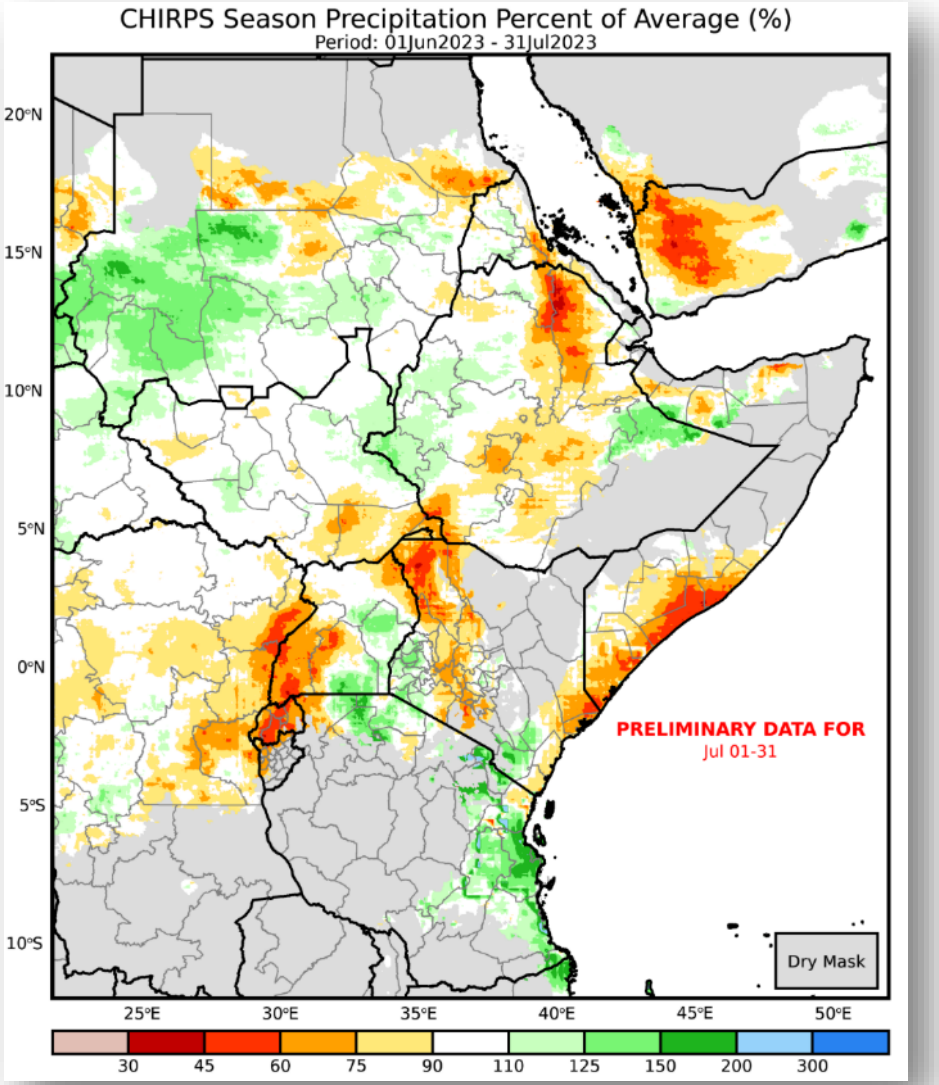
Food and Agriculture Organization
of the United Nations

El Niño: Humanitarian Impacts and Response Implications for the East Africa region

Food and Agriculture Organization
of the United Nations

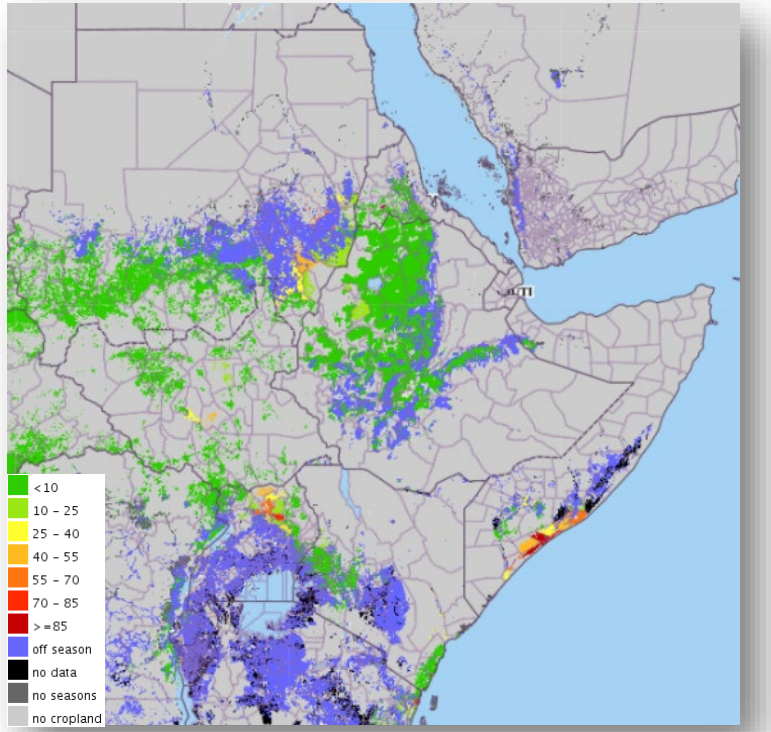
Current climate and agricultural situation across the region

Mixed rainfall conditions to date for the June – September rainy season

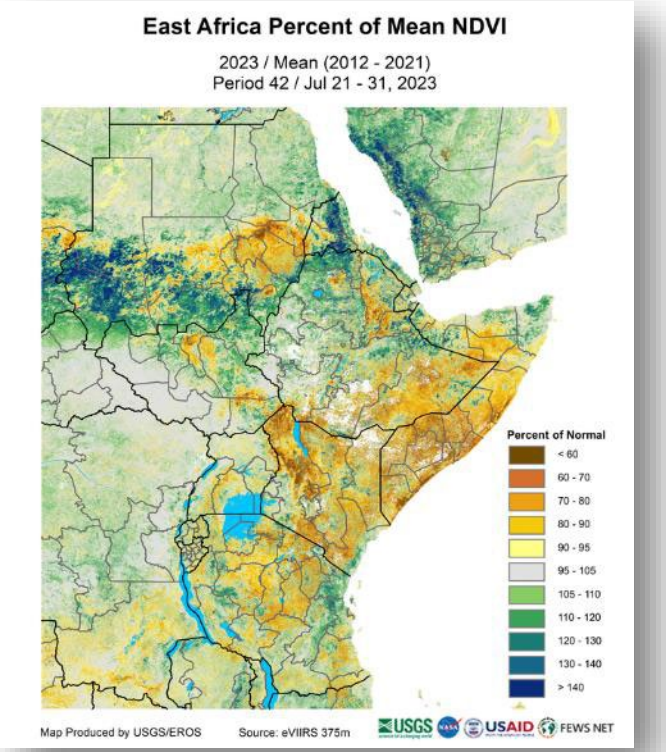


Source: CHC

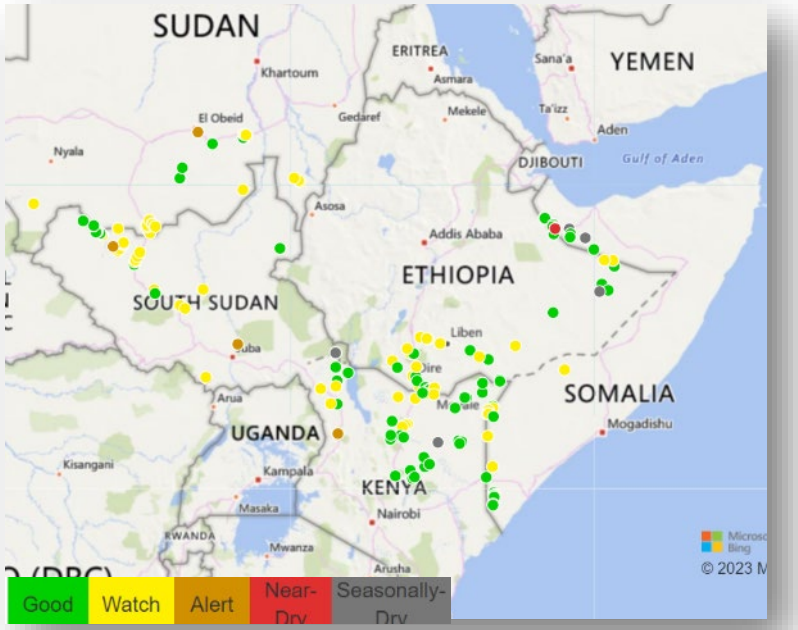
Current agricultural conditions



Source: FAO



Source: USGS/FEWS NET



Source: USGS/FEWS NET

"The **March–May rainy season** was characterized by an **erratic temporal distribution** and consequently **production prospects are unfavourable** in Somalia, southeastern Kenya, Uganda and the United Republic of Tanzania."

"**Planting of the 2023 main season crops, for harvest from October, is well underway in key producing areas** of western Oromiya, western Amhara and Benishangul Gumuz regions of Ethiopia ("Meher" crops), in the Sudan and in central and northern unimodal rainfall areas of South Sudan."

- FAO Crop Prospects and Food Situation #2, July 2023

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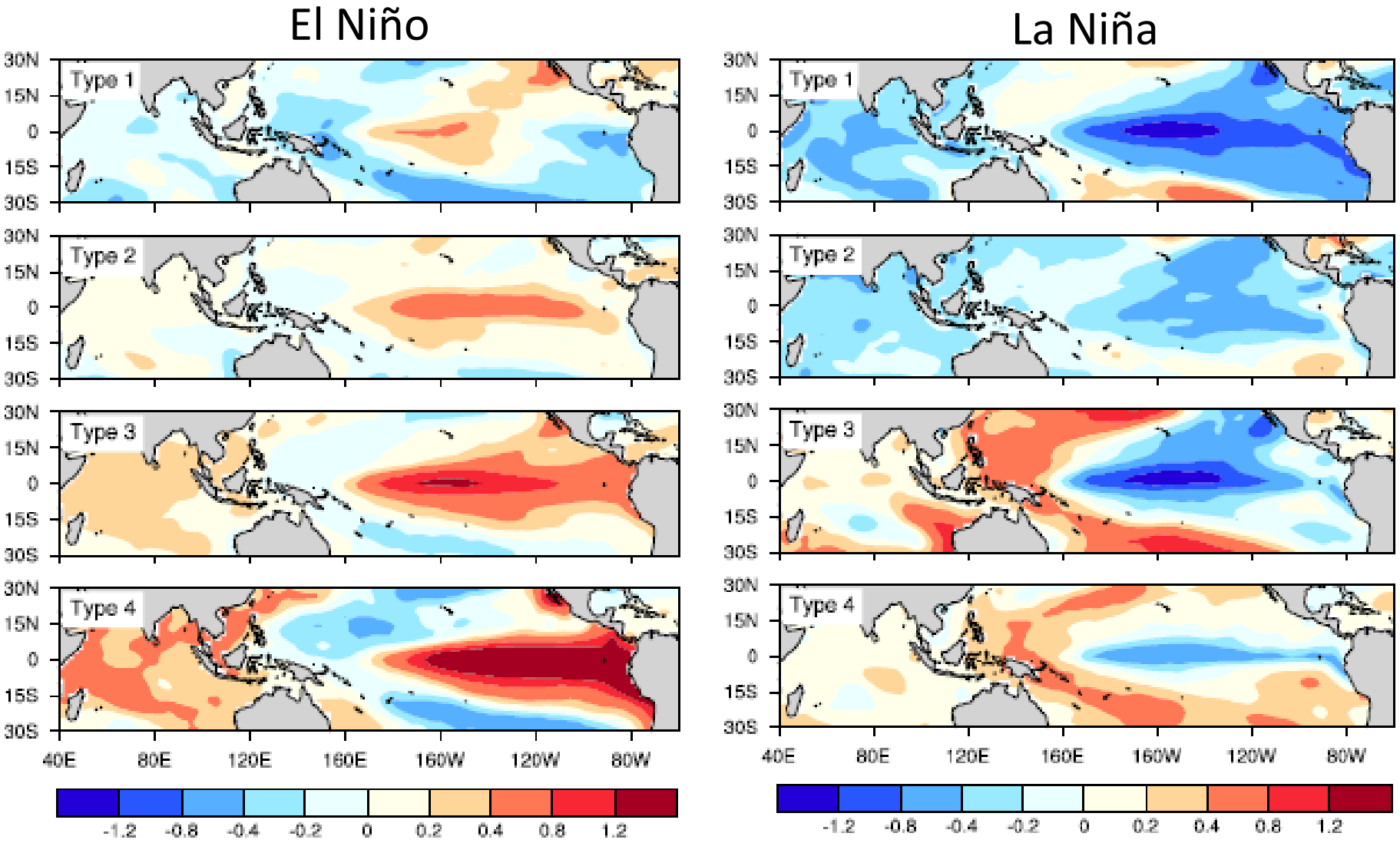
Rainfall forecasts

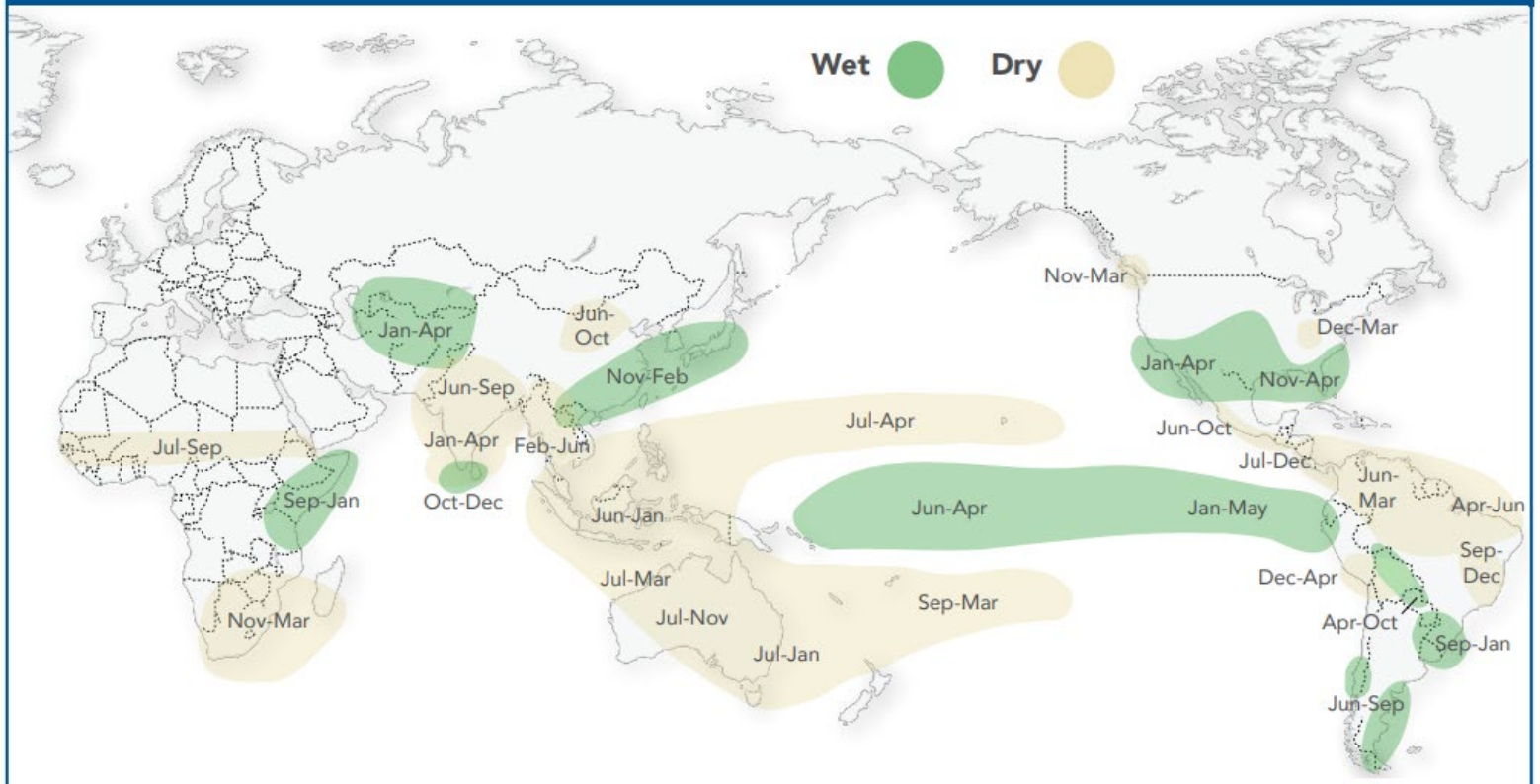
Climate drivers impacting East Africa weather: El Niño



Source: FEWS NET/USGS/NOAA

Climate drivers impacting East Africa weather: El Niño

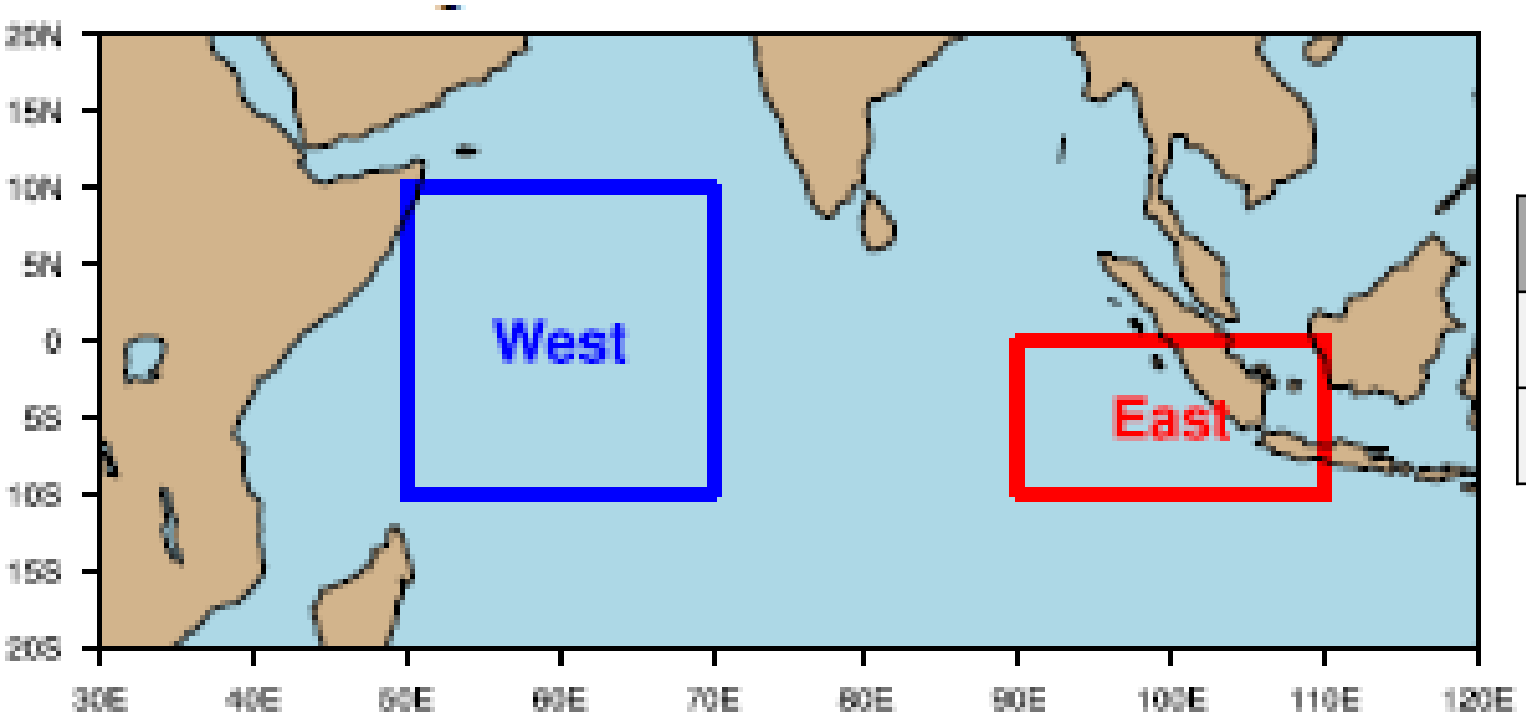
Map 1: Typical precipitation patterns under El Niño conditions (teleconnection)



Note: Teleconnection in atmospheric science refers to climate anomalies being related to each other at large distances (typically thousands of kilometres).
Source: IRI. 2023. *ENSO Resources*. International Research Institute for Climate Prediction, Lamont-Doherty Earth Observatory, Columbia Climate School - Columbia University. Palisades, New York, 2023. https://iri.columbia.edu/our-expertise/climate/enso/.

Source: IRI

Climate drivers impacting East Africa weather: Indian Ocean Dipole (IOD)

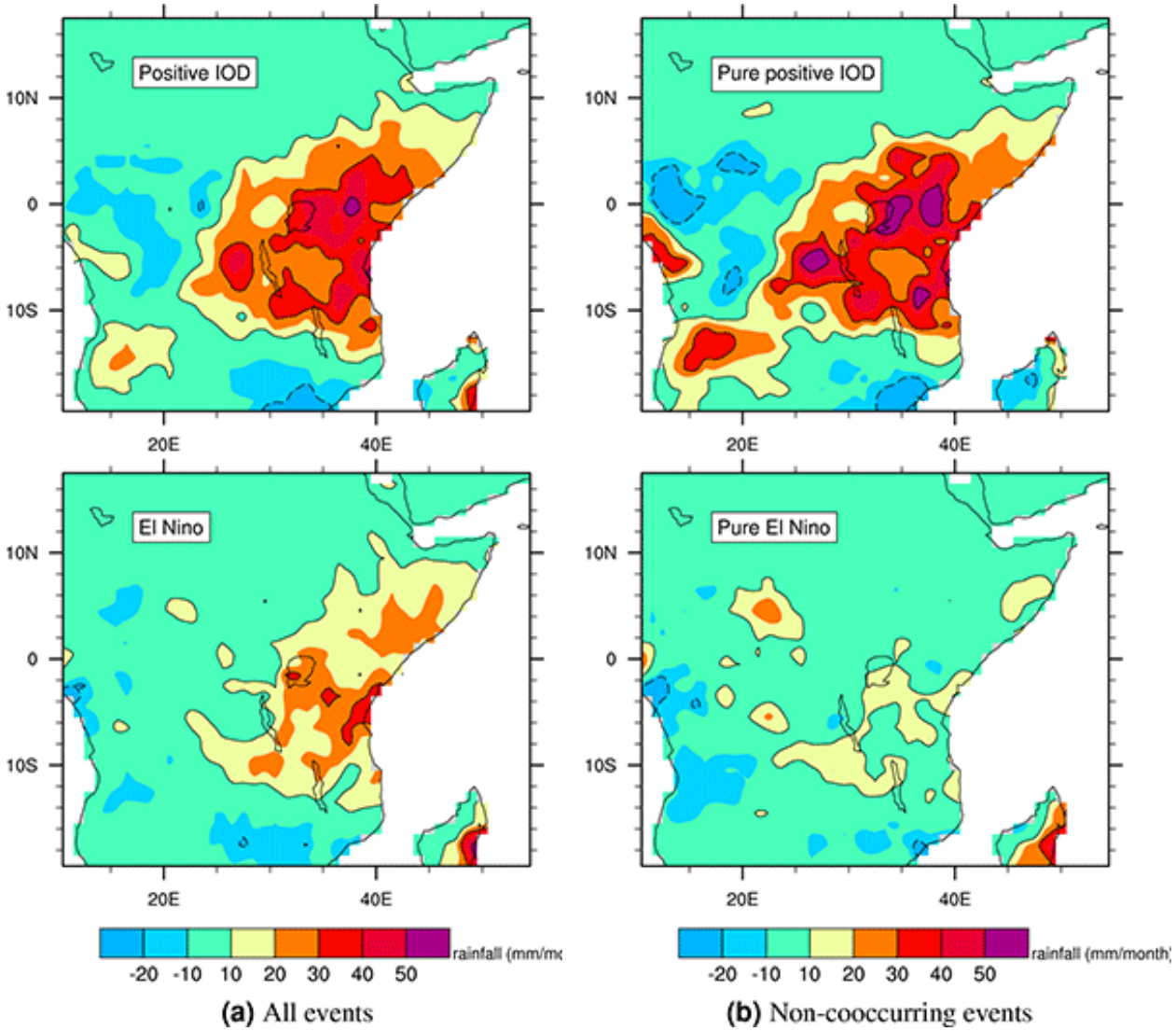


Source of graphic: FEWSNET/USGS/NOAA

IOD Index = West - East

IOD	East Africa Impacts
Positive	Above-average rainfall
Negative	Below-average rainfall

Combined effects of El Niño and IOD



Source of graphics:
Hameed 2018

El Niño forecast

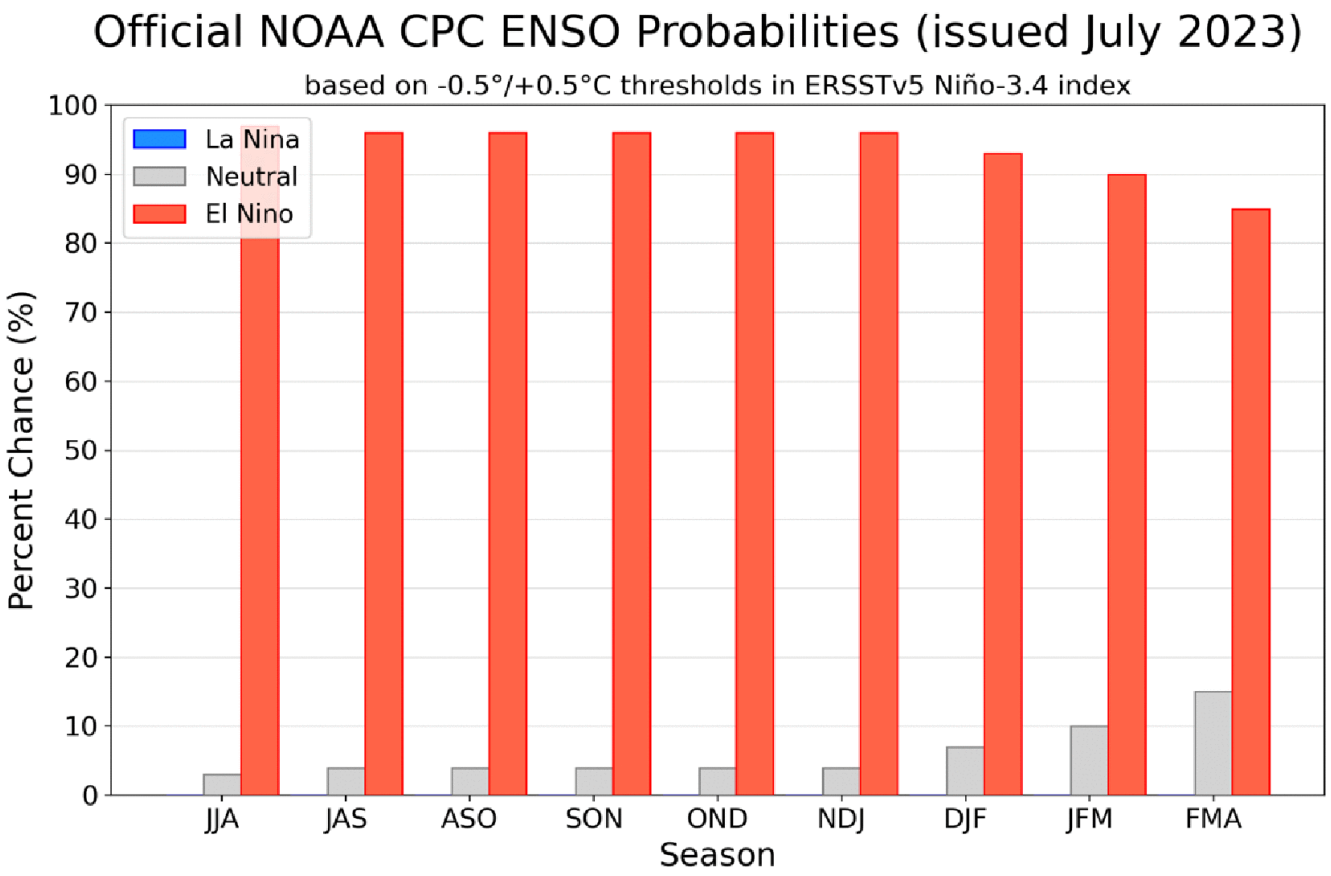
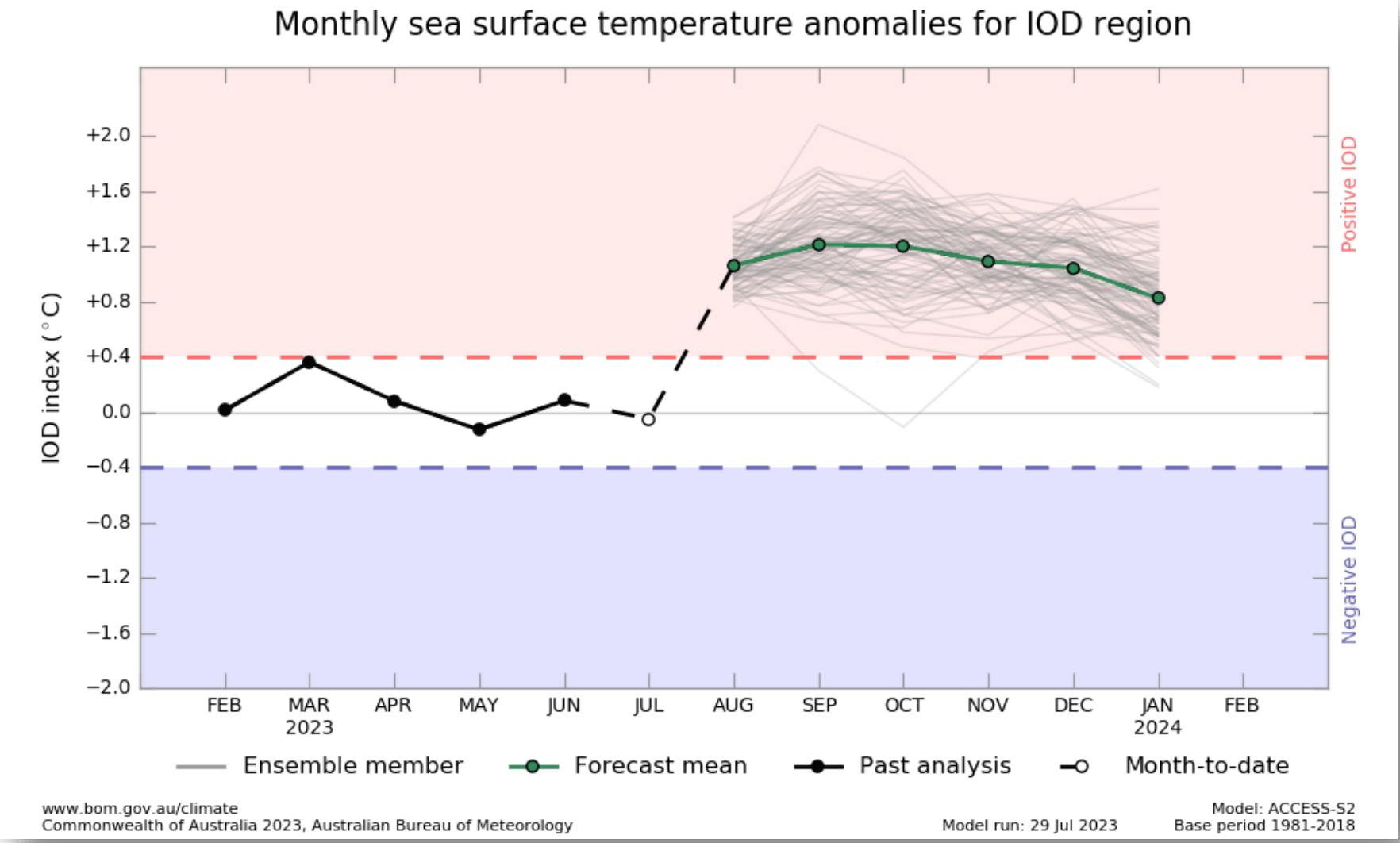


Figure 7. Official ENSO probabilities for the Niño 3.4 sea surface temperature index (5°N-5°S, 120°W-170°W). Figure updated 13 July 2023.

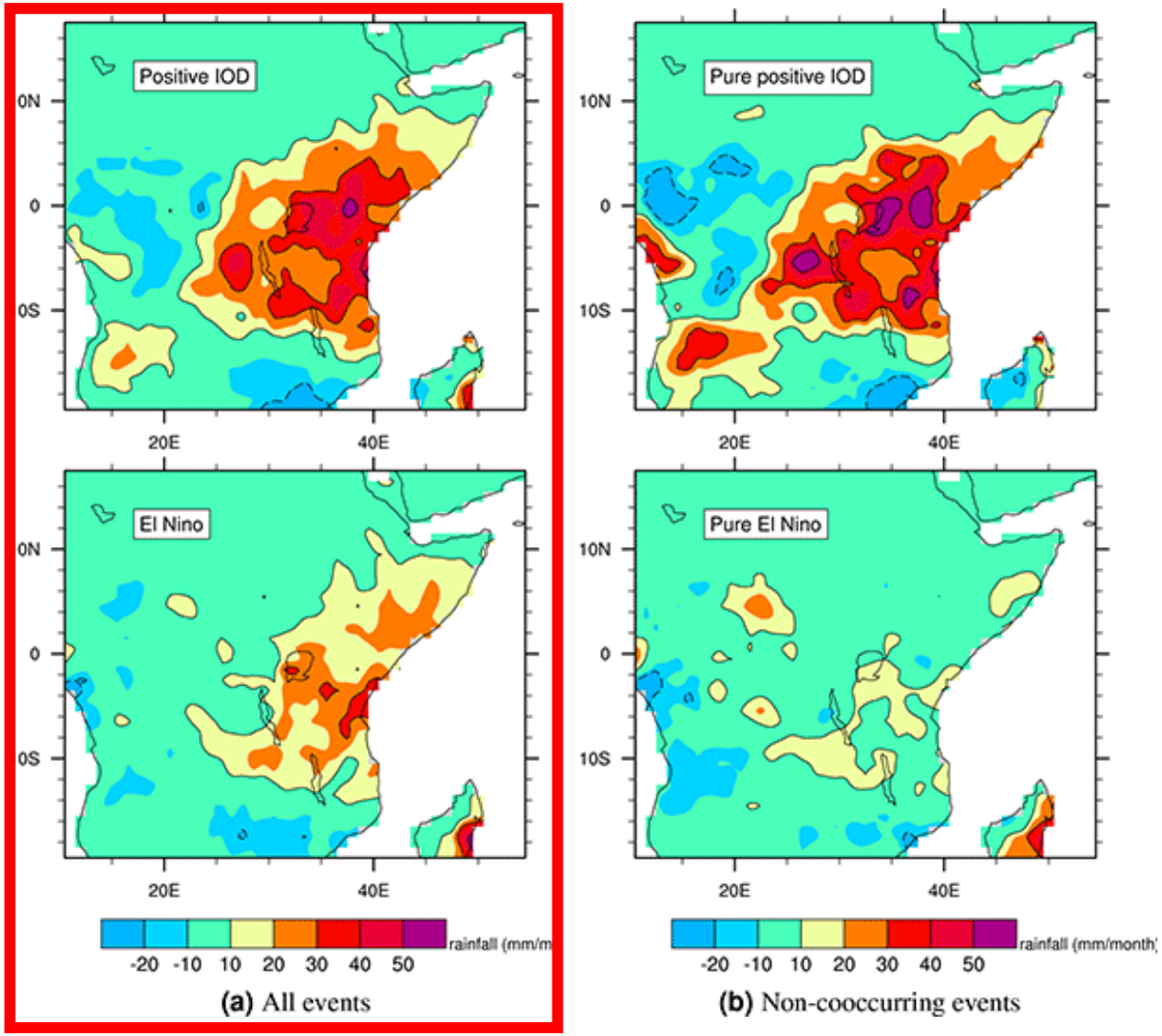
Source of graphics: NOAA

Positive IOD forecast



Source of graphic: Australian Government Bureau of Meteorology

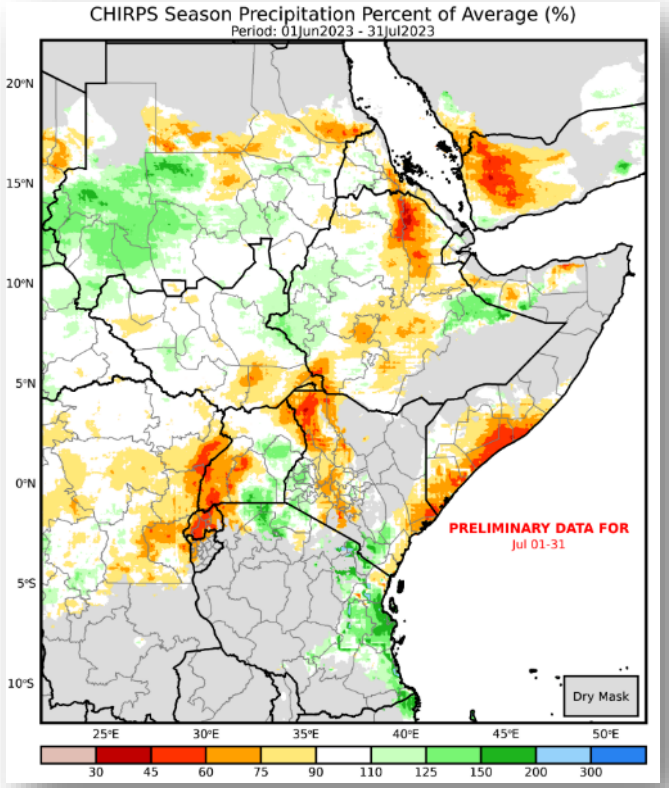
Combined effects of El Niño and IOD



Source of graphics:
Hameed 2018

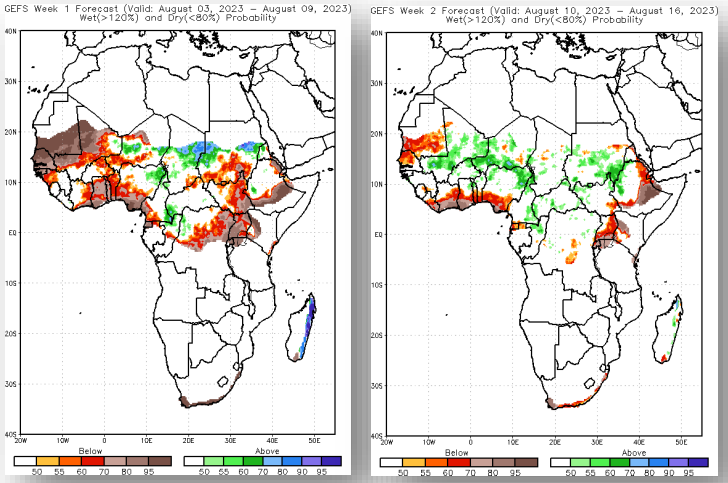
Two-week forecasts for the June – September season

Rainfall Anomaly (%),
1 Jun – 31 Jul 2023



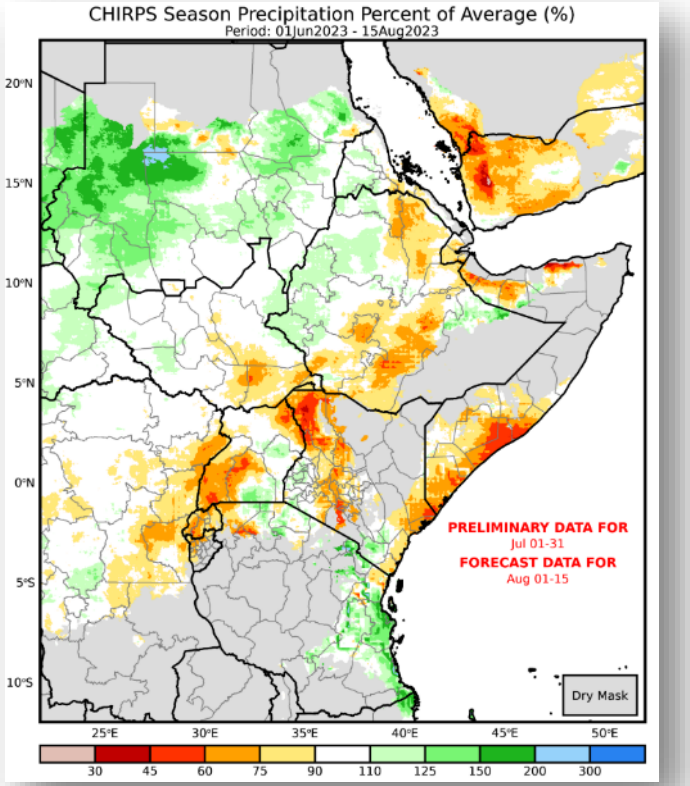
Source: CHC

Two-week rainfall forecast



Source: NOAA

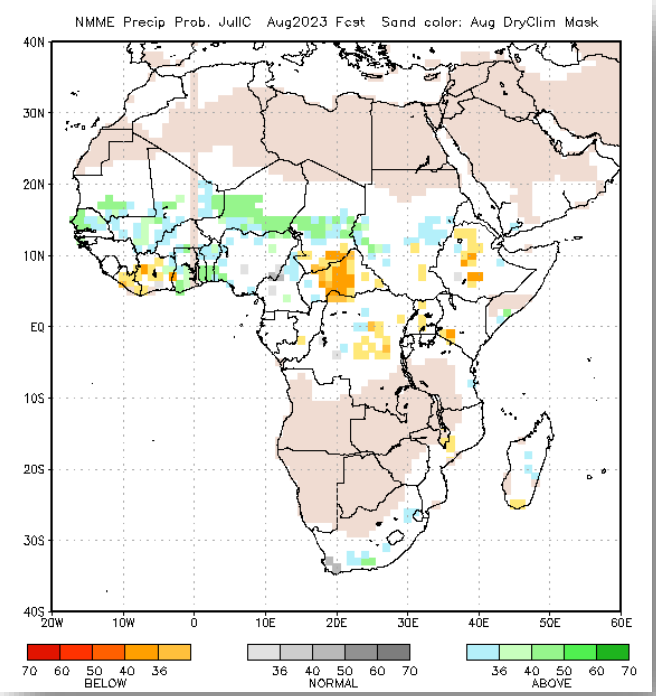
Rainfall Anomaly (%),
1 Jun – 15 Aug 2023



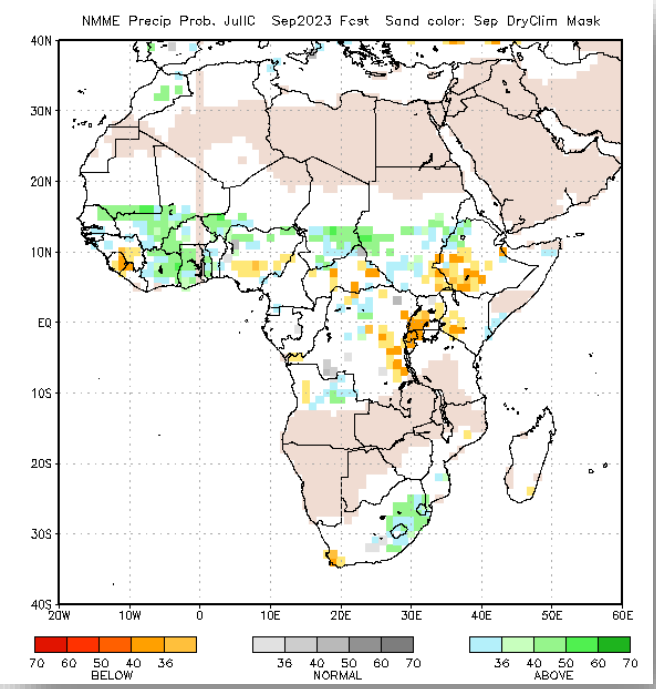
Source: CHC

Below-average to average rains for the rest of season (Aug– Sept)

August forecast

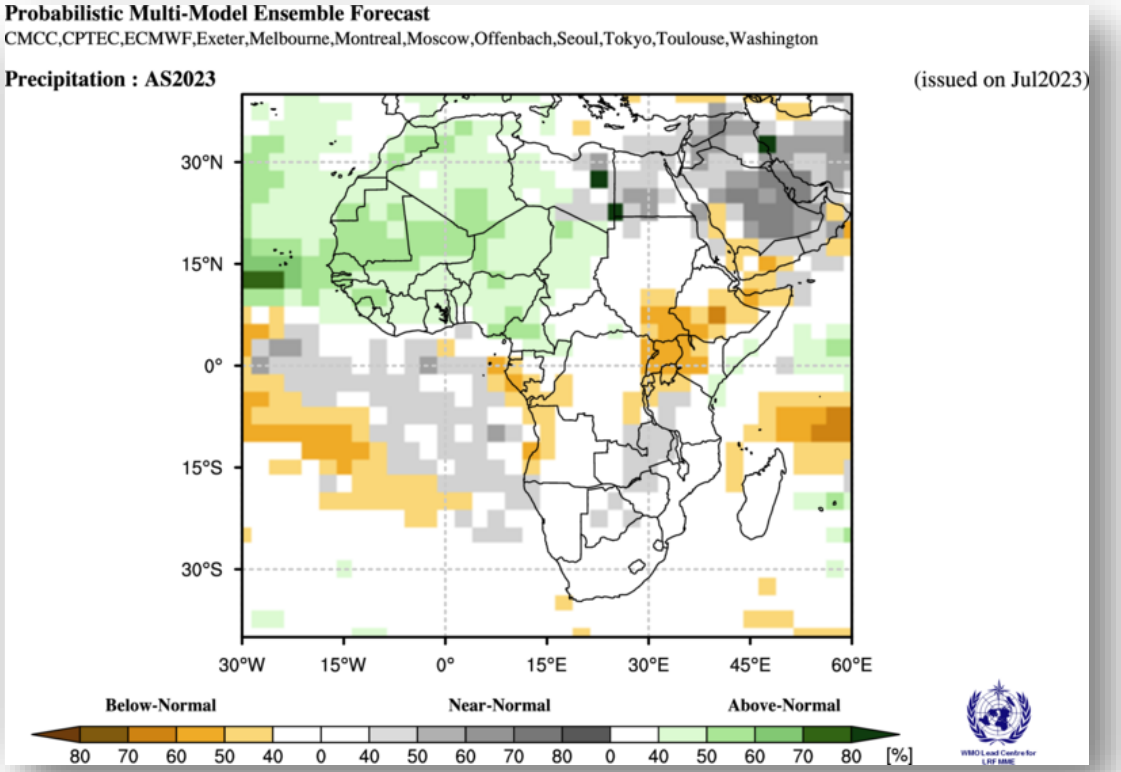


September forecast



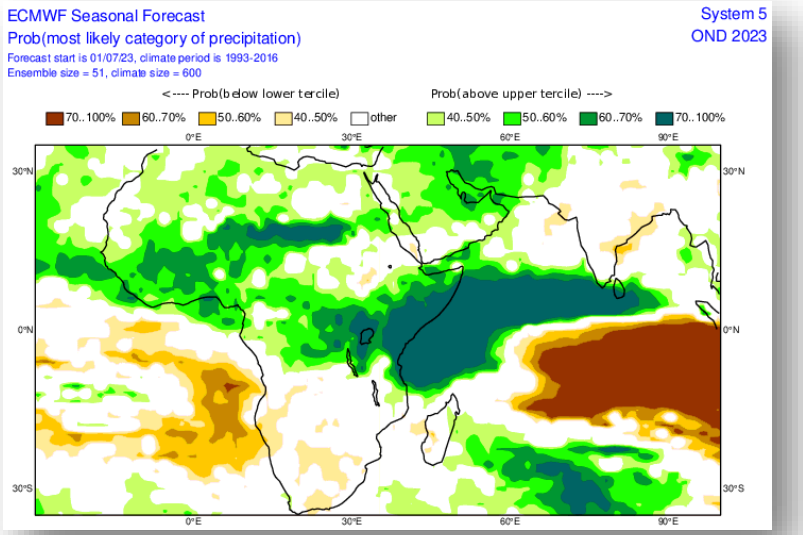
Source: NOAA

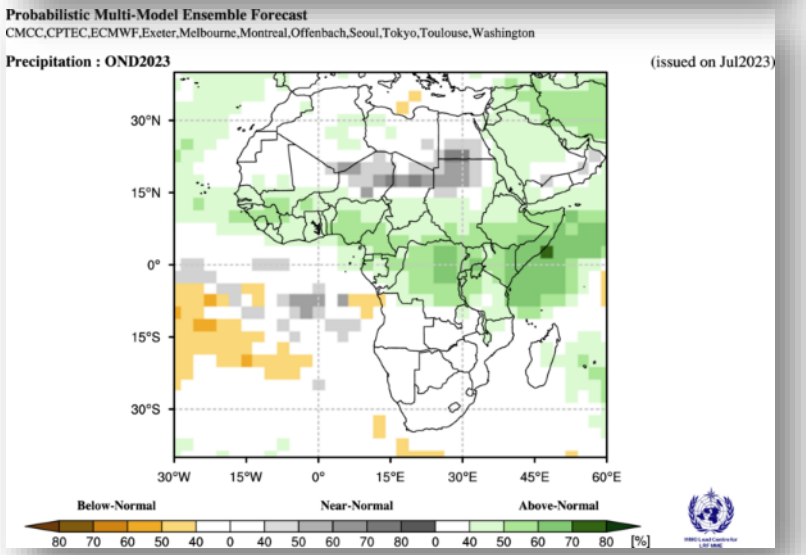
August - September forecast

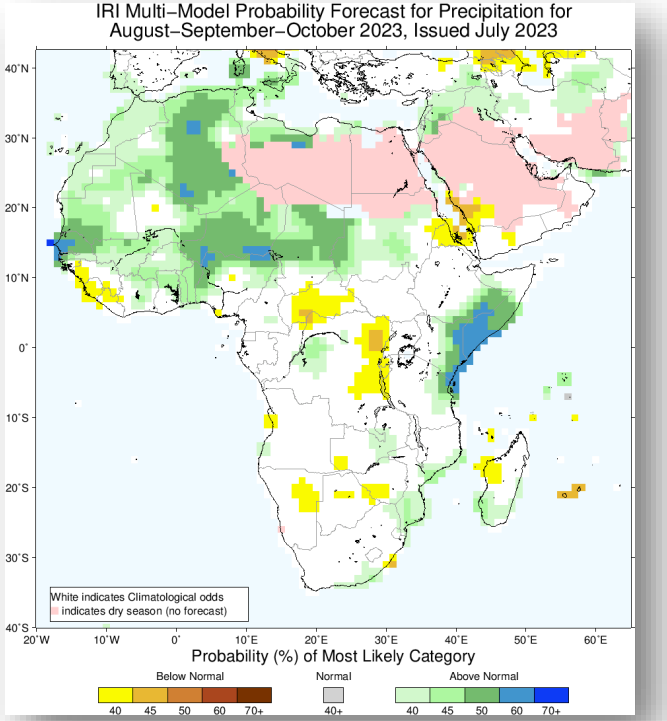


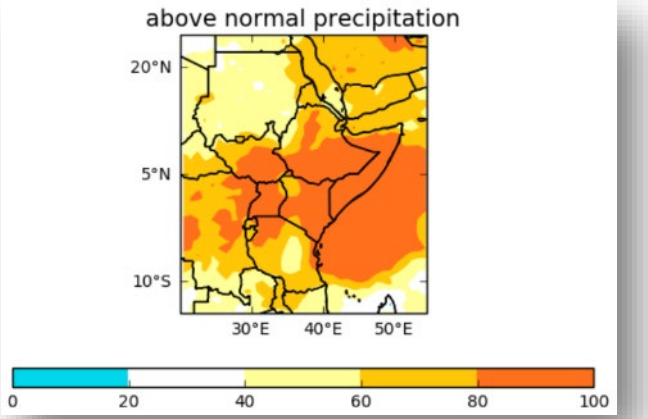
Source: WMO

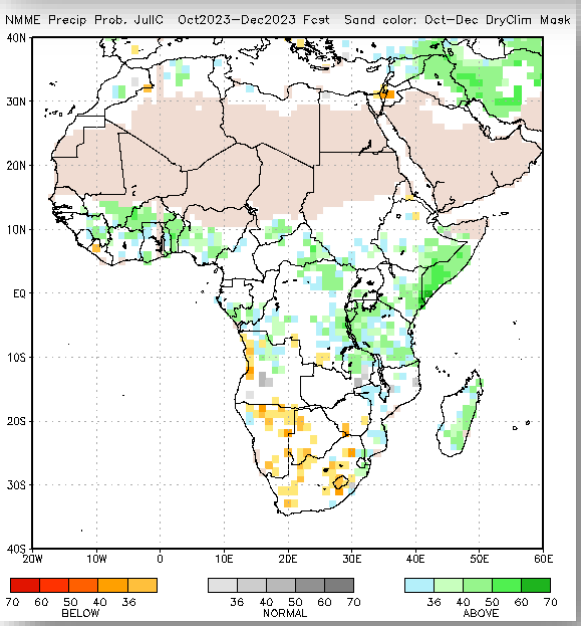
Increased probability of above-average rains between Oct - Dec











Source: NOAA, WMO, IRI, ECMWF, UK MET

Risks and opportunities of El Niño

RISKS

- Food insecurity
- Floods
- Dry spells
- Land degradation
- Loss of livelihoods
- Disease outbreaks
- Displacement
- Reduced crop production
- GBV
- Property damage
- Feed contamination
- Soil erosion

OPPORTUNITIES

- Better production
- Water harvesting
- Improved livestock body conditions
- Groundwater recharge
- Favorable rainfall for production
- Increased incomes
- Increased food availability
- Accelerated drought recovery
- Reduced flooding in South Sudan
- Increased fodder

Source: FAO

WHY EARLY ACTION?

LOSS OF LIFE

We can substantially mitigate loss of human life by alerting people in time with reliable information & slowing flood waters

LOSS OF LIVELIHOODS

We can partially prevent loss of livelihoods & productive asset by telling people when and where to move with their animals, when to plant & when not to

DISPLACEMENT

Displacement will be a key coping strategy but access to information on safe evacuation points & higher ground is critical

WITHOUT EARLY ACTION

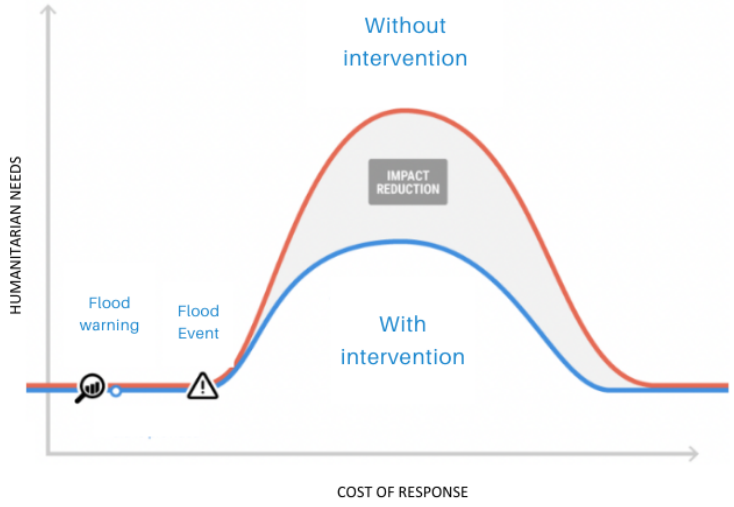
without early action ahead of Deyr 2023 and a high likelihood of a 100 yr flood event loss of lives & livelihoods will be high with a growing humanitarian caseload

WITH EARLY ACTION

Investment in EW & preparedness ahead of Deyr 2023 will save lives & livelihoods and lower the cost of the humanitarian response

IMMEDIATE PRIORITY ACTIONS

Flood defence infrastructures to slow flood waters & give people more time
Set up robust EW systems and emergency response plans
Flood management planning with local & national authorities
Coordinate with all actors to enact safe evac points based on available data set up for prolonged presence
Continuous monitoring of river levels
Repair existing infrastructure to slow flood water
Prepositioning of stocks of food, water and NFI



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THANK YOU!