Early Warning for ALL USAID/BHA Activities

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CGMS
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Outline

- Introduction to USAID/BHA
- PREPARE
- USAID Climate Strategy
- BHA's Climate Action
- BHA Examples on EWS
- Questions

For BHA Internal Use Only

USAID/Scott Fontaine

What is BHA?

- USAID's Bureau for Humanitarian Assistance (BHA) is the U.S. Government lead coordinator for international disaster assistance.
- Reaches tens of millions of people around the world with life-saving aid.
- Created in 2020, merging USAID's Offices of Food for Peace and U.S. Foreign Disaster Assistance.
- Only USAID bureau that provides humanitarian aid and sets foundations for longer-term recovery.

President’s Emergency Plan for Adaptation and Resilience PREPARE

President's Emergency Plan for Adaptation and Resilience (PREPARE)

- Pillar 1, PREPARE Knowledge: Information is Power;
- Pillar 2, PREPARE Plans and Programs: Mainstream and Integrate Adaptation, Build Relationships, Execute; and
- Pillar 3, PREPARE Resources: Mobilize Finance and Private Capital.

For BHA Internal Use Only

PREPARE-Pillar 1

- Support development, delivery and usability of early warning and climate information services
  - Respond to UNSG's EW4ALL and increase co-production and use of climate information
  - Equip the decision makers of today and tomorrow with skills, knowledge, network and outlook to adapt to climate impacts

USAID Climate Strategy

Strategic Framework

VISION: A resilient, prosperous, and equitable world with net-zero emissions

GOAL: To advance equitable and ambitious actions to confront the climate crisis

SO 1. TARGETED DIRECT ACTION

Accelerate and scale targeted climate actions

IR 1.1 Reduce Emissions

Catalyze urgent mitigation (emissions reductions and sequestration) from energy, land use, and other key sources

IR 1.2 Build Resilience

Strengthen resilience of populations vulnerable to climate impacts (adaptation)

IR 1.3 Mobilize Finance

Increase the flow of and equitable access to finance to support adaptation and mitigation

IR 1.4 Partner with IPLCs

Partner with Indigenous Peoples and local communities to lead climate actions

IR 1.5 Amplify Crucial Voices

Enable and empower women and youth and other marginalized and/or underrepresented groups to lead climate action

Embedded Principles

- Locally-Led Development
- Equity and Inclusion
- Private Sector Engagement
- Nature-based Solutions
- Evidence and Innovation

SO 2. SYSTEMS CHANGE

Catalyze transformative shifts to net-zero and climate-resilient pathways

IR 2.1 Transform Key Systems

Advance transformation of key systems and essential services to reduce emissions and enhance climate resilience

IR 2.2 Shift Market Signals

Support a transition to resilient, net-zero economies and financial systems

IR 2.3 Improve Governance

Strengthen responsive, transparent governance and citizen engagement for effective climate action

IR 2.4 Work Across Assistance Types

Strengthen the coordination of humanitarian, development, and peacebuilding assistance to address climate impacts

SpO 3. DO OUR PART

Strengthen the operations and approaches to programming to address climate change and further climate justice within USAID and our partner organizations

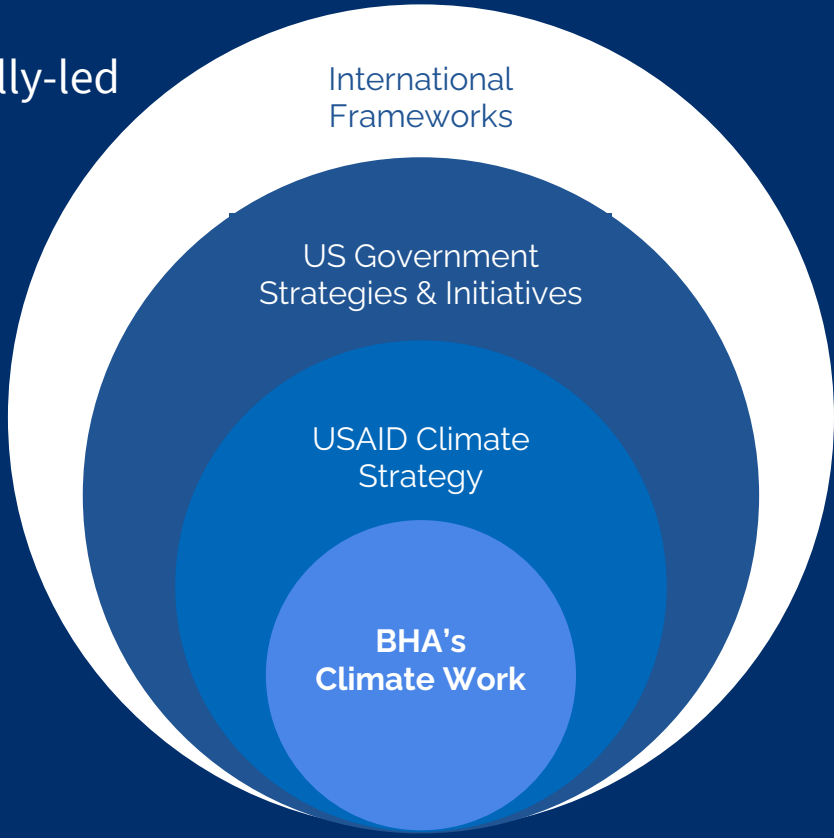
This Strategic Framework relies on Strategic Objectives (SO), Intermediate Results (IR), a Special Objective (SpO), and Embedded Principles to reach the goal and meet the targets of the Strategy.

BHA’s Climate Priorities

BHA Climate Priorities

Catalyze humanitarian assistance through locally-led *and* equitable climate action.

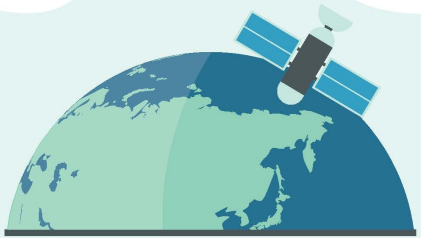
1. Frontline Communities Sustainably Manage Climate Risks
2. Strengthen Coherence Across Climate and the Humanitarian Development Peace Nexus
3. **Expand and Improve Climate Early Warning and Early Action**
4. Accelerate Climate Resilient Humanitarian Assistance



BHA Examples of Early Warning Systems towards EW4ALL

How does an End to End Hydro meteorological Early Warning System Work?

An end to end early warning system consists of a warning and response system made up of many interconnected components. When successful, an end to end hydrometeorological early warning system reduces the impact of hydrometeorological events by providing timely, accurate information that gives sufficient lead-time to prepare for and efficiently respond to extreme events. Investment in user knowledge, capacity of forecasters, and close coordination of all sectors and levels of government are essential to the success of early warning systems.

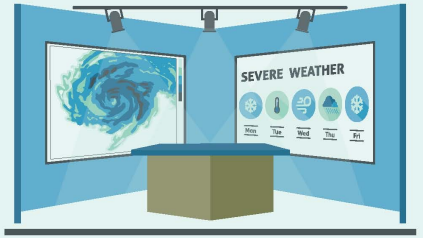


1 Monitoring and Collection of Data

Satellite, radar, and ground observation networks are used to monitor and collect data on extreme hydrometeorological events.

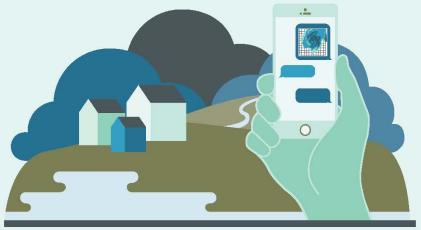
2 Center

Collected data is then sent to a central location for quality control, archiving, and analysis.



3 Meteorological and Hydrological Forecast

From this data, forecasts are produced that detail rainfall, temperature, snowfall, and streamflow.

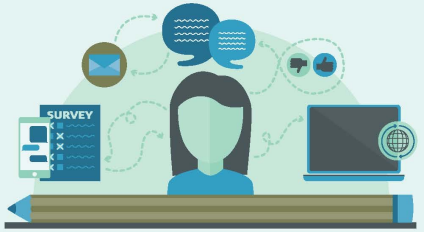


4 Warning Generation and Dissemination

Forecasts are then used to disseminate warnings to public and at-risk populations. Warnings must be provided in a format users can easily understand.

5 Action

Decision makers and the public must monitor hazards, develop protocols for warning, plan for extreme events, and develop policies for disaster management.



6 Feedback

User feedback is encouraged to periodically improve and address the needs of decision makers.

LEAD TIME:

An early warning system should provide timely, accurate information to give sufficient lead time to prepare for and respond to hydrometeorological events

INTERCONNECTIVITY IS KEY:

Each component in this process is essential and failure of any of these components will lead to failure of the entire system.

400%

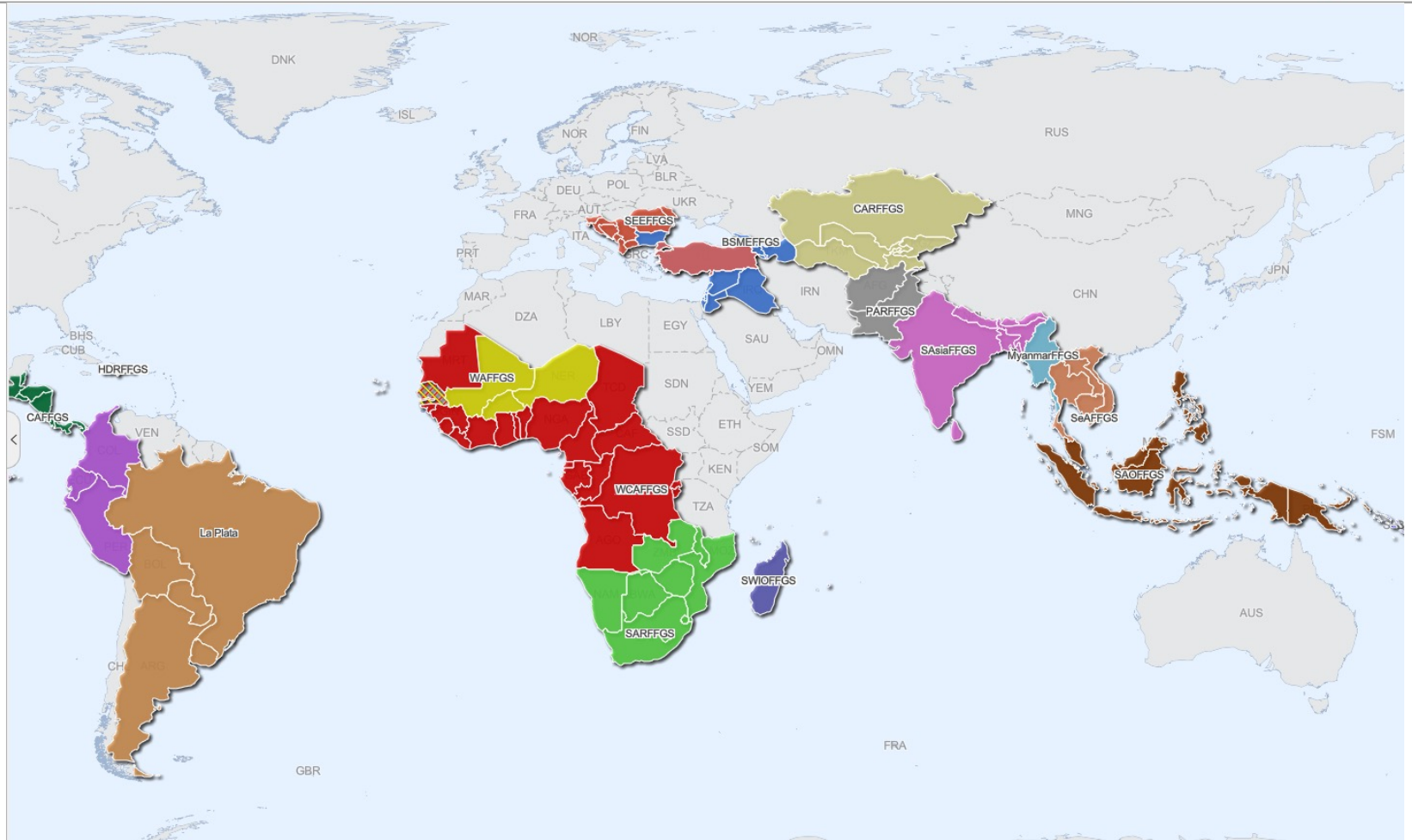
increase in the number of weather, water and climate disasters over the past 25 years.

Global Flash Flood Guidance System FFGS

WORLD METEOROLOGICAL ORGANIZATION

Global Flash Flood Guidance System (FFGS) Status

USAID FROM THE AMERICAN PEOPLE | THE WORLD BANK IBRD • IDA | WORLD BANK GROUP | GREWS | Canada

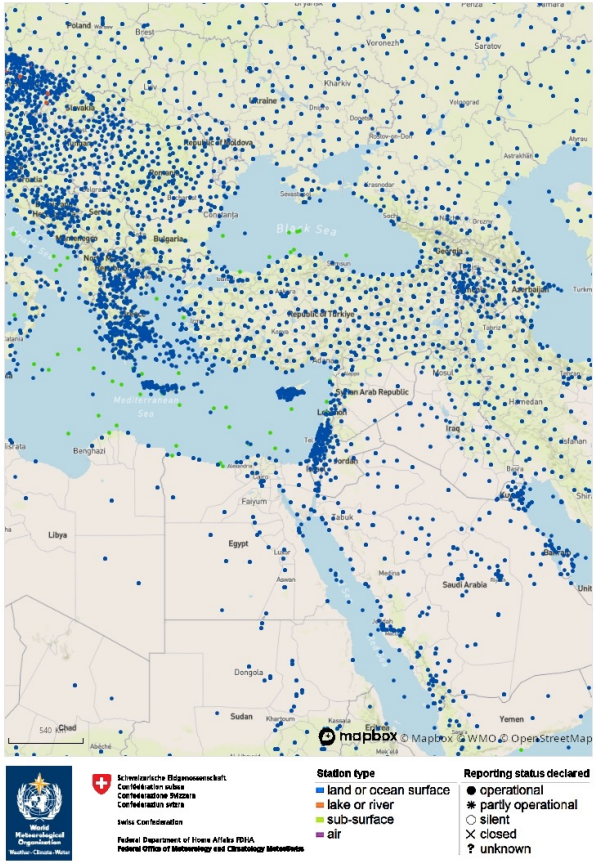


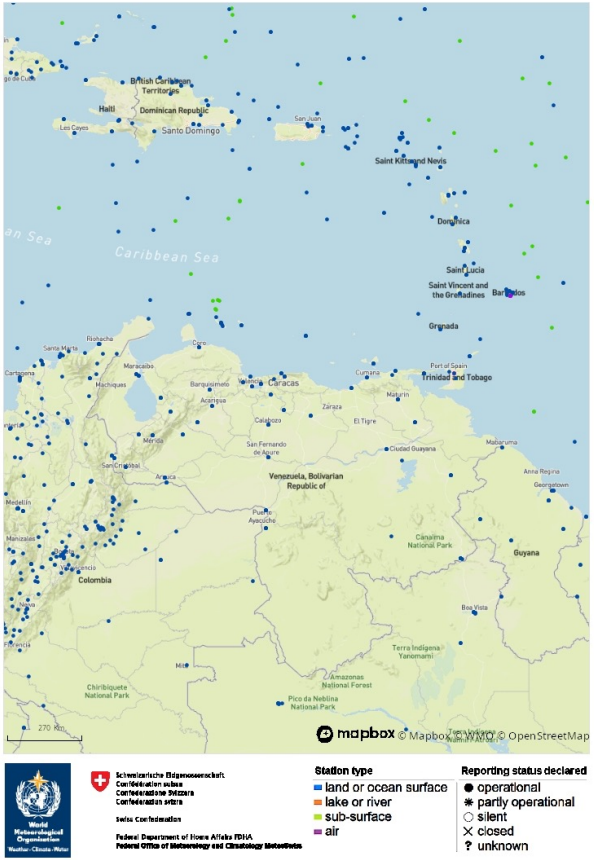
Hydrometeorological Data for critical for operational End-to-End EWS

Fragmentation and Data Scarcity

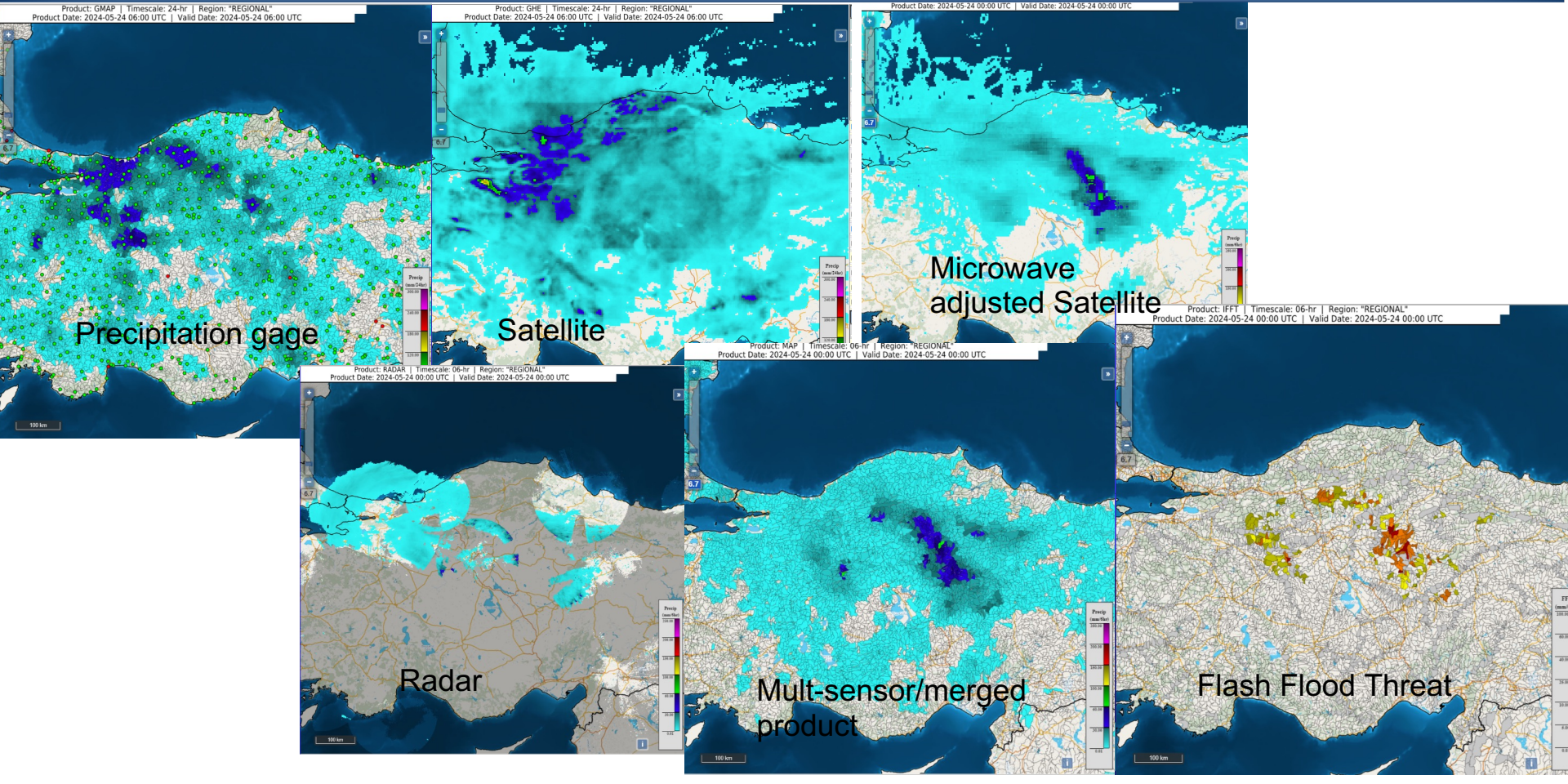
- Lack of critical real time for Early warnings for NMHS- Especially for flash floods and urban floods
- Gaps in data due to limited maintenance of national hydrometeorological networks
- Limited data sharing and data restriction in transboundary basins, especially in short-time frames
- Reluctance to share radar raw or derived precipitation estimates
- Lack of supportive data, DEM, land use, soil characteristics, exposure, vulnerability and others
- Limited standard format for hydrometeorological and other data

OSCAR/Surface-WMO

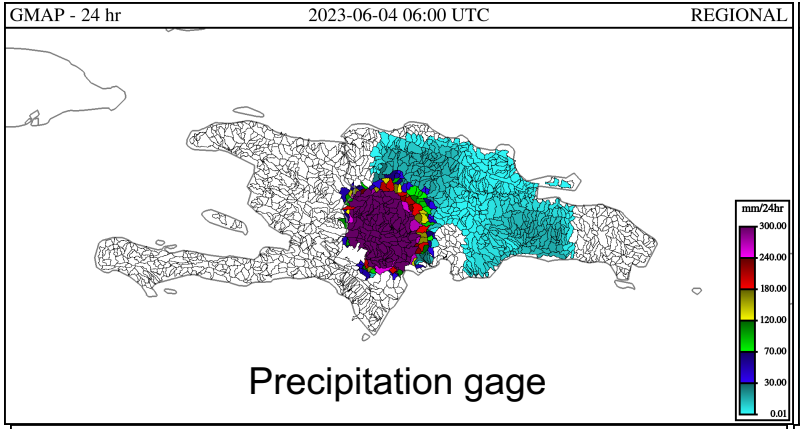


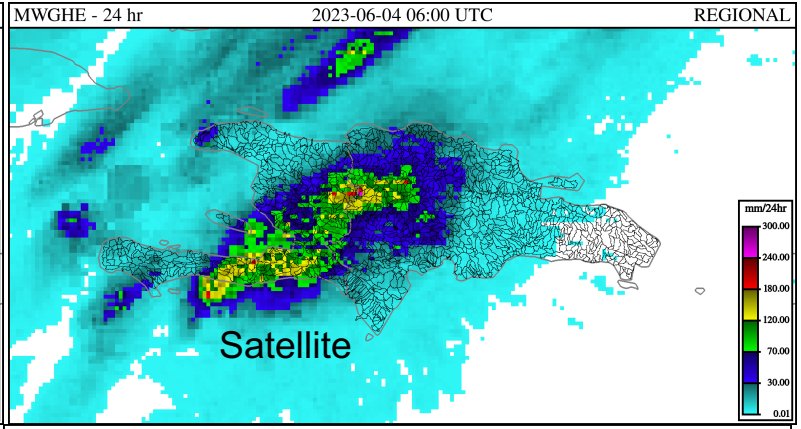


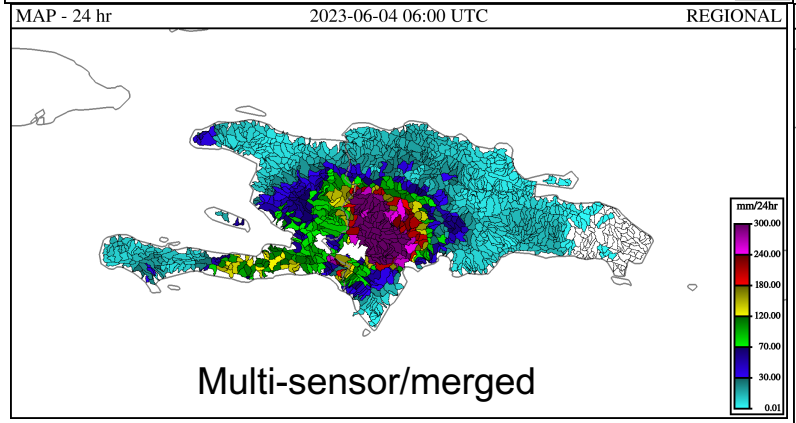
Black Sea Middle East FFGS: Multi-sensor Precipitation

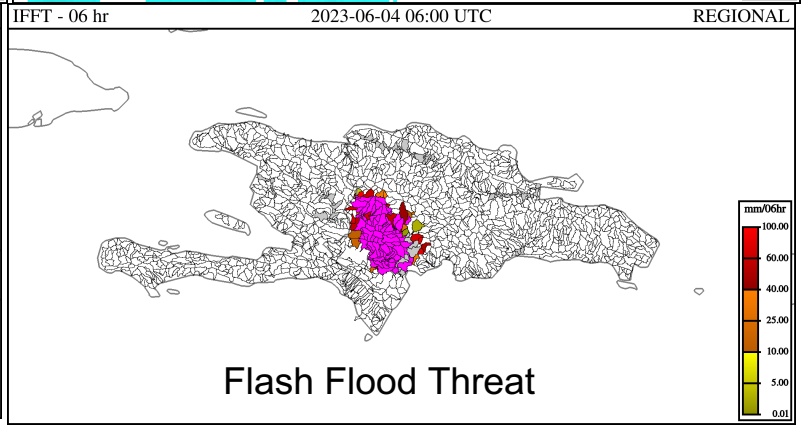


Haiti-DR FFGS multi-sensor rainfall



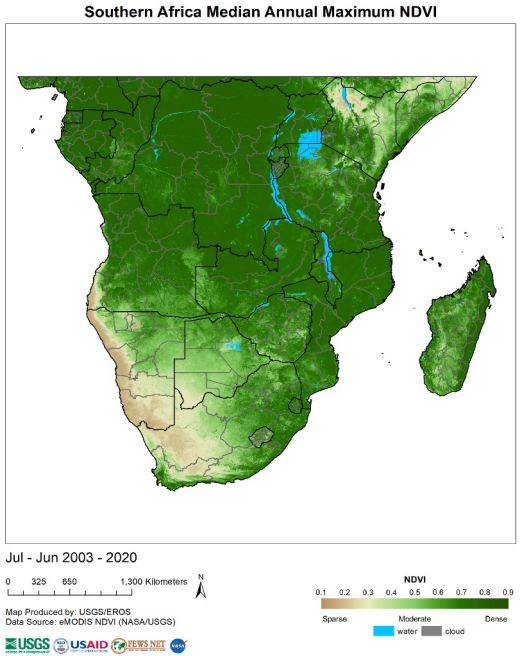


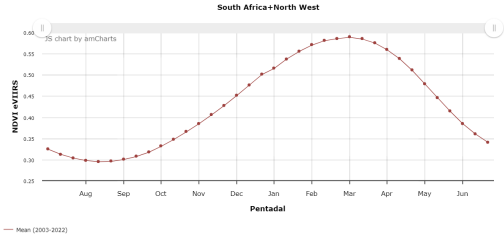


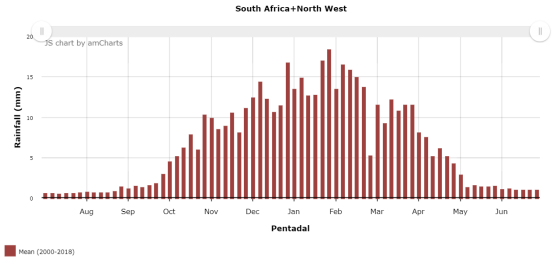


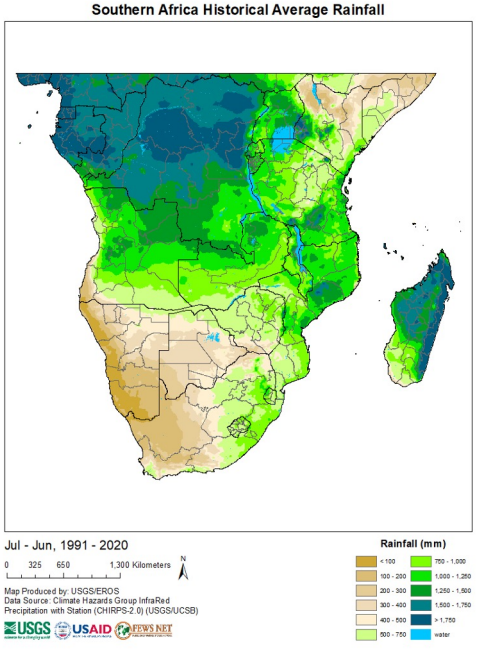
Famine Early Warning System

Additional Satellite Data for impact based forecasting-food security





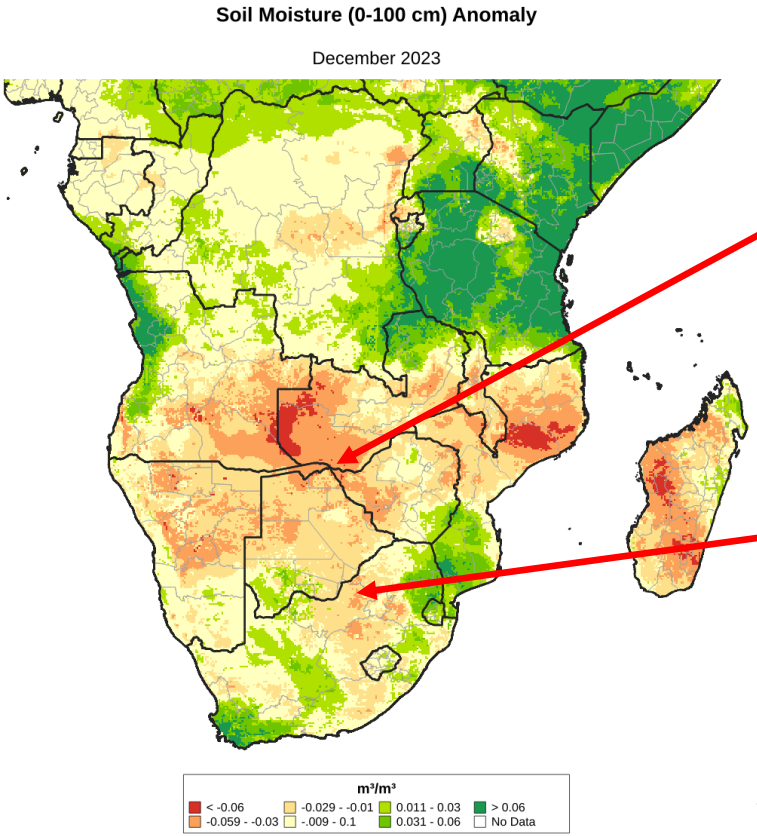


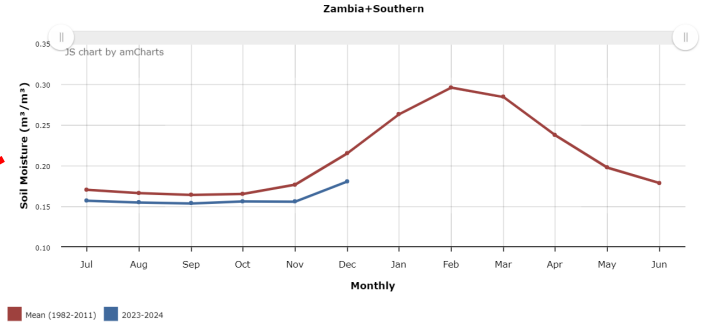


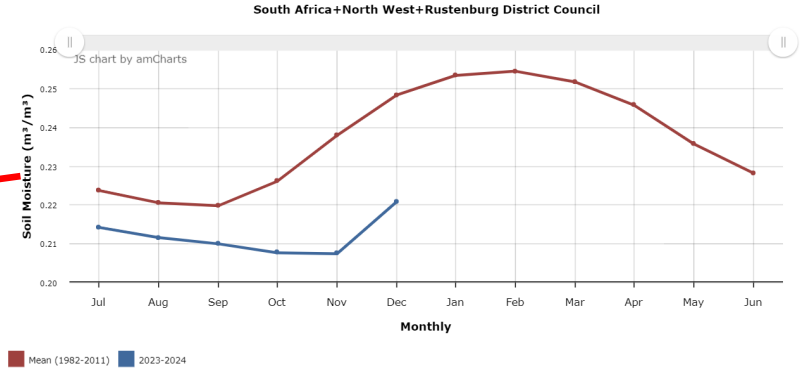
MODIS/VIIRS NDVI Time Series

CHIRPS Rainfall Time Series

Soil Moisture Monitoring-NASA Land Surface Model





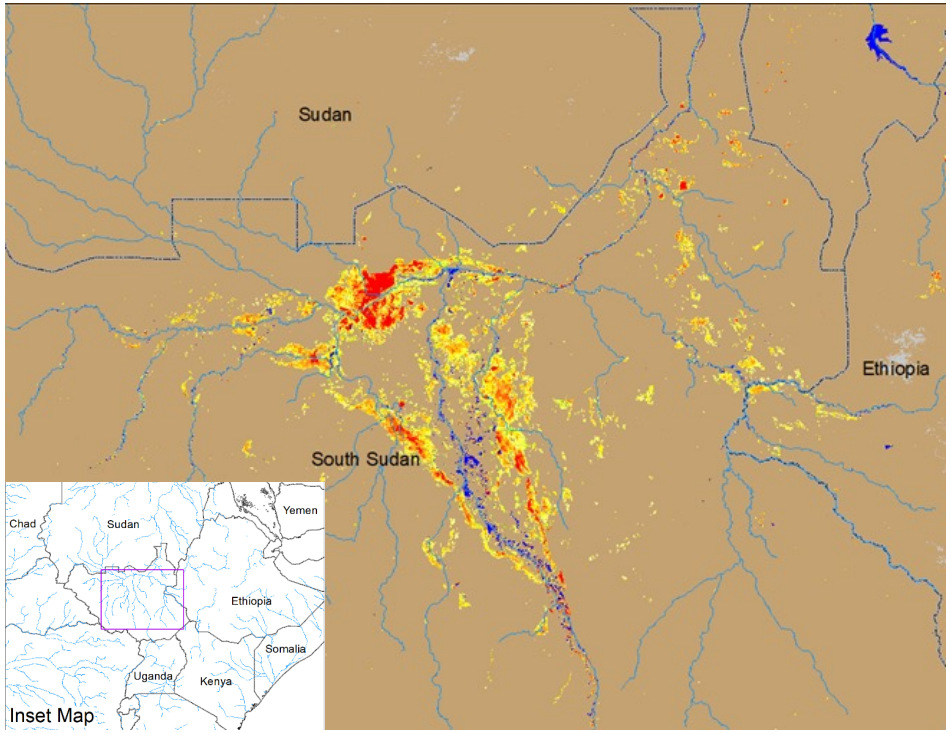


NASA Land Surface Model (FLDAS) Soil Moisture

Map Produced by USGS/EROS

Source: version final

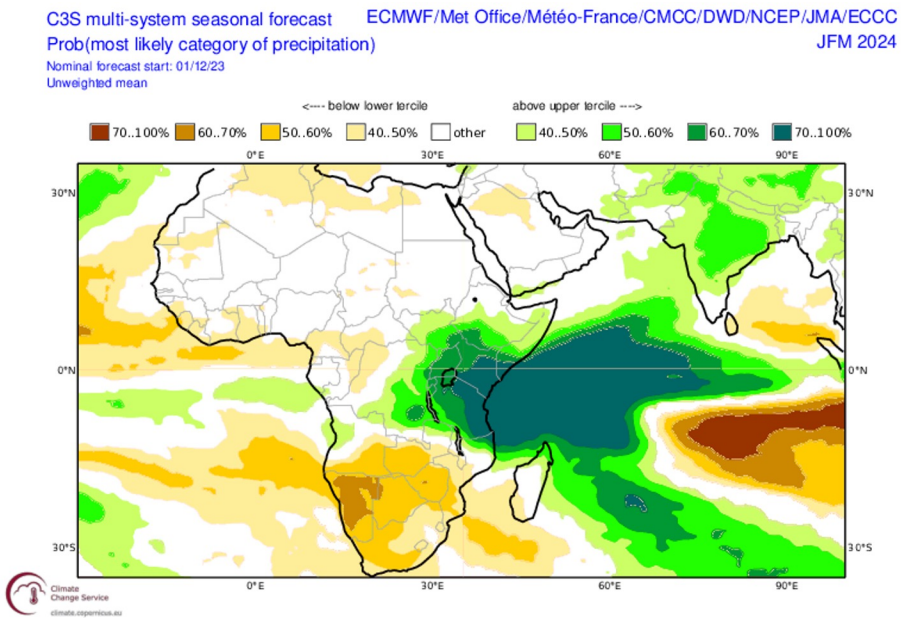
Flood monitoring-NOAA VIIRS



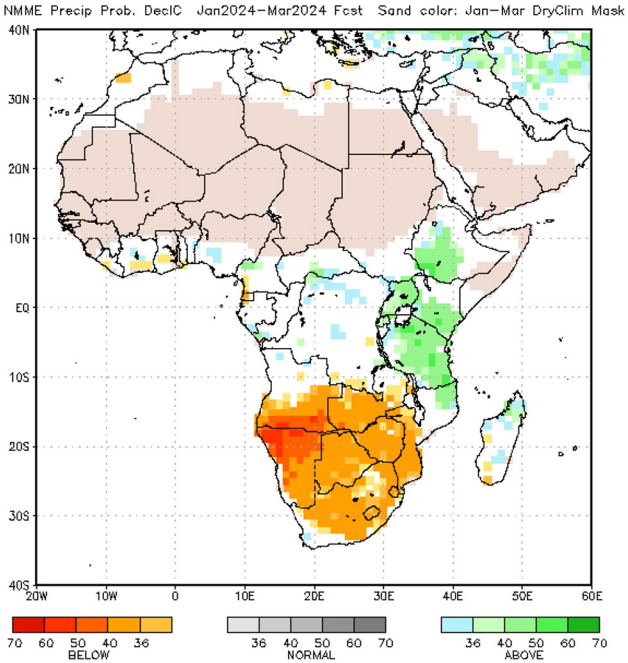
NOAA VIIRS 5-day comp.: 16 – 20 Aug 2023

Flooding in South Sudan

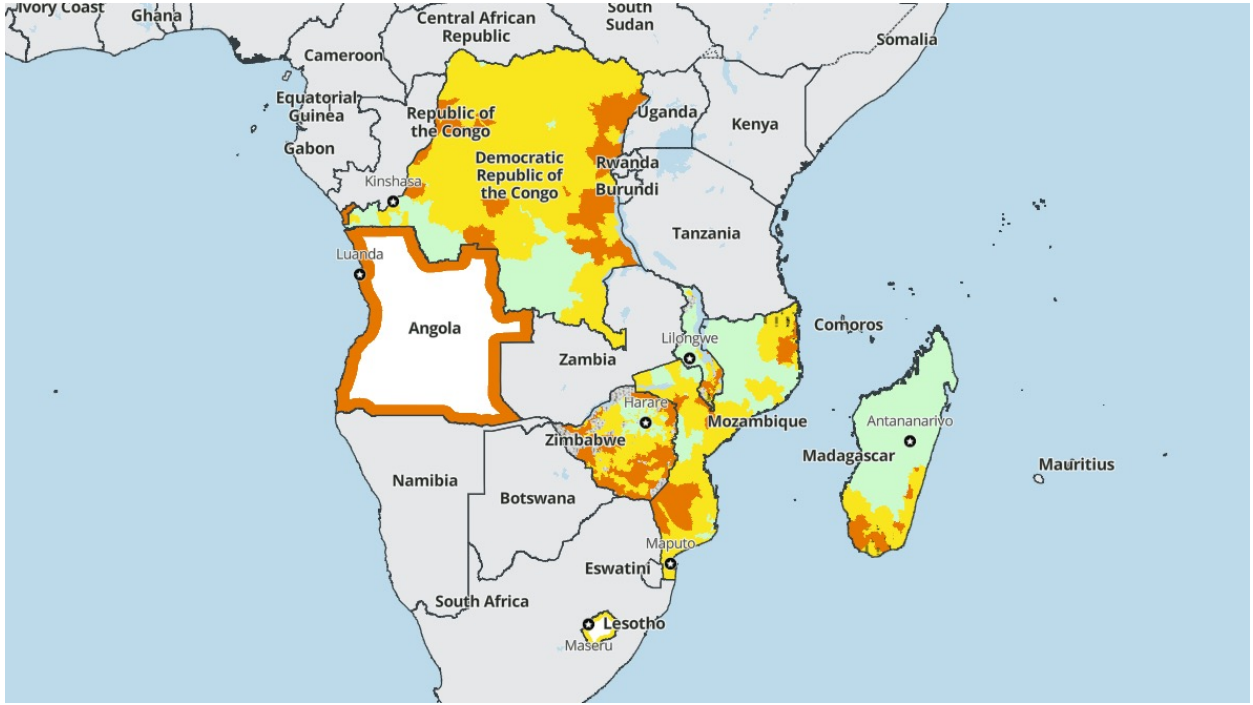
January-March 2024 Precipitation Forecast



December 2023 Initial Conditions



Southern Africa Acute Food Insecurity



Q/A