

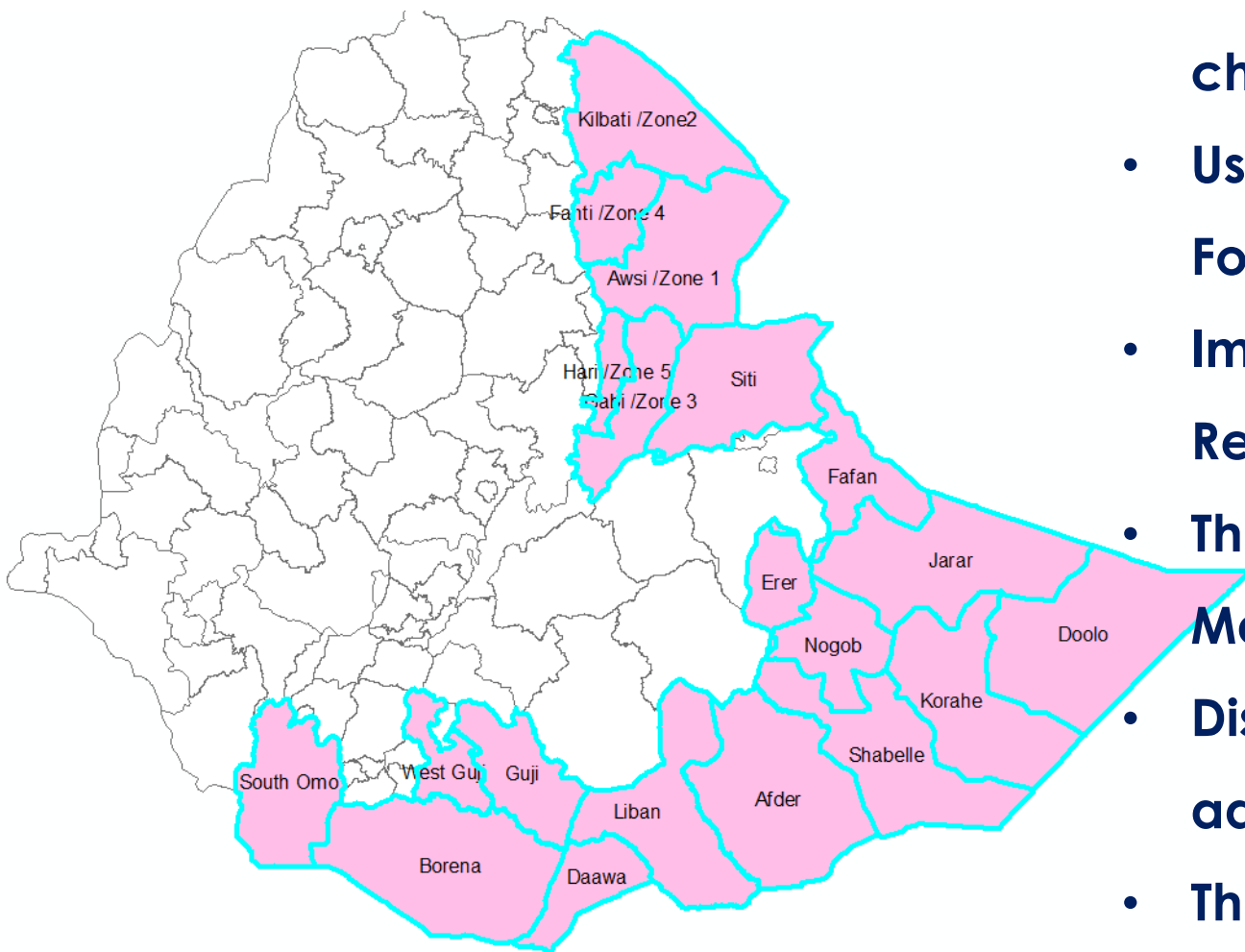


Building Climate Resilience and Conflict Management in Ethiopia's Pastoral Regions through a User-Centered Water and Pasture Monitoring-Forecasting-Early Warning System

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Outline

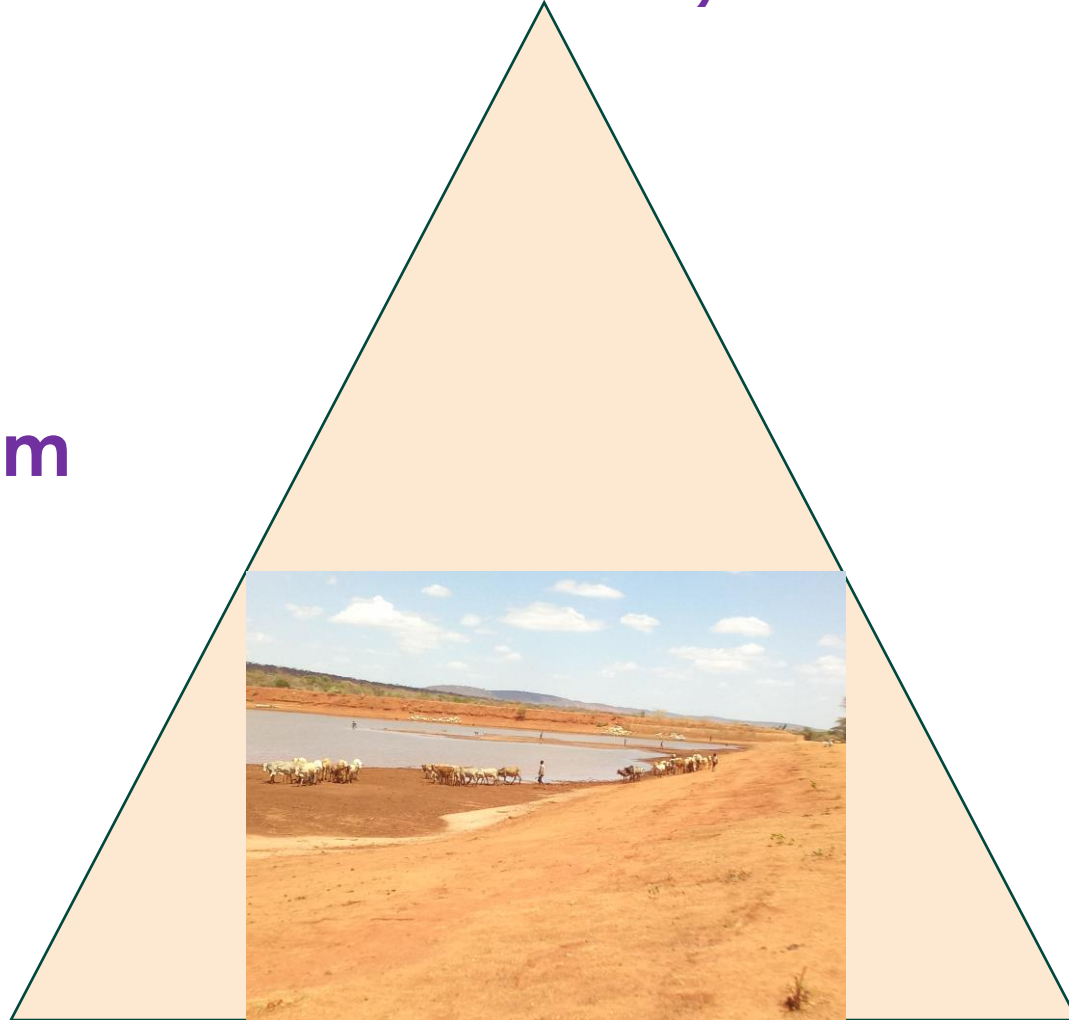
- Pastoralism and their current and future challenges
- User-Centered Water and Pasture Monitoring, Forecasting, and Early Warning System
- Importance of the System for Building Climate Resilience
- The Role of Early Warning Systems in Conflict Management
- Dissemination (Information sharing and advisory services)
- The Way forward



Natural Resource (Pasture and water)

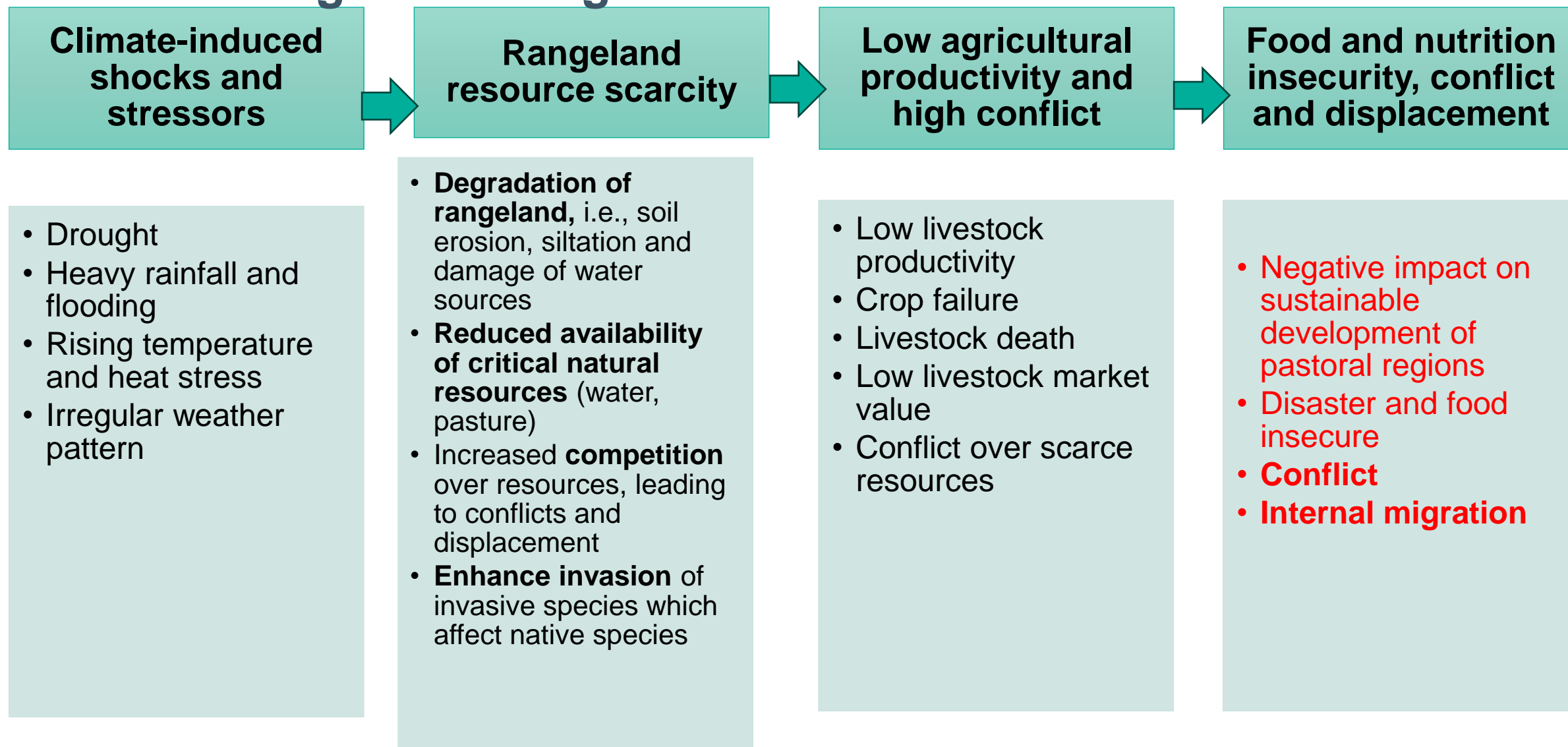
Pillars of pastoralism

Livestock



Society (Pastoralist and Agro-pastoralist) and wider institutions

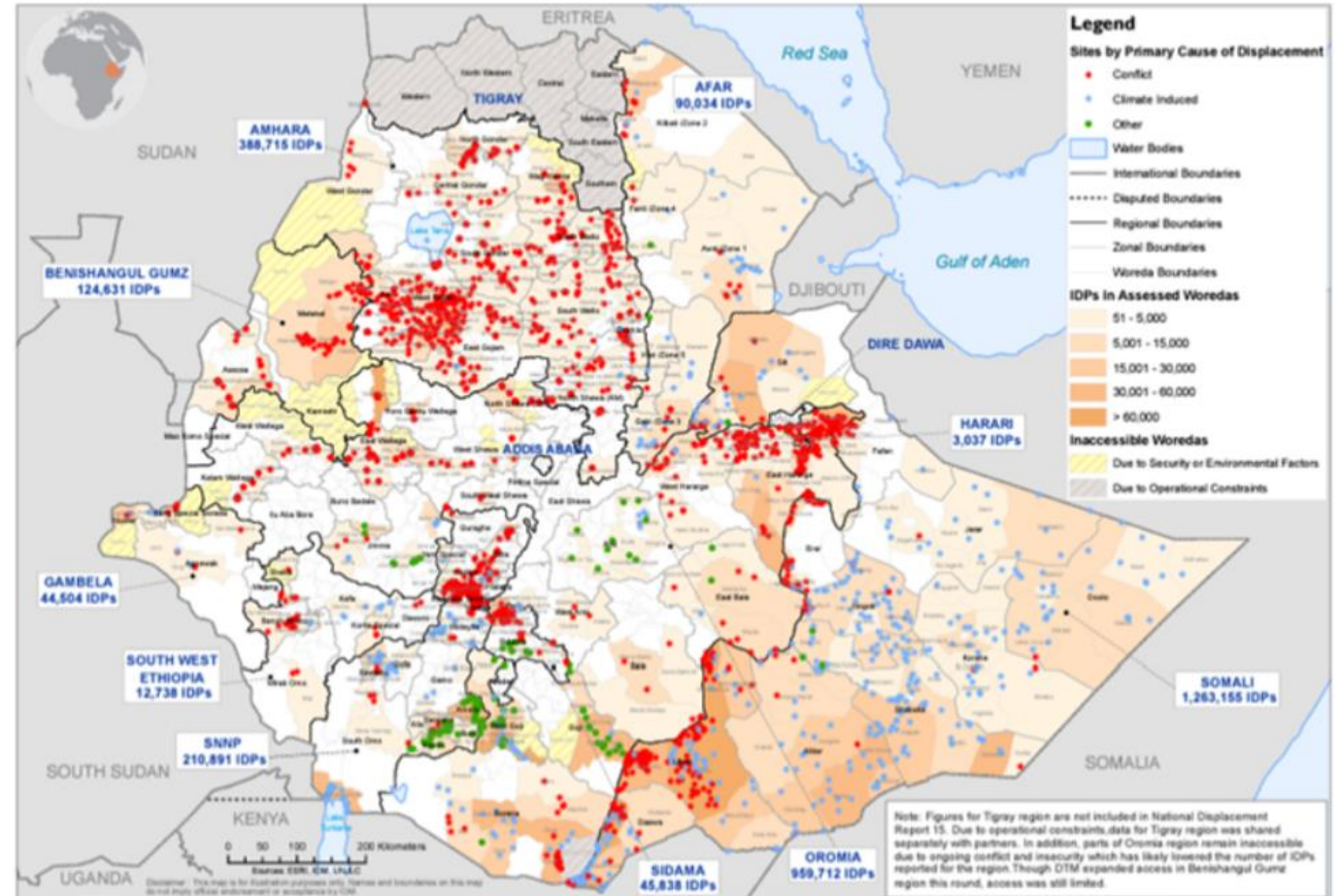
Climate change and Rangeland Resources



Pathways of climate caused displacement in Ethiopia

Displacement across Ethiopia from November 2022 to January 2023

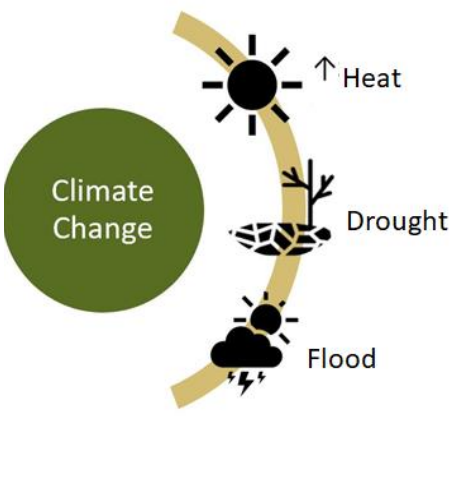
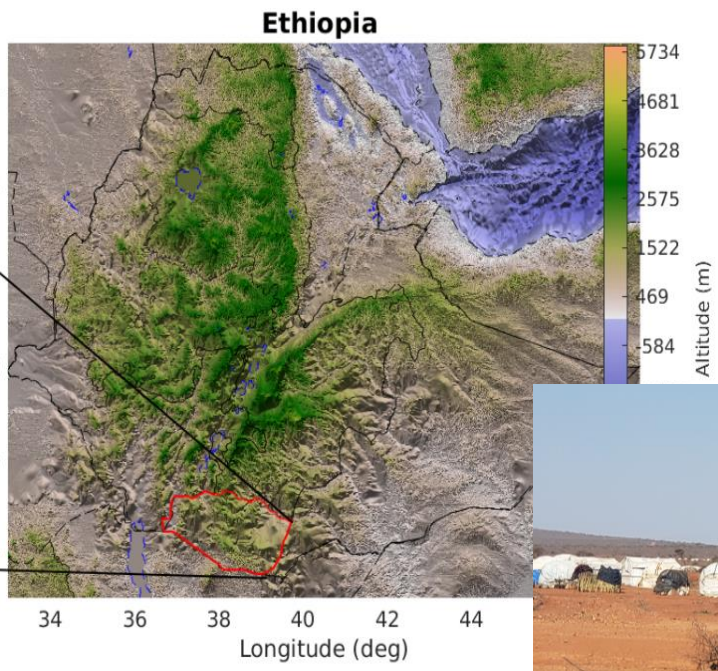
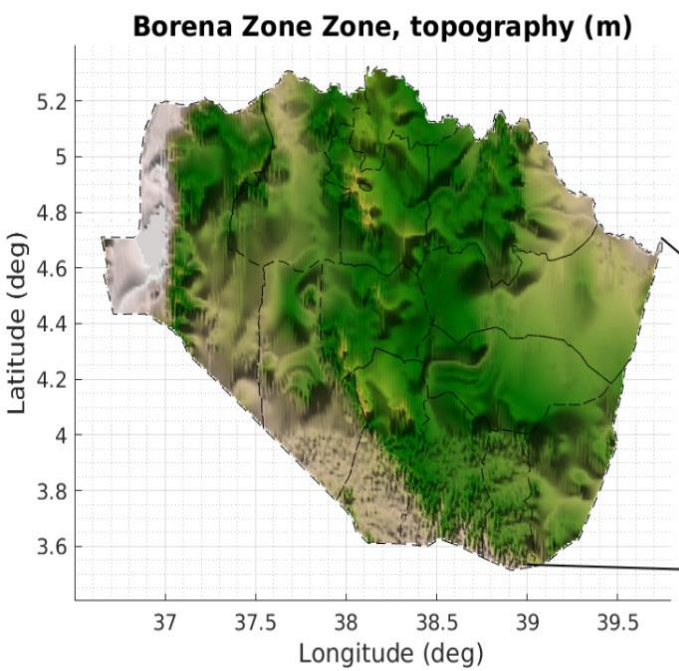
- Climate related resource scarcity and associated conflict is main causes of displacement in pastoral areas of Ethiopia (IOM 2023)



Source: IOM

Call for sustainable and innovative building climate resilience and resource scarcity-induced conflict management solutions!

Objective: Experience on the role of A User-Centered Water and Pasture Monitoring, Forecasting, and Early Warning System to adapt climate change while preventing conflicts over scarce natural resources



Decision Support tool: User-centered water and pasture monitoring - forecasting - early warning system

Waterpoints Monitoring

Monitoring Forage About Us Advisories EN Log in

Making informed decisions

Empowering vital decisions to make the right water management choices for you.

[Go to Monitoring](#)

We also change the lives of pastoralists.

Empowering pastoralist communities with access to information, find out how we are changing their reality.

- Monitoring View**
Explore our interactive map and view the location of each waterpoint in Ethiopia. Get detailed data on existing infrastructure.
- Waterpoint profile**
Explore key characteristics of this waterpoint's surroundings and community.
- Waterpoint dashboard**
Access comprehensive waterpoint data, drill down into historical temperature and precipitation records, and take advantage of seasonal and sub-seasonal forecasts to make informed decisions.
- Routes**
Find your path to the water! With our routing module, getting to the waterpoint has never been easier.
- Forage Module**
The forage module is a tool that allows users to monitor forage production and see how it changes over time.

Sections: [Home](#)

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Partners:

Real-time Water and Pasture Monitoring and Forecasting

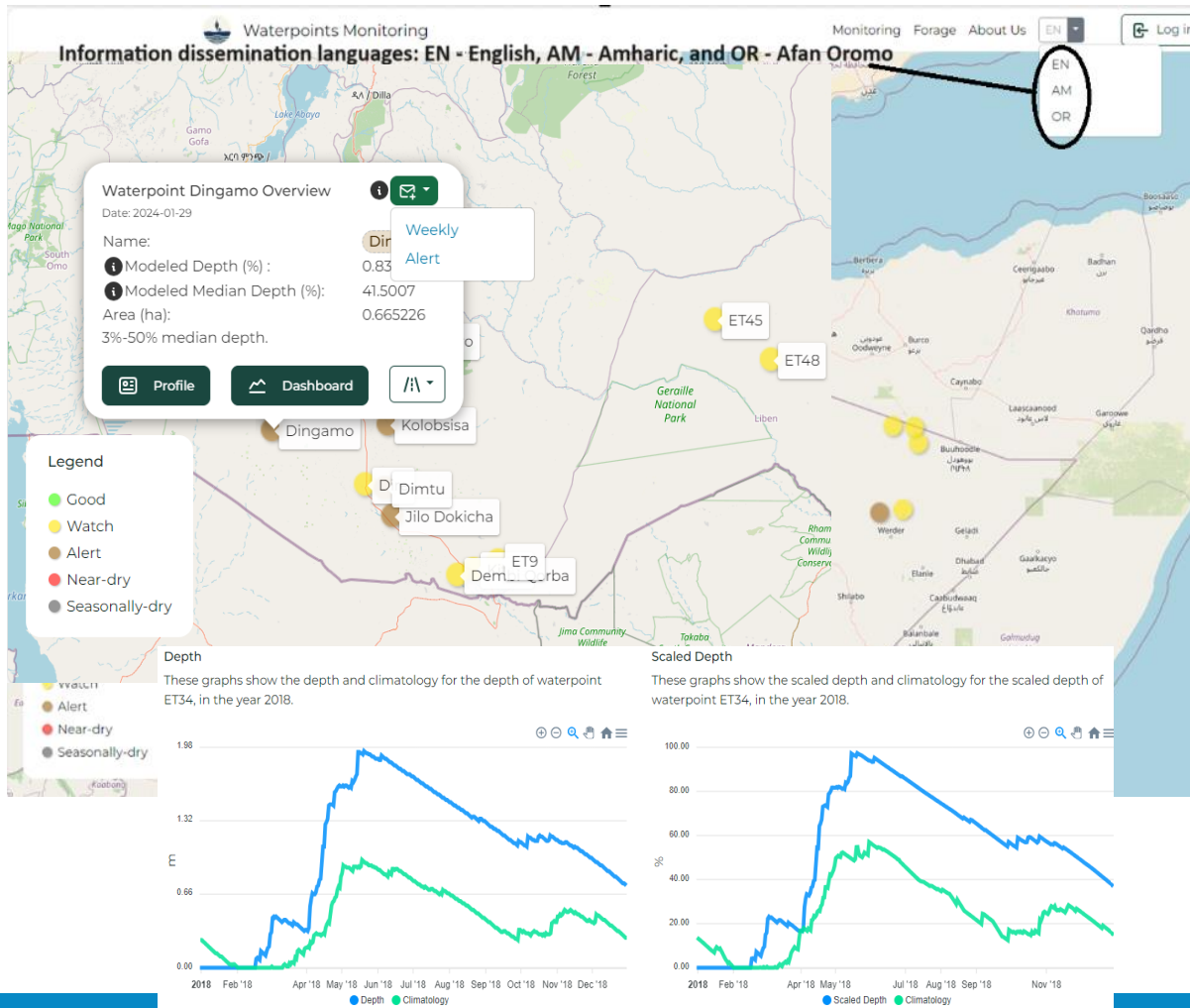
Early Warning Information for Disaster Preparedness

Context Specific Advisory service for Disaster Preparedness

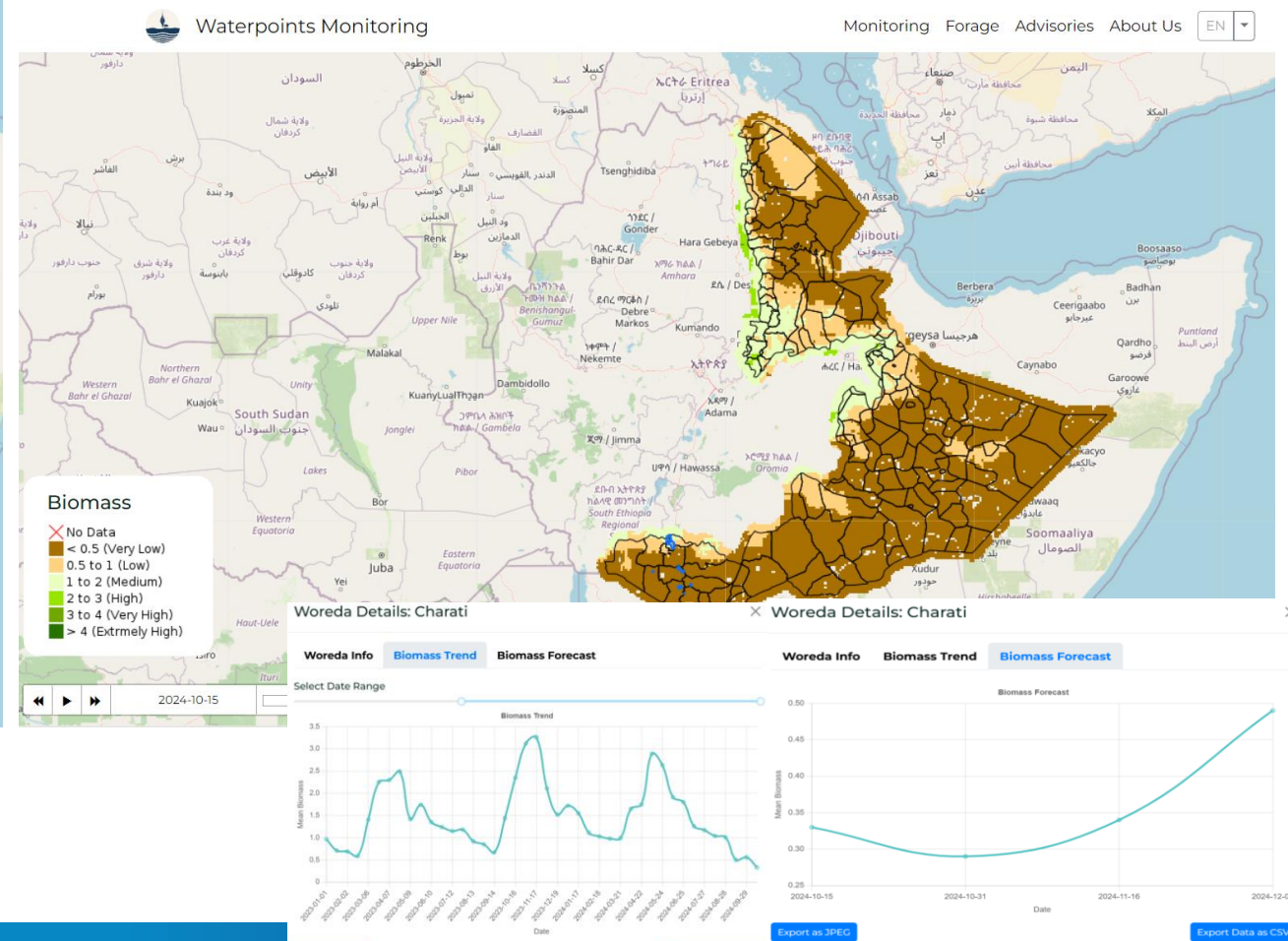
Water and Pasture monitoring - forecasting - early warning system for Lowlands

Early Warning and Response System

Water Monitoring System and Forecasting



Pasture Availability and Biomass Monitoring and Forecasting



Water monitoring - forecasting - early warning system for Resilient and Peace Pastoral and Agro-pastoral Communities



Waterpoints and pasture monitoring

Monitoring Pasture Advisories About Us EN



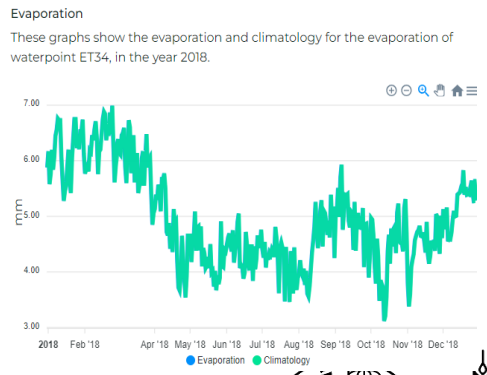
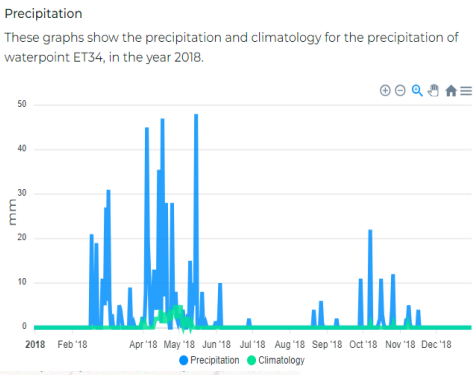
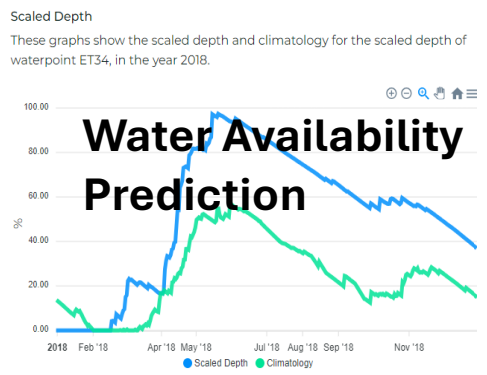
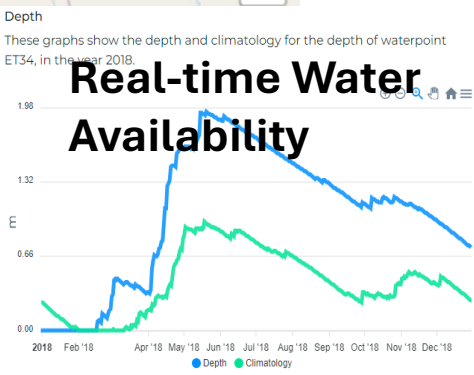
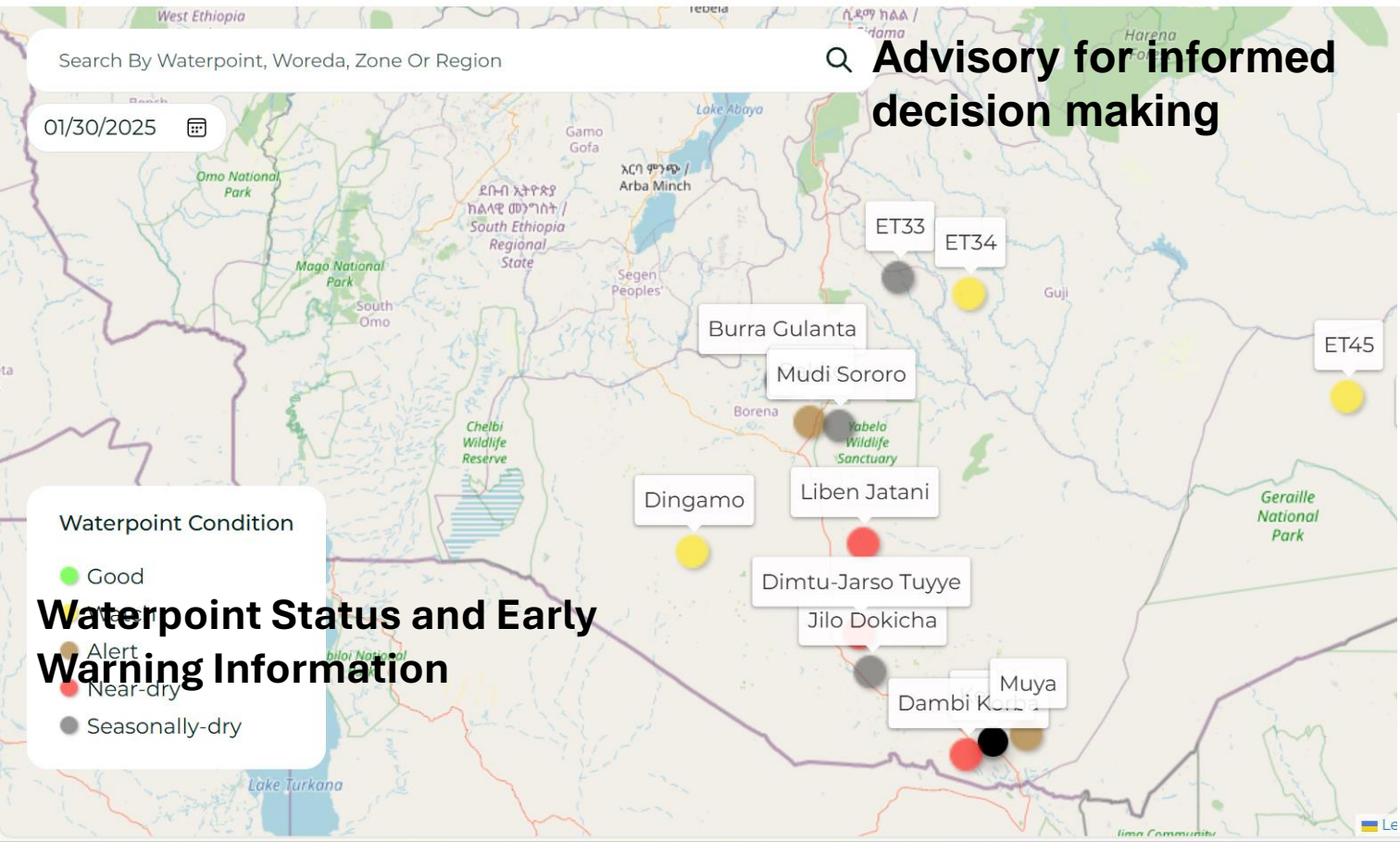
Search By Waterpoint, Woreda, Zone Or Region

01/30/2025

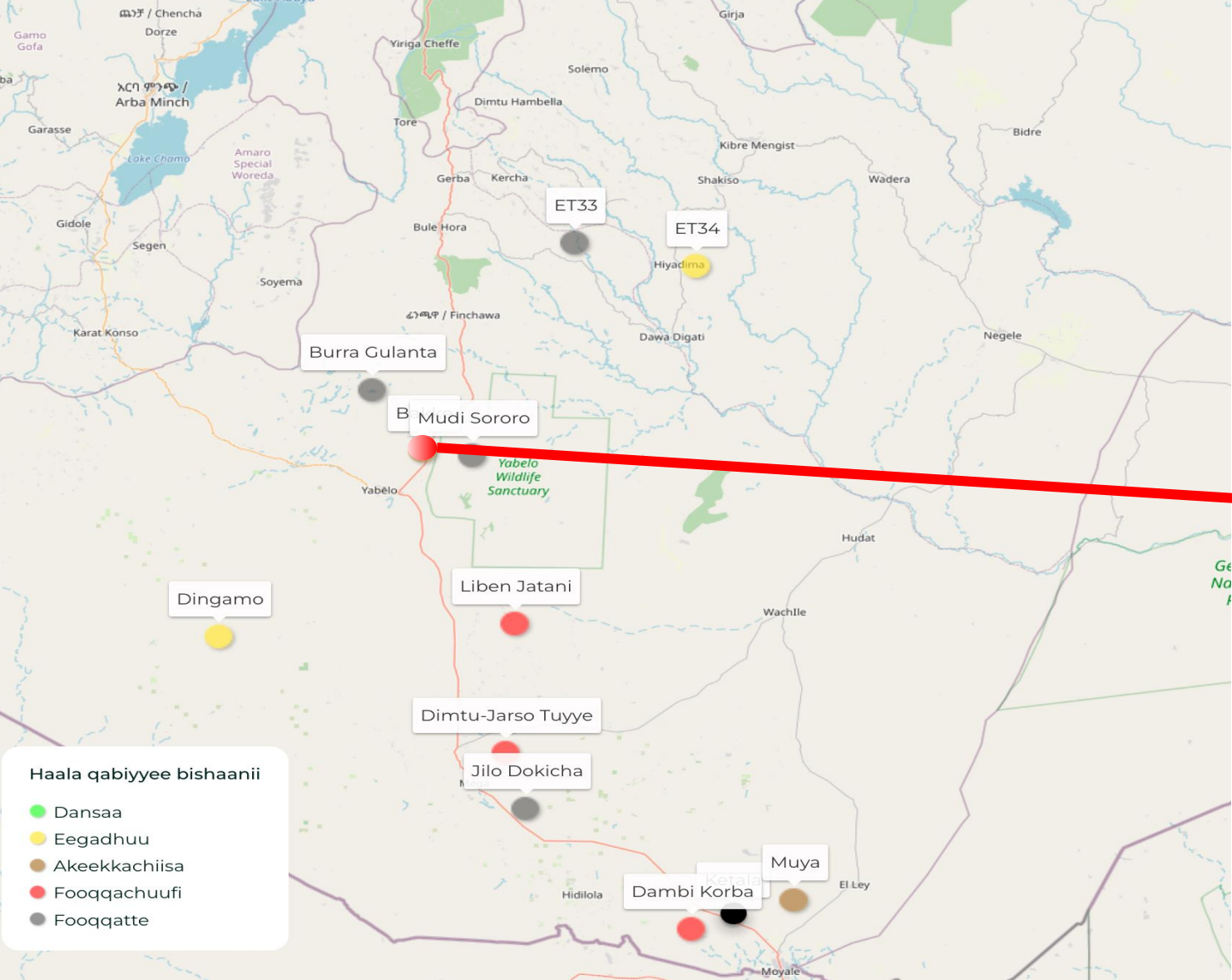
Advisory for informed decision making

Waterpoint Status and Early Warning Information

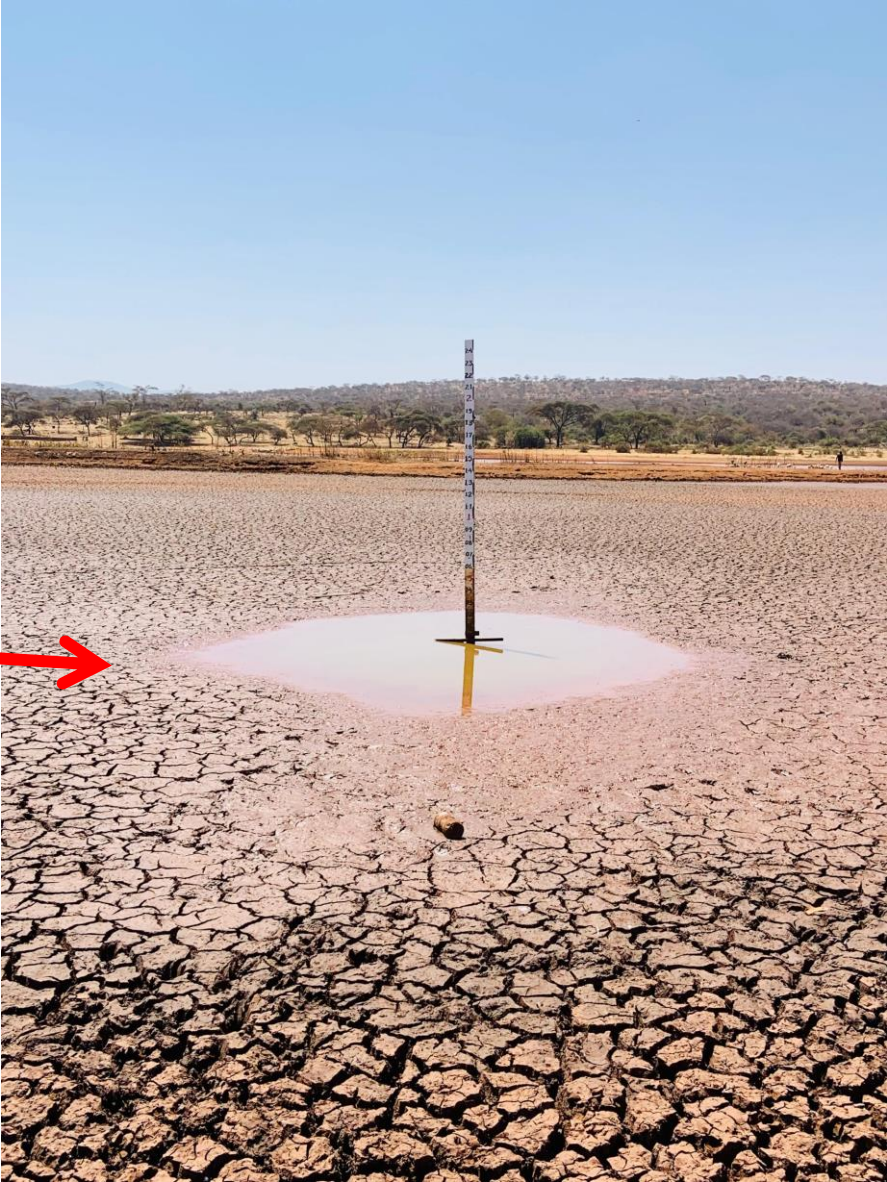
- Good
- Alert
- Near-dry
- Seasonally-dry



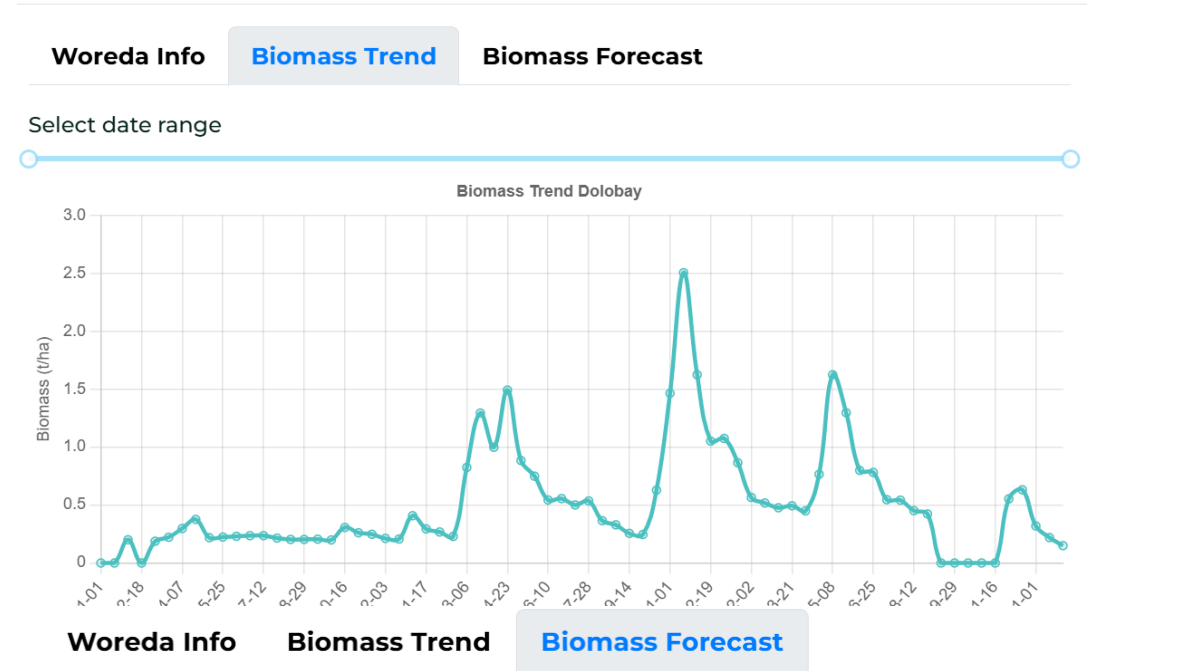
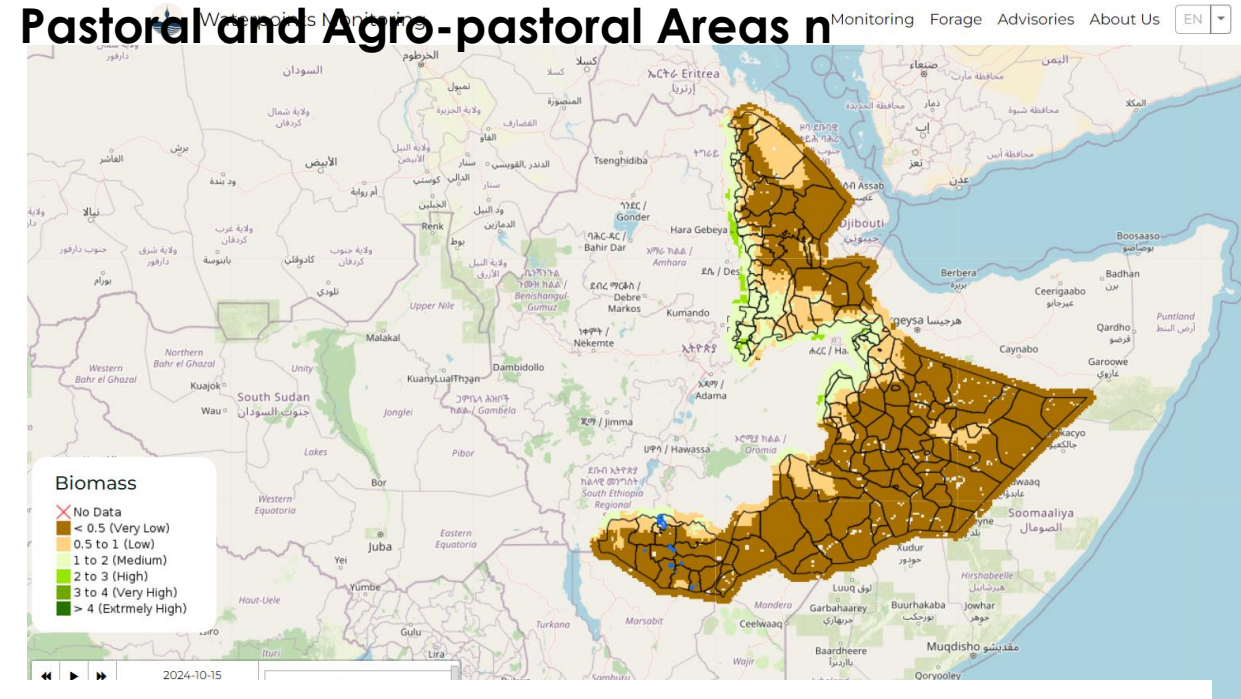
Current status of the water condition in Bakke pond from the system



Physical condition of the water status in Bakke pond



Pasture Availability and Biomass Monitoring and Forecasting for Climate Risk and Conflict Management in Pastoral and Agro-pastoral Areas



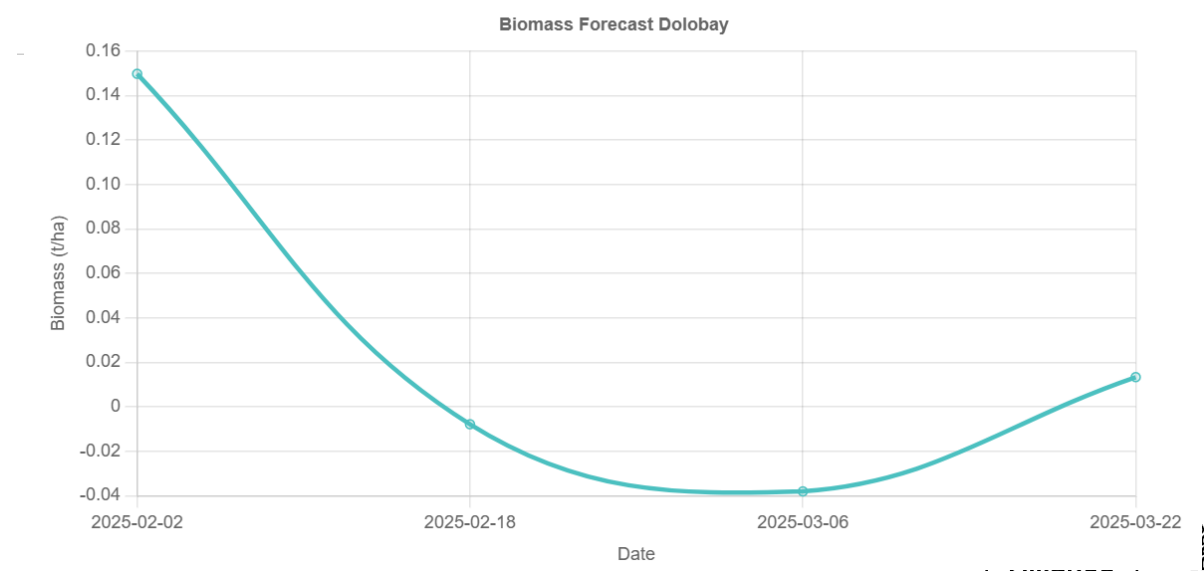
Woreda Details: Charati

Woreda Info | **Biomass Trend** | Biomass Forecast

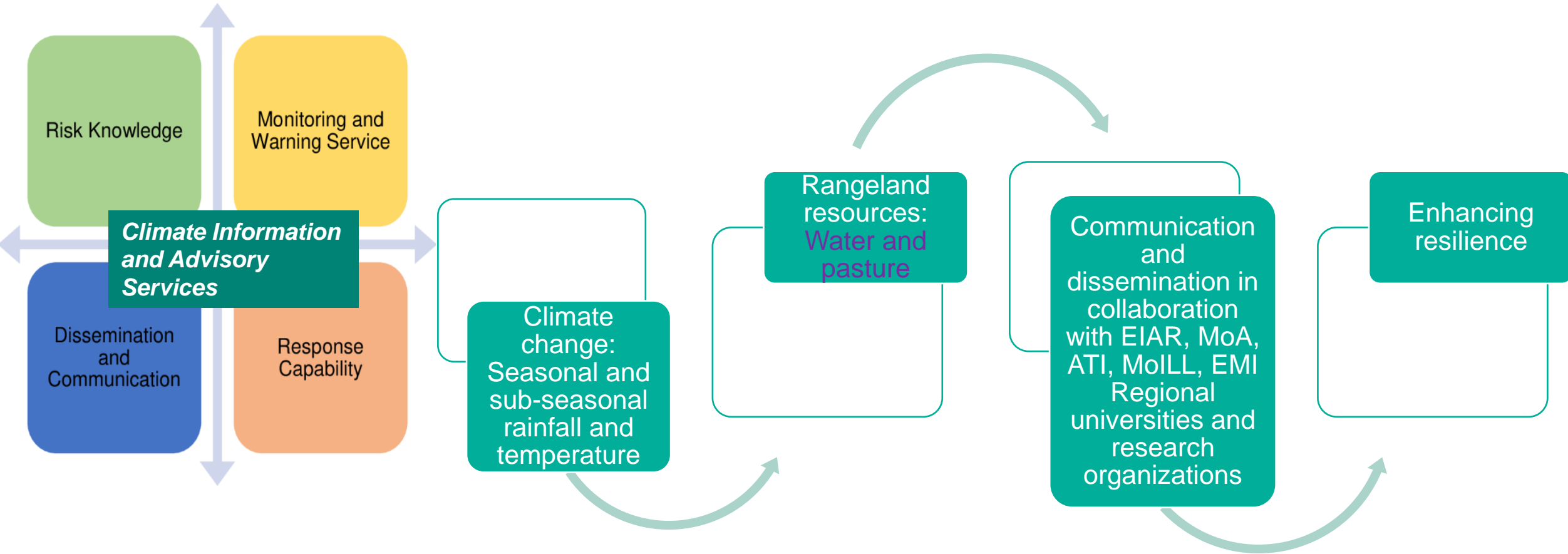
Woreda: Charati

Biomass: 0.33 **Very Low**

Date: 2024-10-15



Advisory Services for building resilience and conflict management



Importance of the System for Building Climate Resilience

- **Strengthening Climate Adaptation and Risk Reduction**
 - Real-time water and pasture information to make evidence-based movement decision accordingly to utilize the available resources
 - **Water and pasture Prediction:** provide short- and long-term predictions for **anticipatory action:**
 - enables pastoralists to make informed decision to reduce climate impacts accordingly
 - Provide guidance for **governments, NGOs, and humanitarian organizations** design **early interventions** as well as to make information or evidence-based intervention
 - **Provide support for evidence-based investment decision**
- **Enhancing Livelihood Resilience in Pastoral and Agro-Pastoral Systems**
 - By providing **localized, context specific and accessible information**, to make informed **decisions** to minimize **livestock losses** and maximize **resource use efficiency**
 - Encourages **sustainable rangeland management** and the adoption of **climate-smart grazing strategies**, improving ecosystem health and productivity

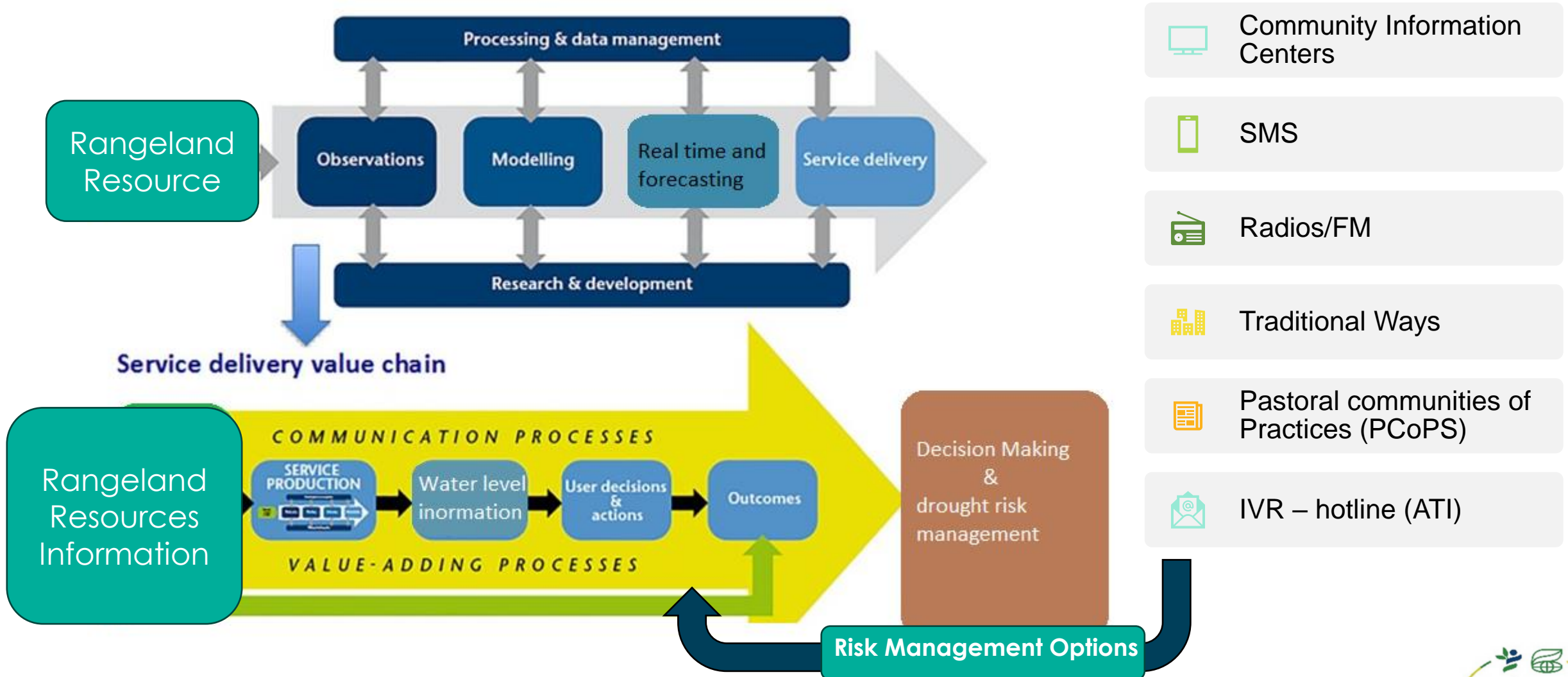
The Role of Early Warning Systems in Conflict Management

- **Anticipatory Alerts and advisory services:** Provides early warnings of resource scarcity to reduce conflicts
 - **Where to Graze and Water Livestock**
 - Spatial location of High Forage and Grazing Areas for grazing
 - Spatial location of water resource availability for watering
 - Movement routes
 - **When to Graze and Water Livestock**
 - Timing of Grazing
 - Timing of Watering
 - **How to Graze and Water Livestock Sustainably and peacefully**

The Role of Early Warning Systems in Conflict Management

- **Data-Driven Mediation:** Empowers local governments, elders, waterpoint manager and rangeland managers with evidence based decision making for peaceful resource use
- **Coordination:** Supports local communities peacebuilding efforts by harmonizing resource use among pastoralists
- **Advisory for Crisis Response Planning:** Provide timely information to make timely humanitarian interventions, such as emergency water trucking and alternative grazing area identification

Translate and deliver for end-users for decision-making and building resilience and conflict management



Climate information and Agro-climate advisory Services



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foundation



*2023 Bega Season Agro-climate
Advisory for Pastoral and Agro-
pastoral Communities in Ethiopia*



2024

*2024 Belg Season Agro-climate
Advisory for Pastoral and Agro-
pastoral Areas Communities in
Ethiopia*



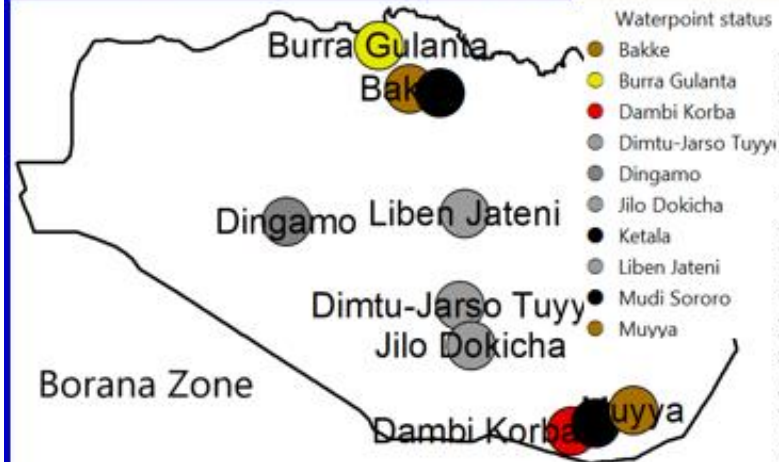
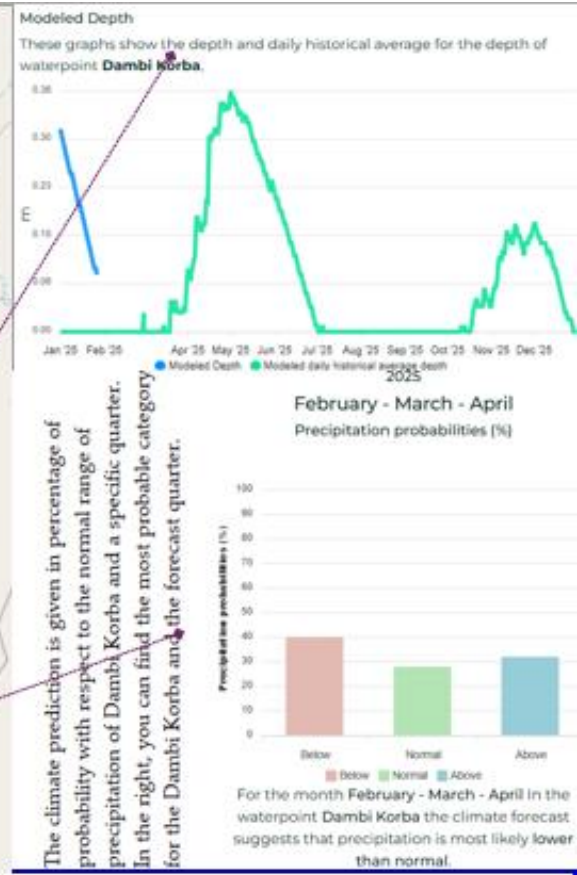
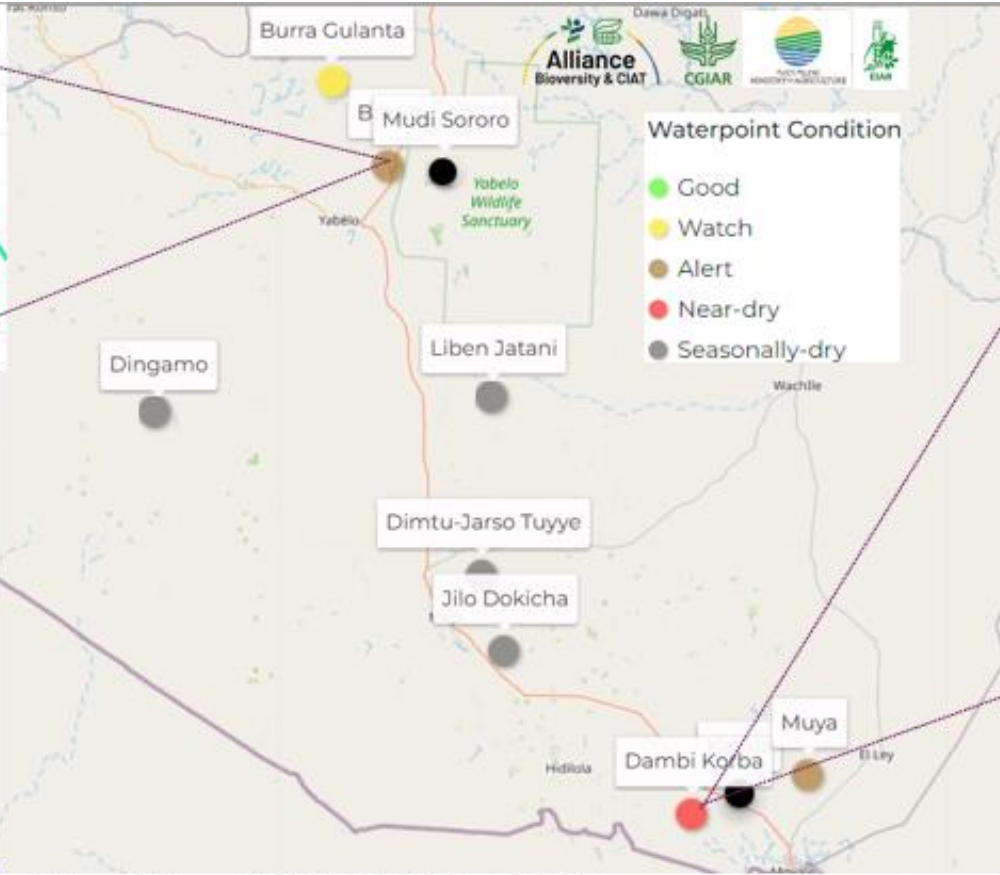
Community Information Center (CIC) - Harobeke Water Point

WATERPOINT STATUS	Date	DEFINITION TOWARDS LOCAL CONTEXT	PROPOSED ANTICIPATORY ACTION
Good		Adequate amount of water level at this time	Recommended using the water pond as usual as there is an adequate amount of water.
Watch			
Alert			



Wiirtuu Odeeffannoo Hawaasaa - Haroo Bakkee			
Haala bishaan haroo irra jiru	Guyyaa	Ibsa haala naannoo irratti hunda'e	Murtee haala jiru irratti hunda'ee dhiyaate
Dansaa	19/11/2016	Bishaan gahaa ta'e argachuu ni danda'ama	Bishaan gahaan waan jiruuf haaluma kanaan dura baratameen fayyadamaa
Eegadhu			
Akeekkachiisa			
Fooqachuuf			
Fooqate			

Monthly situational analysis bullet point



Advisory message

Burra Gulanta waterpoint show the **YELLOW** alert level, indicating less adequate amount of water at this time. Thus, it is recommended to conserve water as there is a high probability of water shortage in February. Please also reduce water consumption for other purposes and follow waterpoint manager instructions.

Bakke and **Muyya** waterpoints show the **GOLD** alert level, indicating inadequate amount of water at this time. The pastoralists around Bakke and Myya waterpoints should prepare themselves in an appropriate way for the anticipated conditions. It is also advised to seek alternative water sources for livestock and prioritize domestic and weak livestock water usage.

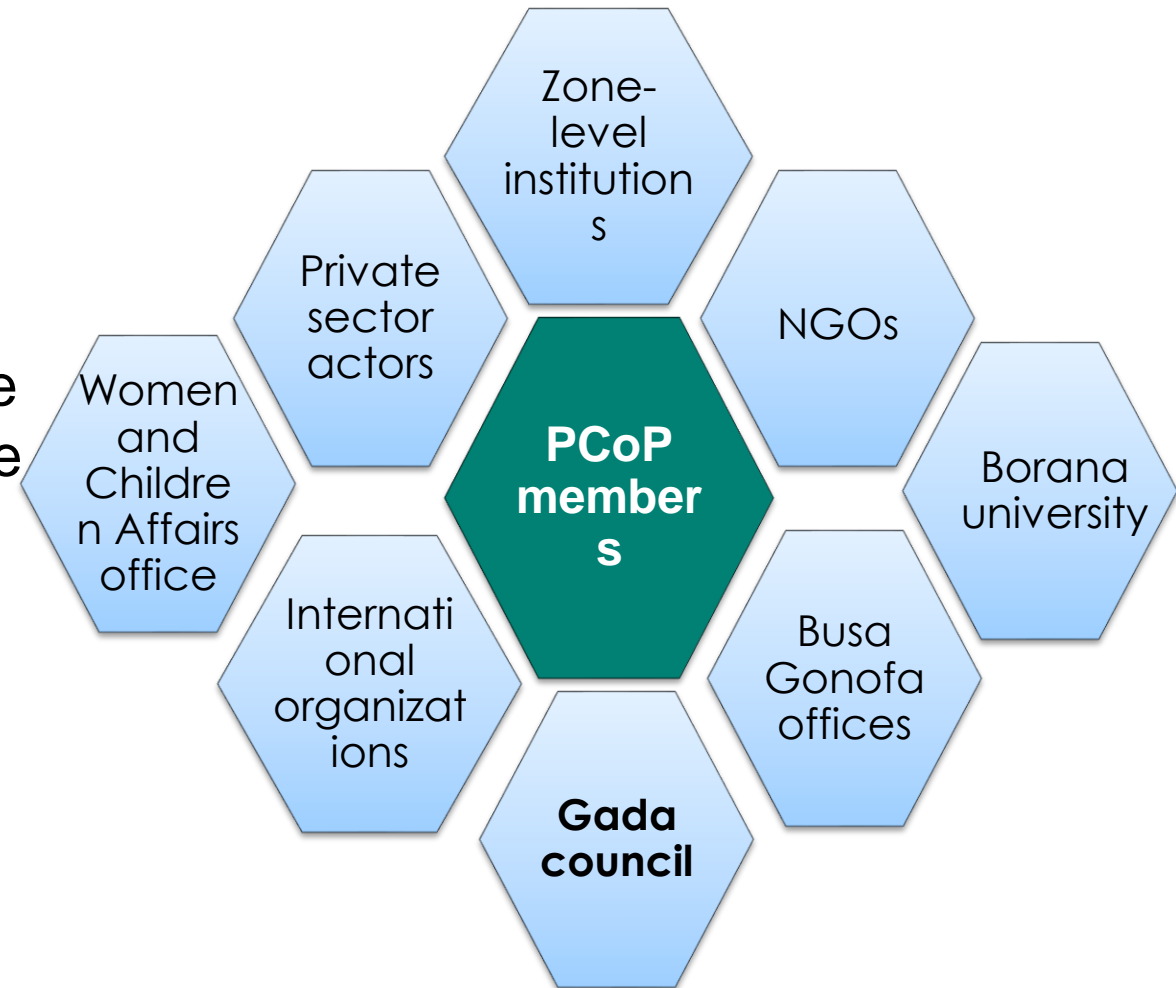
Dambi Korba waterpoint show the **RED** alert level, indicating very small amount of water at this time. The pastoralists around Dambi Korba waterpoint should act in an appropriate way for the anticipated conditions and take action to protect themselves and/or their properties; this could be by moving their livestock out of this waterpoint temporarily; by following the system livestock movement route or by other traditional approaches aimed at mitigating the effects of the waterpoint dryness. It is also recommended to search for other water sources and prioritize domestic water use.

Dingamo, **Liben Jatani**, **Dimtu-Jarso Tuyye** and **Jilo Dokicha** waterpoints show the **GREY** alert level, indicating no amount of water at this time. Thus, it is recommended to search for other water sources.

Dissemination through Pastoral Community of Practices (PCoPs)

PCoPs - two-ways information exchange

- PCoPs also serve as a **traditional conflict management platform**
 - **Gadaa council** of the Gedad system play a great role in resolving resource-based conflicts by employing customary laws
 - **Abba Herrega and Abba Dheda** play a role on information dissemination about resource availability



The way forward: Enhance proactive Approach

- Proactive disaster management such as rangeland resource monitoring and forecasting and providing early warning systems are very critical for building resilience and conflict management

1. To make early informed decision and take early action for climate risk and conflict management

2. Play a role for disaster preparedness and early response actions

3. Enhance livelihoods and production capacities and resilience

Partners



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Thanks!