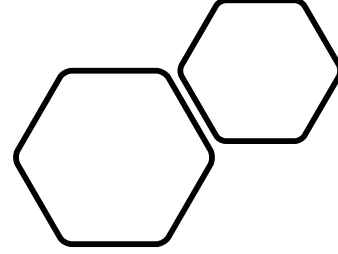


# **Anticipatory Action and Red Cross Experience in Ethiopia**

**Sirak A. Temesgen**  
Resilience Advisor for  
Africa

# What is AA

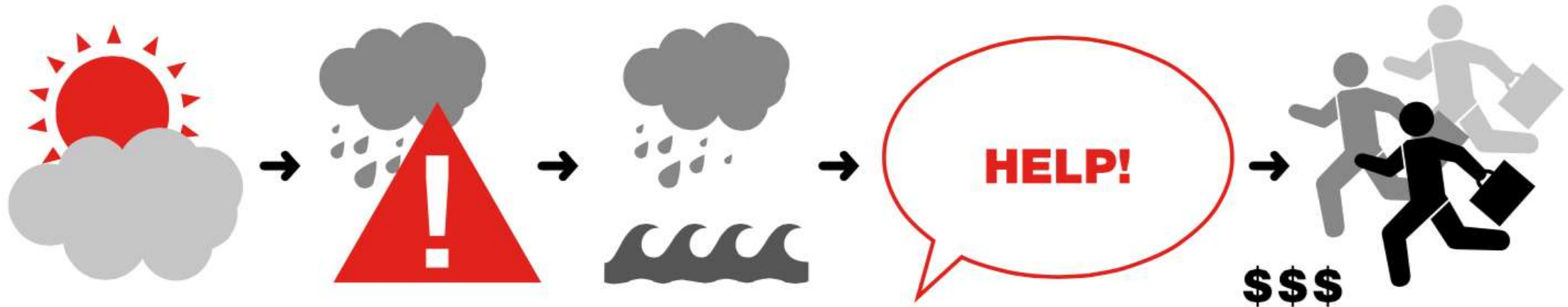


- Anticipatory action is a set of actions taken to prevent or mitigate potential disaster impacts before a shock or before acute impacts are felt
- Anticipatory Action is an innovative approach that systematically links **early warnings** (**impact-based forecast**) to **actions** designed to protect families and their assets **ahead of a hazard event**.
- Impact Based forecasting (IBF) a forecast which integrates the anticipated hazard with its respective impact
- IBF is not only what a hazard could **be** but also what a hazard could **DO**

# Why Anticipatory Action

## THE CHALLENGE

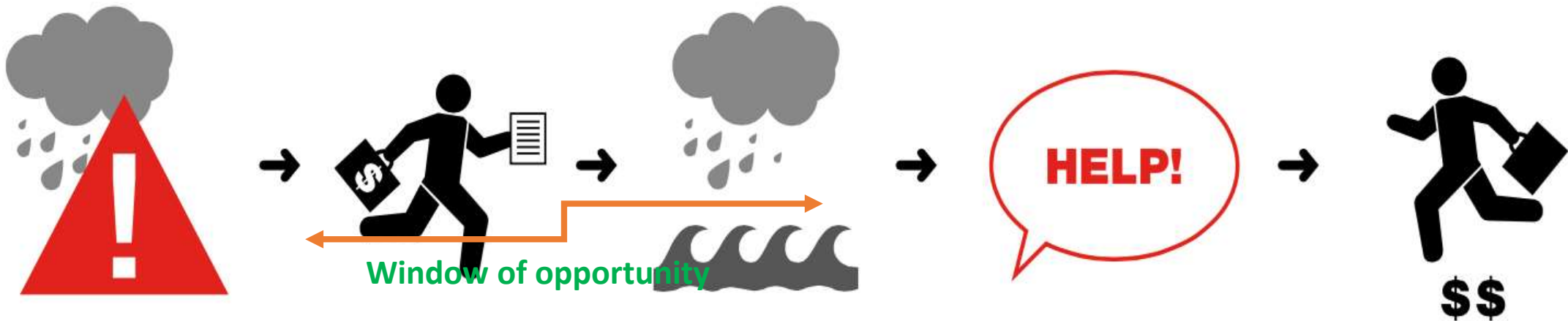
Humanitarian finance is available when a disaster strikes and suffering is almost guaranteed. But climate-related risks are rising worldwide, and just waiting for disasters to happen is not an option:



# Wind of Opportunities to Reduce Risks of Crisis

Many humanitarian actions could be implemented in the window between a forecast and a disaster. Many climate-related hazards can be forecast; humanitarians get information about when and where extreme-weather events like storms, floods and droughts are expected.

Can we set up an automatic system that triggers and funds preparedness actions before a disaster strikes when a credible warning arrives? If so, we could prevent suffering, use humanitarian funds more efficiently, and contribute to strengthened community resilience:

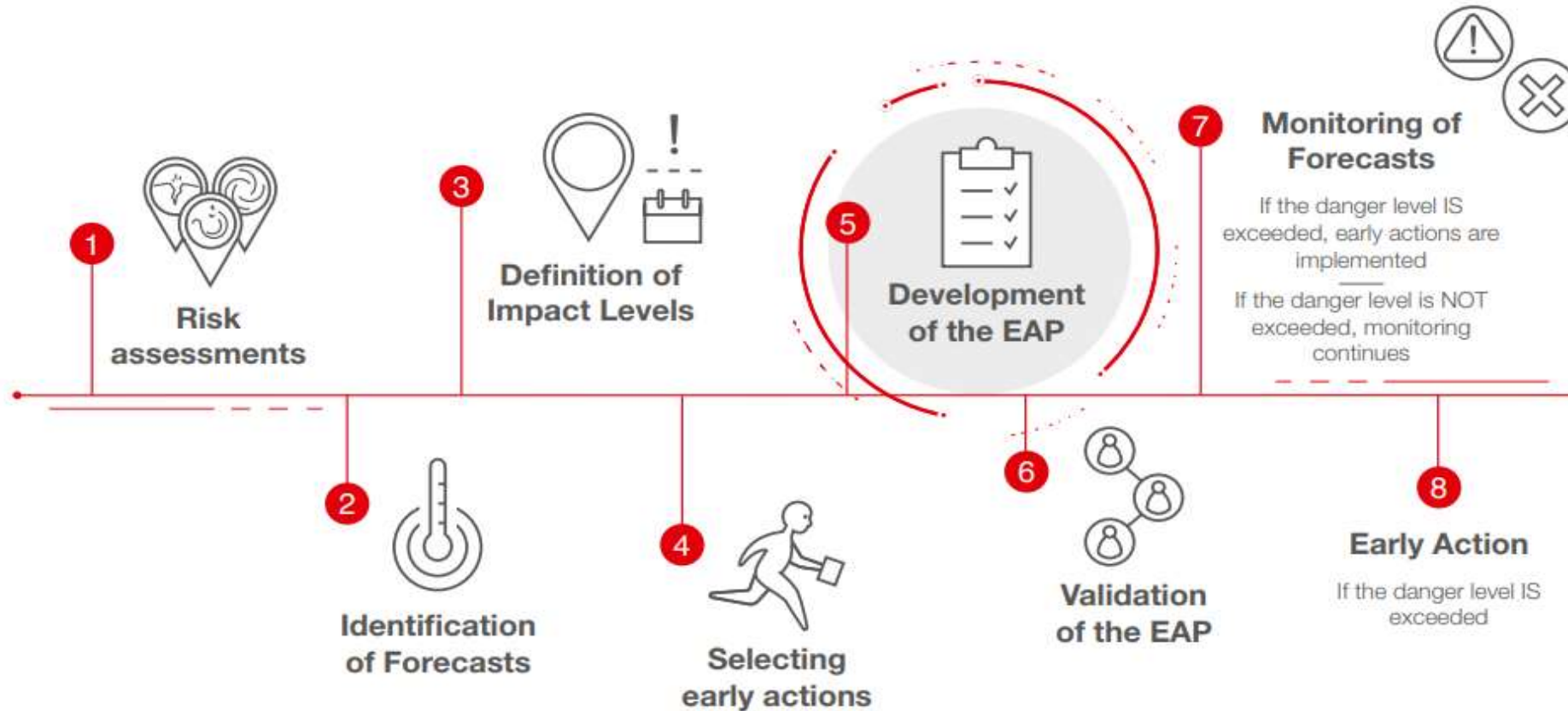


# Stakeholders Involved

- National AA Technical Working Group – There is a TOR
  - EDRMC – lead
  - ERCS – Secretariat
  - EMI, MoA, MoWE, WFP, OCHA, (even FAO) are members

We have developed a national level EAP for Drought and Riverine Flood and Activated in 2022 and 2023

# Phases of AA



# Risk Analysis

- ❑ Provide a justification of the selection of hazard.
- ❑ Answer who is vulnerable to this hazard and where are they?
- ❑ understand the risk through mapping and other statistical methods
- ❑ what types of vulnerability and exposure can combine with the hazard to cause impact
- ❑ Gather and analyze data on indicators for hazard exposure, vulnerability and coping capacity

# Prioritized Impact for Flood

This EAP has prioritized five following impacts



Loss of human life (due to drowning/washed away)



Destruction of crops



Death of livestock (due to drowning/washed away)



Damage to Houses/shelters leading to displacement



Contamination of drinking water



# Vulnerability Analysis

5 vulnerability indicators identified

Children under five



Uprooted people (IDP, Refugee)



Shelter/wall material



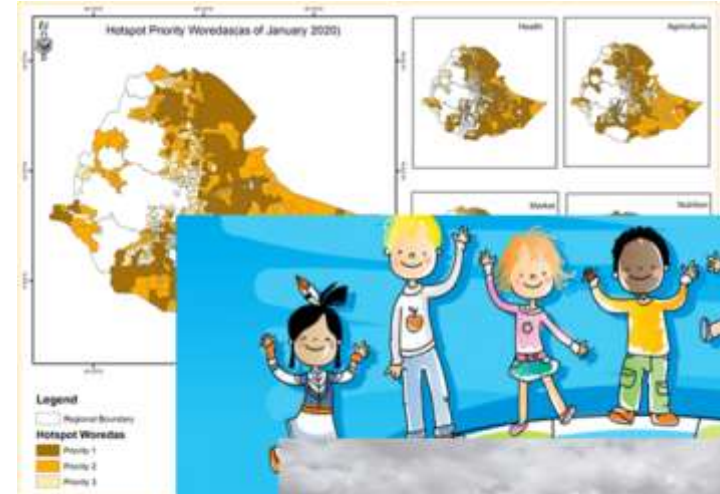
Access to infrastructure



Hotspot woreda/as proxy indicator to FI

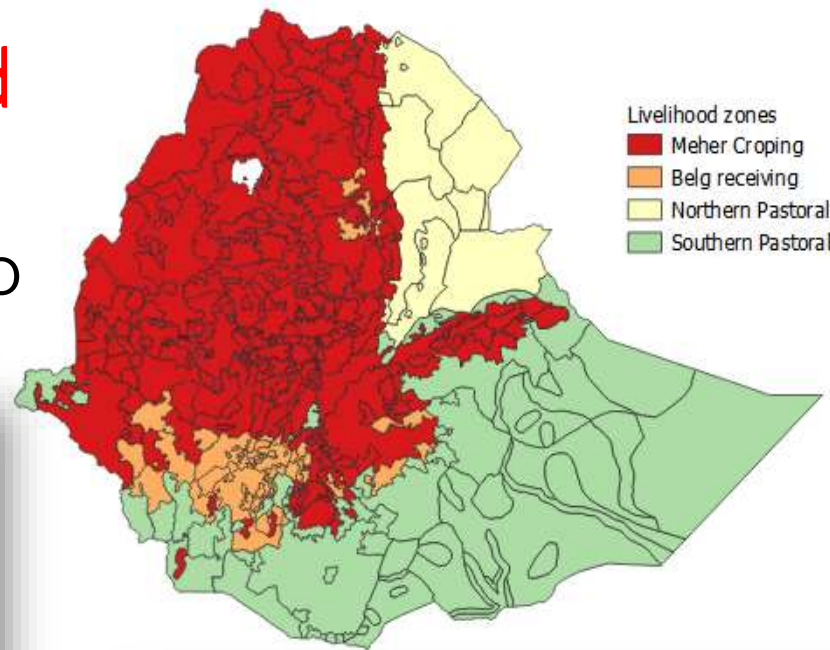


☐ VI were combined to create CVI based on INFORM risk framework

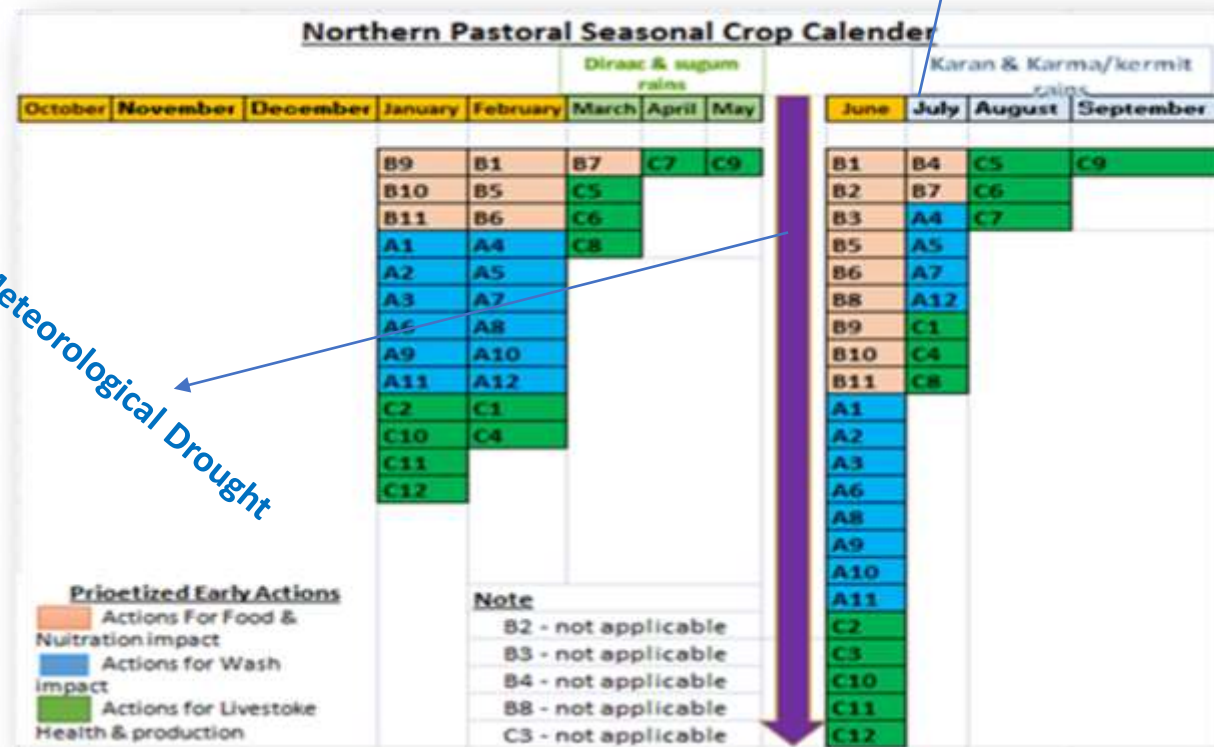
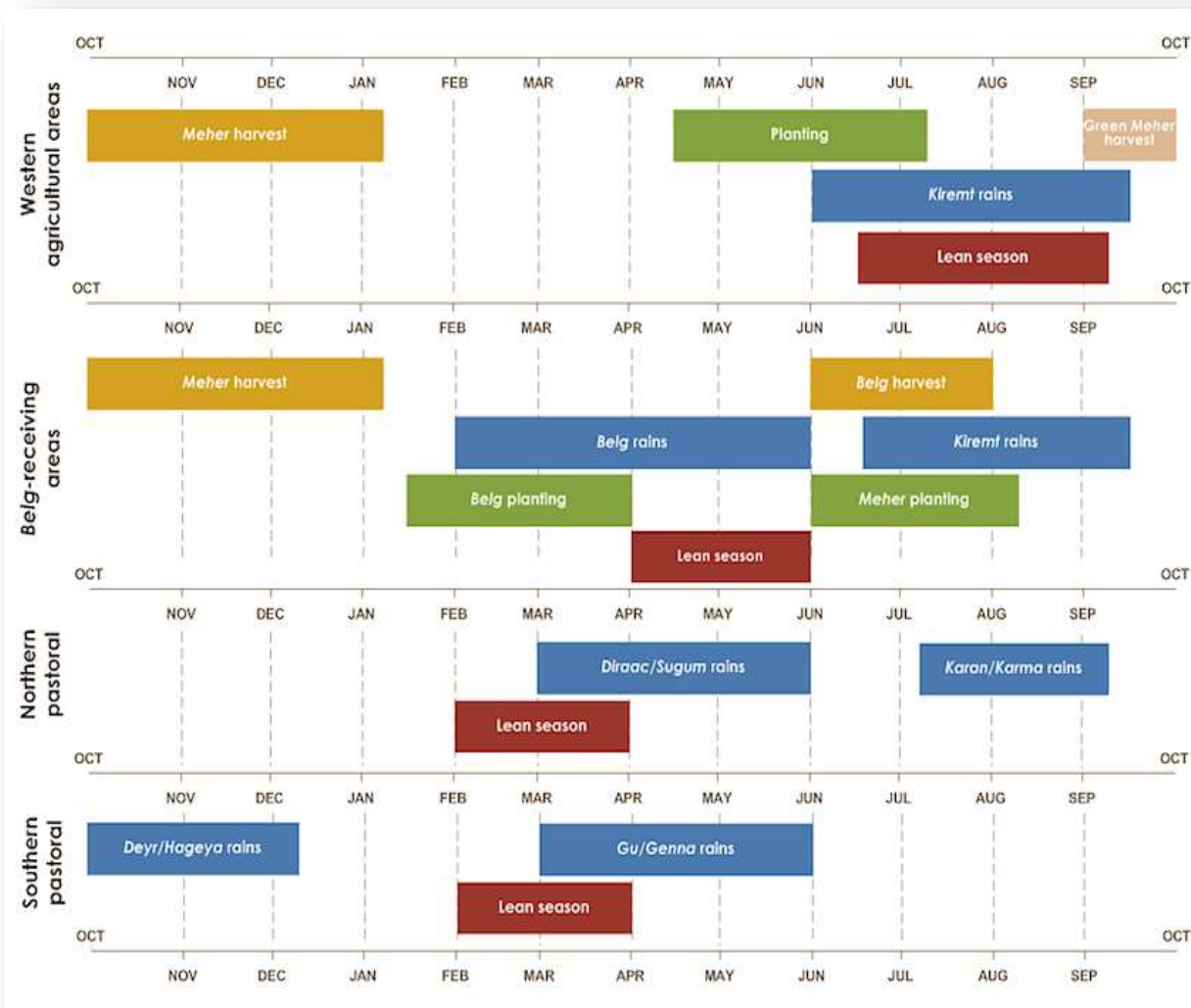


# Prioritized Impact for drought and when it is being felt

- Seasonal d/c over locations (Crop Calendar) -FAO
- Slow on set hazard (Drought case by case)



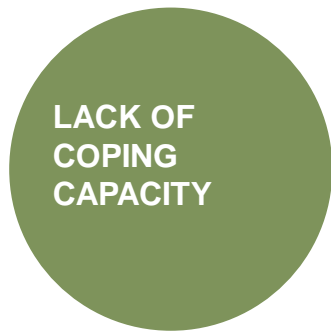
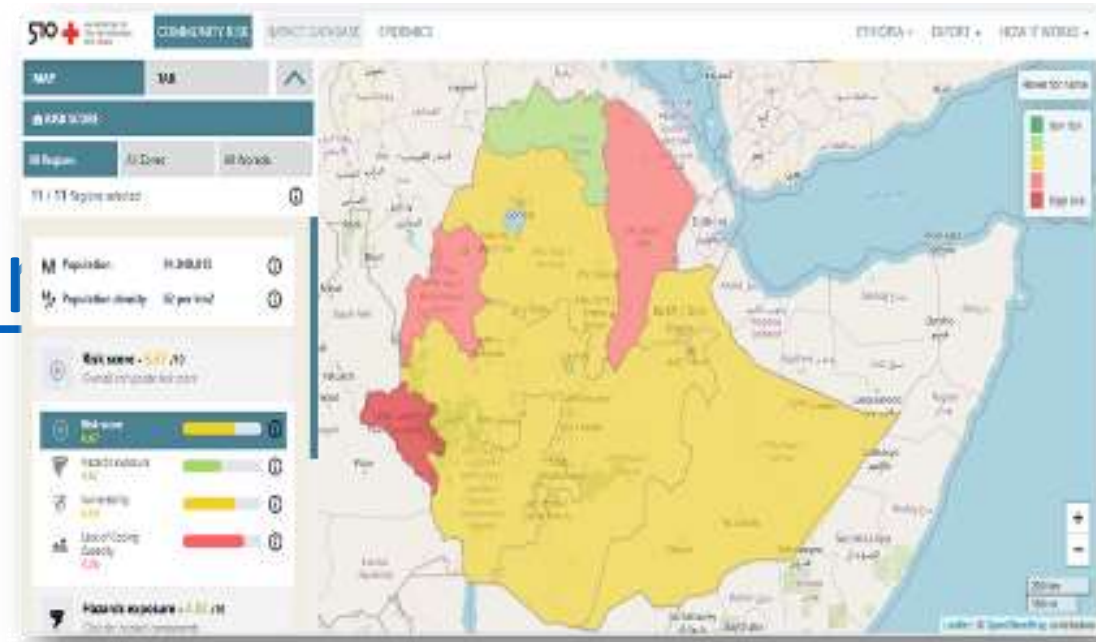
Agricultural/Hydrological Drought



Meteorological Drought

# CRA Dashboard

## Community Risk Assessment



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We live for humanity!



# Trigger Development

## 1. Identification of Indicators :

- Rainfall Forecast
- River discharge forecast

## 2. Inventory of Forecast

## 3. Historical Impact Hazard curve

Available Forecast for AA  
for riverine flood

Forecast	Source	Lead time	False Alarm Ratio	Number of times the forecast has been issued for floods in the last 10 years
WRF model	EMI	1 to 10 days	0.4	Two times a week for ten day time period
Global Flood Awareness System (GLOFAS)	European Commission Copernicus Emergency Management Service	30 days	For each location	Issued daily since 2011
Seasonal forecast	EMI, MoWE	120 days	Not known	Every four month Since 1987
HYPE discharge model	MoWE	To be determined	Not Known	Under Experiment
Water level flow measurement	MoWE	Real time	Real Time	Every day/rainy season/

Impact Hazard Curve

You have selected Dubti

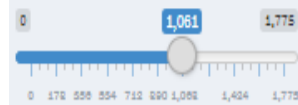
Select Rainfall Threshold (in mm):



Select A GLOFAS Station:

G1045

Select a Threshold for The GLOFAS Station in(cms):



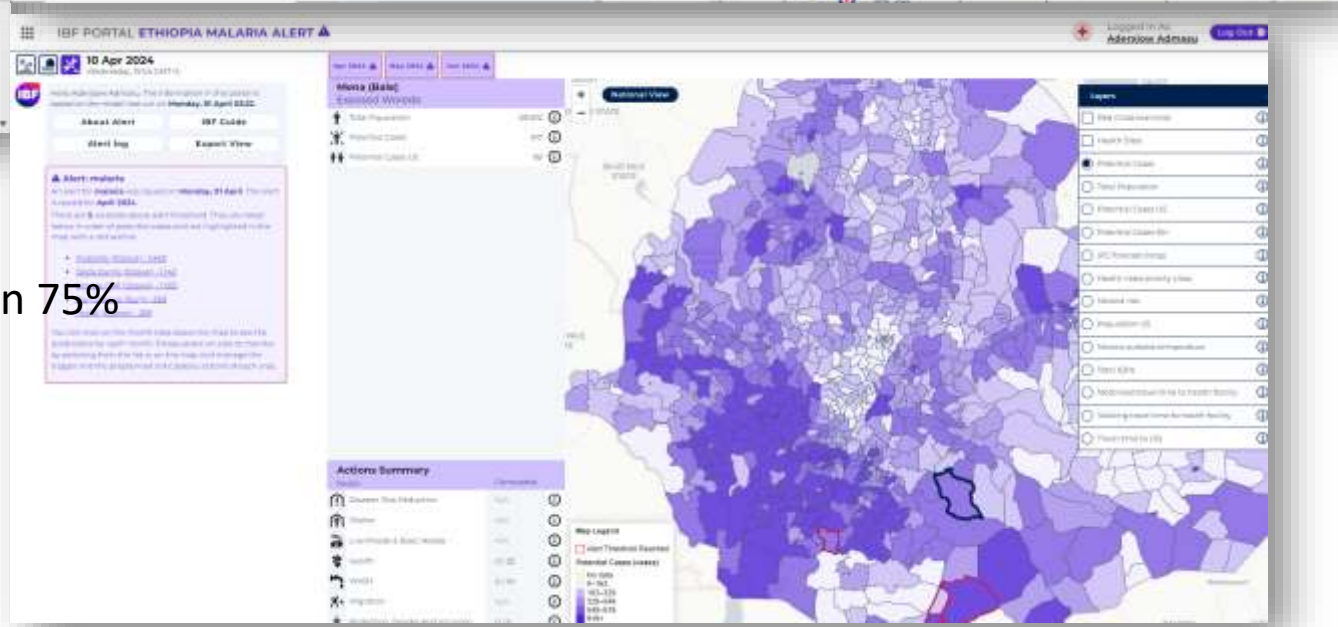
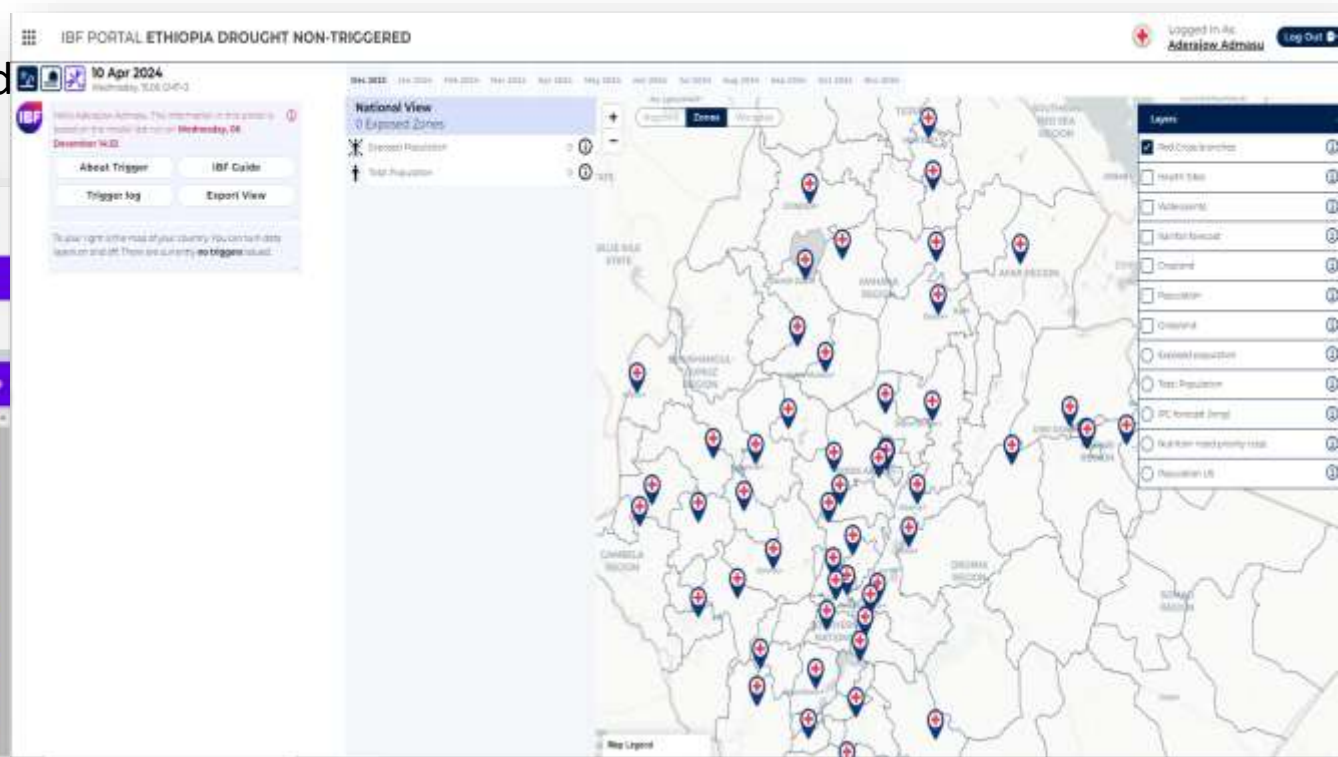
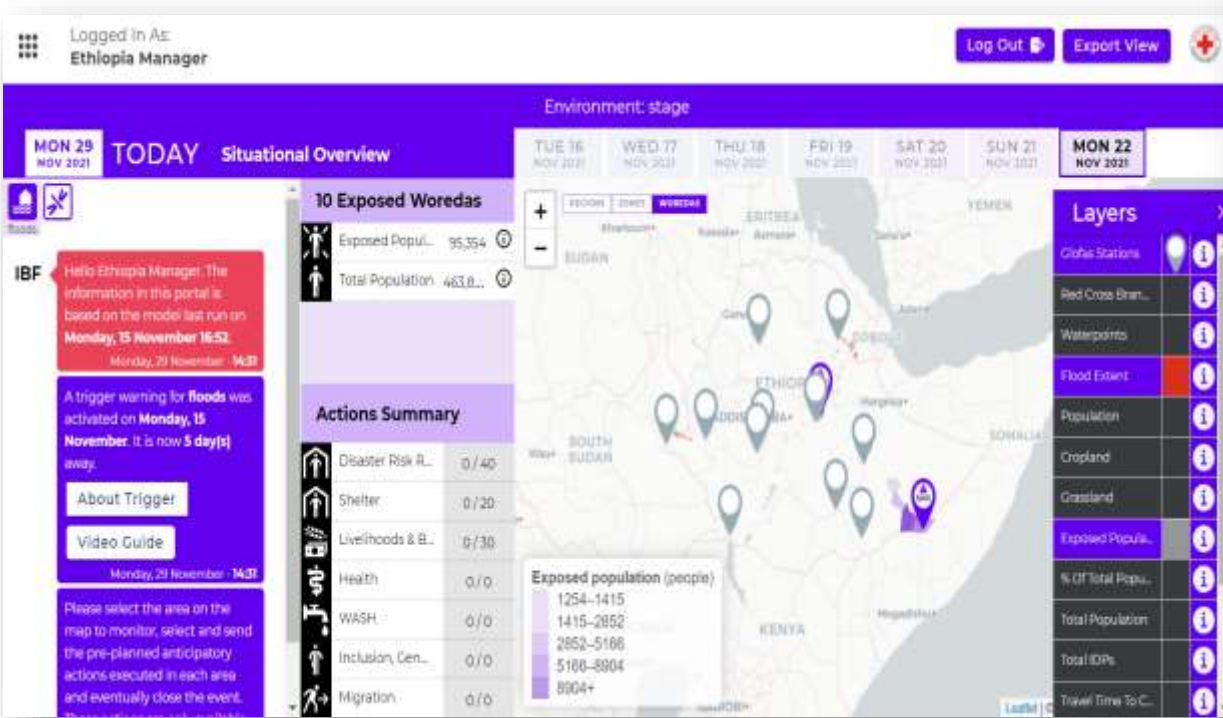
Select lead time(dis=0,dis\_3=3 days or dis\_7=7 days) discharge variable

dis



# Multi hazard IBF model

<https://ibf-demo.510.global/>; [dunant@redcross.nl](mailto:dunant@redcross.nl); password



**Flood IBF:** - Discharge Forecast (GLOFAS)

- 7 Day Lead Time, Probability of Glofas greater than 75%

**Drought IBF:** - 1<sup>st</sup> trigger Seasonal Rainfall Forecast

- 2<sup>nd</sup> trigger Agricultural Indexes

- 1 month Lead time

**Malaria IBF:** - Rainfall and Temperature

- 1 Month Lead Time

# Activation Of Flood EAP

IBF model for Riverine Flooding: Used to *Activate The Flood (Dubti Kiremt 2022 and drought EAPs (over East Bale 2023 Bega).*

## Dubti

- Maintenance of 10 breaking points in an Irrigation Canals to protect around 250 hq of farmlands (300 CFW deployed)
- Evacuation of 1900 HHs from the down stream side two kebeles (NFI: water tank, chemicals, sleeping mat and Plastic sheet cover)



# Activation of Drought EAP

## Drought Over Sewena/East Bale Zone

- Area closure works done on the selected areas (FTC or PTC)
- Installation of 2 (10,000lt) roof water harvesting WT done (3 Kebele)
- Payment and cash transfer is also ongoing
- Ground water harvesting by plastic membrane support given for one kebele





# Challenges Faced

- Limitation in quality and quantity of risk data
- Limited Skills of the Forecast Models (though there is significant improvements recently by EMI)
- Limited technical skills in the area of AA
- Most of the AA initiatives are still at national level
- Lack of coordination among different actors (though there seems to be good move recently by EDRMC and other actors)
- Limited funding for AA