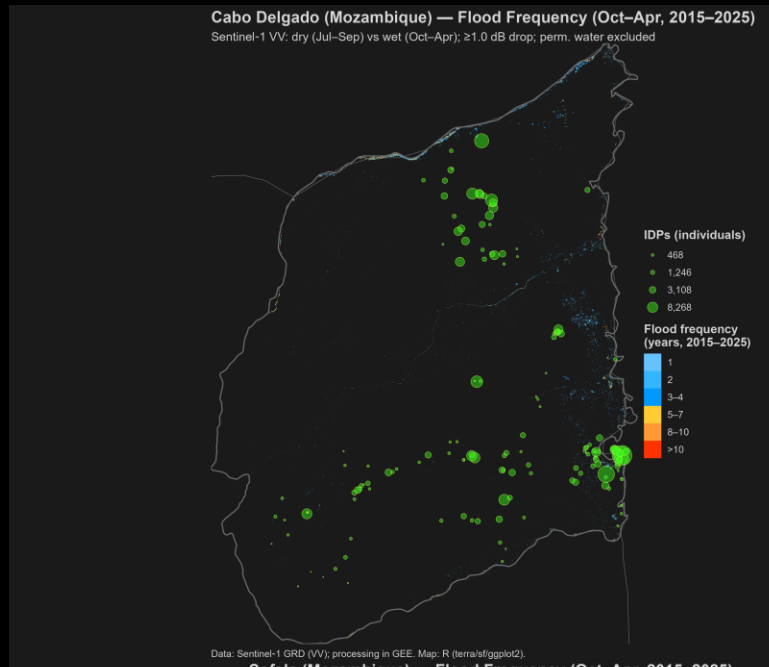
Operational usage - preparedness and planning:

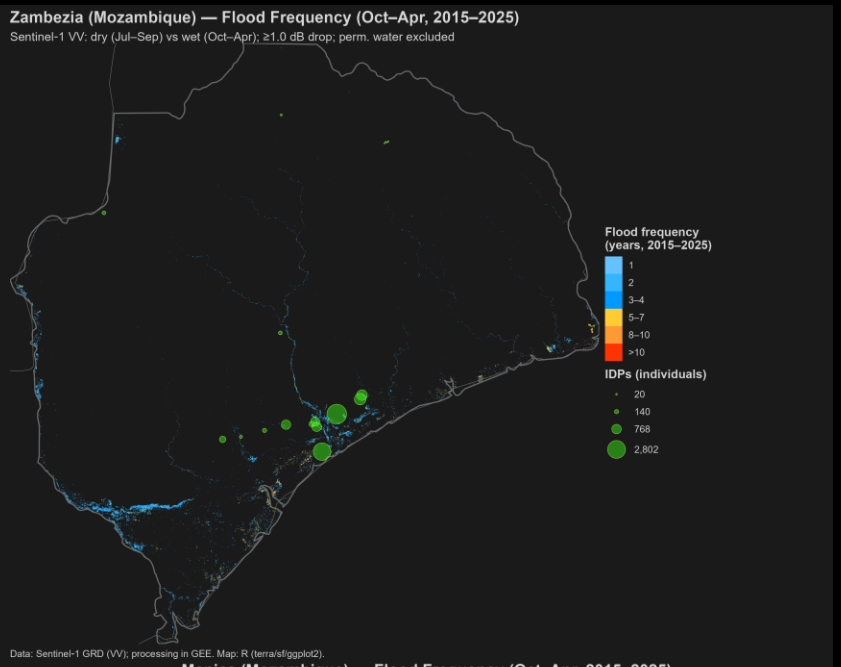
- Planning evacuation routes
- Potential agricultural or livelihoods destruction
- IDP locations at risk
- Populations at risk
- Using data from DTM and partners, how location risks interact with WaSH, Shelter, Food Security vulnerability data.

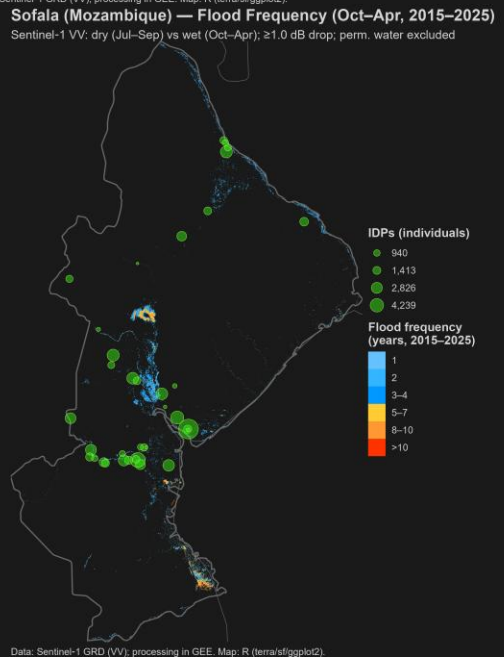
Forecasts and lead times

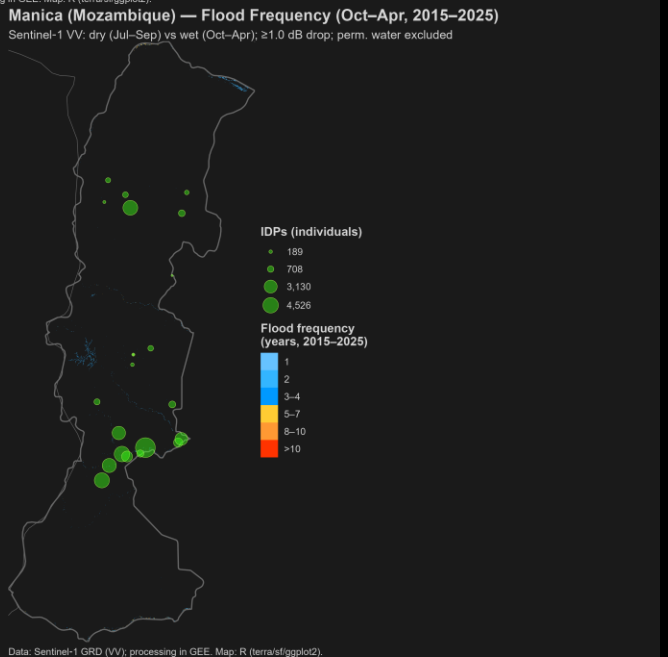
- Cover the next 15 days for preparedness (Depending on activities).
- Activation window 2-3 days.

Flood Frequency 2015-2025



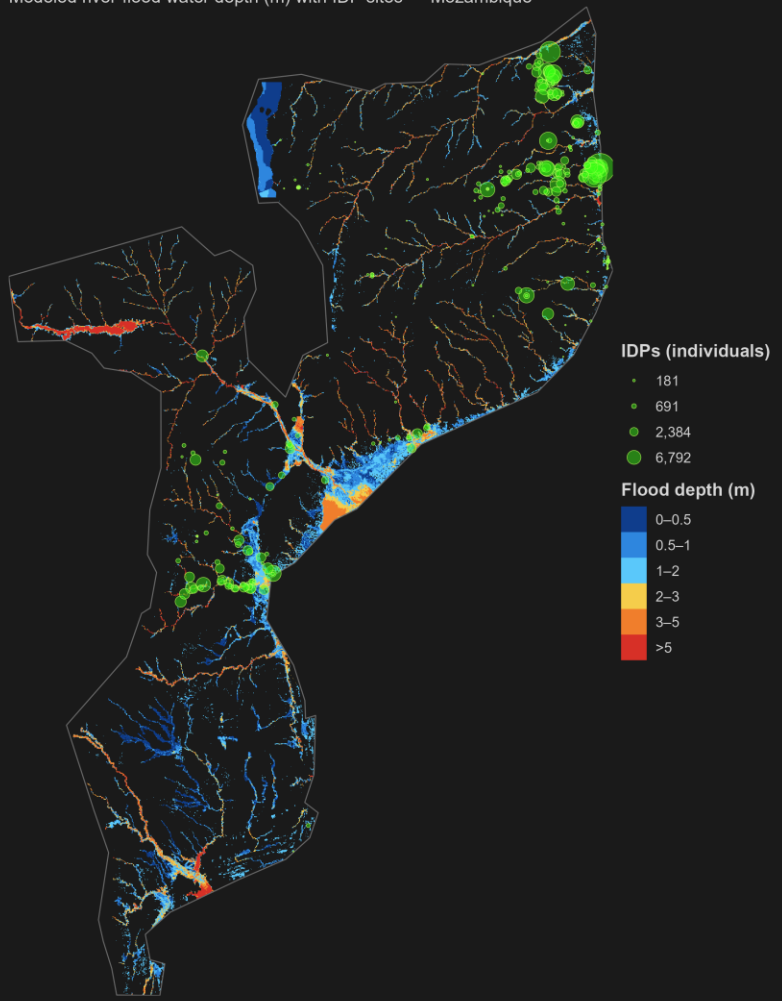






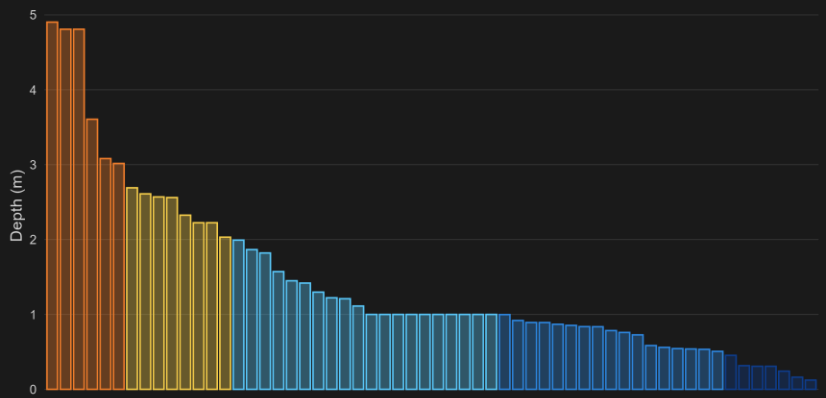
Mozambique — Flood Depth (RP10, 1-in-10 year)

Modeled river-flood water depth (m) with IDP sites — Mozambique

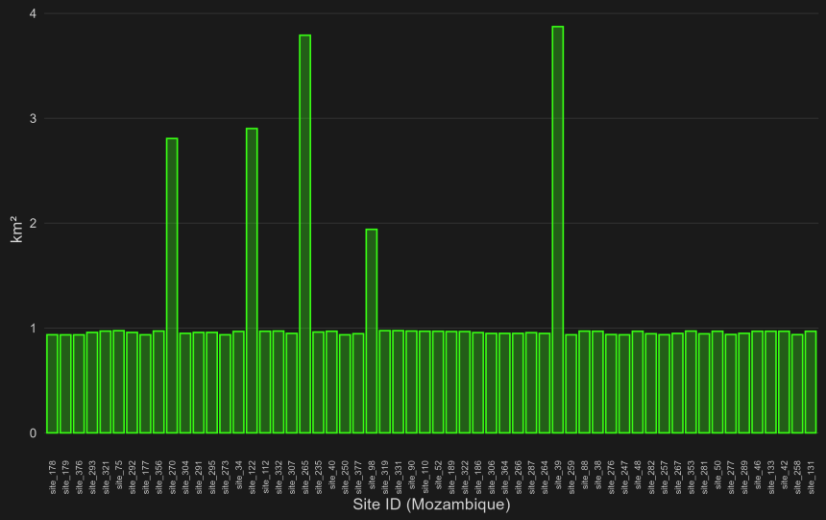


Data: JRC/CEMS GLOFAS v2.1; IDP dots sized ∝ population

Max flood depth within 500 m — RP10 (1-in-10 year)



Hazard area within 500 m (km²) — same site order



Admin-1	Priority for AA (displacement focus)	Reason	Potential Rivers to monitor
Cabo Delgado	Highest	Many IDP clusters overlap repeat wet-season zones; several sites show max frequency of 6–7 years; RP10 has 1–3 m+ pockets on floodplains.	Messalo, Montepuez, Rovuma (coastal stretch), Lúrio (lower reach), Megaruma/Muaguide (local).
Sofala	Very high	Large IDP populations near deep deltaic plains; top sites show max frequency of 2 years; RP10 depths often 2–5 m.	Púnguè (Beira corridor), Búzi, Zambezi distributaries (Marromeu–Chinde), Save (lower).
Nampula	High	Several high-population sites with max frequency of 2–4 and .RP10 depth 1–3 m	

Moving forward

- Further vulnerabilities data is needed to overlap population risks to key climate shocks.
- Ideally utilize data already gathered from IOM and partners (UN NGO, Government)
- Where data is missing, use of DTM to fill gaps at site level where high probability or impact of shocks is projected.

Afghanistan Climate Vulnerability Assessment (ACVA)

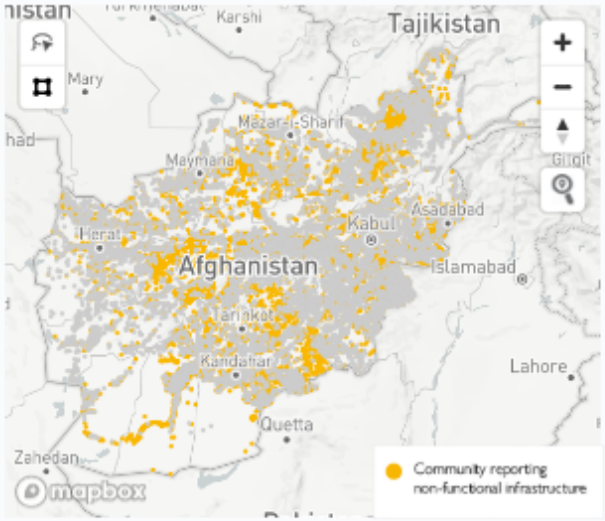
IOM UN MIGRATION | GLOBAL DATA INSTITUTE DISPLACEMENT TRACKING MATRIX

SELECT ROUND: ACVA R#1 (Nov. - Dec.) 2024 | ACVA R#2 (Mar. - Apr.) 2025

METHODOLOGY | OVERVIEW | INFRASTRUCTURE/SERVI... | LIVELIHOODS/ADAPTIVE...

INFRASTRUCTURE

Locations reporting non-functional Infrastructures

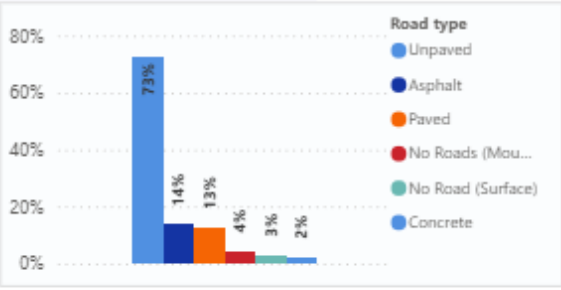


Province: All | District: All

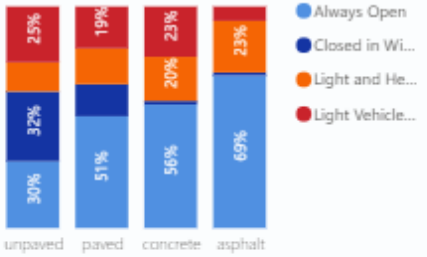
Infrastructure types and functionalities

Infrastructure type	# of communities reporting availability	% availability	# of non-functional	% non-functional
Culverts	25,565	41%	9,465	37%
Province health centers	16,206	26%	880	5%
District health centers	15,547	25%	2,683	17%
Bridges	12,149	19%	3,877	32%
Makeshift irrigation system	11,403	18%	4,070	36%
Cell towers	10,506	17%	2,008	19%
Water reservoir	10,399	17%	3,886	37%
Retention wall	10,043	16%	5,346	53%
Electricity	9,243	15%	1,668	18%
Renewable energy sources	9,185	15%	2,547	28%
Constructed irrigation system	6,609	11%	2,625	40%
Basic health centers	5,991	10%	1,026	17%

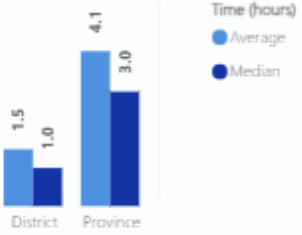
ROADS AND ACCESSIBILTY



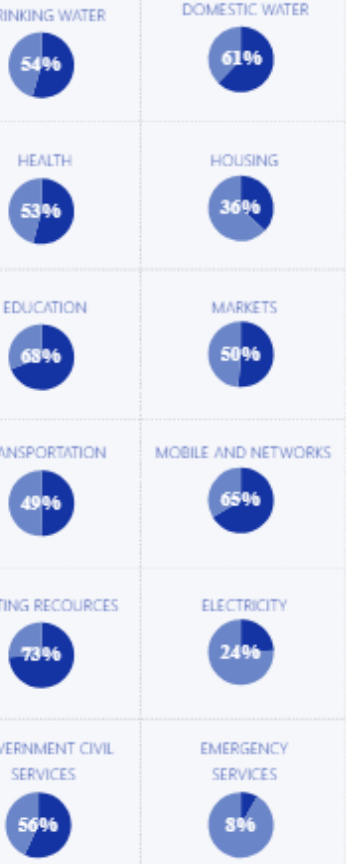
Road condition



Average and median time from communities to district and province centers



SERVICES AVAILABILITY



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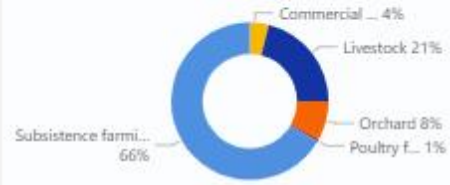
METHODOLOGY | OVERVIEW | INFRASTRUCTURE/SERVI... | LIVELIHOODS/ADAPTIVE...

LIVELIHOODS

9M* Individuals practicing climate-sensitive livelihoods

3M Other livelihoods

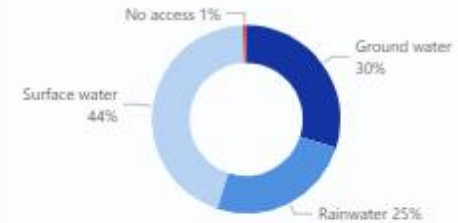
Climate sensitive livelihood activities



of communities practice agriculture

Reported decrease in irrigation water

Agriculture water sources

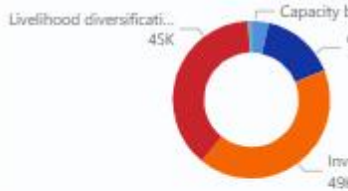


Province: All | District: All

Distribution of communities practicing agriculture

ADAPTIVE CAPACITY

Community primary needs related to disaster / hazard



Community challenges resulting from hazards

% of communities adopting coping strategies in response to hazards

* *Climate sensitive livelihood activities includes: commercial crop farming, livestock, orchard, and poultry farming.*

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climate mobility innovation lab

IOM's Climate Mobility Innovation Lab (CMIL)

Climate Mobility: Key Figures

- On average **21.6 Million displacements / year** past decade due climate-related disasters*
- **Up to 216M people expected to migrate** due to slow-onset effects of climate change **by 2050**
- **90%** of those (*194M*) will come from **Africa, Asia and the Pacific**
- Over **1 billion people at risk** of exposure in costal areas by 2050
- Up to **75% of the global population** at existential threat from extreme climate by 2100

Climate-related mobility is already a multi-billion dollar problem requiring innovation, global-scale solutions

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**Average number of internally displaced people per year globally due to climate-related disasters over the past decade*

Climate Mobility Innovation Lab (CMIL)

CMIL incubates and scales innovative solutions linking climate change and human mobility, while it catalyzes policy, financing, and cross-sector collaboration

How it works

- It cultivates and tests scalable, context-sensitive solutions
- Shares knowledge through peer-to-peer learning and exchange
- Connects diverse ecosystem of actors to foster transformative change

Impact and Reach

- Field-tested solutions for adaptation & displacement prevention
- Coordination and engagement with governments, communities, CSOs, academia, private sector in Asia, Pacific & Africa
- Supports at-risk communities with livelihoods, early warning systems, resilient housing & adaptive planning

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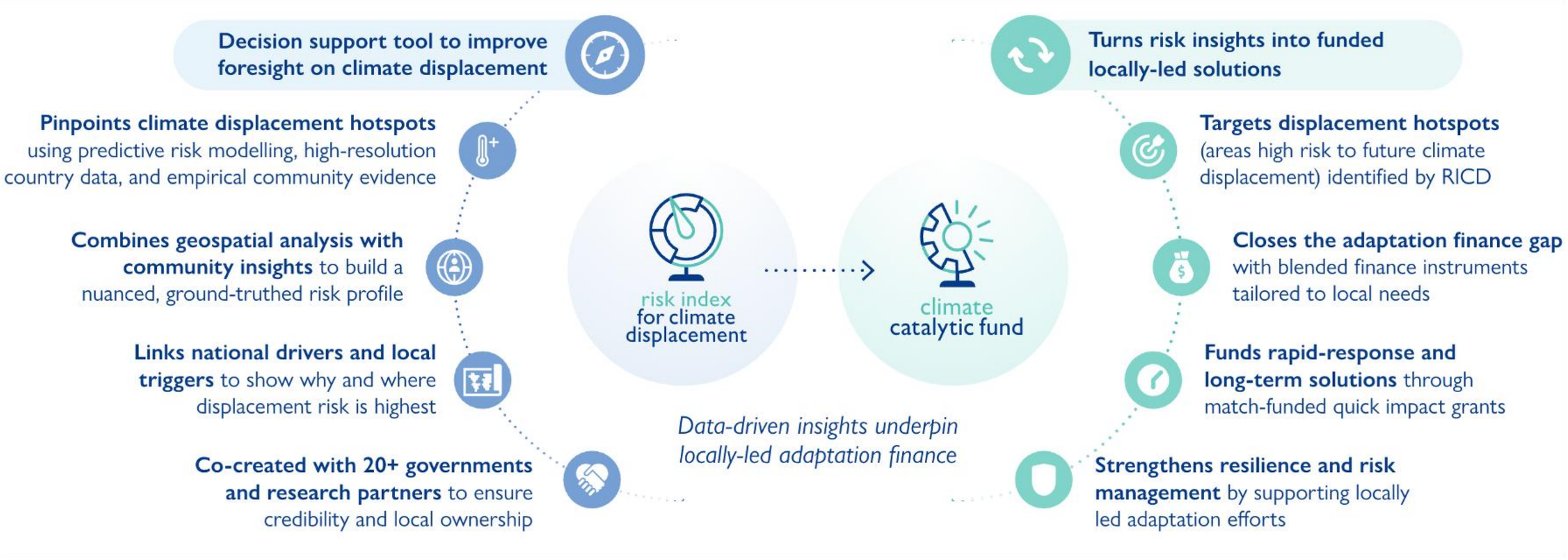
Climate Mobility Innovation Lab Framework

Filling the Data-to-Action Gap



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RISK INDEX FOR CLIMATE DISPLACEMENT (RICD)

The RICD forecasts displacement risk in Africa and guides interventions

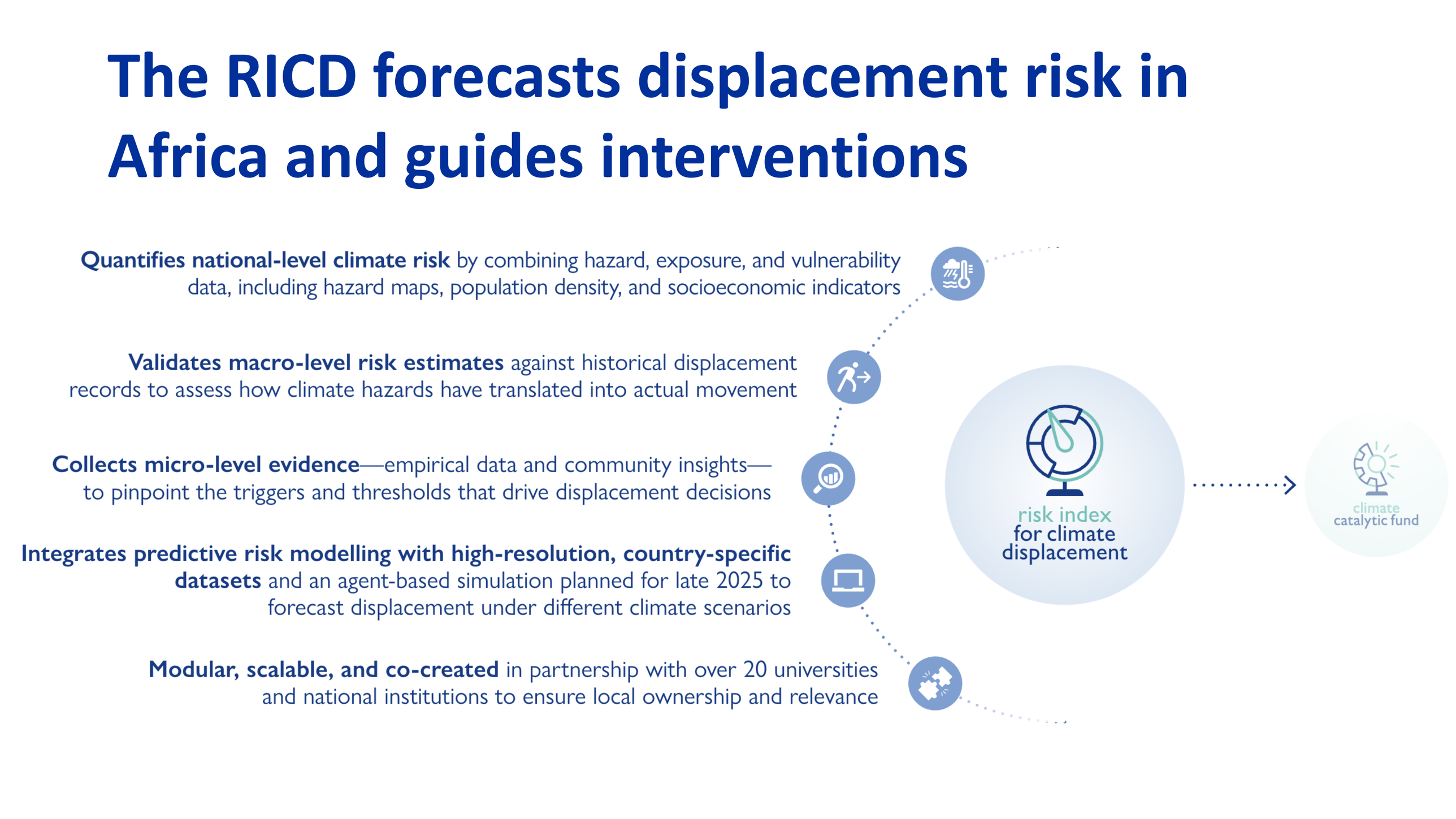
Quantifies national-level climate risk by combining hazard, exposure, and vulnerability data, including hazard maps, population density, and socioeconomic indicators

Validates macro-level risk estimates against historical displacement records to assess how climate hazards have translated into actual movement

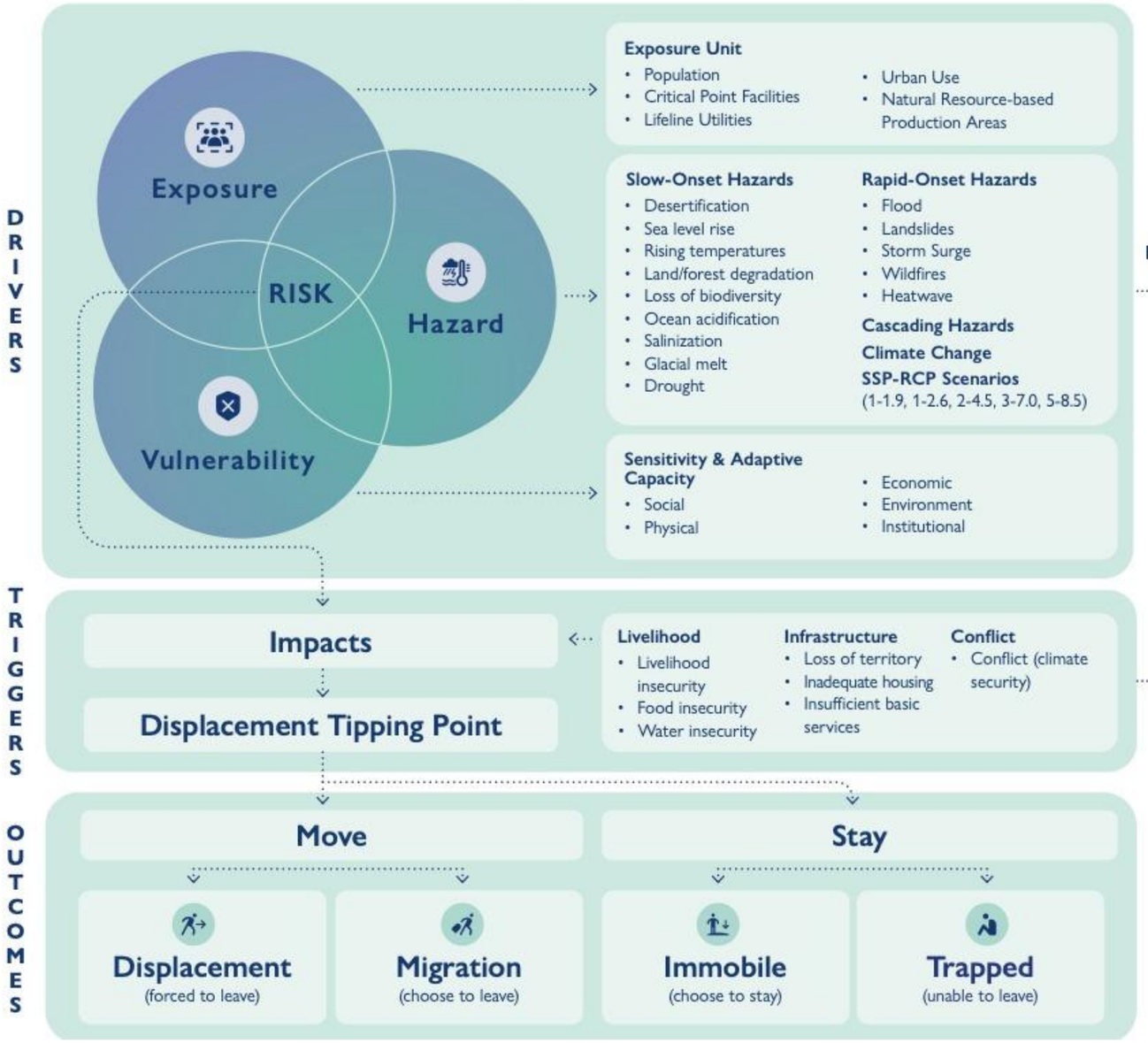
Collects micro-level evidence—empirical data and community insights—to pinpoint the triggers and thresholds that drive displacement decisions

Integrates predictive risk modelling with high-resolution, country-specific datasets and an agent-based simulation planned for late 2025 to forecast displacement under different climate scenarios

Modular, scalable, and co-created in partnership with over 20 universities and national institutions to ensure local ownership and relevance



Conceptual Framework



RICD Framework

NATIONAL LEVEL

LOCAL LEVEL

MACRO AND MICRO RISK ANALYSIS

RICD macro-level focuses on 'drivers' of displacement

- Uses geospatial and national-level data to identify displacement 'hotspots'
- Risk is assessed and cross-validated with historical displacement data

RICD micro-level focuses on 'triggers' of displacement

- Integrates local data and community insights
- Combines quantitative and qualitative data with predictive analytics

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We are enhancing our models and scaling RICD

Methodological Enhancements

- Expand hazard coverage
- Contextualisation and iteration
- Advance predictive capability
- Design for scalability

Geographic Scaling

Current

Indonesia

Philippines

Upcoming

Fiji

Vanuatu

Uganda

Somalia

South Sudan

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Co-funded by European Union Humanitarian Aid
UNIVERSITY OF THE PHILIPPINES RESILIENCE INSTITUTE
AIT Asian Institute of Technology

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CLIMATE CATALYTIC FUND (CCF)

Climate Catalytic Fund

Catalytic finance delivers match-funded grants to priority displacement hotspots identified by RICD

1:1 matching fund mobilizes resources from national actors, including governments, the private sector, diaspora partners, and local communities.

Funds locally led projects to address key displacement drivers—housing, livelihoods, early warning, and nature-based solutions

Tech-enabled platform streamlines applications, with future chatbot and automated due diligence to reduce admin time

Creates a pipeline for larger climate finance and provides high-visibility CSR and ESG impact for funders

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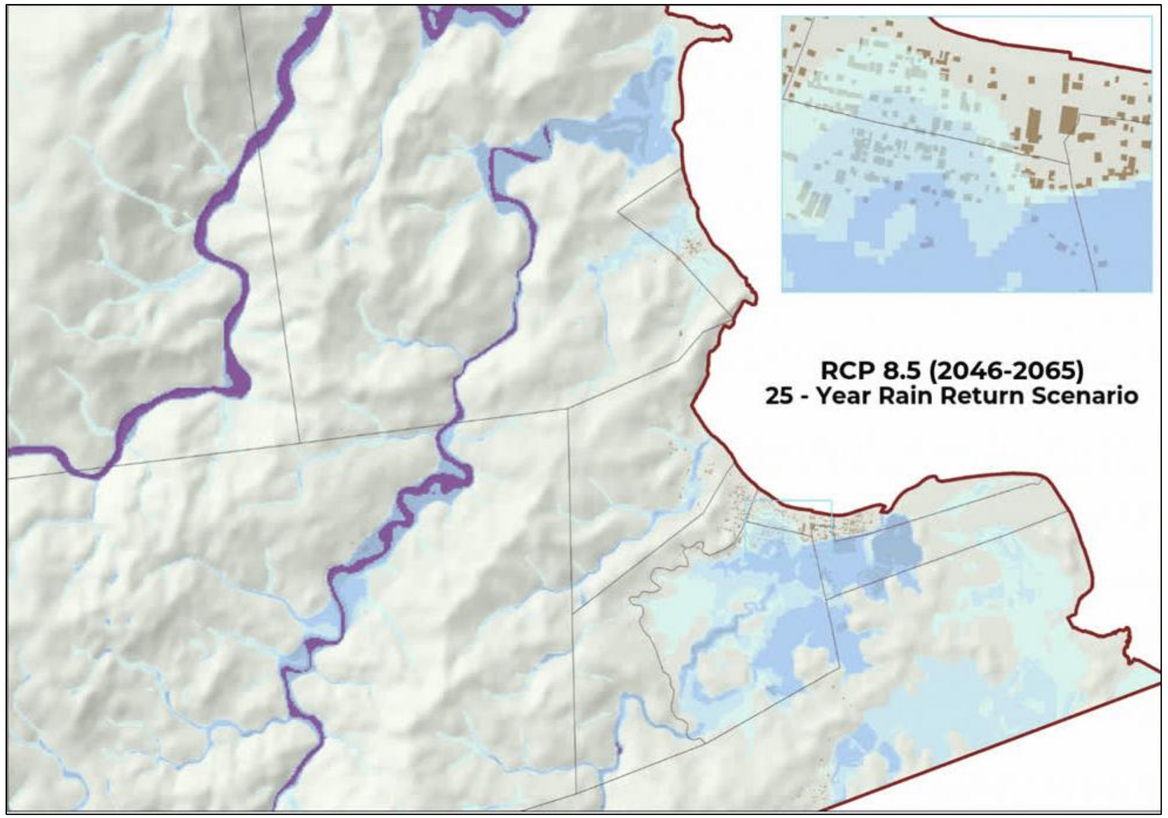
Climate Catalytic Fund Powered by RICD



RICD directly informs the focus areas of the Climate Catalytic Fund:

Targeted entry points: storm-risk data pinpoints needs in disaster preparedness, resilient livelihoods, and rural adaptation

Evacuation & alerts: repeated short-term displacements call for early-warning systems and safe shelters in remote coastal zones

Shock-proof livelihoods: income loss after storms signals demand for CCF support to diversify and strengthen livelihoods

Inclusive resilience: “trapped” households need tailored assistance to reduce immobility and boost coping capacity

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Next steps CMIL Africa

- Expansion of RICD implementation
- CCF development and setup underway in Africa
- Integration of RICD and CCF insights into policy dialogues and frameworks (eg KDMECC etc.)
- Strong interest from national stakeholders and the private sector (e.g., Indonesian Chamber of Commerce) in collaboration and match-funding
- Expanding financial instruments beyond matching grants to include guarantees, concessional loans, and equity investment.
- Broadening scope to mobilize funding for larger nature-based solutions (NbS) alongside local projects.

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Thank you

CLIMATE INDUCED FORCED DISPLACEMENTS

IN CHAD

NOVEMBER 2025

SUMMARY

Climate's Hazard Key factors

Temperatures:

Various scenario predicted annual increases of:

- South: 0.8° Celsius
- Centre & West: 1.2° Celsius
- North: 1.3° Celsius

It is expected an overall annual increase of 1° Celsius in Chad especially in the Northen area to reach +1.5°C by 2030 and +2.5°C by 2080 with a peak in the northern part of the country.

*Source: PNA. 2021, p,36

Rainfall:

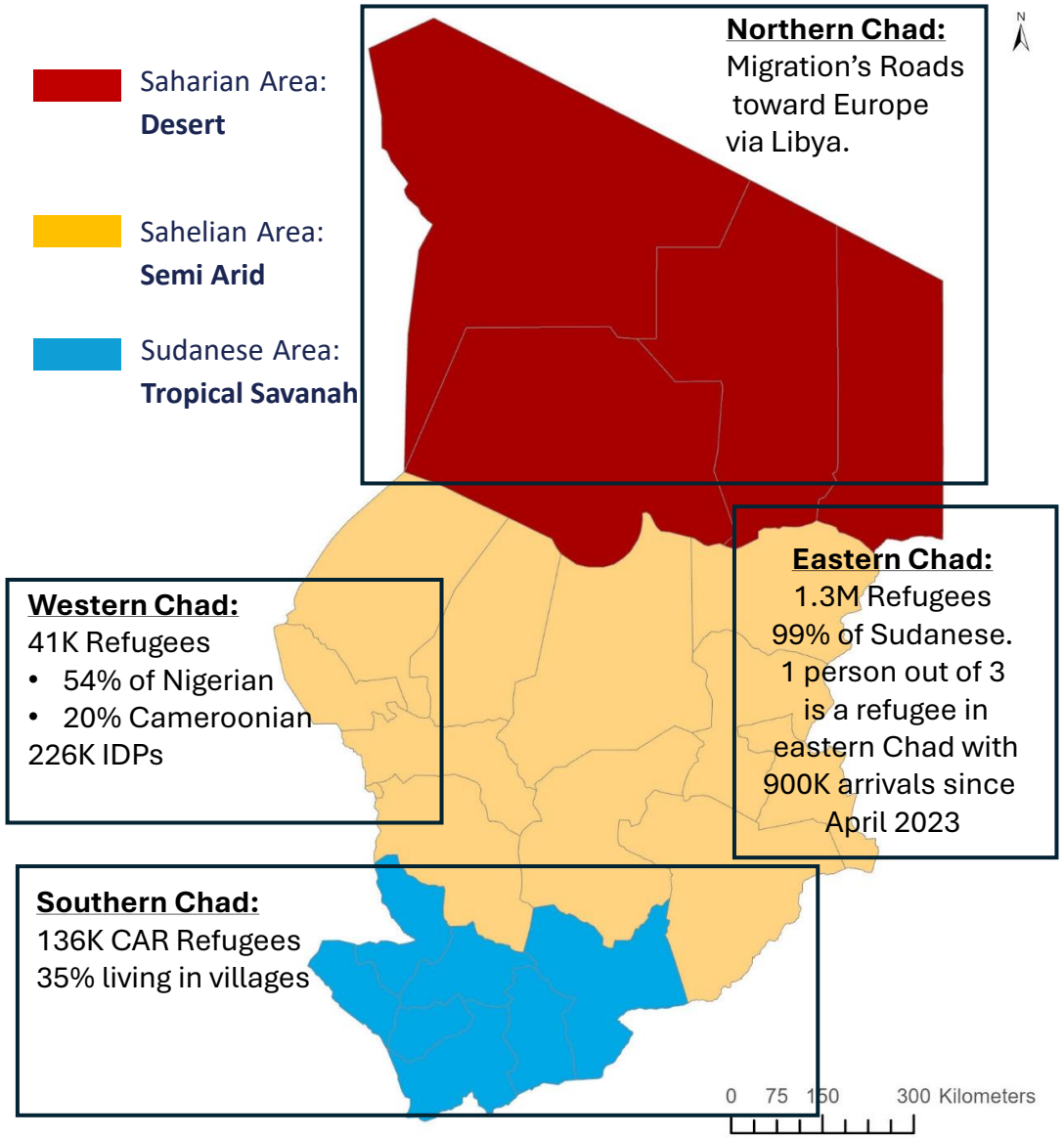
The rainfall's projections are a bit uncertain however it is predicted an increase of 10 to 20%. In Western and Southern Chad, it might cause regular overflows of Chad Lake and the Chari and Logon rivers.

*Source: PNA. 2021, p,36

Drought:

Drought is affecting the entire country with highest concerns in the northern and eastern Chad. It could potentially cause severe famine and population displacement.

Climate Map and Population of Concern to UNHCR



According to the Chad National Adaptation Plan, 91% of the households interviewed declared having noticed significant environmental transformations with key factors being lack of potable water, flood and forest degradation.
The most affected sectors are agriculture (27 to 29%) and livestock (25%) .
In addition, the climate change is also an underlying reason behind communities' conflicts.

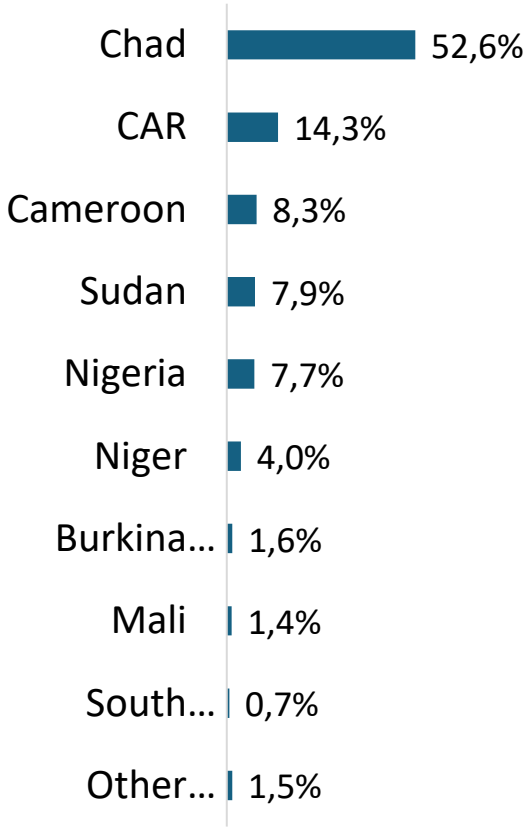
According to the same Plan, mobility is the most cited coping mechanism with 49% of the households mentioning it.

*Source: PNA. 2021, p,36

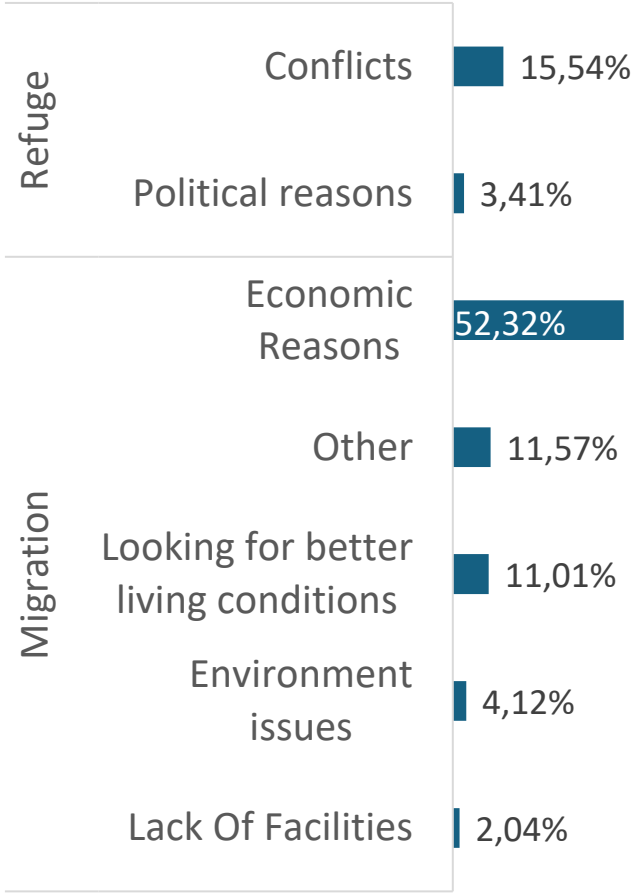
16K

Individuals Interviewed Between Jan 2024 and June 2025

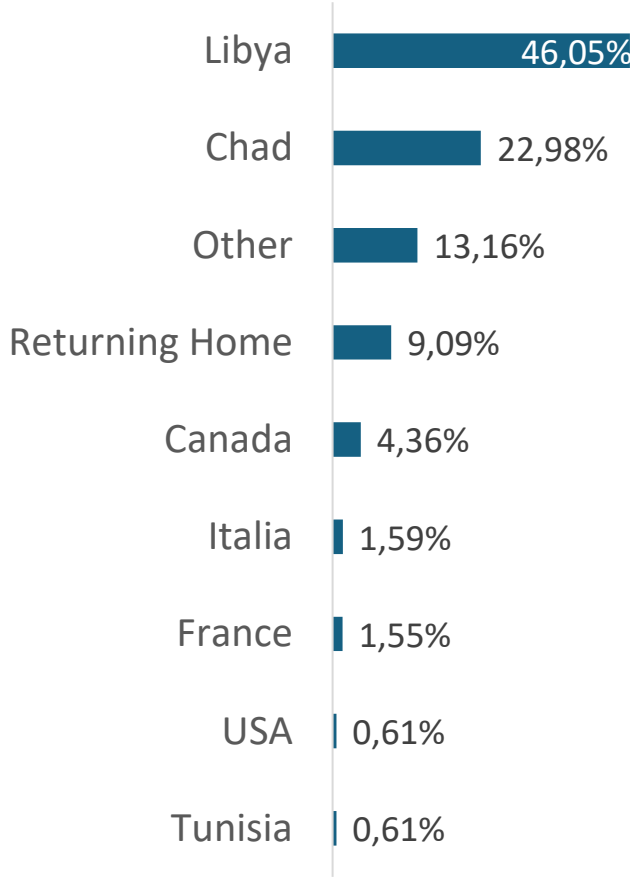
Country of Origin



Displacement reasons



Declared final destination



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IMPACT ON INTERNAL DISPLACEMENTS

- The Lake Chad, the Chari and Logon rivers overflows happening every year during the raining season. This is due to the poor management of the rainwater. As a result, in 2022, more than 340,000 people were displaced due to.

- In 2024, Chad was severely affected by the flooding in the Western and Southern part of the country

1.9 M
Internally Displaced Persons

423K ha
Crops Destroyed

570
Death

72K
Perished Livestock

217K
Houses Destroyed

- Mapping of areas at risk of flood, drought and landslide (Flight 4 Hope project supported by the innovation Fund). This is project is jointly implemented with CNRD (National Center for Research and Development)

- Inclusion of the flood response in the Chad HNRP under the lead of the government

- Internal and cross border population movements monitoring to better understanding the dynamic through tools such as:

    - P21 (Border Monitoring and protection incident reporting): Kobo Form administered by UNHCR and its partners

    - Mixed Migration: Kobo form intended to collect data on migration. It is administered by UNHCR and Chad Red Cross.

- Strengthening UN agencies (Humanitarian and development) partnership with the government agencies

- There are also quite a number of mitigation measures being implementing such as trainings on natural resources management, reforestation

KEY GAPS

- Extend Data collection coverage and ensure the effective involvement of the government counterparts.
- Draw donor's attention to climate issues in Chad's and Sahel in general
- Environmental and natural resource management needs:
  - Reforestation and restoration of degraded lands,
  - Sustainable water management
  - Protection of wetlands and watersheds,
  - Dissemination of climate-resilient agricultural techniques.
- Infrastructure and land-use planning needs:
  - Establishment of water and irrigation infrastructure
  - Construction of housing resilient to flooding, strong winds and extreme heat
  - Implementation of urbanization and risk management plans (preventing settlements in flood-prone areas),
  - Installation of drainage and soil protection systems.
- Economic needs and livelihoods:
  - Diversification of income sources
  - Access to microcredit and green finance to support sustainable activities
  - Vocational training in alternative occupations to traditional agriculture
- Social and institutional needs:
  - strengthening community capacity in climate risk management
  - education and awareness-raising on climate adaptation practices
  - community participation in local environmental management policies
  - strengthening local institutions to plan for and respond effectively to crises.
- Risk prevention and management needs:
  - Early warning systems for droughts, floods, and storms establishment
  - Design a contingency plan
  - Social protection mechanisms for vulnerable households (climate insurance, food assistance)

THANK YOU FOR YOUR ATTENTION

PSMN Evidence on Climate-Forced Displacement in Somalia: Turning Data into Action for Preparedness and Response

at

Climate and Displacement Workshop

4-5 November

UNHCR
The UN Refugee Agency

ABOUT PSMN

PSMN (Protection & Solution Monitoring Network) is a **UNHCR**-led project with a network of **10** local NGOs managed in partnership with **NRC**.

PSMN acts as a platform for identifying and reporting on displacements (including returns) of populations in Somalia as well as **protection incidents** underlying such movements.

UNHCR
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BACKGROUND

Population Movement Tracking

2006

Protection Monitoring Network

Protection & Return Monitoring Network

2016

Protection & Solutions Monitoring Network

2024

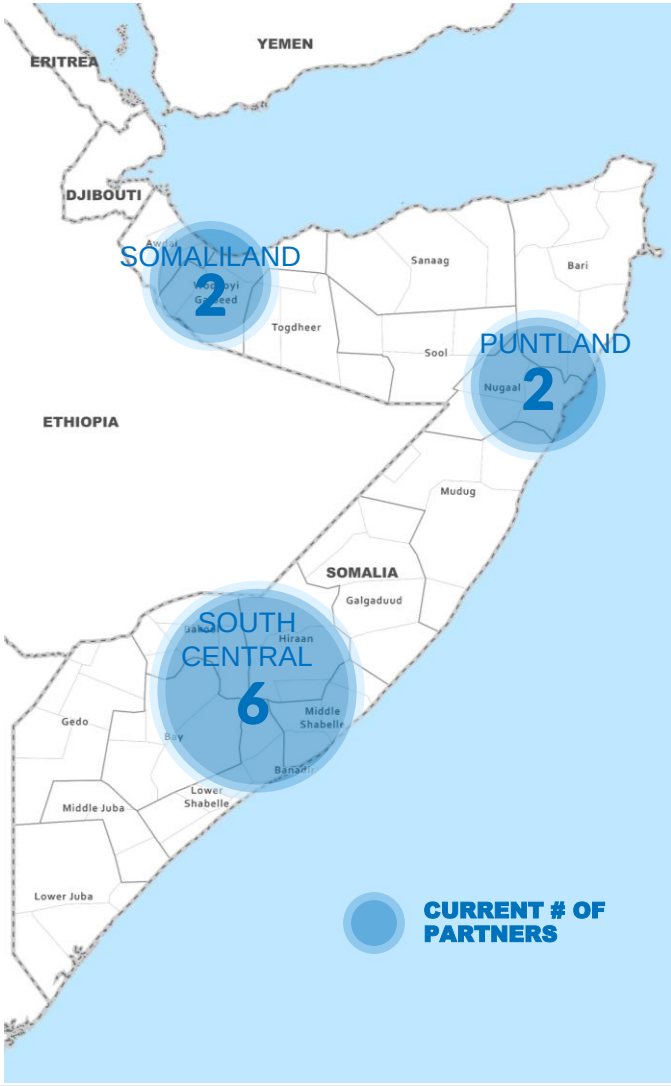
10 Current Partners

60 Monitors

15 Region covered

+250K Movement recorded since 2016

+10M Displaced individuals recorded since 2016



UNHCR The UN Refugee Agency

Genesis of PRMN & PSMN in Somalia

PRMN Established (2006):
Initiated by **UNHCR and NRC** to monitor population movements linked to **conflict, insecurity, and natural hazards**.

Evolution of PRMN:
Expanded into a **national early warning and evidence system**, capturing **trends, drivers, and protection risks** tied to **droughts, floods, and conflict**.

Introduction of PSMN (2023):
Developed under **UNHCR and the Shelter Cluster** to **complement PRMN** with a focused analysis on **shelter, protection, and climate-induced displacement**.

Enhanced Analytical Scope:
Integrates **climate impact indicators**, **vulnerability profiling**, and **site-level monitoring** to strengthen **anticipatory and protection-sensitive planning**.

STRATEGIC OBJECTIVES

- Provide critical data on displacements and **protection analysis** to inform targeted humanitarian and solutions efforts in Somalia.
- Strengthen protection monitoring to ensure timely identification and reporting of **protection incidents and risks**
- Enhance **access to effective responses**, services and **advocacy efforts** to meet the urgent needs of displaced and returning populations.

STRENGTHS

- **Protection Analysis:** identify, assess, and understand protection risks and existing vulnerabilities
- **Real-Time Data:** Provides timely and accurate protection & displacement information necessary to inform responsive and strategically targeted humanitarian responses.
- **Utilizes local capacity:** UNHCR partnered with NRC to mobilize and leverage local capacity in data collection through a network of 10 local NGOs and 60 monitors as of 2025

The network captures information from the point of origin, destination, triggers of movement and the priority needs

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Somalia: Climate & Displacement Context

- Somalia faces recurrent droughts, floods, and sandstorms.

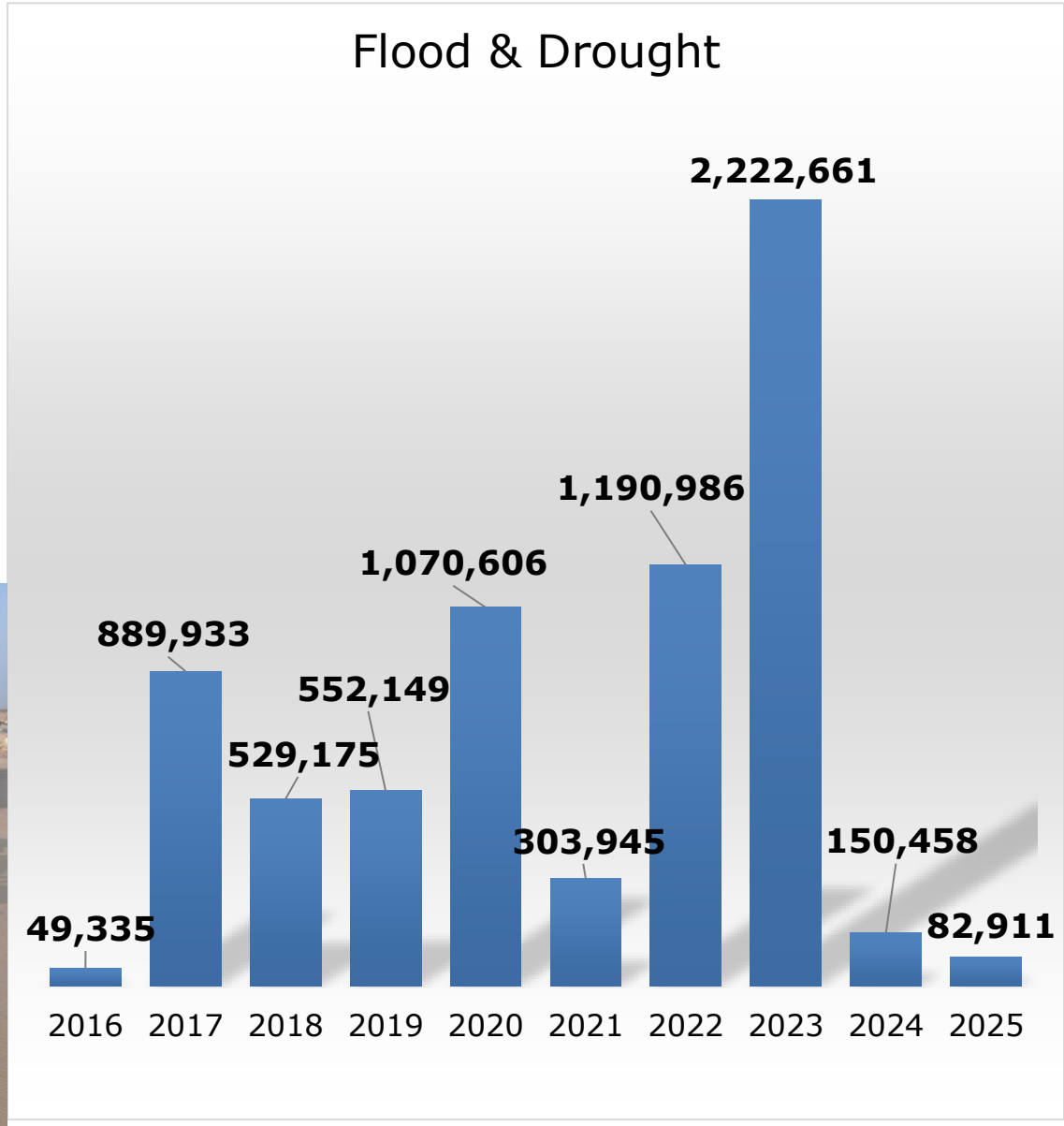
- Climate shocks now surpass conflict as key drivers of displacement.

- 3.8 million Somalis are internally displaced (2024).

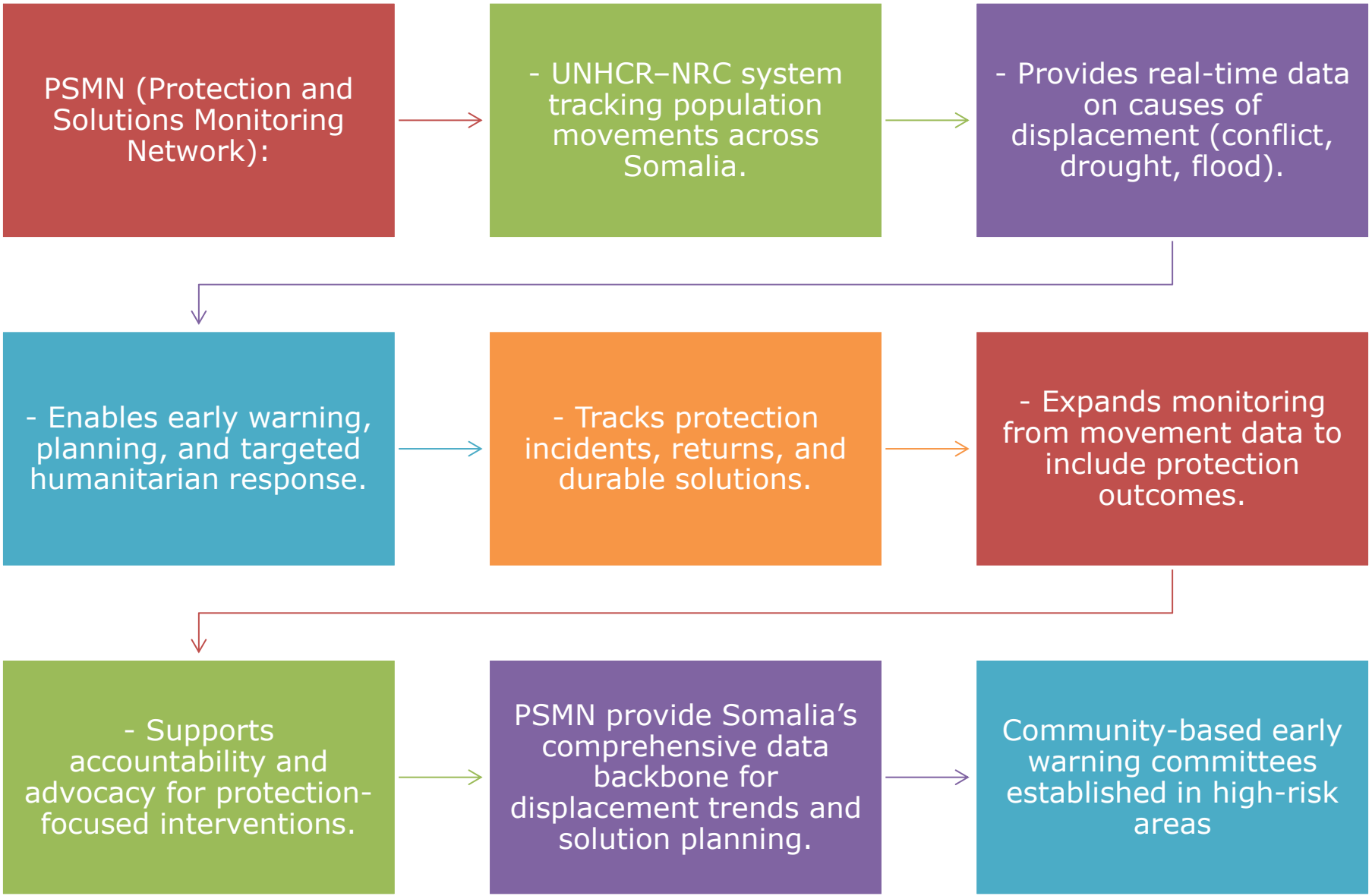
- Humanitarian needs worsening amid alternating drought-flood cycles.

Climate Shocks & Displacement Trends in Somalia

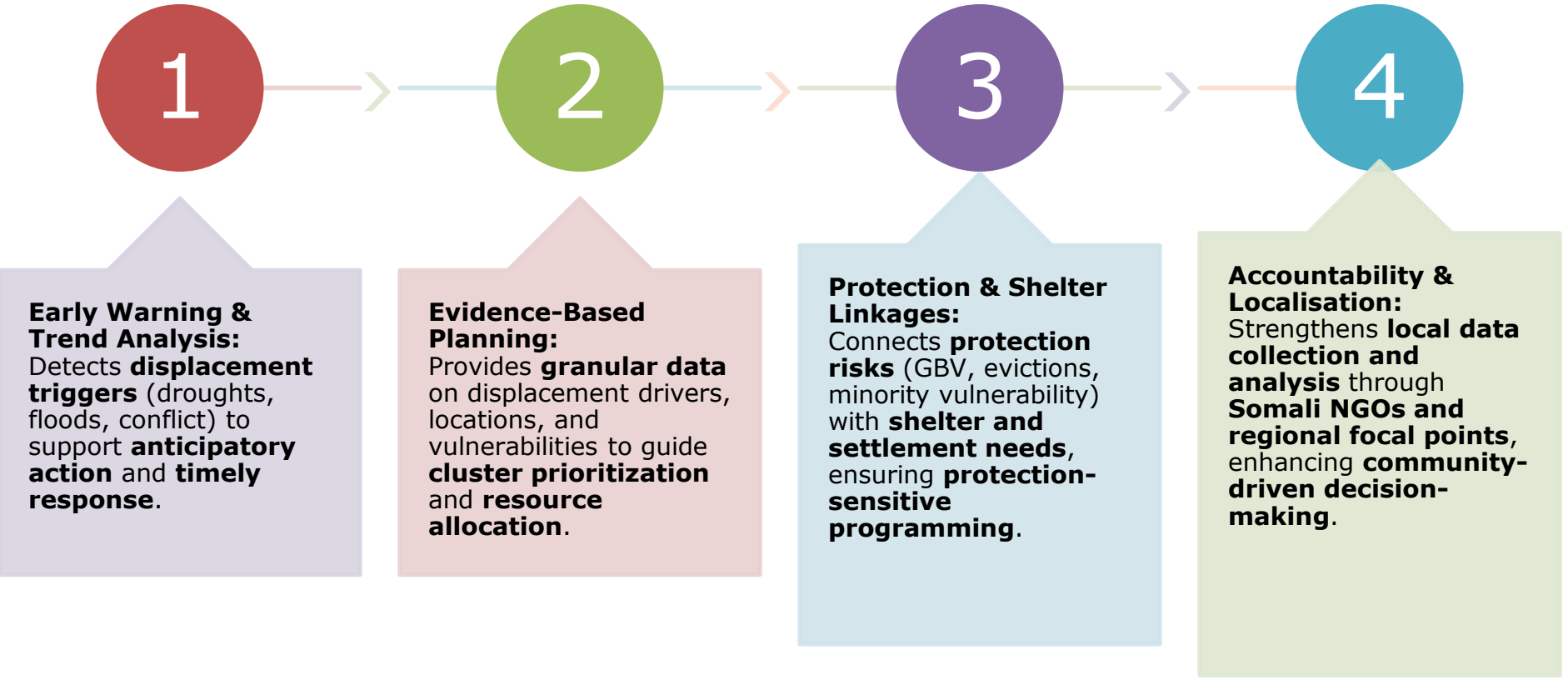
- -Impact on displacement: The 2022 drought displaced 1.3 million, while the 2023 floods displaced nearly 2.9 million
- - Shifting dunes threaten coastal settlements (Kulub Village).
- - Cyclical drought–flood pattern leaves little recovery time.
- - IDPs mainly live in informal settlements lacking resilience.



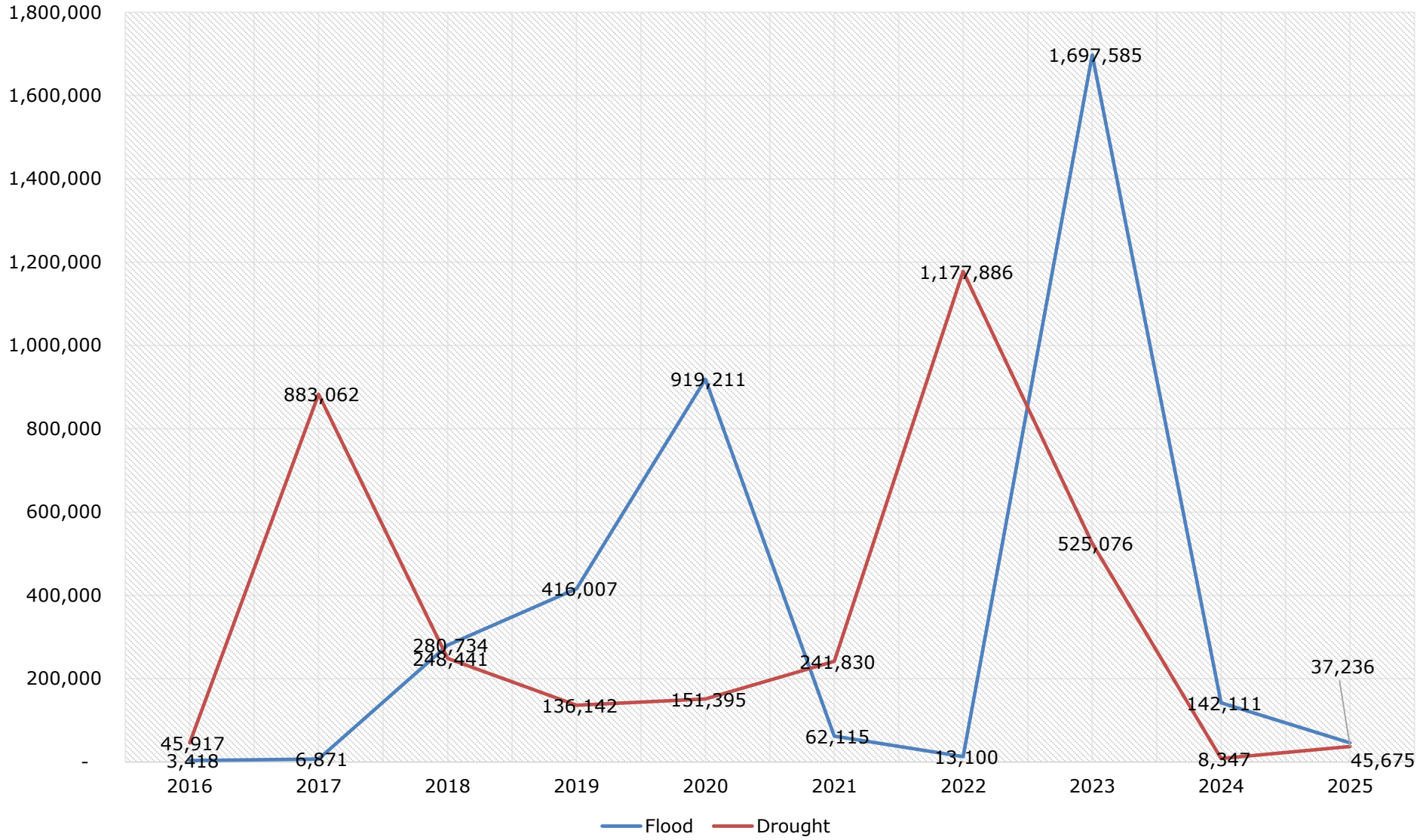
PSMN – UNHCR's Displacement Protection and Solutions Monitoring Network



From Data to Action: How PRMN & PSMN Inform Climate-Displacement Decisions



Climate-Induced Displacement in Somalia: Drought Vs Floods



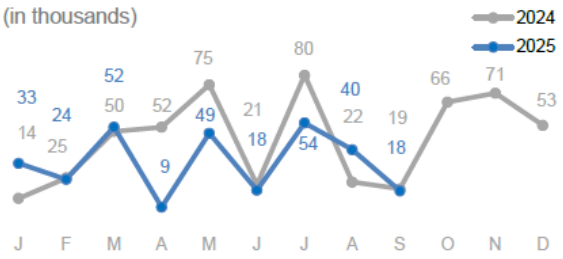
Internal Displacements Monitored PSMN

The PRMN/PSMN data provides critical evidence linking climate shocks to forced displacement across Somalia, enabling early identification of mobility trends for anticipatory and targeted responses.

TOTAL DISPLACEMENTS

18,000	296,000	357,000
in September	(Jan - Sep 2025)	(Jan - Sep 2024)

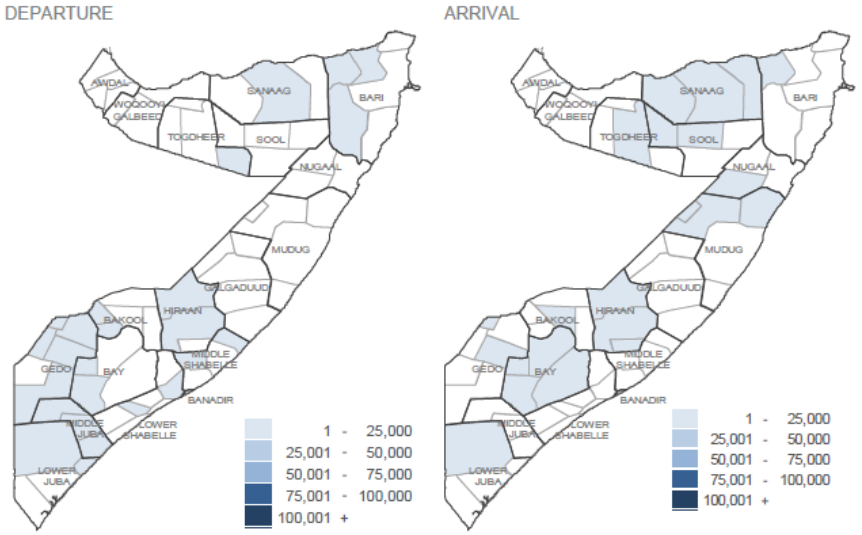
The UNHCR-led PRMN implemented in partnership with NRC reported 18,000 new internal displacements in the month of September 2025. Out of these, 9,000 were caused by conflict or insecurity while 5,000 were due to drought. Approximately 4,000 were displaced due to other reasons



BY REGION (Jan - Sep 2025)

	DEP	ARR
Hiraan	38,950	38,320
Lower Shabelle	15,200	980
Middle Shabelle	78,010	63,450
Gedo	38,500	45,080
Bay	12,760	8,650
Bari	33,220	39,640
Lower Juba	17,350	22,560
Galgaduud	1,400	1,080
Mudug	4,900	4,990
Bakool	6,150	2,320
Sanaag	22,890	17,190
Middle Juba	7,560	2,270
Banadir	3,060	32,390
Awdal		
Togdheer	3,490	4,320
Sool	6,180	6,300
Nugaal	6,880	6,950
Woq. Galbeed		

BY DISTRICT (Jan - Sep 2025)

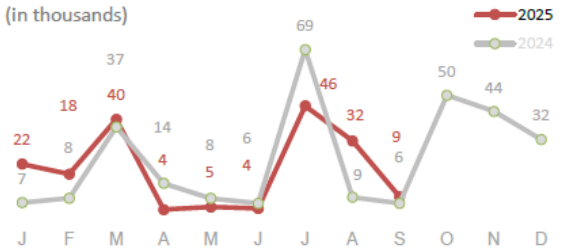


CONFLICT / INSECURITY DISPLACEMENTS

9,000	180,000	164,000
in September	(Jan - Sep 2025)	(Jan - Sep 2024)

Major arrival displacements in September occurred in Bossaso (4,918) district. This represented over 50% of all conflict related displacements recorded in September.

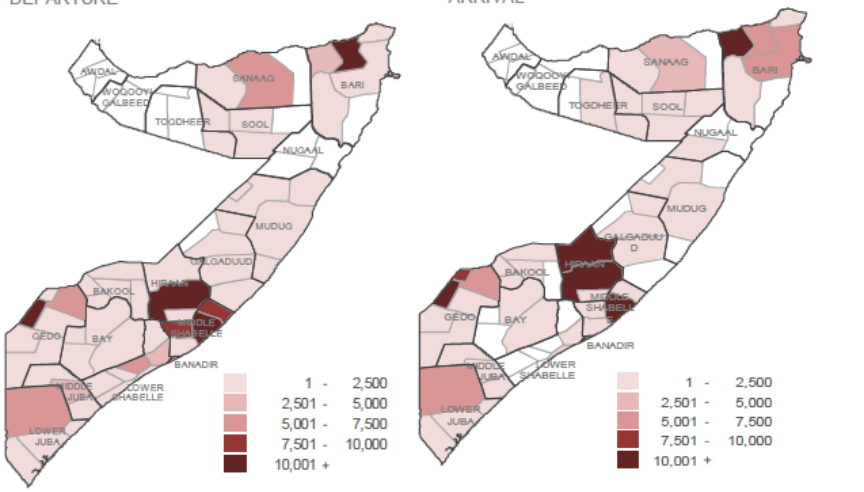
Major departure displacements occurred in Qandala (4,351) and Iskushuban (1,026) districts.



BY REGION (Jan - Sep 2025)

	DEP	ARR
Lower Shabelle	13,070	890
Bay	3,030	2,640
Galgaduud	230	90
Gedo	31,740	33,710
Bakool	3,200	1,270
Lower Juba	7,220	11,210
Sool	1,520	1,520
Sanaag	11,740	7,700
Middle Juba	5,600	2,030
Togdheer	1,880	2,380
Mudug	530	510
Banadir	40	24,420
Middle Shabelle	34,710	22,360
Hiraan	35,850	35,650
Bari	29,210	33,230
Nugaal		20
Awdal		
Woq. Galbeed		

BY DISTRICT (Jan - Sep 2025)

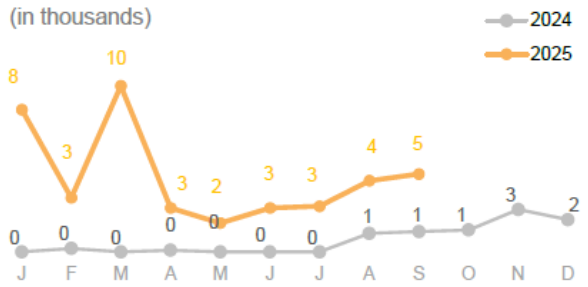


Internal Displacements Monitored PSMN drought & flood

DROUGHT RELATED DISPLACEMENTS

5,000	40,000	3,000
in September	(Jan - Sep 2025)	(Jan - Sep 2024)

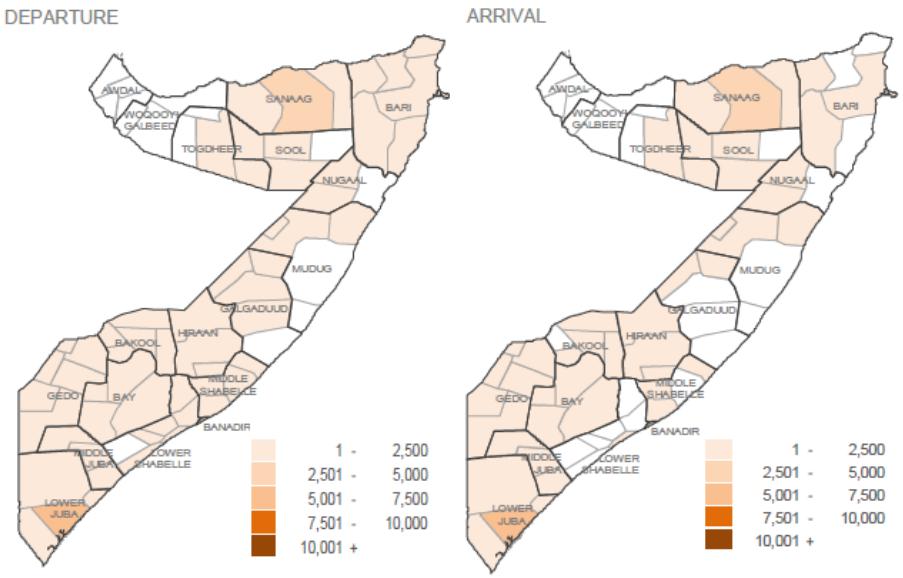
Significant arrival displacements in September owing to drought were recorded in Bossaso (1,686), Doolow (679) and Dhahar (562) districts.
Major departure displacements occurred Bossaso (985), Dhahar (562) and Diinsoor (472) districts.



BY REGION (Jan - Sep 2025)

	DEP	ARR
Bay	6,470	4,890
Bari	2,650	3,360
Sanaag	5,960	5,770
Bakool	1,990	910
Awdal		
Sool	2,730	2,640
Gedo	1,080	2,200
Lower Shabelle	1,910	60
Mudug	1,360	1,340
Togdheer	150	390
Hiraan	2,820	2,620
Nugaal	80	80
Lower Juba	8,070	9,030
Woq. Galbeed		
Middle Juba	1,290	240
Banadir	60	4,910
Middle Shabelle	2,270	480
Galgaduud	890	870

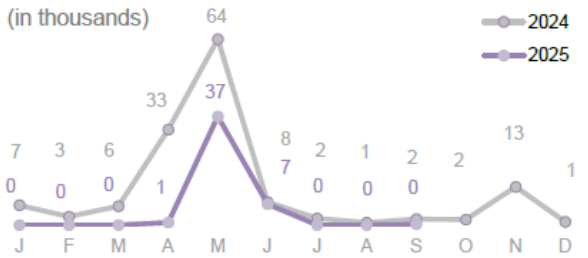
BY DISTRICT (Jan - Sep 2025)



FLOOD DISPLACEMENTS

0	9,000	126,000
in September	(Jan - Sep 2025)	(Jan - Sep 2024)

There were no significant displacements owing to floods that were recorded in the month of September.



BY REGION (Jan - Sep 2025)

	DEP	ARR
Hiraan	10	
Lower Shabelle	50	
Middle Shabelle	37,710	37,470
Gedo	10	10
Lower Juba	650	720
Bari	440	710
Mudug	170	170
Banadir	2,690	2,970
Middle Juba	60	
Galgaduud		
Bakool		10
Bay	110	100
Awdal		#REF!
Sool		
Woq. Galbeed		#REF!
Sanaag	270	10
Togdheer		
Nugaal	3,610	3,610

PRIORITY NEED ON ARRIVAL (September in %)

	Food	Water	Shelter	Health	Other	Protection	Livelihood	Humanitarian Aid	Transport
Awdal									
Bakool	57		43						
Banadir	62	5		32					
Bari	67	11	13	9					
Bay	42		58						
Galgaduud	100								
Gedo	73	3	13	10					
Hiraan			100						
Lower Juba	56	3	40	1					
Lower Shabelle	100								
Middle Juba									
Middle Shabelle	35		59	7					
Mudug	68		32						
Nugaal	14		86						
Sanaag	53	31	7	7				2	
Sool	96	4							
Togdheer	63		38						
Woq. Galbeed									

AGE & GENDER (2025)

Female	Age	Male
12%	0-4	11%
12%	5-11	13%
9%	12-17	10%
14%	18-59	12%
3%	60+	3%

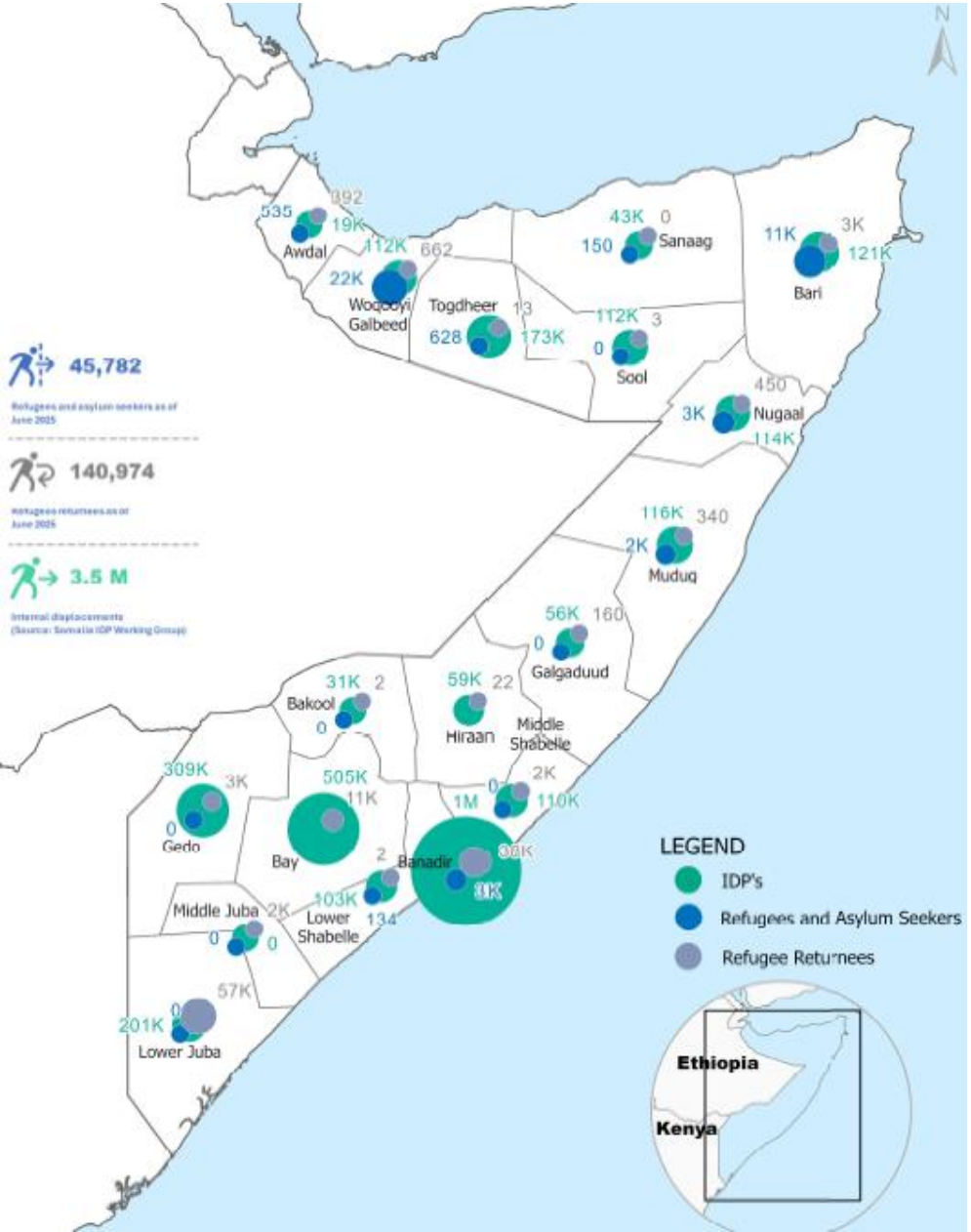
Women & chidren 85%

Disaggregated data for displaced persons are based on those displacement reports where data has been collected at household level

NEED

Food	Protection
Water	Livelihood
Shelter	Humanitarian Aid
Health	Transport
Other	

Where to Access PSMN & associated Products



PSMN & Data

Somalia model (PSMN data)

PSMN use case: impact of climate on conflict displacement

- PSMN data offers information on reason for displacement – flood, drought, conflict, etc.
- Opportunity to analyze direct and indirect influence of climate on conflict displacement
  - Climate → Conflict Events → Displacement
- Mediator model: $M_{it} = \alpha_i + \lambda_t + aX_{it} + \varepsilon_{it}$
- Outcome model: $Y_{it} = \alpha_i + \lambda_t + c'X_{it} + bM_{it} + v_{it}$
  - X_{it}: climate variable
  - M_{it}: mediator (conflict events)
  - Y_{it}: outcome (conflict displacement)
  - α_i: grid fixed effects (spatial heterogeneity)
  - λ_t: time fixed effects

PSMN use case: impact of climate on conflict displacement

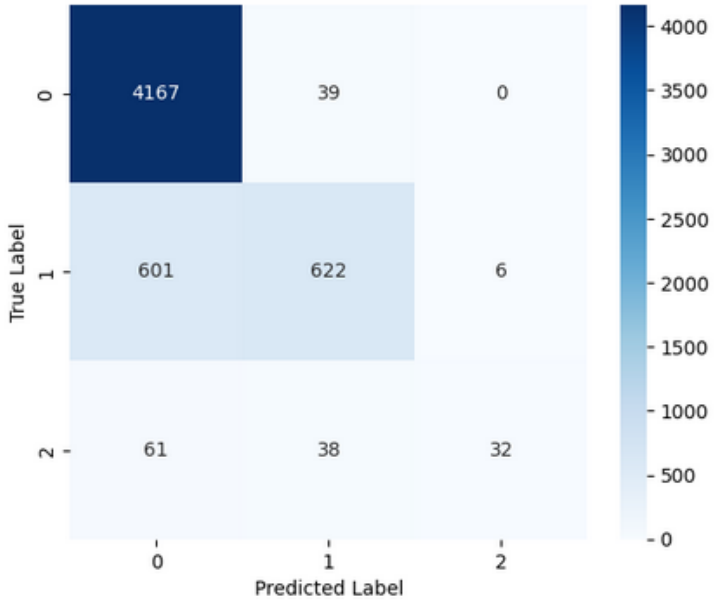
- Mediator model: $M_{it} = \alpha_i + \lambda_t + aX_{it} + \varepsilon_{it}$
- Outcome model: $Y_{it} = \alpha_i + \lambda_t + c'X_{it} + bM_{it} + v_{it}$

- a captures effect on climate on conflict events
- b captures effect of conflict events on displacement
- c′ represents direct effect of climate on displacement

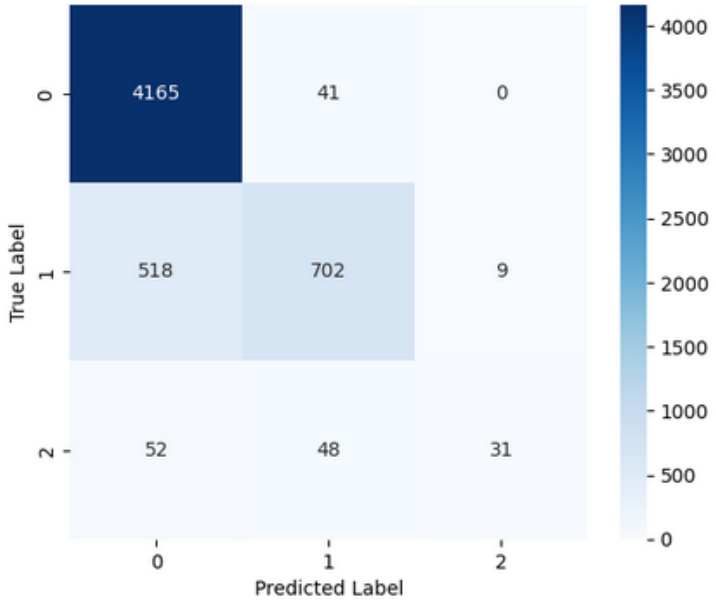
- Indirect effect = a x b = 0.6012
- c′ = -3.6877
- To obtain robust inference of a x b, we employ **cluster bootstrapping** at the grid level.
  - Mean indirect effect = 0.6730
  - 95% CI : [0.4170, 1.1244]

PSMN use case: modelling conflict displacement

- Using LightGBM algorithm to predict conflict displacement with and without climate variables



Conflict variables only



Conflict and climate variables

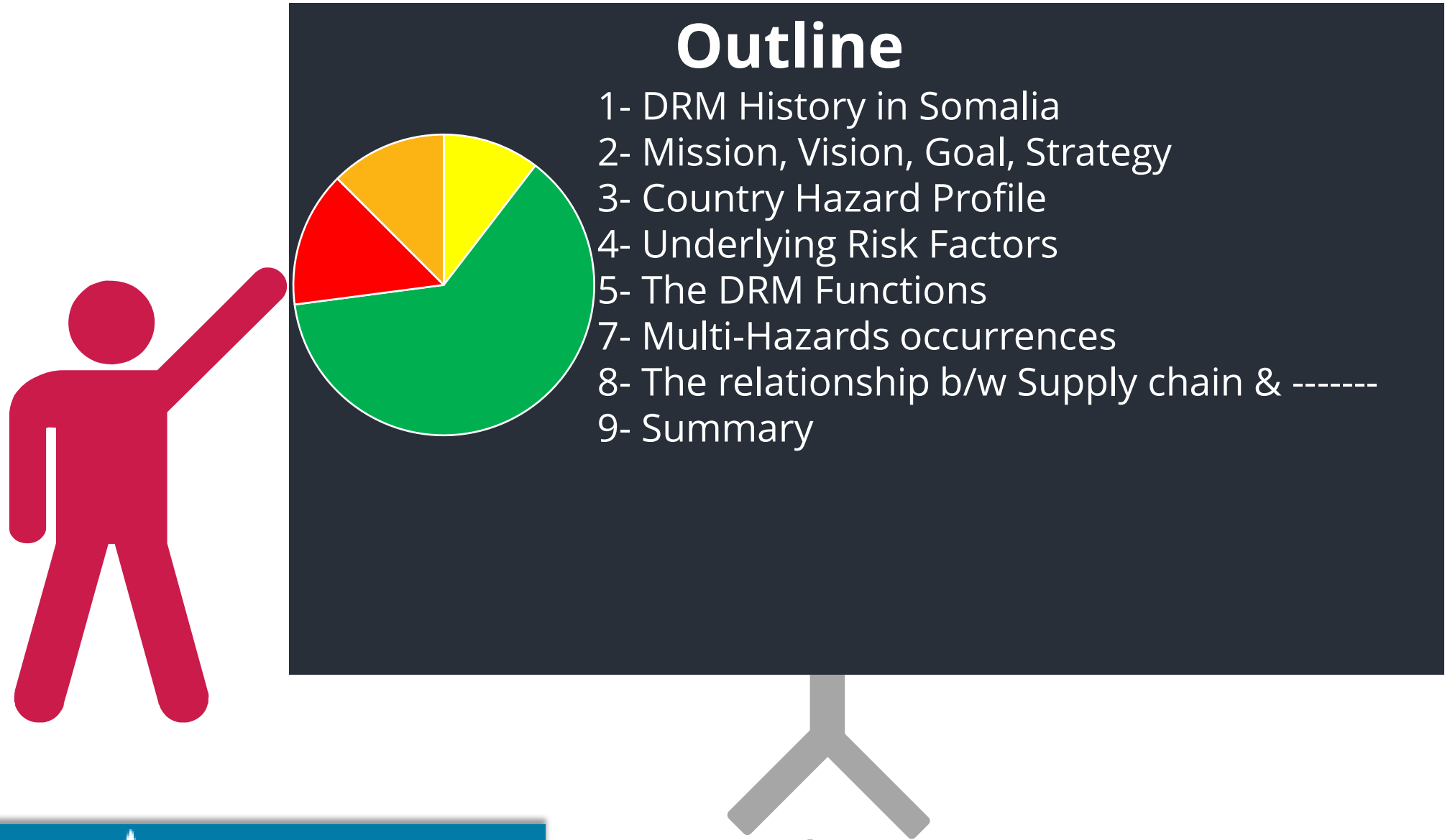
Thank you.

Questions,
comments,
Suggestions
&
Discussion.

Overview of the SoDMA NMHEWS and Disaster Preparedness

Presented by: Mr. Khadar Nur

Presentation - Outline



DRM History in Somalia

2011

Somalia Disaster Management Agency (SoDMA) was established as the 1st DM Structure, and this was in the wake of a famous drought of 2011 which claimed the lives of more than two hundred thousand people.

2016

Disaster Management Law number 17/2016 was passed by the parliament of the Federal Republic of Somalia, and was later signed in a presidential degree by the president of the Republic .

2017

A fully fledged Ministry of Humanitarian Affairs & Disaster Management was added to the cabinet.

In the same year, A National Disaster Management Policy was developed and was endorsed by the Council of Cabinet Ministers

2021

A National Multi-Hazard Early Warning Center was officially launched by the Prime Minister of the Republic.

Establishment of similar centers at the local levels is under process

2022

Somalia Disaster Management Agency (SoDMA) was reinstated once again in August 2022 to replace the Ministry of Humanitarian Affairs and Disaster Management (MoHADM)

Our Mission

Saving lives, protecting livelihoods and assets of vulnerable communities in disaster-prone areas, to make communities safer and resilient through putting up a coordinated system that can detect, monitor and trigger early action to multi-hazards and increasing local capacity to deal with disasters.

Our Goal

Promotes risk management culture to reduce vulnerability among populations at risk, and that includes, taking measures toward disaster prevention, mitigation, preparedness, response, recovery and reconstruction in a way that strengthens linkages between disaster risk management, resilience and sustainable development.

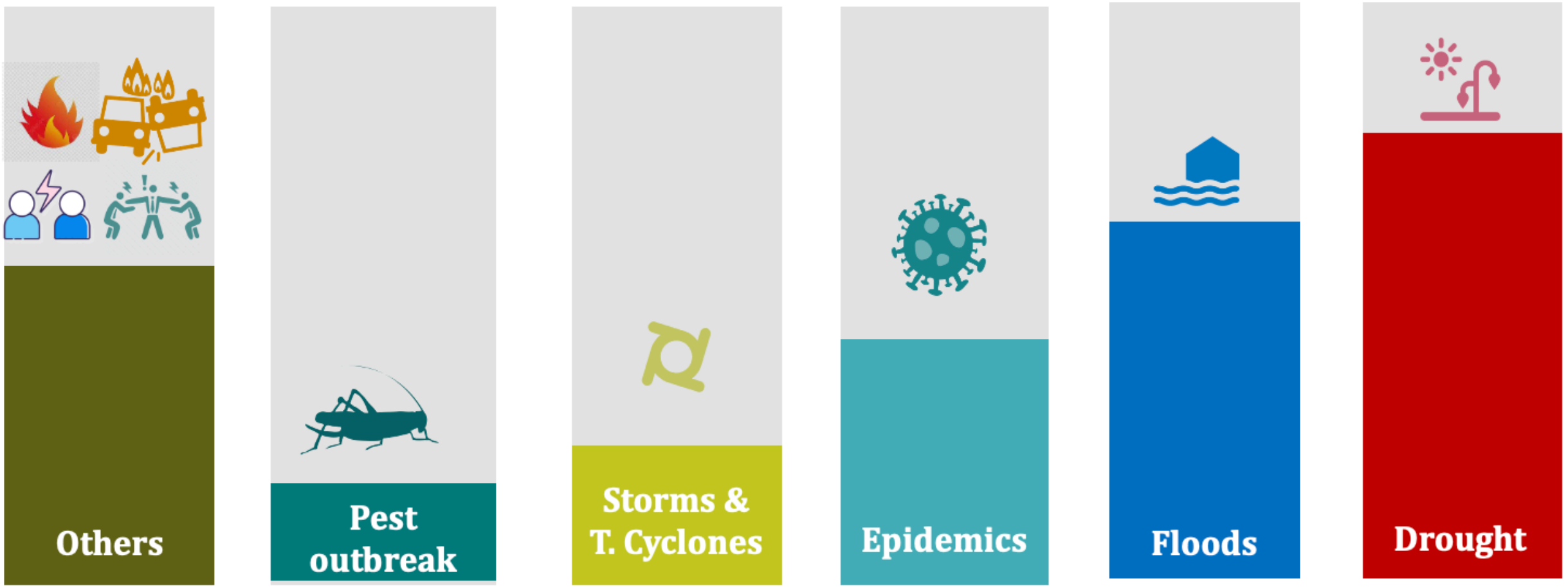
Our Strategy

Multi-sectorial approach that combines disaster preparedness, prevention mitigation, resilience building and integrates disaster Risk management into the National development activities.

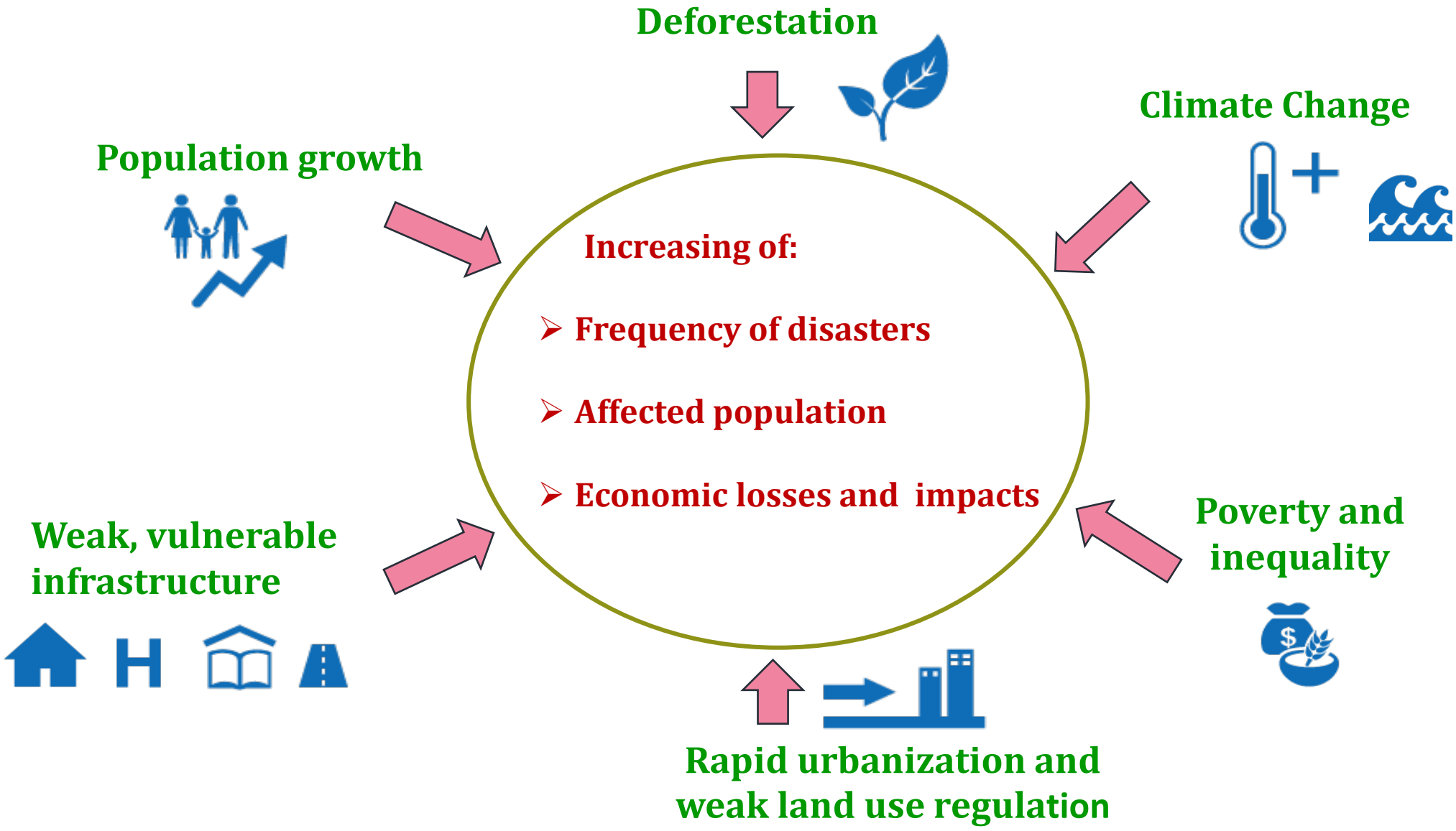
Our Vision

All Somali people live in a resilient life in which disasters from multi-hazards don't undermine their way of life.

Country Hazard profile (Somalia)



Underlying risk drivers



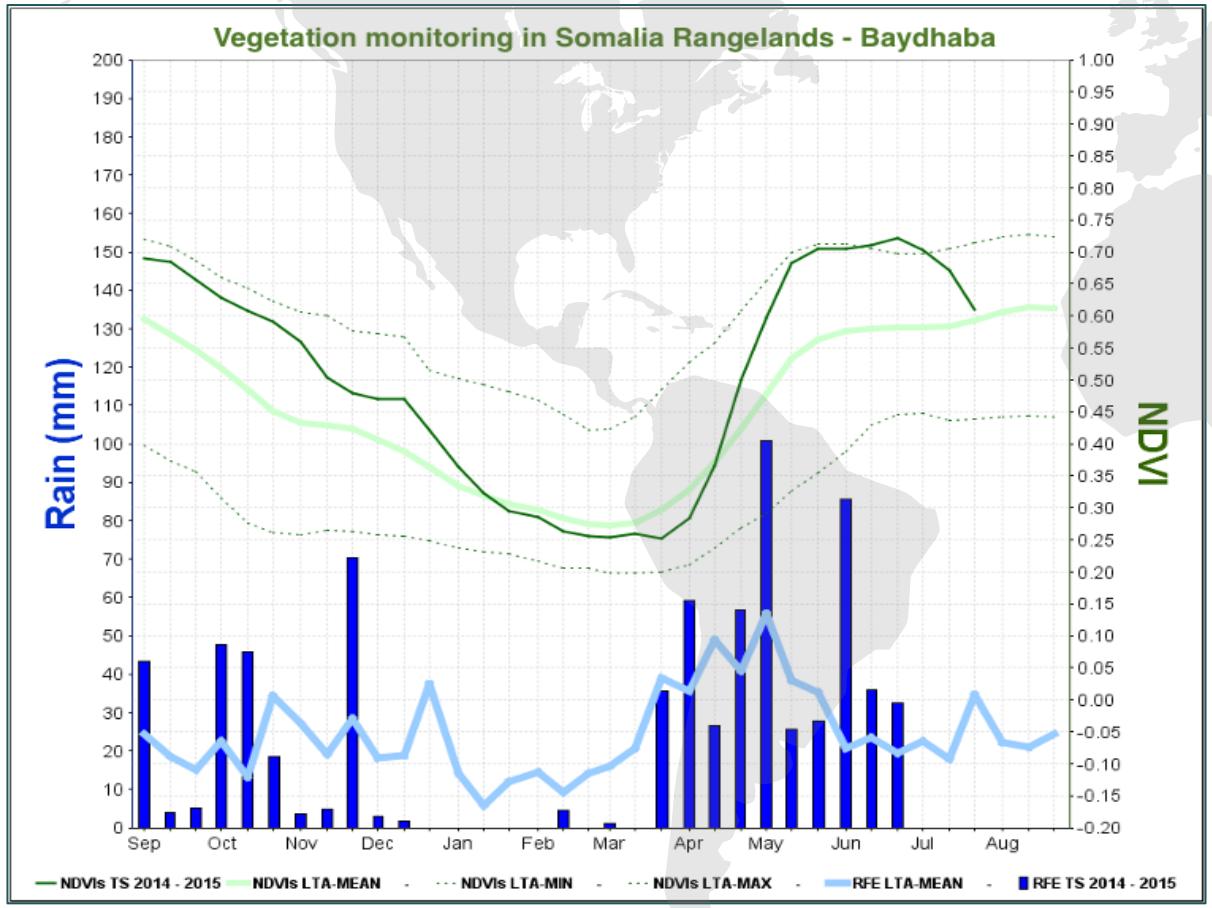
Risk Information

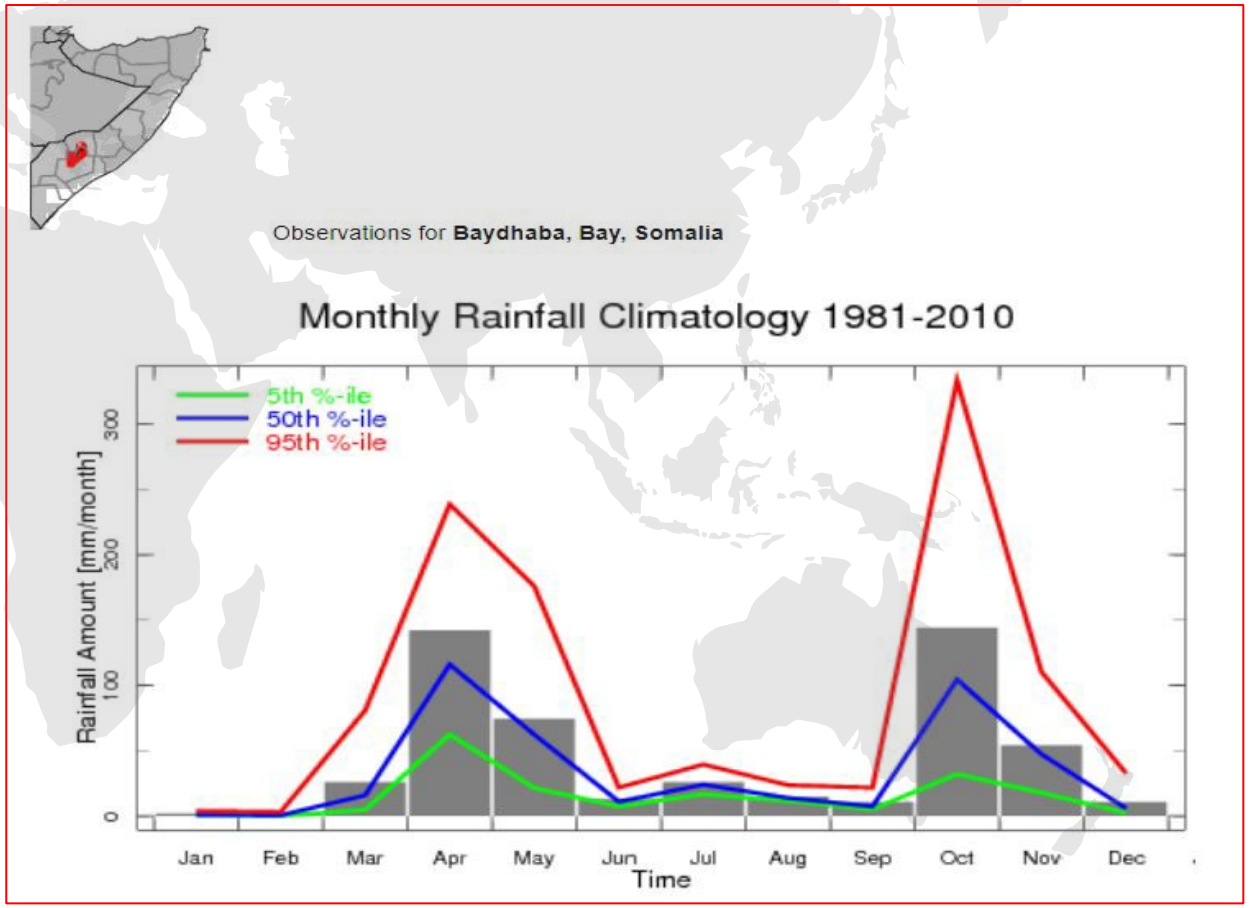
MONITORING/EARLY WARNING

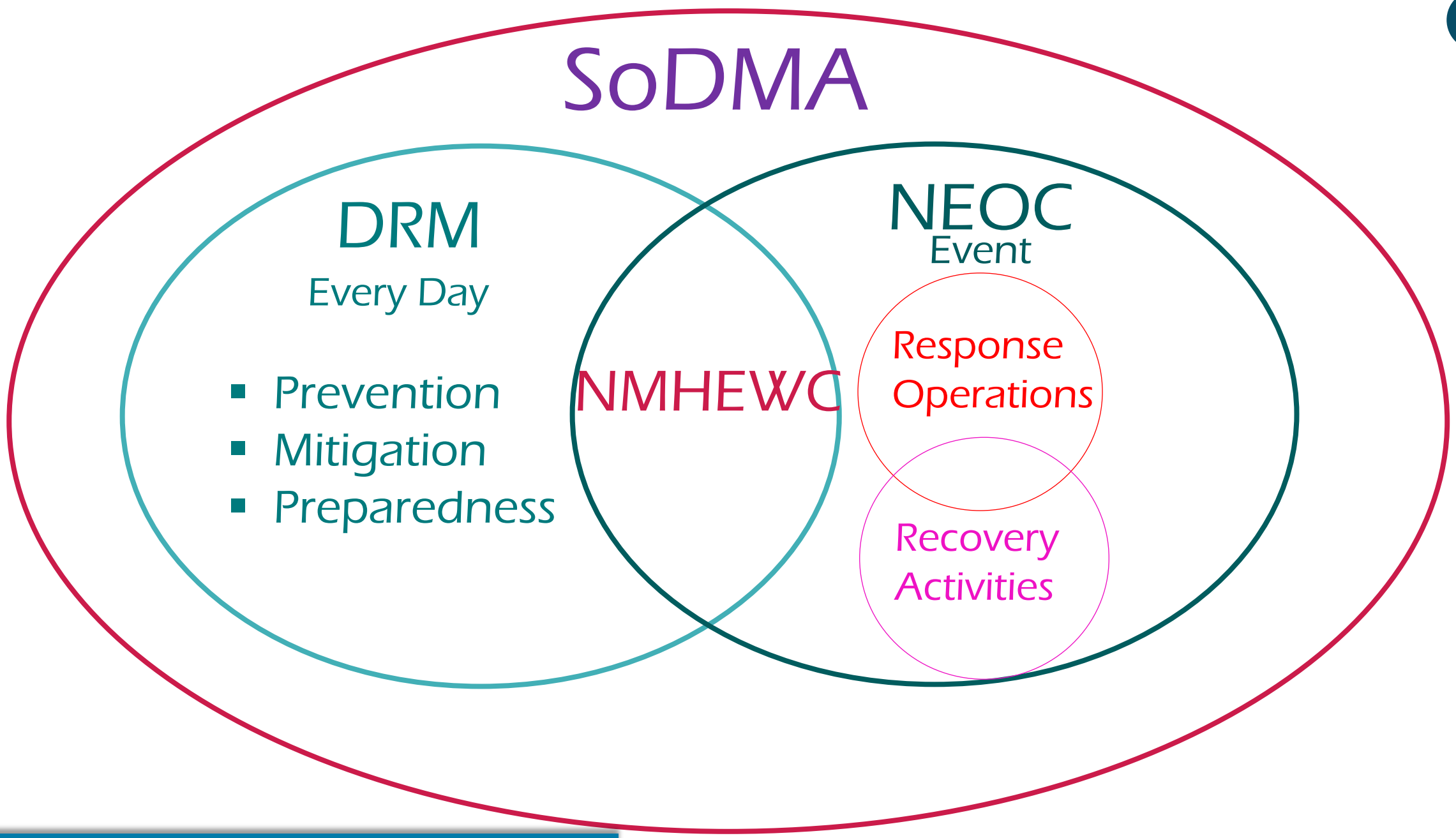
MHEWS

DRR/DRM POLICY/STRATEGY

EFFECTIVE DRR/RESPONSE/RECOVERY

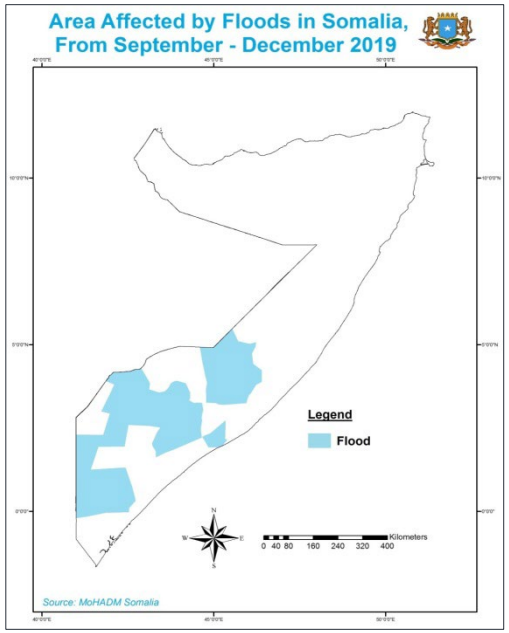


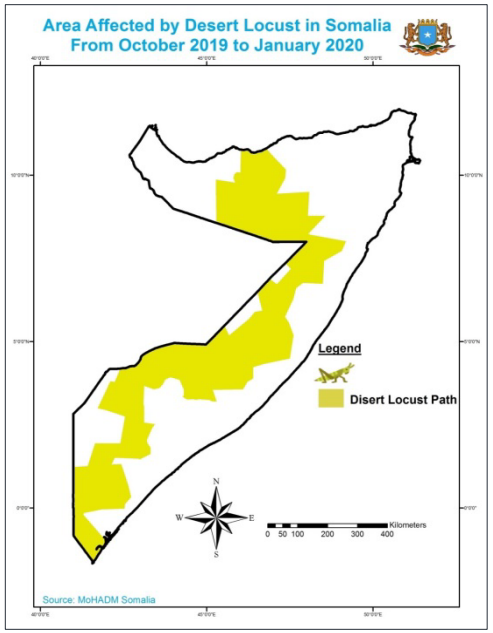


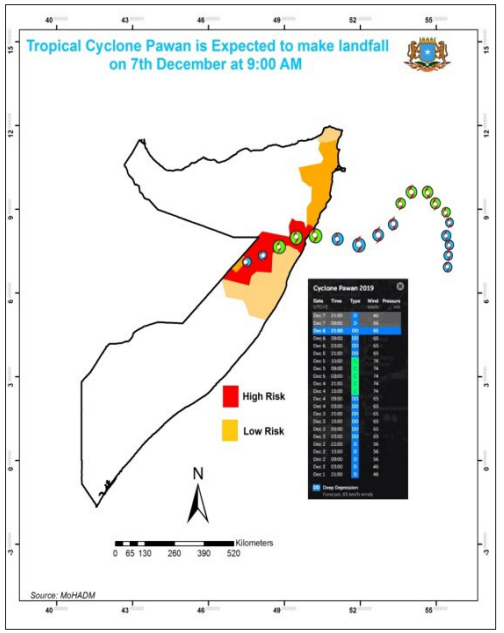

SoDMA
DRM
Every Day
Prevention
Mitigation
Preparedness
NMHEWC
NEOC
Event
Response
Operations
Recovery
Activities

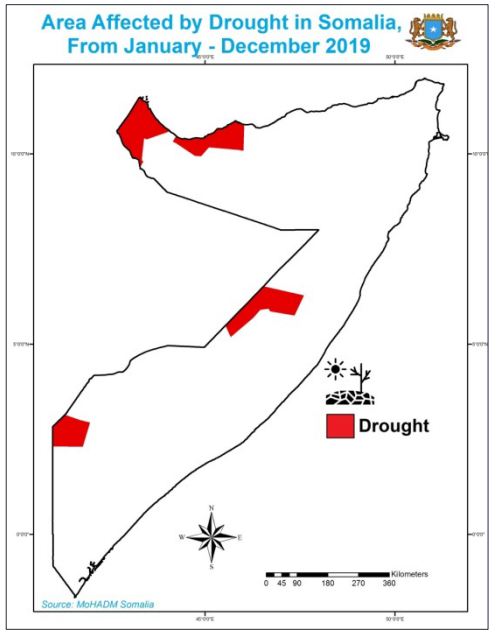
The Center operates under the Department of Disaster Risk Management of the Somalia Disaster Management Agency and it mainly serves to provide Multi-Hazard Early Warning and advisory services against recurrent hazards which often threaten communities' lives and livelihoods. The center is intended to effectively improve disaster preparedness and link early warning to early action in order to lessen the impact of disasters if they occur.

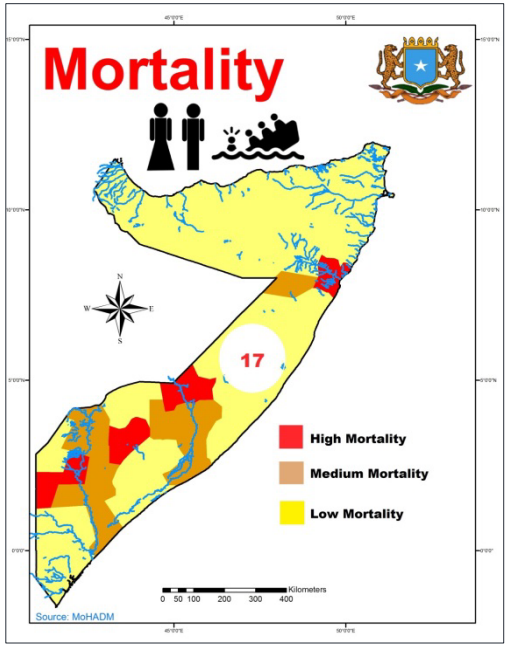
MULTI-HAZARDS OCCURING IN ONE SEASON IN A YEAR (DEYR 2019)

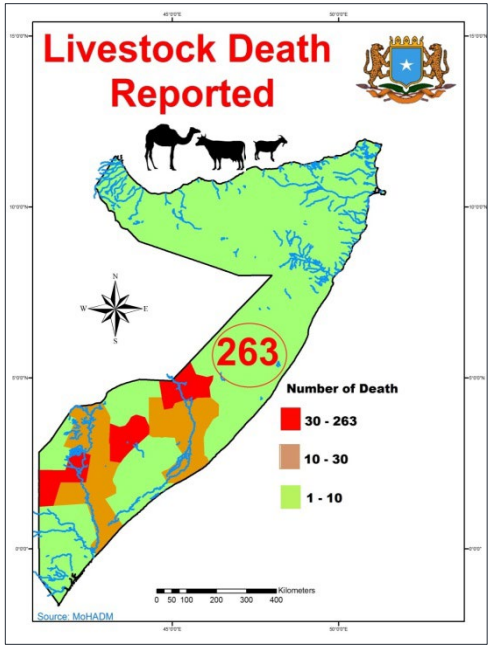


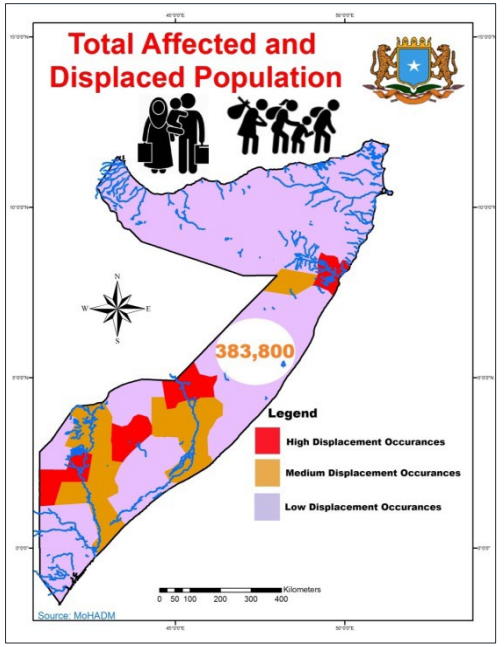


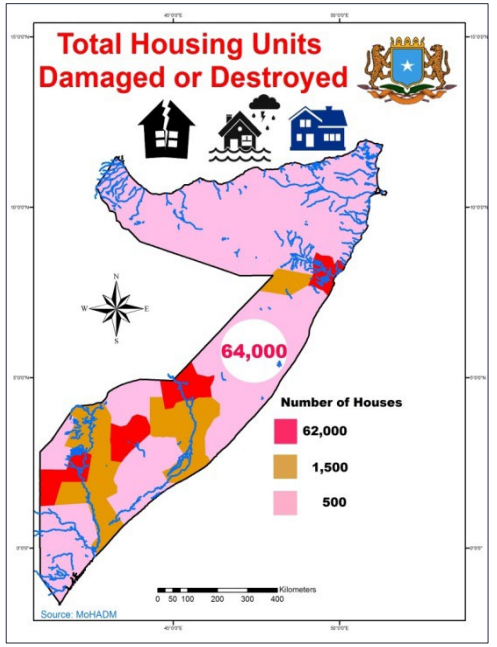












HOW DO WE GET FROM THIS

Early Warning is given

People don't react

People will suffer

It will be very expensive

TO THIS

Early Warning is given

If we act early

We save lives

It is cost effective

⚠️ What if we could detect the risk earlier

🚦 What if there was a robust MHEWS

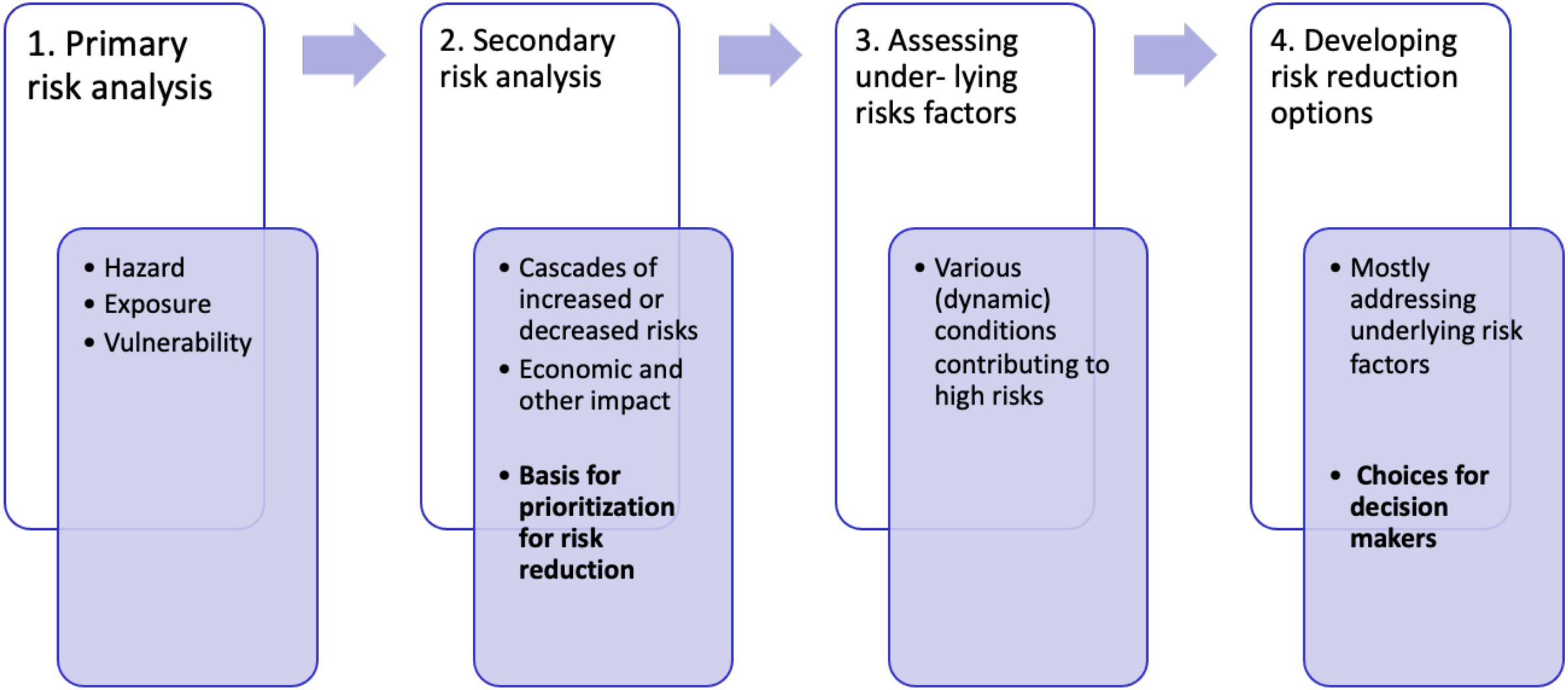
💰 What if funding was made available at all stages of DRM

💵 What if funding could be released earlier

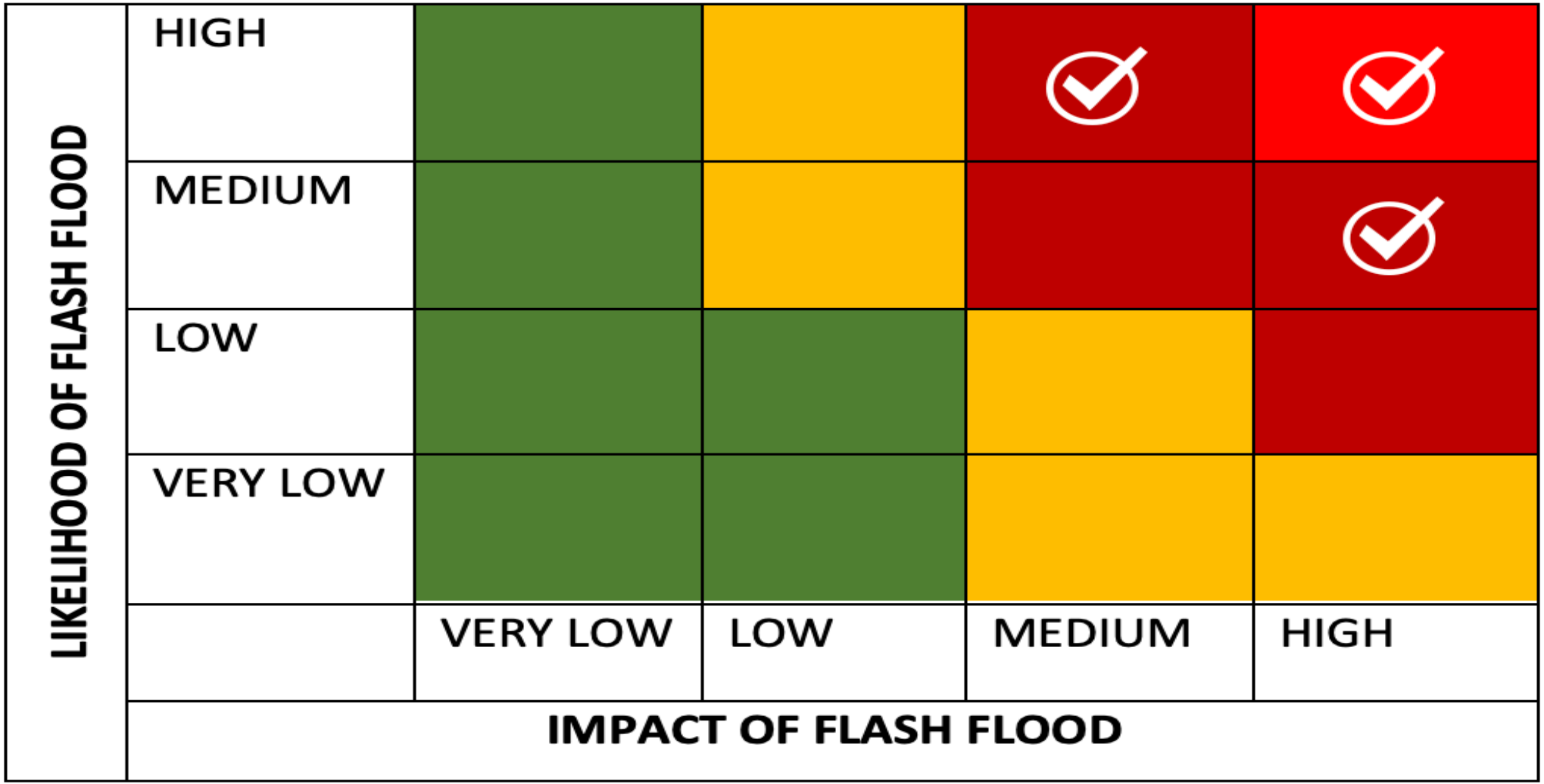
⛑️ Enabling interventions at a fraction of the cost

⛔ Mitigating the impacts and saving lives

Overview of the Risk Analysis method that is used consists of four steps.

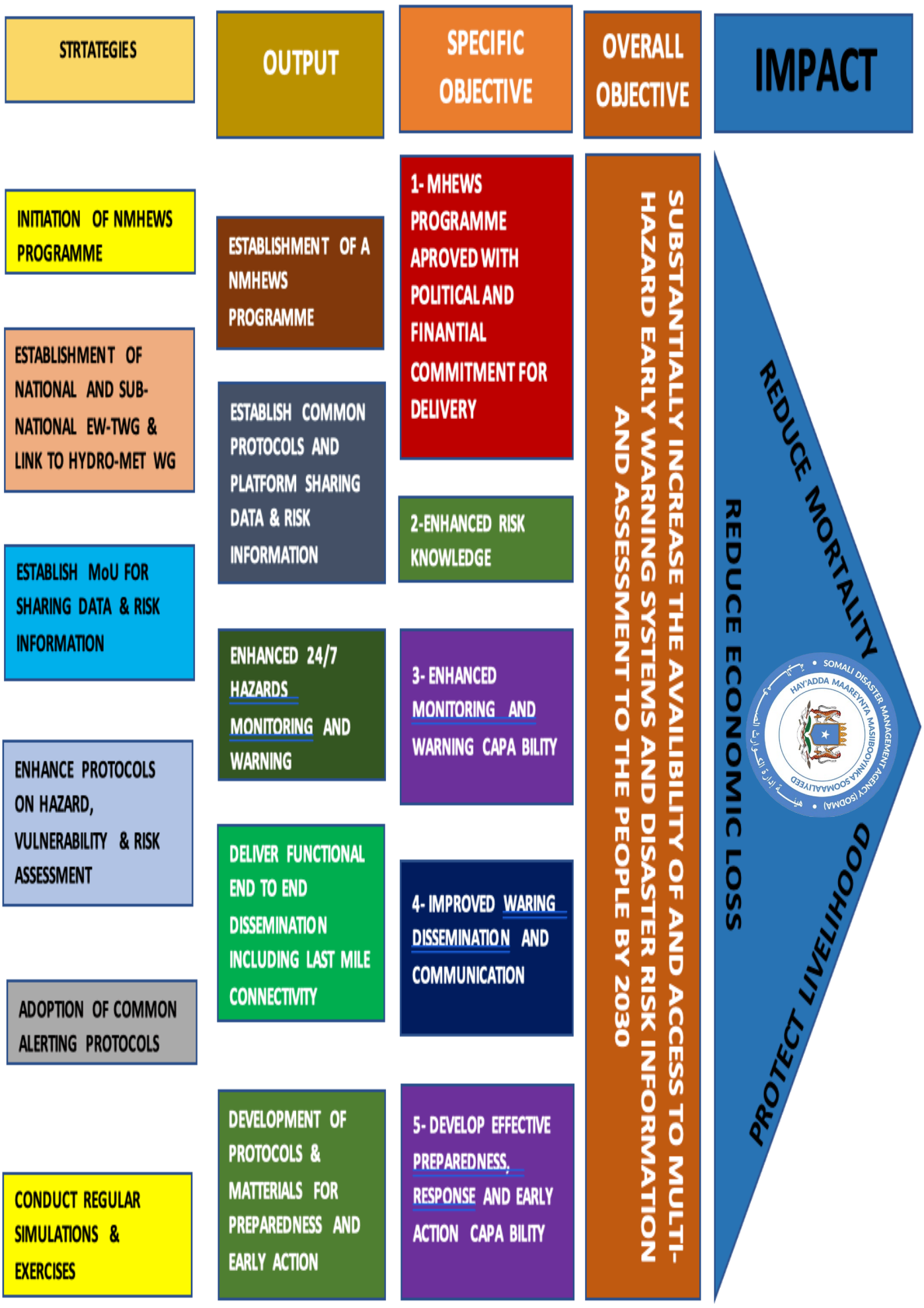


RISK INFORMED DECISSION MAKING TOOLS

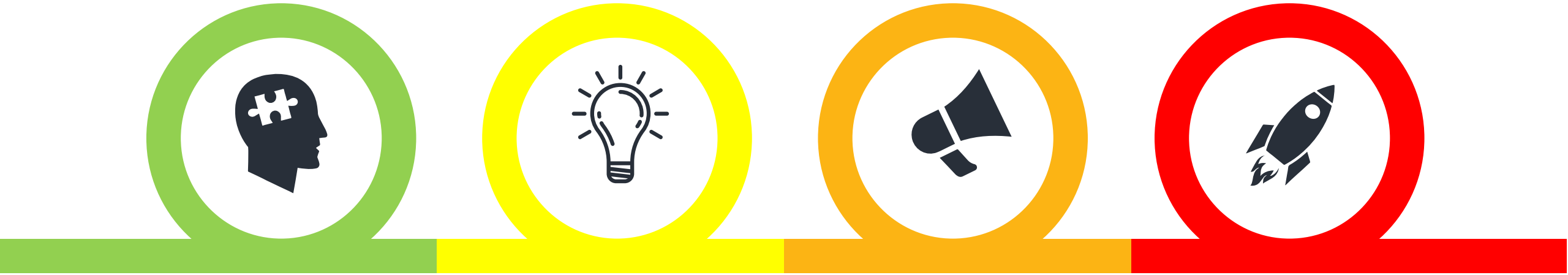


INSTITUTIONAL FRAMEWORK FOR MHEWS

LINKING ANTICIPATORY ACTION TO EARLY WARNING



The NMHEWC Functions



Section 1

Hazard detection, Risk assessment and data analysis section

Section 2

Hazard Monitoring, forecasting and warning section

Section 3

Advisories, Alerts and Warning information dissemination section

Section 4

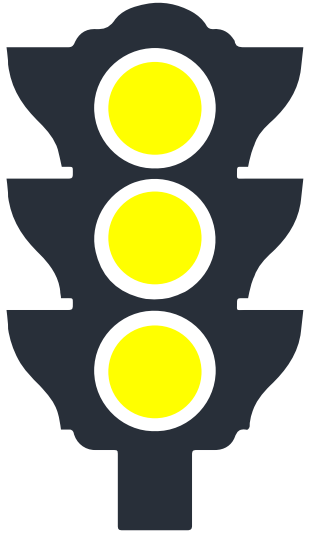
Contingency Planning and response triggering section

Scenario development for Early Action

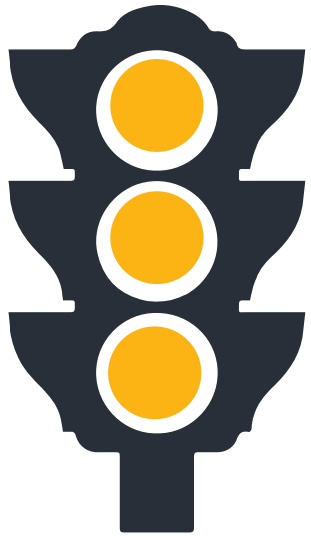
Flagging system

Normal

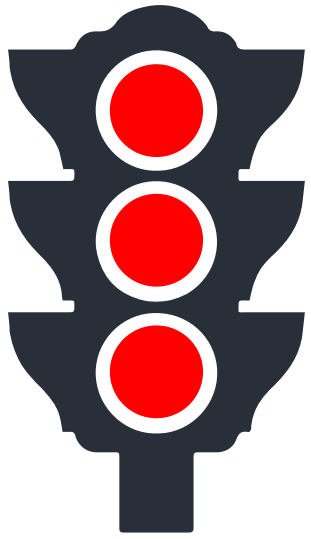
Alert



Alarm

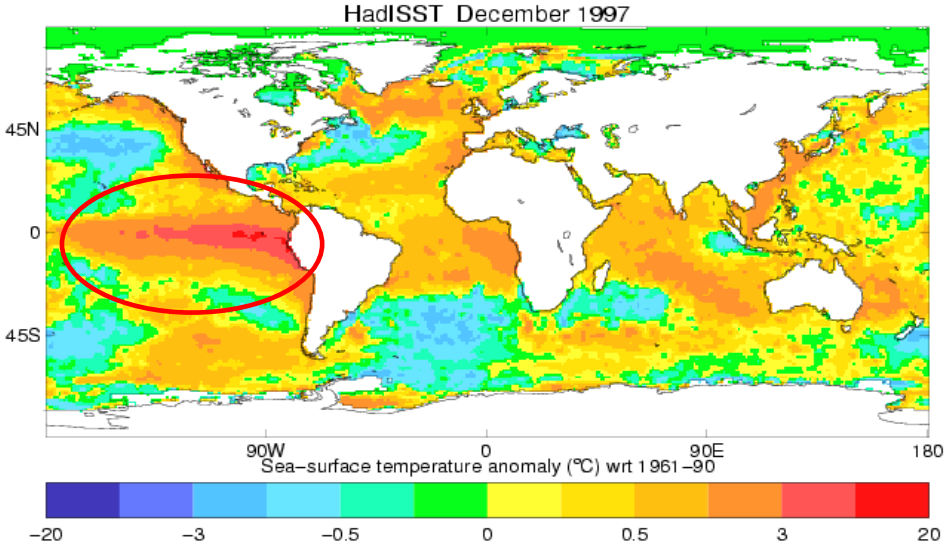


Emergency

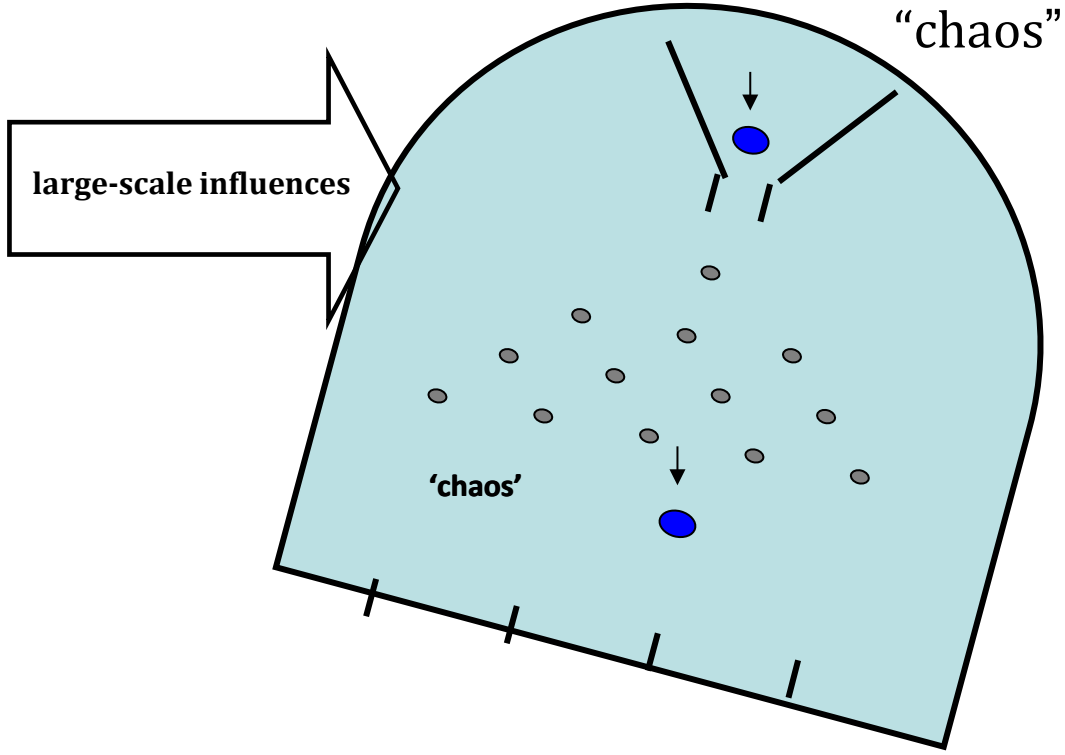


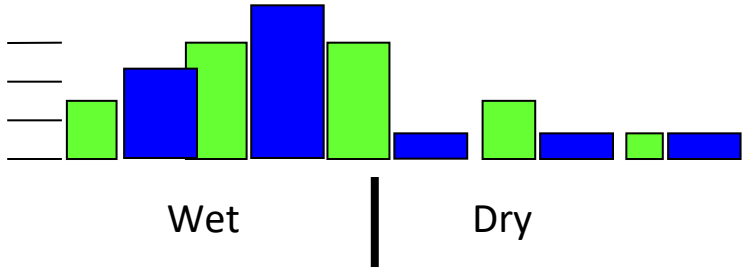
What drives the inter-annual variability in rainfall in a given season in our country?

Sea surface temperature (SST) anomalies



Unpredictable internal variability
"chaos"





Coproduction of MHEW info. products

1. Taking into account that risks associated with multi-hazards may have impacts across sectors, therefore, we need to break the silos and work together to serve our common purpose.

2. Able to access available sectoral data improves the quality of EW product and informs the decisions of different users to respond to an anticipated event and as adopting no regret approach is win-win situation

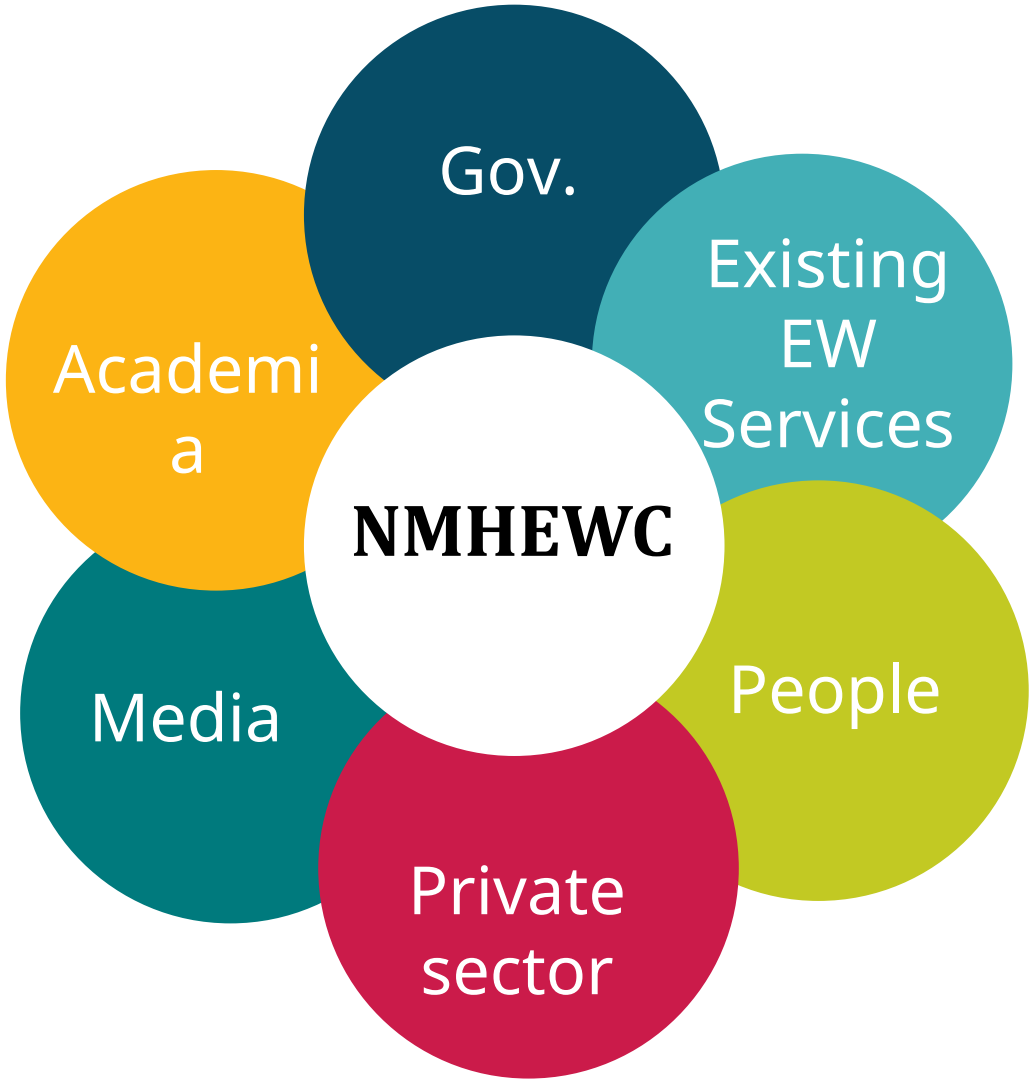
3. Coproduction of an accurate and timely information is the ultimate objective, so lives and livelihoods could be saved

Stakeholders

EW information producers meetingrealize the aspiration of a "one National source of EW information and no contradictions"

Building trust, harmony and coherence among stakeholders at all level

Making sure that all available EW information reach to the end user with out hindrances



The importance of MHEWS user engagement

The NMHEWC Products

What is the relationship between DRM and MHEWS ?

The systematic **connection** between **Disaster Risk Management**, and **Multi-Hazard Early Warning System is that** Early warning systems are a major component of disaster risk management. They prevent loss of life, as well as reducing the economic impact of natural hazards. Increasing the availability of multi-hazard early warning systems and disaster risk information is one of seven global targets set by The Sendai Framework for Disaster Risk Reduction 2015-2030.

Summary

- **Early Warning System is an integral part of Disaster Risk Reduction and it is all about understanding risk(s) and putting in place enabling mechanisms for effective disaster risk reduction, that informs decision making.**
- **The global to national DRM/DRR strategies and frameworks provide an opportunity for a shared understanding of the importance of Early Warning Systems EWS in reducing systemic risks as well as strengthening the people's resilience.**
- **Coordinating a people cantered robust Early Warning System and integrating it with relevant sectors including the media and telecommunication is decisive for an effective MHEWS for DRR and building resilience.**
- **No system is perfect and there is always a room for improvement to address system gaps**

THANKS

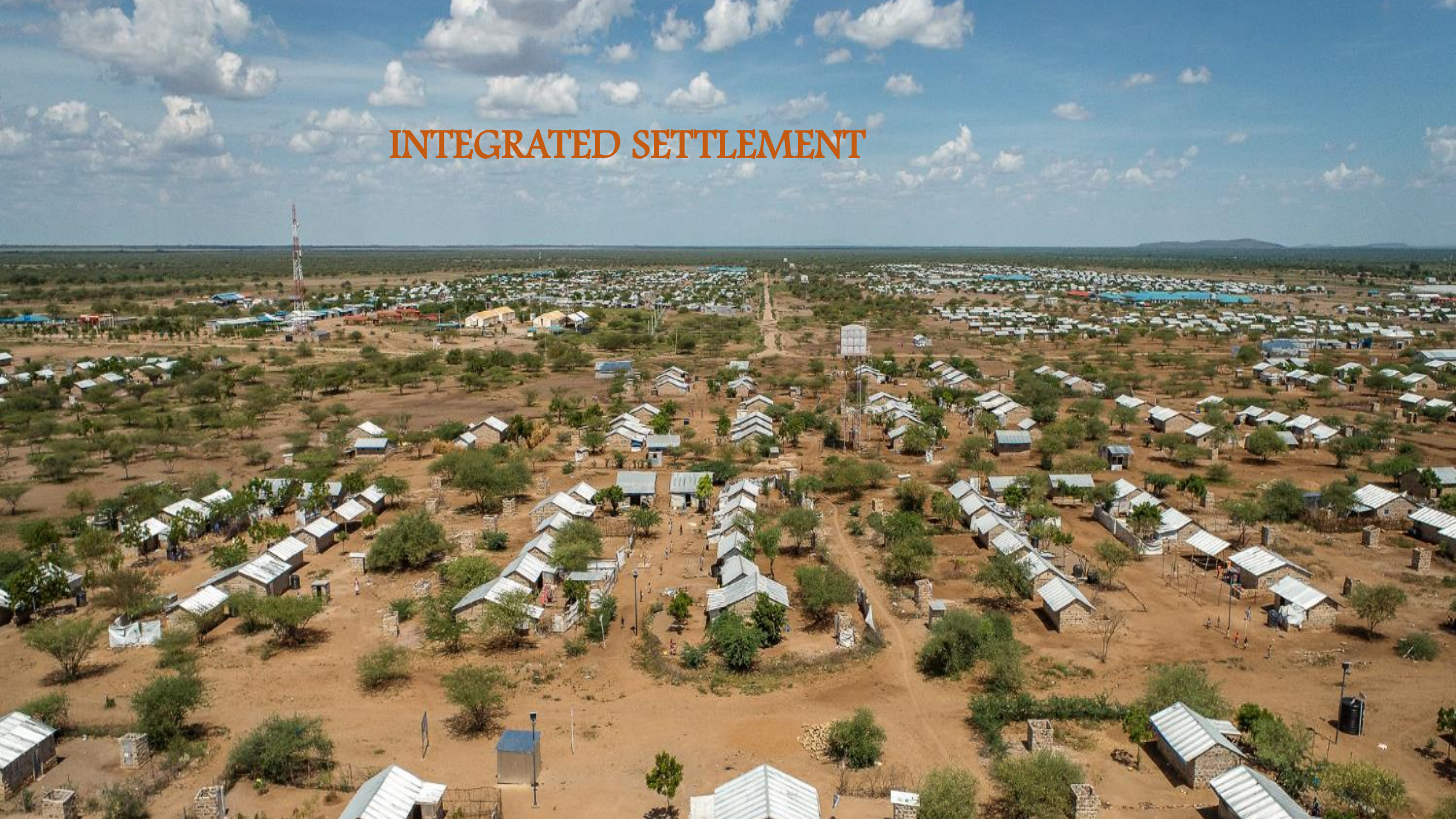
GOVERNMENT OF KENYA
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

DEPARTMENT OF REFUGEE SERVICES

CLIMATE & DISPLACEMENT WORKSHOP

(5TH NOVEMBER 2025)

INTEGRATED SETTLEMENT



1. Services offered to Refugees and asylum seekers by DRS

i. Reception and registration of asylum seekers and refugees.
ii. Issuance of identification cards to bonafide refugees.
iii. Issuance of Movement Passes to refugees and asylum seekers.
iv. Facilitate the processing of Machine Readable Conventional Travel Documents for refugees.
v. Facilitating the processing of exit stamps.
vi. Responding to refugee complaints.
vii. Facilitate the processing of police clearance letter for refugees.
viii. Facilitate processing of Students Passes
ix. Facilitate the processing of class M work permits for refugees.
x. Respond to urgent correspondence by refugee agencies.
xi. Processing of permits to visit refugee camps.

2. KENYAN Operation

Kenya hosts a complex mix of displaced populations, shaped by regional conflicts, protracted refugee situations, and internal vulnerabilities.

1. Refugees and Asylum Seekers

- 5th largest refugee-hosting country in Africa, 13th largest in the world.
- Kenya has hosted refugees from the Great Lakes region, the Horn of Africa , Eastern Africa and other parts of the world for more than three decades.
- The majority of refugees in Kenya are from Somalia and South Sudan, majority reside in the camps
- Kenya is a host to **864,693** registered refugees and asylum seekers as **at 30 September 2025.**
- About **120,000** refugees reside in Nairobi and other urban areas.
- Drivers of displacement; Conflicts, Political Factors and Climatic conditions
- Kenya is shifting towards a more progressive refugee management model – Shirika Plan; emphasizing on **self-reliance** and **integration** into local economies.

KENYAN Operation Cntd'

2. Returnees

- Return movements include both refugees returning to their countries of origin and IDPs returning to their communities.
- In 2025, there were approx. **300 refugee returnees** and **1.7 million returned IDPs** across the region, though Kenya-specific figures are less clear as reported by the National statistical office

3. Internally Displaced Persons (IDPs)

- Kenya has experienced internal displacement due to ethnic violence, climate shocks, and development projects.
- IDPs often face challenges accessing services and durable solutions, with many remaining in protracted displacement.
- Efforts are being put to collect IDP Statistics

3. Policy and Research Initiatives

- The **2025/26 Kenya Integrated Household Budget Survey (KIHBS)** has incorporated refugee camps into the sampling frame.
- The **Kenya Analytical Program on Forced Displacement (KAP-FD)** is generating detailed socioeconomic data to inform policy and improve service delivery for refugees and host communities.
- The **Refugee Act 2021** was adopted and came into effect in February 2022.
- Refugees have been included in county integrated development plans (CIDPs) in key counties i.e. **KISEDP, GISEDP and Urban plans.** Addresses climate change by incorporating natural resource management, livelihood support and resilience, community-led action, partnerships, etc.
- **Kenya's comprehensive refugee response framework** was adopted in 2020
- **Recognition of Prior Learning (RPL) policy,** the Government launched a pilot program in 2023 to test the policy's implementation in trades like textiles, welding, and motor vehicle mechanics.

4. Current Policy and Institutional Frameworks for Managing Displacement Data.

- Kenya Citizenship and Immigration Act (2011)
- Kenya Citizens and Foreign Nationals Management Service Act (2011)
- Statistics Act, CAP 112 Laws of Kenya [Rev. 2022]
- Refugees Act (2021)
- Registration of Persons Act (1949) (Rev 2011)
- Births and Deaths Registration Act (1929) (Rev 2011)
- Children's Act (2022)
- Marriage Act (2014)
- National Policy on Labour Migration 2023
- Kenyan Constitution 2010 on Data privacy
- Data Protection Act 2019
- Institutional Data Protection Policies

5. Climate Change Initiatives

- Kenya has a comprehensive framework on climate change, guided by the **Climate Change Act of 2016,** the subsequent **National Climate Change Action Plans (NCCAPs)** and the **National Framework for Climate Services (NFCS).** These initiatives focus on both adaptation and mitigation efforts, aiming for a low-carbon, climate-resilient development pathway, enhancing coordination and use of climate information, early warning systems, among others.
- The 'Shirika Plan', which includes reforestation to combat desertification, the adoption of alternative energy like solar power, and sustainable water management strategies. The plan also focuses on environmental sustainability within its broader goal of integrating refugee settlements with host communities and enhancing resilience against climate impacts like droughts and floods.
- Ministry of Environment, Climate Change and Forestry has more in terms of monitoring, prediction models, etc

6. Kenya's Refugee Act 2021 (SHIRIKA PLAN)

- Provides better protection and solutions for refugees, in line with Global Compact for Refugees(GCR) and the Comprehensive Refugee Response Framework (CRRF)
- Offers new opportunities, rights, and access to documentation for refugees in Kenya
- Recognizes refugees' contribution to Kenya's development and facilitates employment and small business establishment
- Demonstrates Government commitment to protect refugees and find lasting solutions to their problems
- Refugee Regulations 2024, are in place.

7. Building Resilience and Economic Inclusion

- All refugees in Kenya are registered and are allowed to live in refugee designated areas(camps), 14% percent live outside designated areas.
- Asylum seekers who have been granted Refugee Status are issued with Refugee Identity Cards
- Children born to registered Refugees are issued with Kenyan Birth Certificates.
- Refugees wishing to travel out of the Country for Business, Education, Employment, Sports or religious functions among others, are facilitated through the issuance of Convention Travel Document.
- Refugee children attending Public primary and Secondary Day Schools benefit from government capitation and subsidies.
- Refugees benefit from the free National Primary Healthcare, National Hospital Insurance Scheme through direct payments or through subsidies paid by Partners working in the refugee space to access medical services in government hospitals.
- The Registration Documents including identity cards, enable refugees to access services such as Medical, Education, registration of businesses, opening Bank accounts, registration of CBOs, access to mobile money banking, telcos access among many others.
- The Government of Kenya through the National Qualification Authority rolled out Recognition of Prior Learning (RPL) to recognize and certify refugees and asylum seekers skills acquired both formally, informally and non- formally.

8. Data Collection Practices

Data Sources

1. Censuses:
- Population and Housing Census
- School Census
- Census of Street Families

2. Surveys:
- Demographic and Health Surveys
- Household Budget Surveys
- Remittance Survey
- Labour Force Survey

3. Administrative Sources:
- From MDAs

4. Citizen Generated Data:
- From MDAs

9. Achievements & Progress

- Launch of Migration and Displacement Statistics TWC in 2025
- The 2025/26 Kenya Integrated Household Budget Survey (KIHBS) has incorporated refugee camps into the sampling frame
- Kenya has been consistently contributing to the IGAD regional displacement statistics
- Kenya is a member of EGRISS Group and has been implementing the frameworks (IRRS, IRIS & IROSS)
- Plans are underway to produce a chapter on migration and displacement into the Annual Economic Survey Report
- Refugees have access to documentation and legal identity; refugee ID, Birth certificates.
- Refugees are included in the Kenyan education system and sit for Kenyan national exams
- There is a rollout of Recognition of Prior Learning skills for refugees by the Kenya National Qualifications Authority. This will provide refugees with certificates and promote employability.

Achievements & Progress Contd'

- Process of Registration of schools in the refugee camps as Government schools through the Ministry of Education has commenced.
- Refugees are able to access Primary healthcare (SHA)
- Kenya has developed a draft Education policy for refugees .
- More refugees are enrolling in tertiary learning institutions, colleges and universities in Kenya as well as pursuing Education abroad through sponsorships. Refugees to access work permits non-gratis.
- The Government has encouraged private sector involvement in development projects in Refugee hosting areas as well as inclusion of Refugees in their services.
- Kakuma and Dadaab towns have been upgraded to municipalities thus services will be brought closer to the refugees and host community as well as enhancing access to wage employment.
- Kalobeyei Socio-economic development Program (KISEDP) phase II has been launched

10. Challenges & Gaps

- Securitization of data especially internal displacement data making it inaccessible
- Partial implementation of IRIS framework
- Low political goodwill
- No Government tools/systems for managing displaced population
- Limited System interoperability with other MDAs to ease access to Government services
- Financial Resources
- Environmental Degradation
- Inadequate knowledge on refugee issues, policies , documentation
- Insecurity linked to presence of Refugees
- Human trafficking and Smuggling/contraband activities
- Protracted Refugee situation with continuous influx
- Onward movers

11. Support Required

- Bringing together relevant stakeholders to address displacement statistics especially IDPs
- Capacity building of Government institutions such as police, the judiciary through training , provision of vehicles.
- Implementation of the Shirika Plan; Socio-economic Inclusion /Integration
- Promoting voluntary repatriation in the region. Repatriation is seen by Kenya as the best durable solution due to reduced resettlement quotas

12. Conclusion

- Kenya is committed to support refugee empowerment to enhance self-reliance and resilient while in the host country and when they return home.
- NGAOS and County Governments are key stakeholders to address security issues, policy issues and social issues, service delivery.
- To promote self reliance and empowerment , there is need for an enabling legal and policy framework.
- Contribution by County Governments in hosting refugees over the years is immense
- Kenya is ready to improve displacement statistics by providing data and building capacity of stakeholders

Thank You!