



ICPAC

JUNE TO SEPTEMBER (JJAS) 2024 CONSOLIDATED OBJECTIVE SEASONAL CLIMATE OUTLOOK

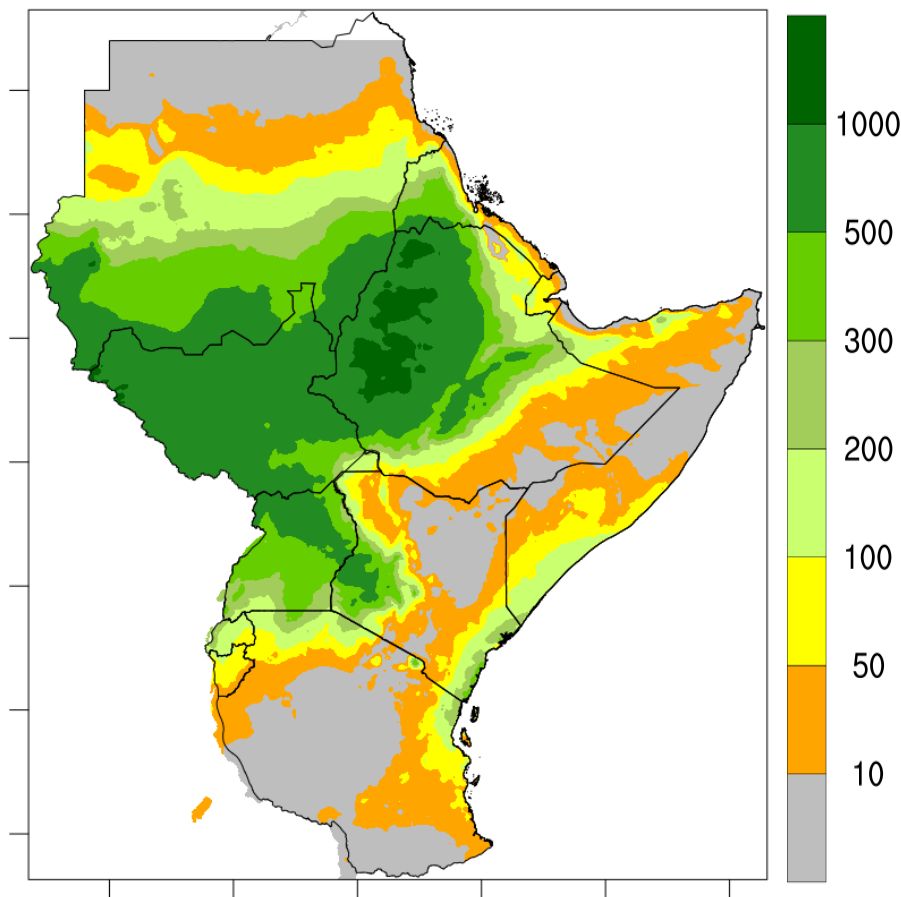
ACCOF-17, 30 May 2024, Addis Ababa

Hussen Seid
IGAD Climate Prediction and Applications Centre
(ICPAC)



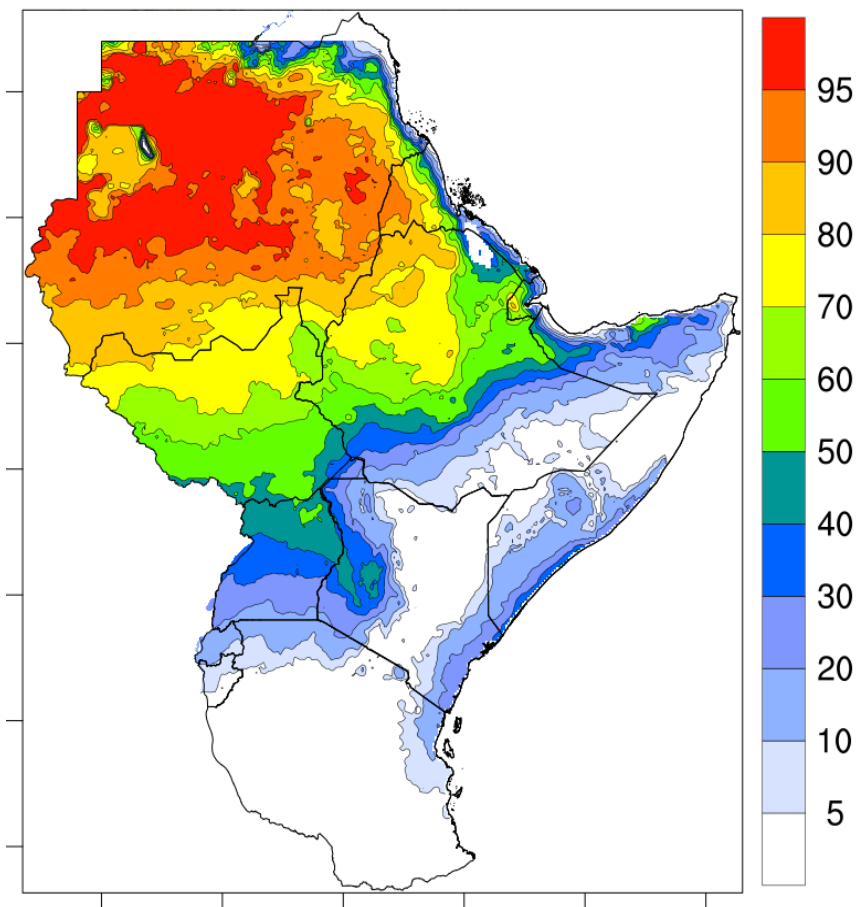
RAINFALL CLIMATOLOGY DISTRIBUTION DURING JJAS FOR 1991-2020

JJAS Total Rainfall (mm)



JJAS is an important rainfall season for the northern parts of the region

JJAS Contribution (%)

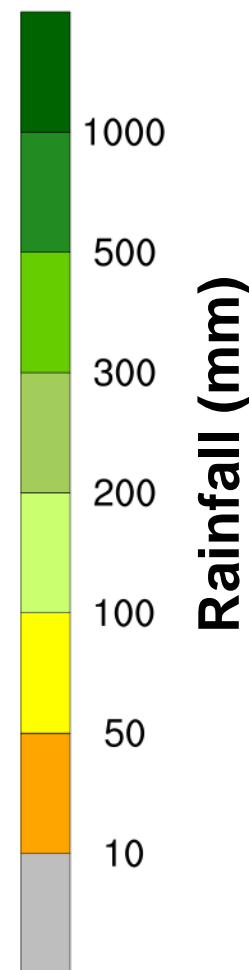
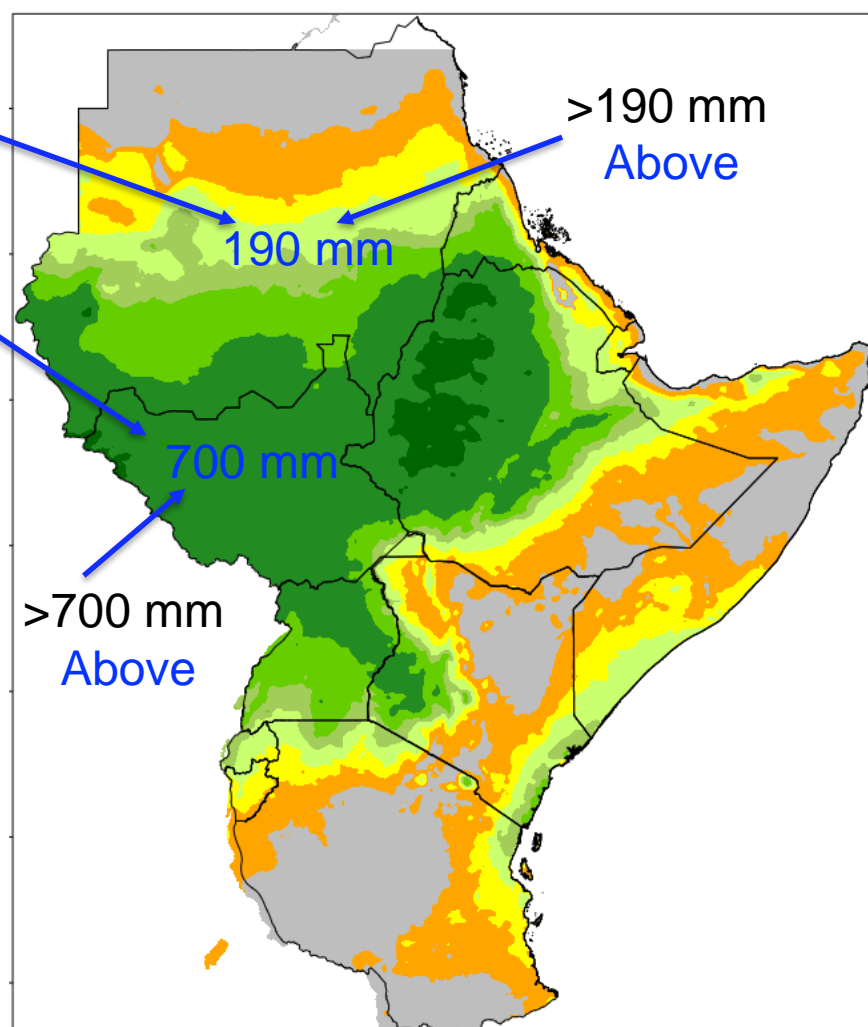
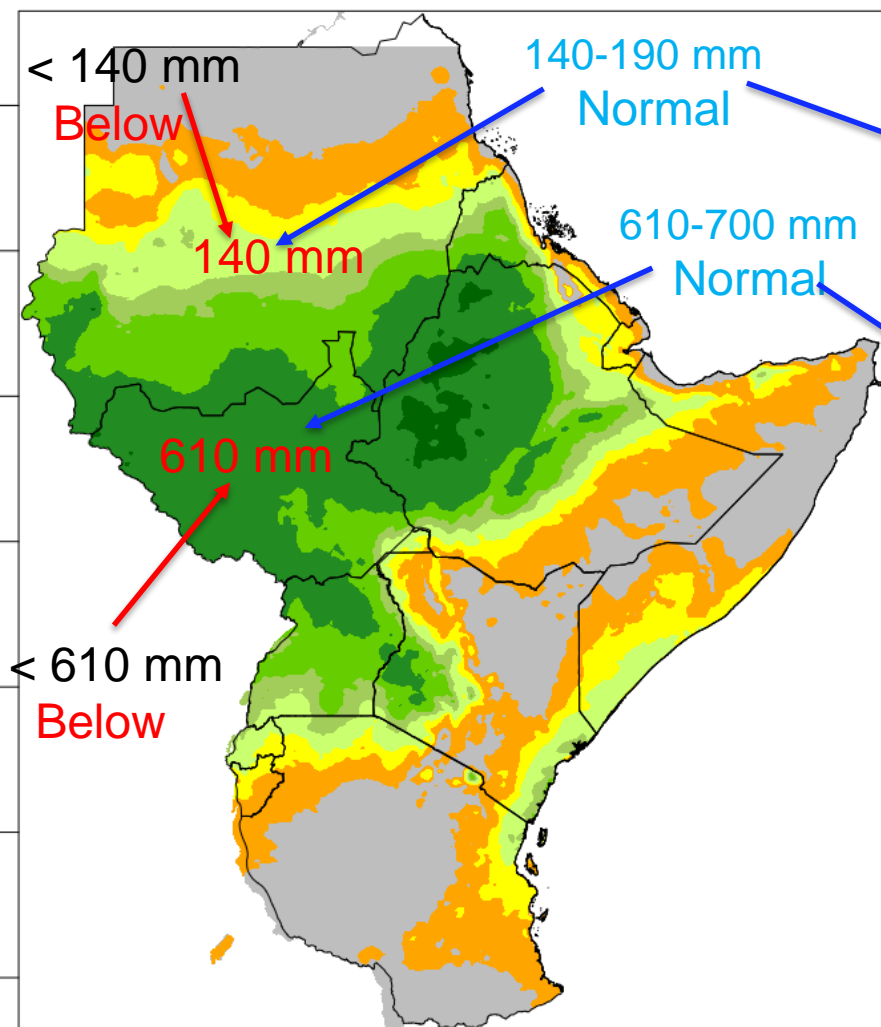


It contributes more than 50% of the annual rainfall over the northern GHA

LONG-TERM (1991–2020) JJAS RAINFALL THRESHOLDS FOR BELOW AND ABOVE NORMAL CATEGORIES

BELOW NORMAL RAINFALL THRESHOLD

ABOVE NORMAL RAINFALL THRESHOLD



May 2024 initialized global forecasts from 9 GPCs were processed using 3 calibration methods to produce JJAS 2024 climate outlook over GHA



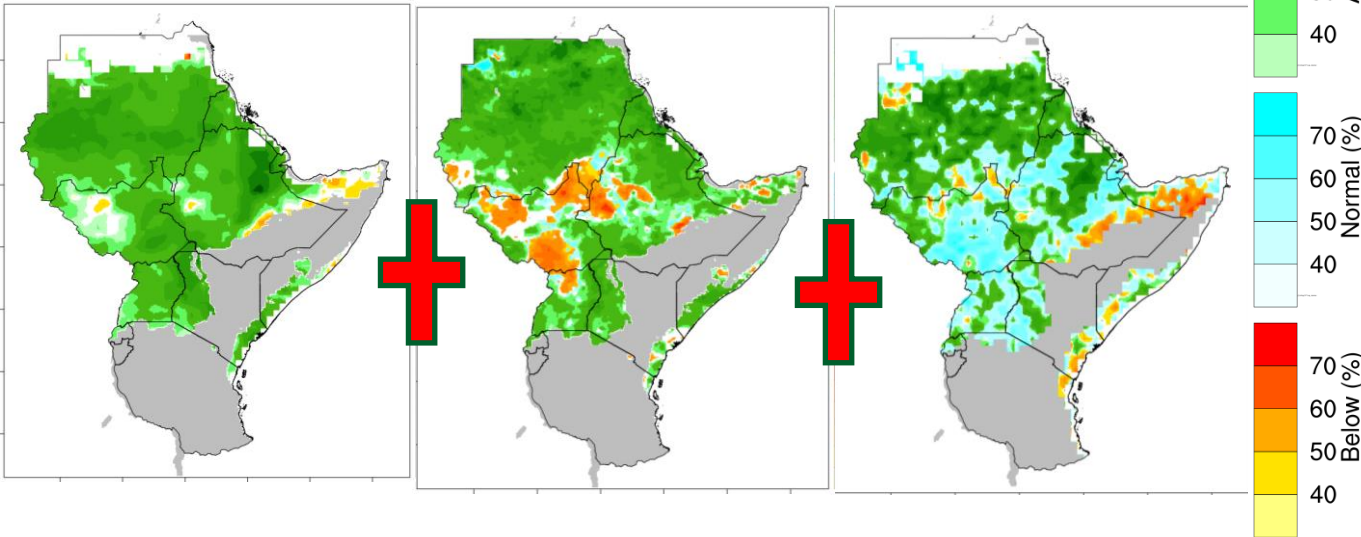
INPUTS FOR OBJECTIVE JJAS 2024 FORECASTS

Multi-model average forecasts from the 3 methods

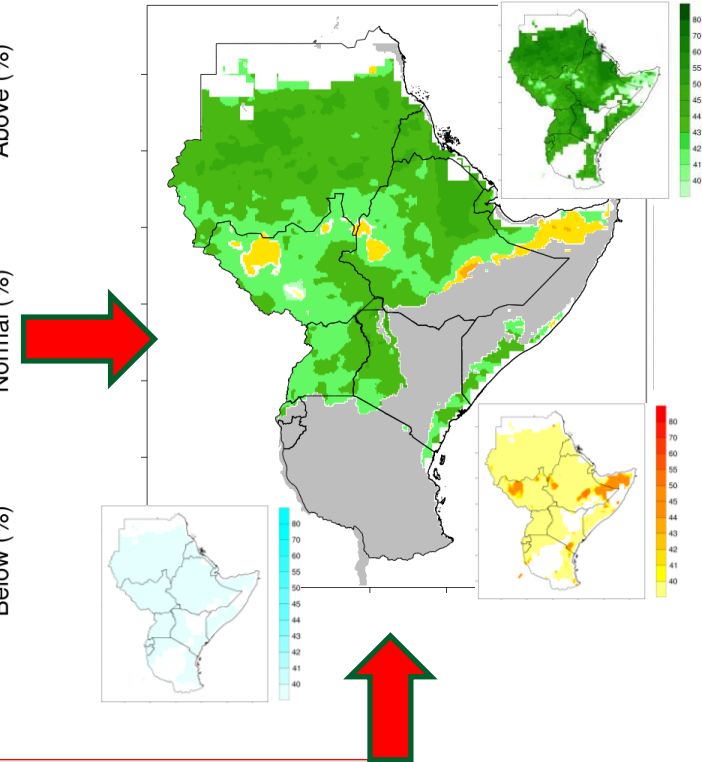
Regression
(Local climate)

CCA
(Global effects)

Logit
(ENSO effects)



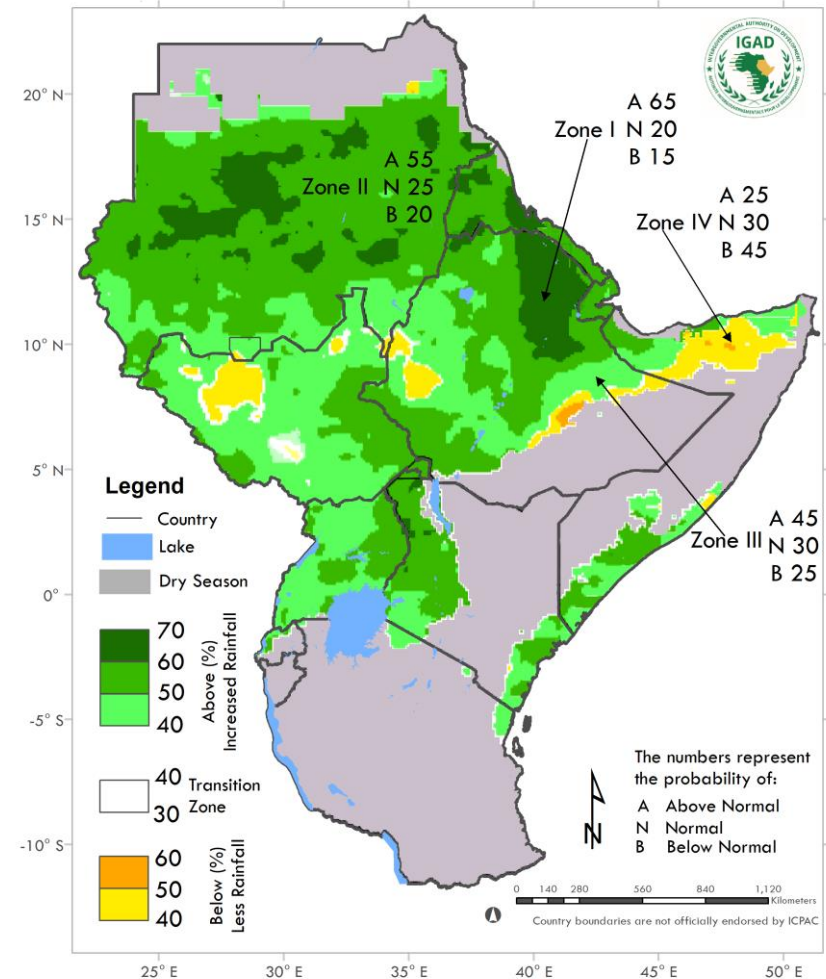
Consolidated Forecast



$$\text{Objective Forecast} = (\text{eReg} + \text{CCA} + \text{Logit}) / 3$$

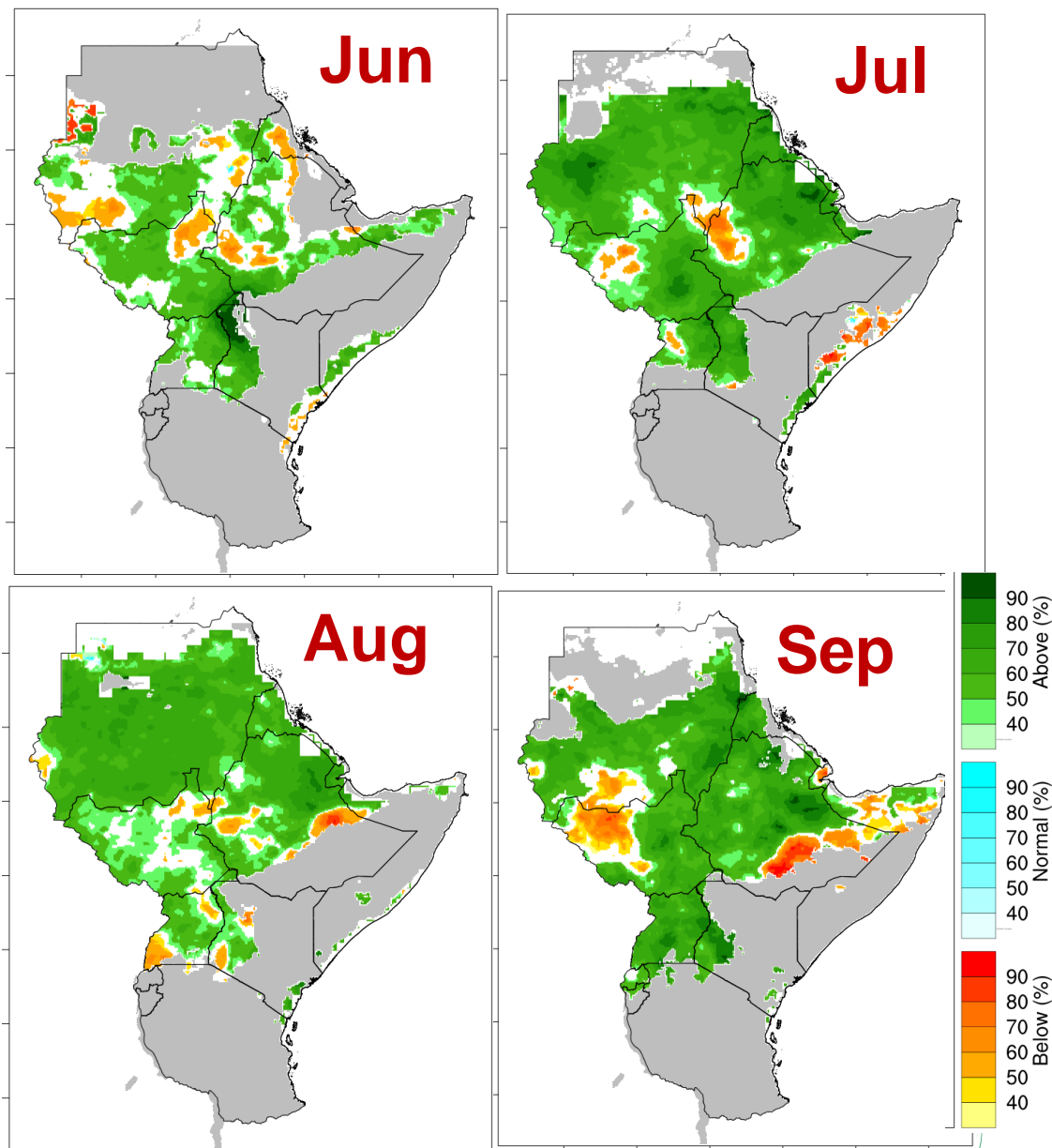
JJAS 2024 RAINFALL OUTLOOK

- Wetter than normal conditions expected over the northern and western GHA covering much of Sudan, Eritrea, Djibouti, Ethiopia, south Sudan, Uganda, western Kenya, coastal parts of Kenya and Somalia.
- Drier than normal conditions are expected over parts of northern Somalia, localized areas in western Ethiopia and north-central South Sudan.
- The southern and parts of the equatorial sector are climatologically dry this season.

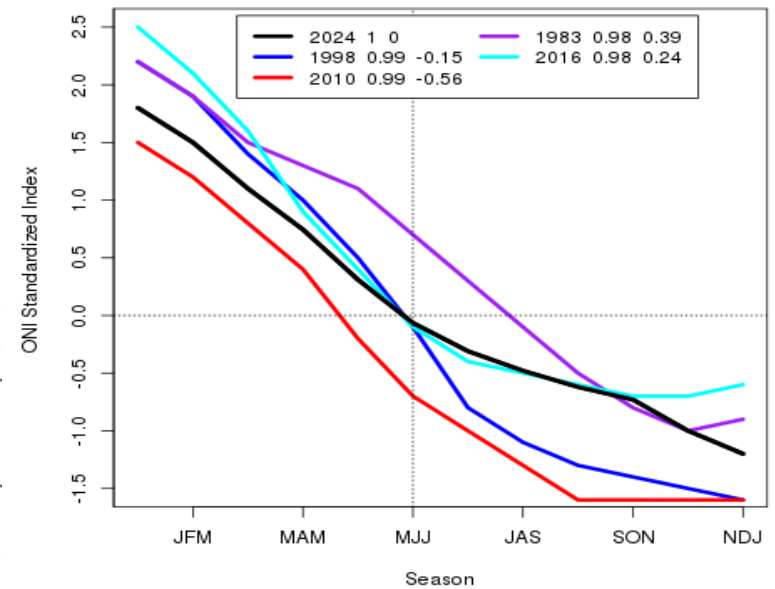
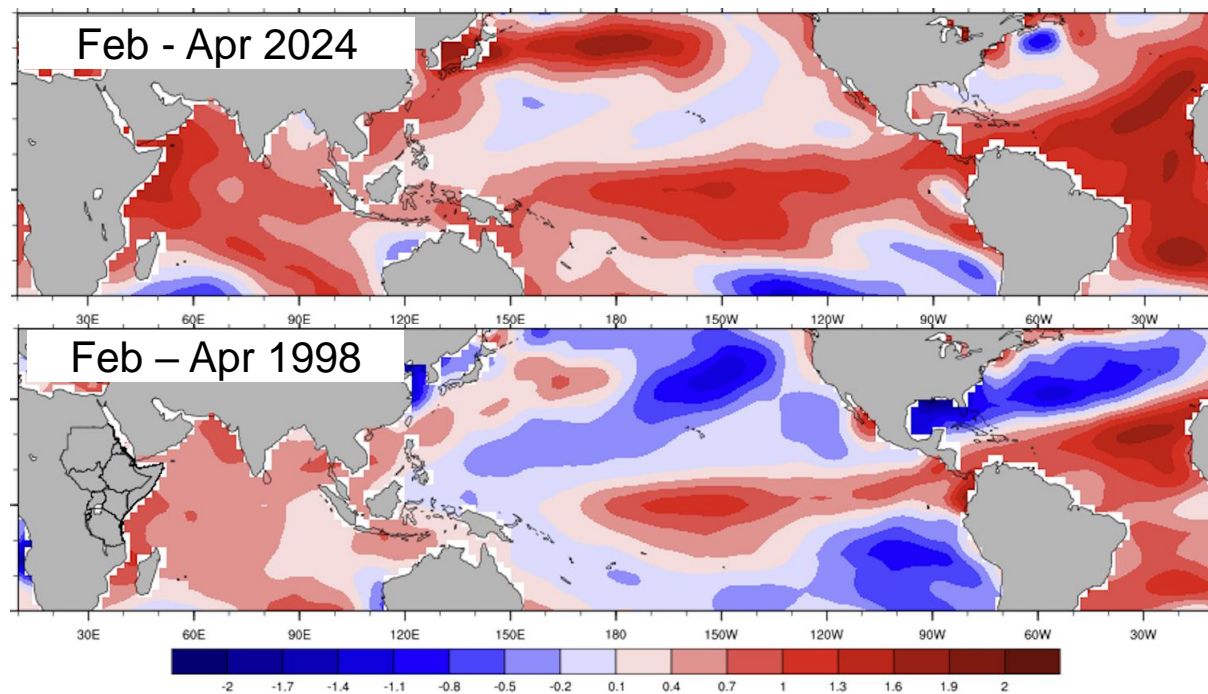


MONTHLY RAINFALL OUTLOOKS

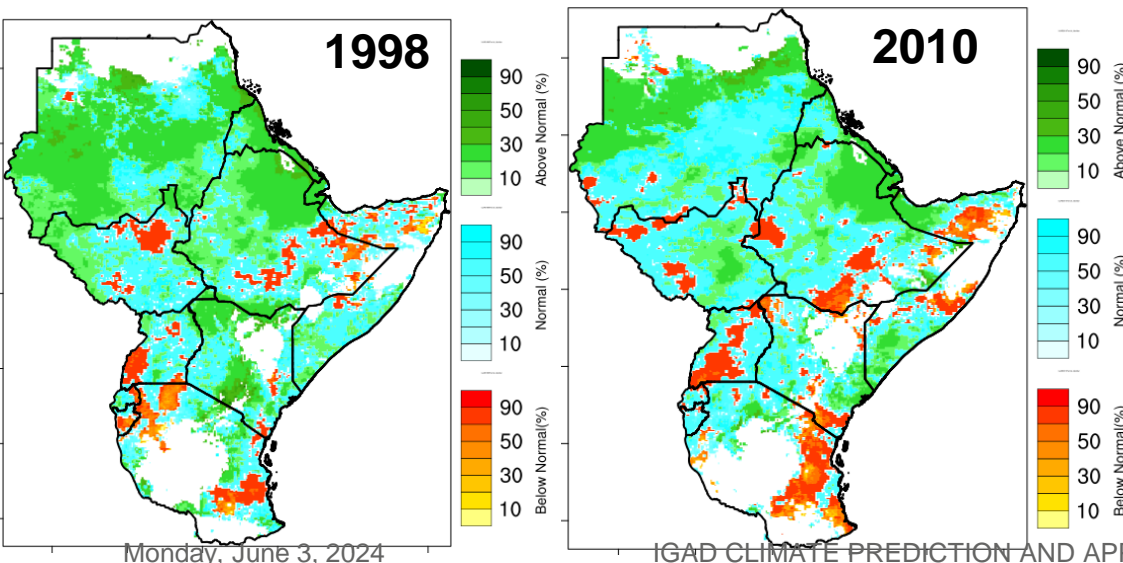
- In June, high chances for wetter than normal conditions over western Kenya, Uganda, South Sudan & drier than normal conditions western Sudan cross-border areas of Ethiopia & South Sudan.
- In July and August, most parts of the northern GHA are expected to have wetter than normal conditions
- High chances for drier conditions in Sep over western South Sudan, southern Sudan & northern coastal Somalia.



ANALOGUE YEARS BASED ON SST PATTERN



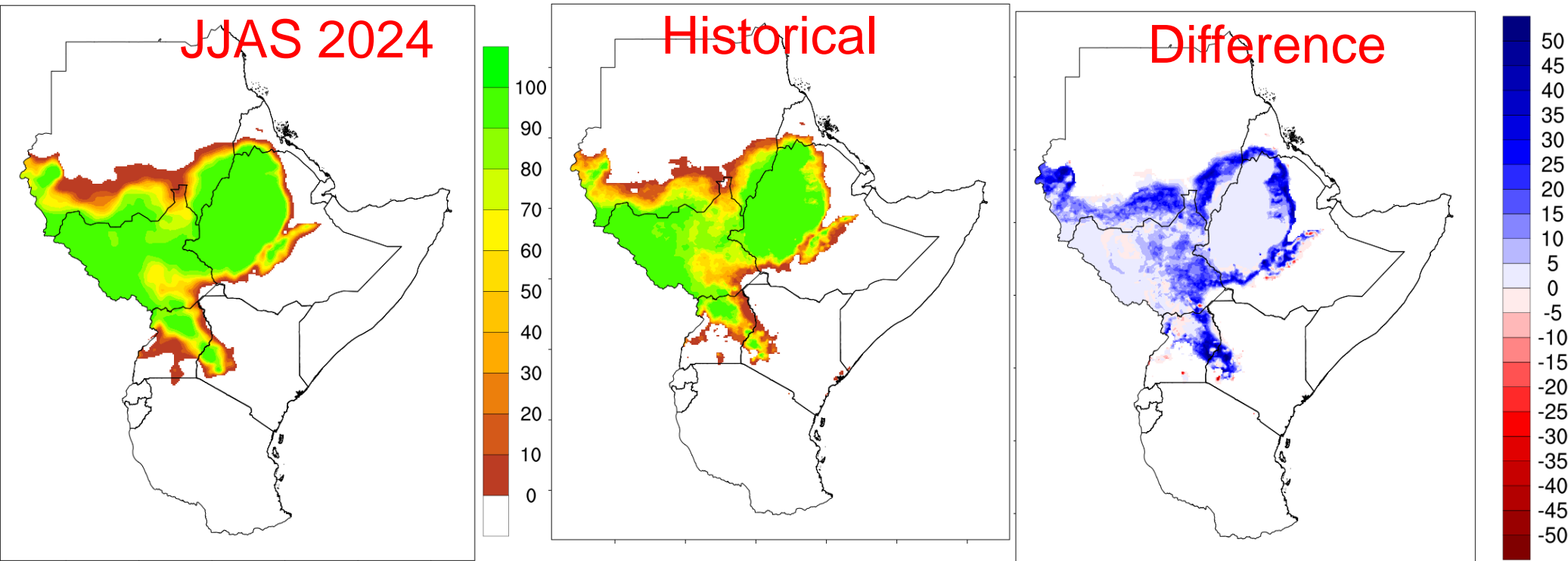
Evolution of Nino3.4 Index



Current SST patterns across tropical oceans and the evolution of the Nino3.4 index over recent and upcoming months indicates that 1998 and 2010 closely matches with 2024 and have been identified as analogous years.

CHANCES OF JJAS RAINFALL EXCEEDING 500 MM

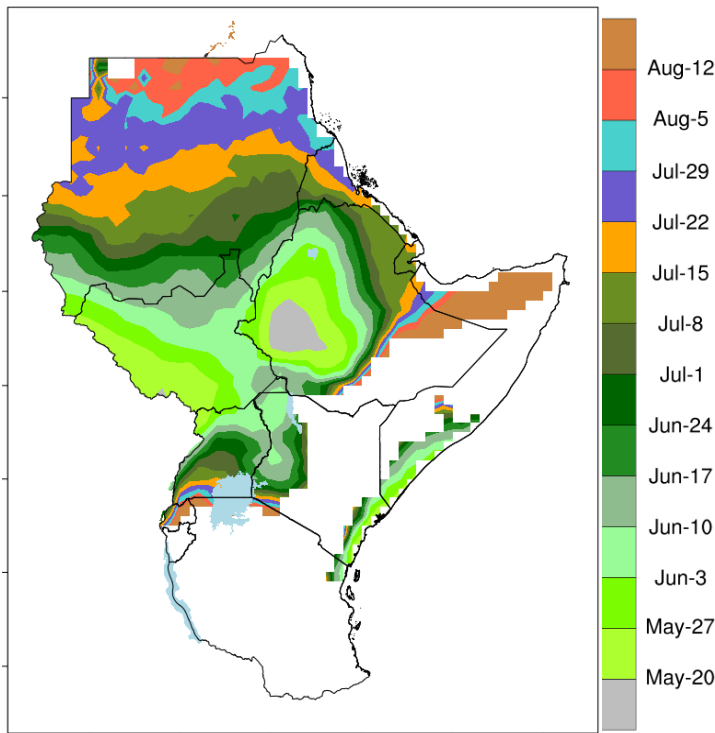
- High chances of receiving 500 mm over central to western Ethiopia, South Sudan, southern areas of Sudan, and northern Uganda



- Higher chance (up to 30%) of recording 500 mm compared to historical over southern Sudan as well as in parts of Ethiopia, South Sudan, Uganda & western Kenya.

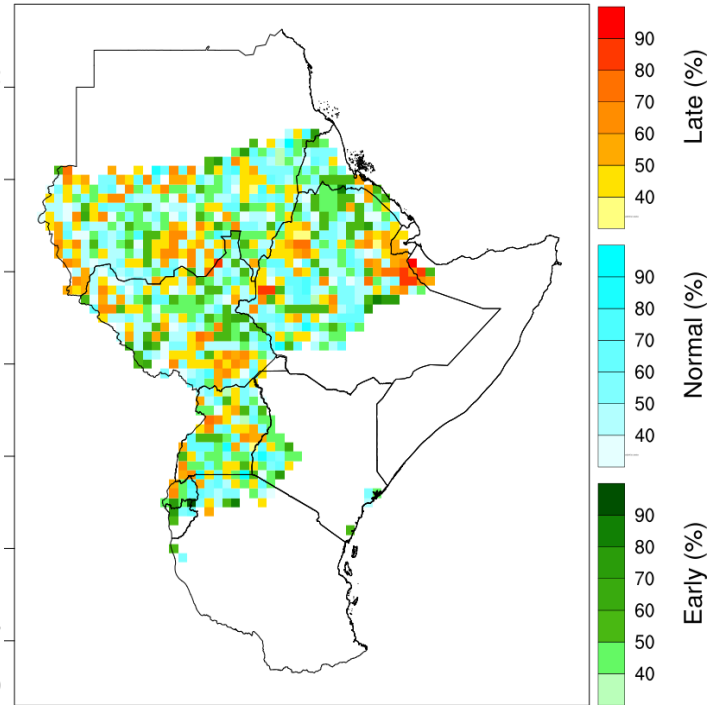
ONSET OF JUN-SEP (JJAS) 2024 SEASON

JJAS 2024 Onset Date



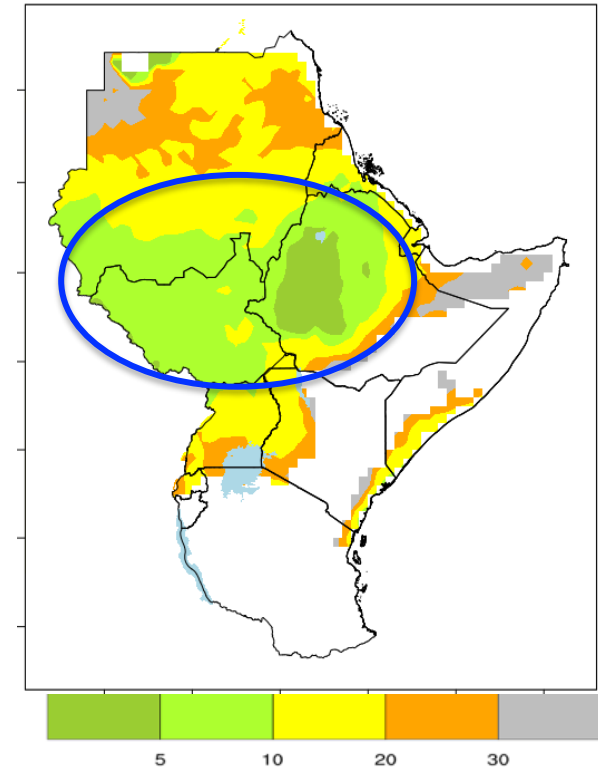
The onset of rainfall, as predicted by the average forecast from 5 GCMs (212 members) shows a progression from south to north

Standard Dev.



Normal onset forecasted over most parts of the region; delayed onset indicated in localized areas of north-eastern and western parts of the region.

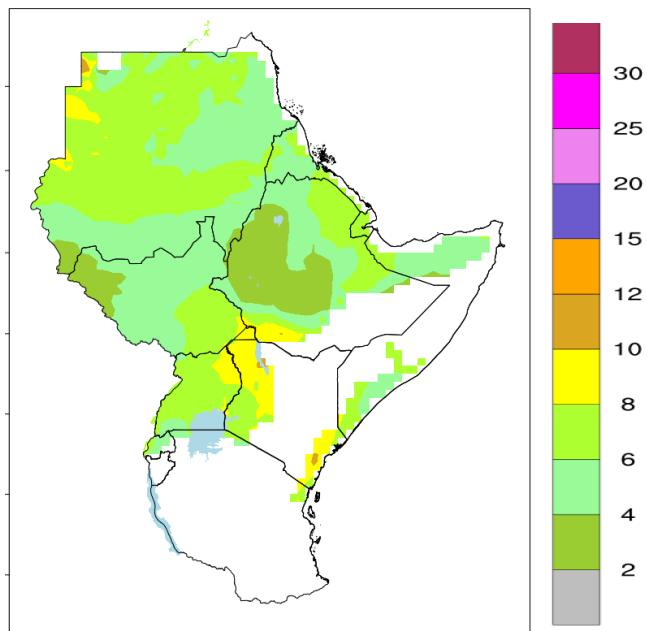
Onset Probability



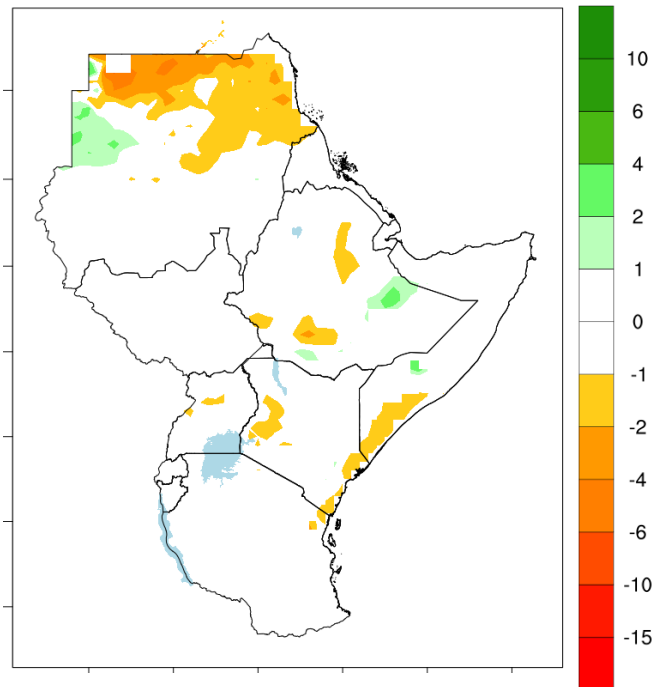
Significant variation in predicting onset dates among various ensemble members over Sudan, Eritrea, Djibouti & north eastern Ethiopia.

LENGTH (DAYS) OF MAXIMUM DRY-SPELL DURING JJAS 2024 SEASON

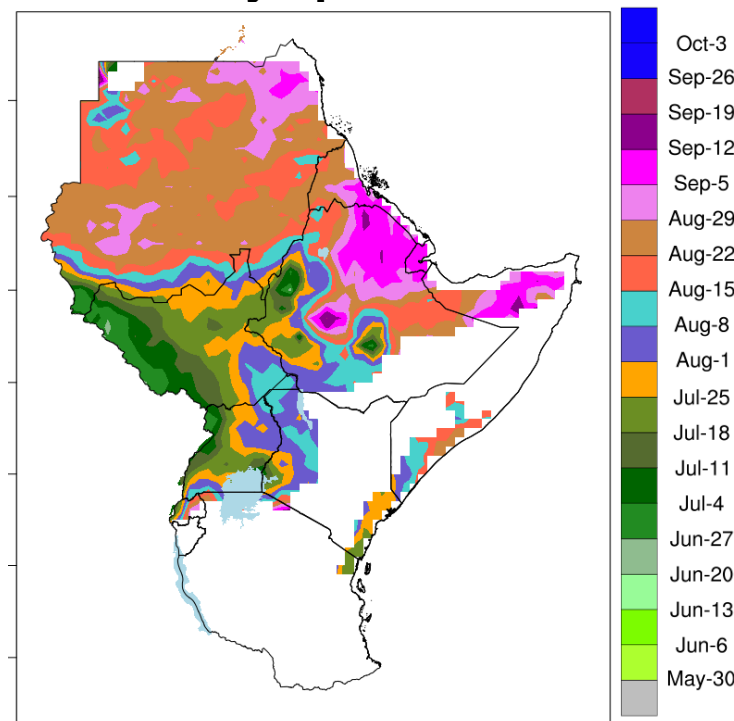
Maximum Dry-spell Length



Dry Spell Anomaly



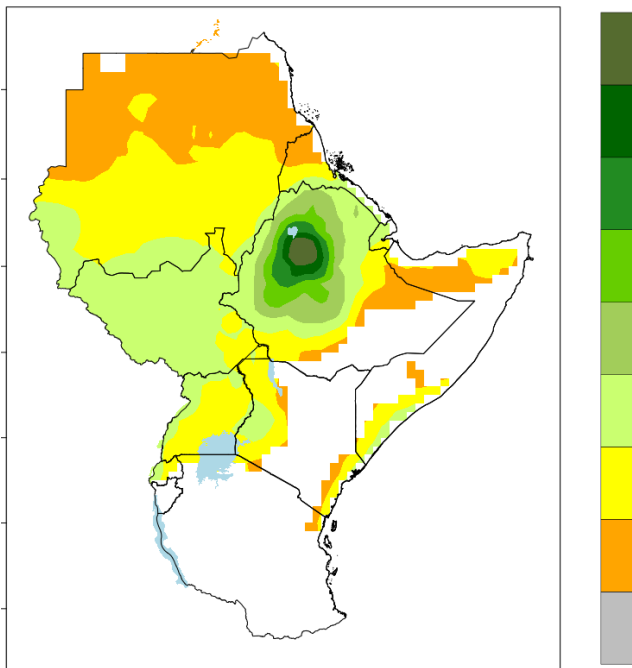
Start Date of the Max Dry-spell



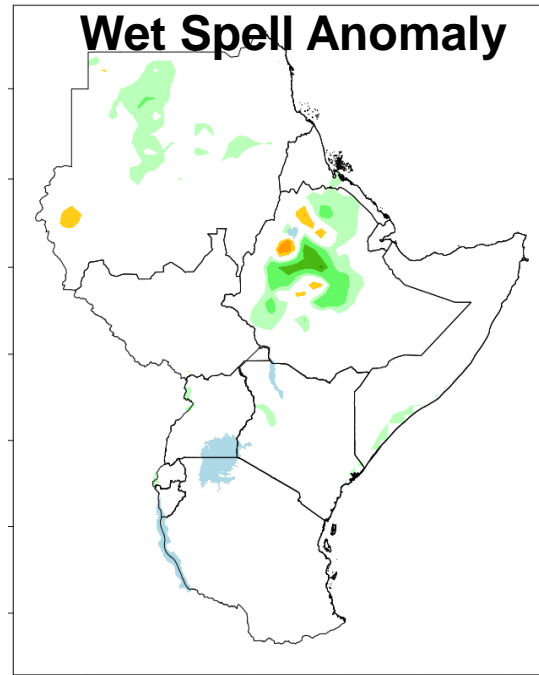
- Much of the region is expected to experience a normal dry spell length ranging from 4 to 8 days with the exception of western and coastal parts of Kenya, and eastern Uganda

LENGTH (DAYS) OF MAXIMUM WET-SPELL DURING JJAS 2024 SEASON

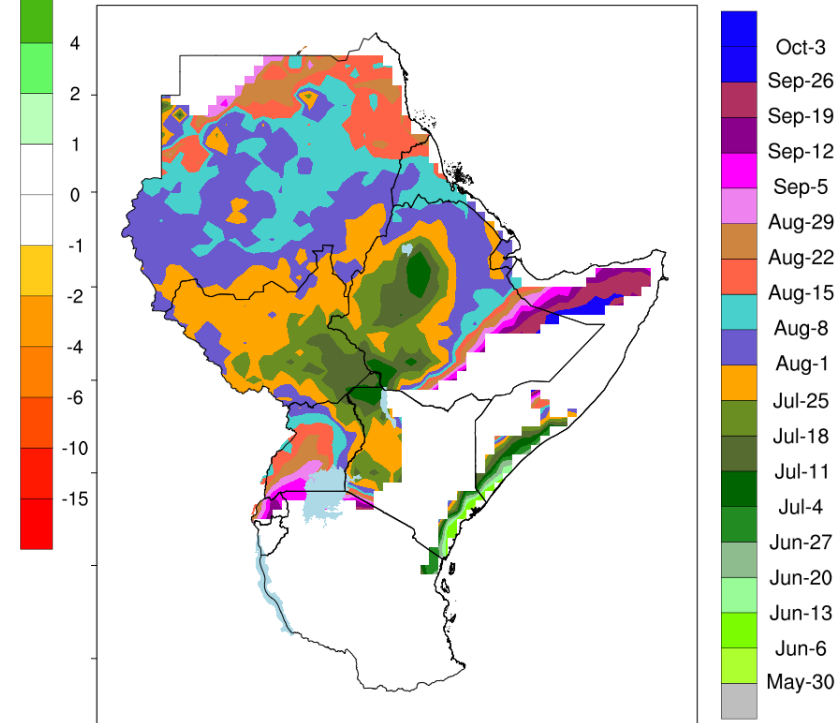
Maximum Wet-spell Length



Wet Spell Anomaly



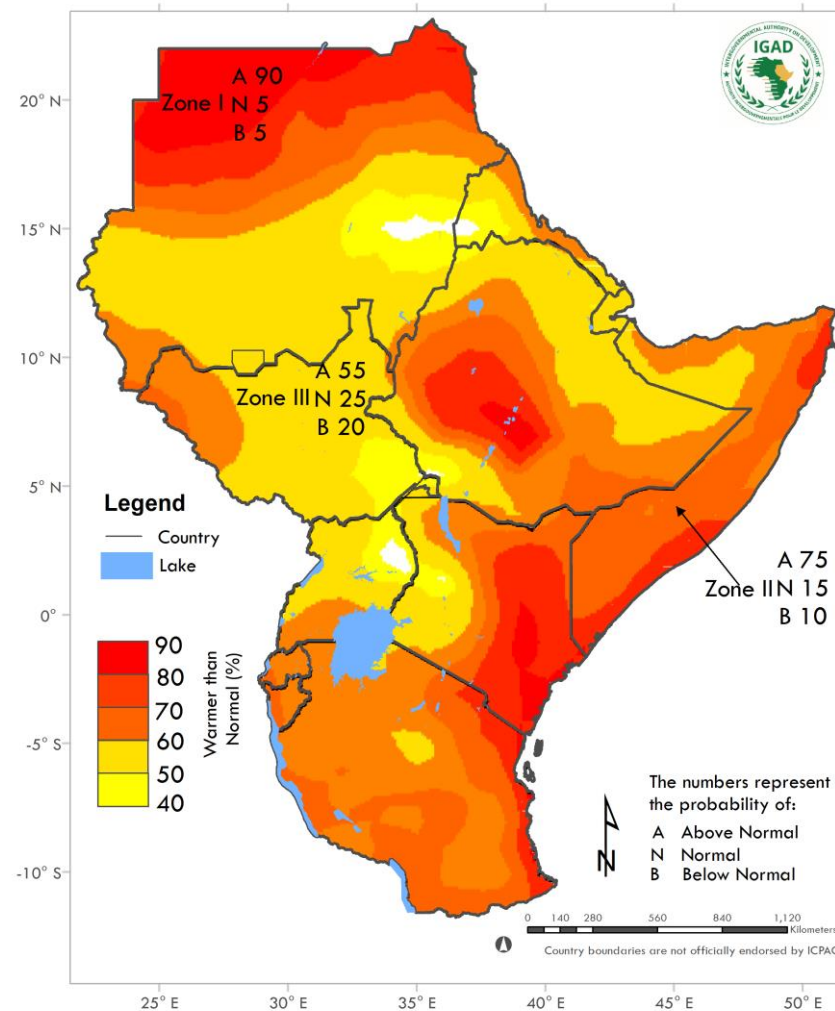
Start Date of the Max Wet-spell



- Longer wet spell lengths after onset are expected over parts of central and northern Ethiopia

JJAS 2024 TEMPERATURE OUTLOOK

- Warmer than average temperatures are expected over most parts of the region.
- Higher probabilities of above-average temperatures are indicated over northern Sudan, southern and coastal parts of the region.
- Normal temperatures are expected over a few areas of the cross-border regions of Sudan-Eritrea and Kenya & Uganda.



SUMMARY

- Wetter than normal conditions expected over most parts of Sudan, South Sudan, central to northern Uganda, western Kenya, Ethiopia, Djibouti & Eritrea.
- Normal to early onset is expected over most parts of the northern regions covering much of central and northern Ethiopia, Eritrea, Sudan and South Sudan.
- Temperature is expected to be warmer than average over much of the region with higher probabilities over northern Sudan, parts of Ethiopia, Somalia, Kenya, Rwanda, Burundi & Tanzania.

THANK YOU!!HANK YOU!

www.icpac.net