March 2024
FEWS NET Seasonal Forecast Review

Prepared by Andy Hoell
andrew.hoell@noaa.gov

Overview

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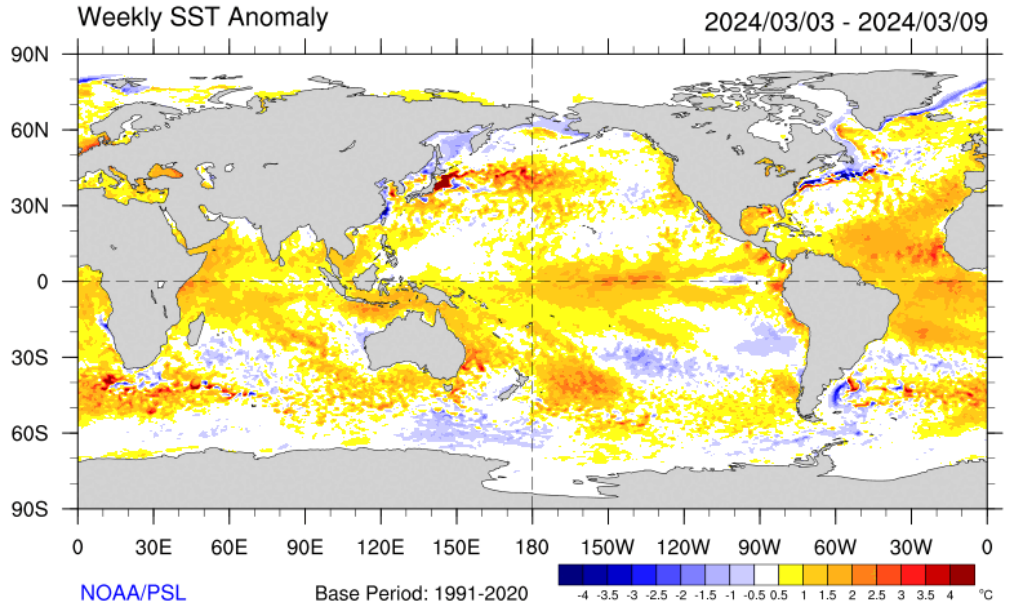
State of the Global Climate

Sea Surface Temperatures and Climate Modes

Moderate El Niño Waning; Negative SIOD; Neutral IOD



ENSO Diagnostic Discussion

El Niño most likely to end in Northern Hemisphere spring 2024
La Niña most likely in Northern Hemisphere summer 2024

EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

issued by

CLIMATE PREDICTION CENTER/NCEP/NWS
14 March 2024

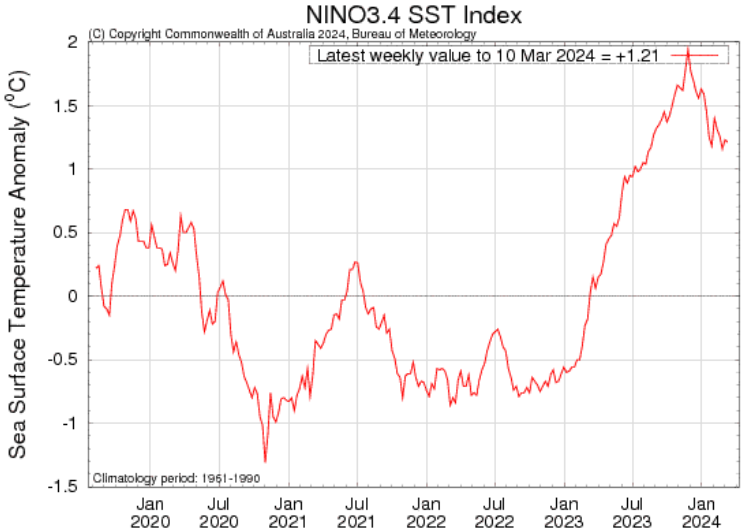
ENSO Alert System Status: El Niño Advisory / La Niña Watch

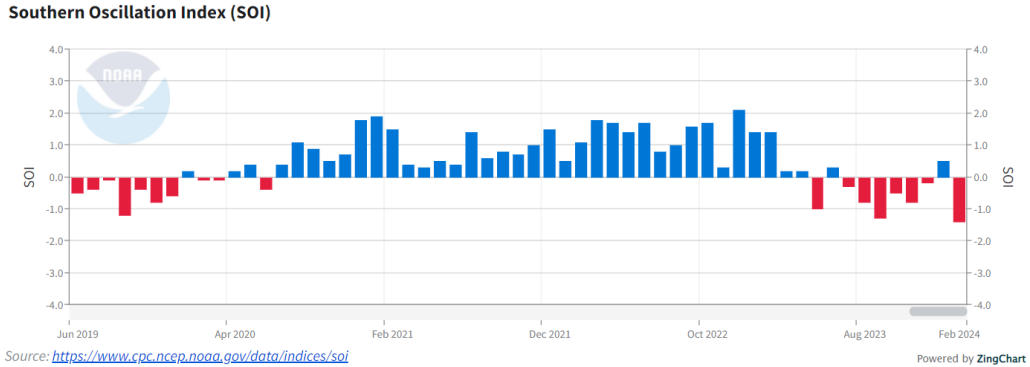
Synopsis: A transition from El Niño to ENSO-neutral is likely by April-June 2024 (83% chance), with the odds of La Niña developing by June-August 2024 (62% chance).

During February 2024, sea surface temperature (SST) anomalies continued to weaken across most of the equatorial Pacific Ocean. In the last week, below-average SSTs emerged in a small region of the eastern equatorial Pacific Ocean (~100°W; Fig. 1). The weekly Niño indices weakened but remained positive, with the latest value in Niño-3.4 standing at 1.4°C (Fig. 2). Area-averaged subsurface temperature anomalies were slightly negative (Fig. 3), reflecting the consequences of an upwelling Kelvin wave and associated below-average temperatures across the equatorial Pacific Ocean (Fig. 4). Low-level winds were near average over most of the equatorial Pacific, while upper-level wind anomalies were easterly over the east-central Pacific. Convection was enhanced near the Date Line and was suppressed near Indonesia (Fig. 5). Collectively, the coupled ocean-atmosphere system reflected a weakening El Niño.

Current ENSO State

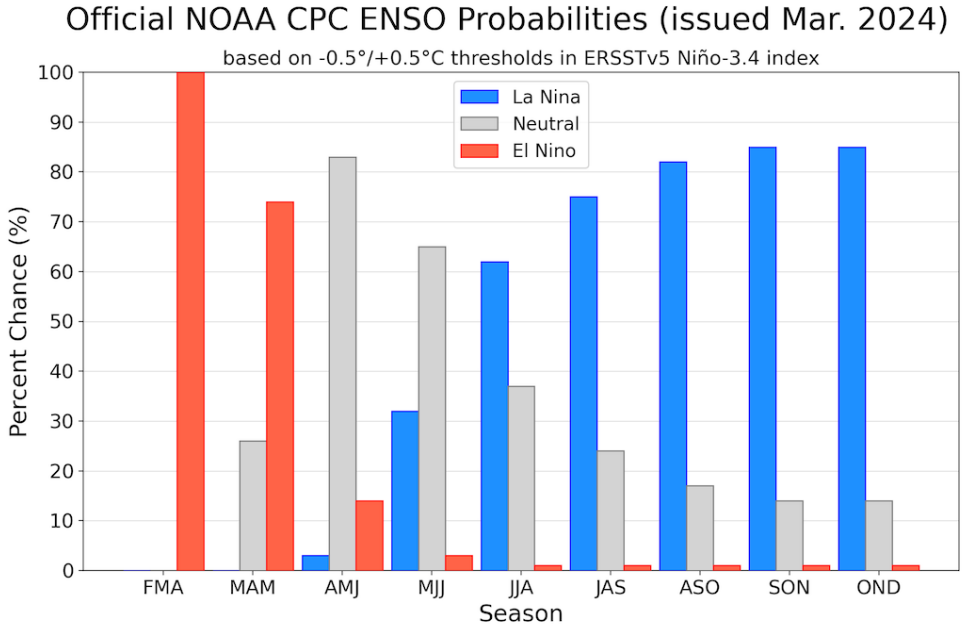
El Niño is weakening; now moderate in intensity





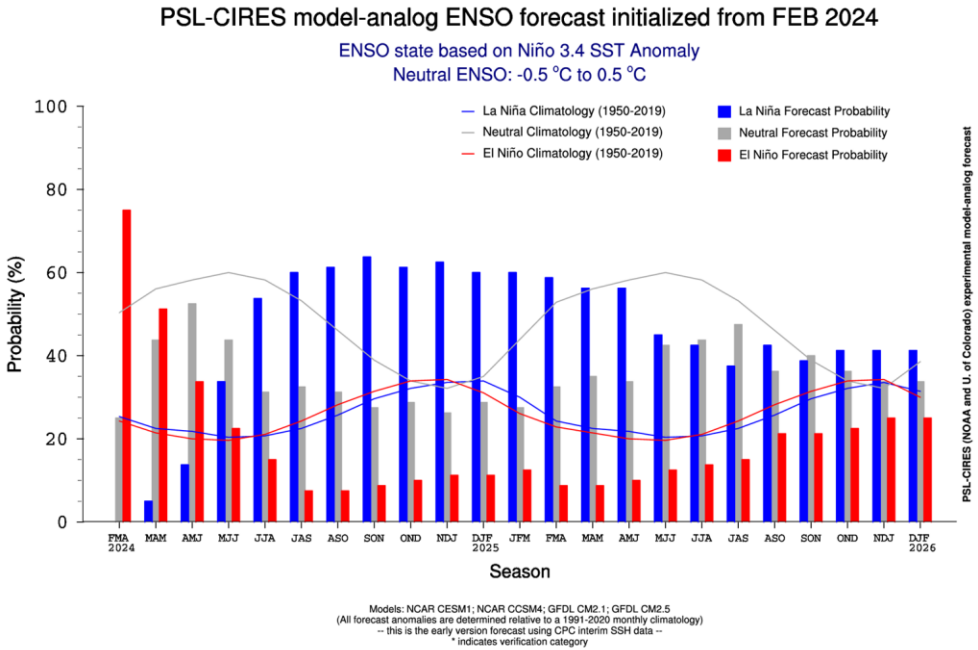
ENSO Forecast

La Nina most likely by mid-2024



Extended ENSO Forecast

La Nina most likely by mid-2024

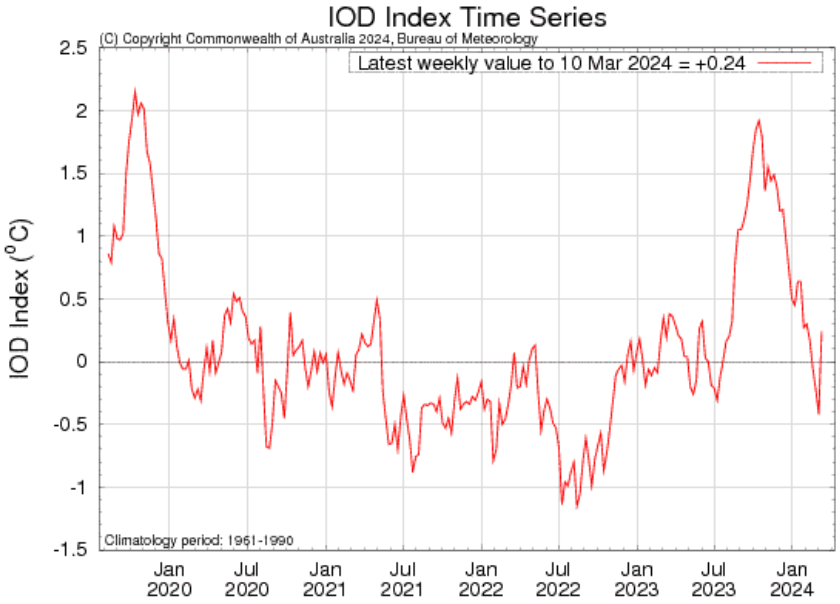


Current IOD State

Neutral IOD

Australia Bureau of Meteorology

The Indian Ocean Dipole (IOD) is neutral.

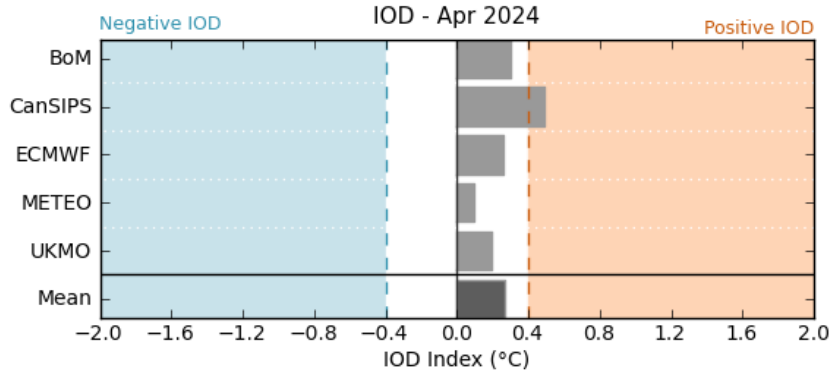


IOD Forecast

IOD expected to remain neutral through NH spring

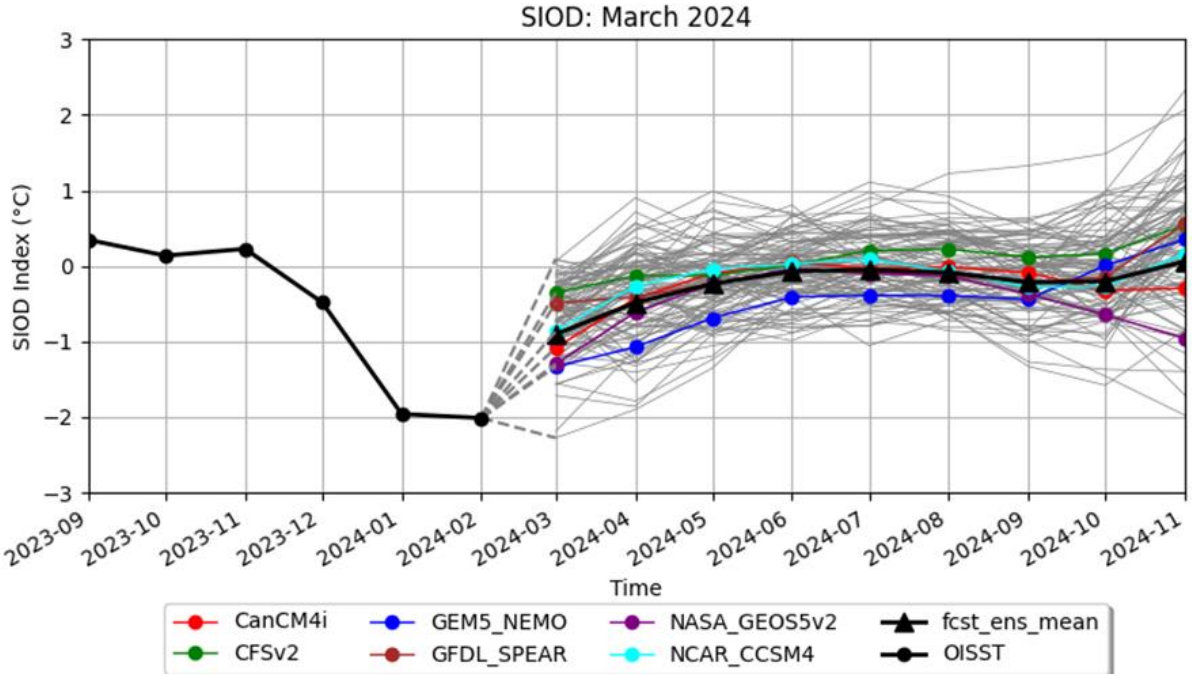
Australia Bureau of Meteorology

IOD events are typically unable to form between December and April. This is because the monsoon trough shifts south over the tropical Indian Ocean changing wind patterns and preventing the IOD pattern from forming.



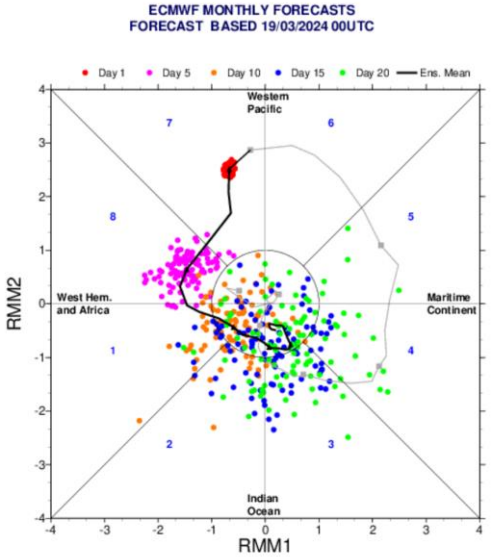
SIOD Forecast

Negative SIOD likely to continue through southern Africa wet season



Madden-Julian Oscillation Forecast

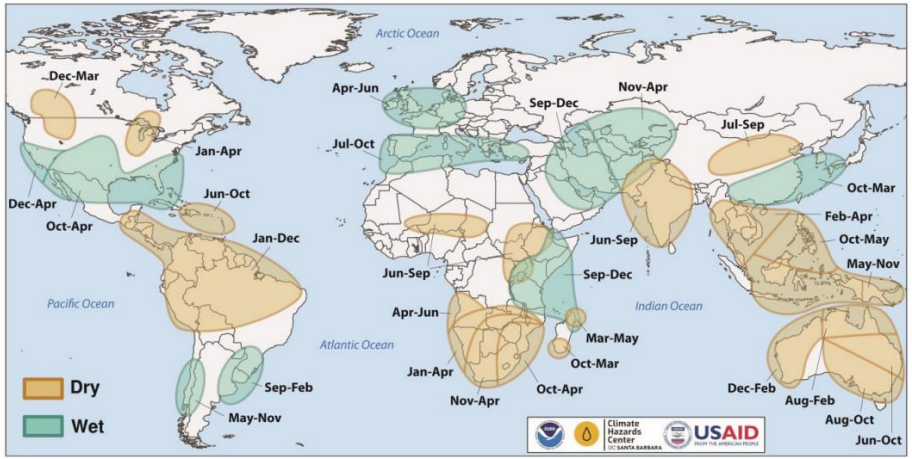
Strong MJO in phases 6,7,8,1 in the next two weeks

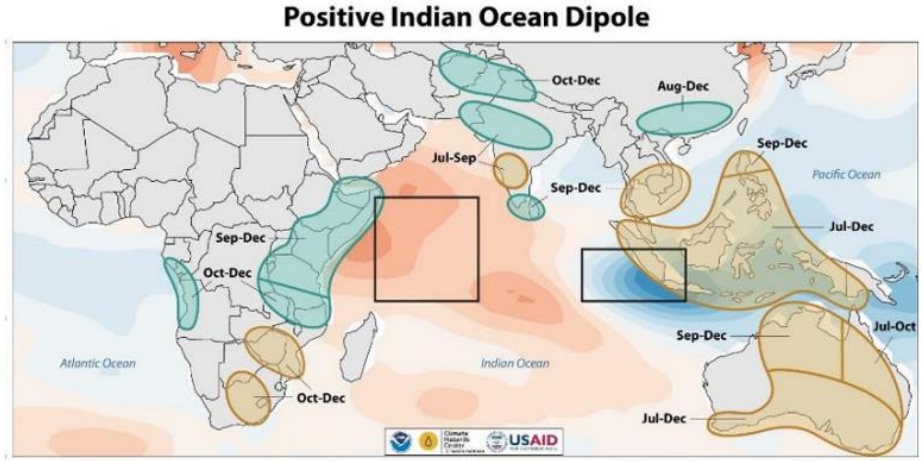


ECMWF

Precipitation related to ENSO and IOD

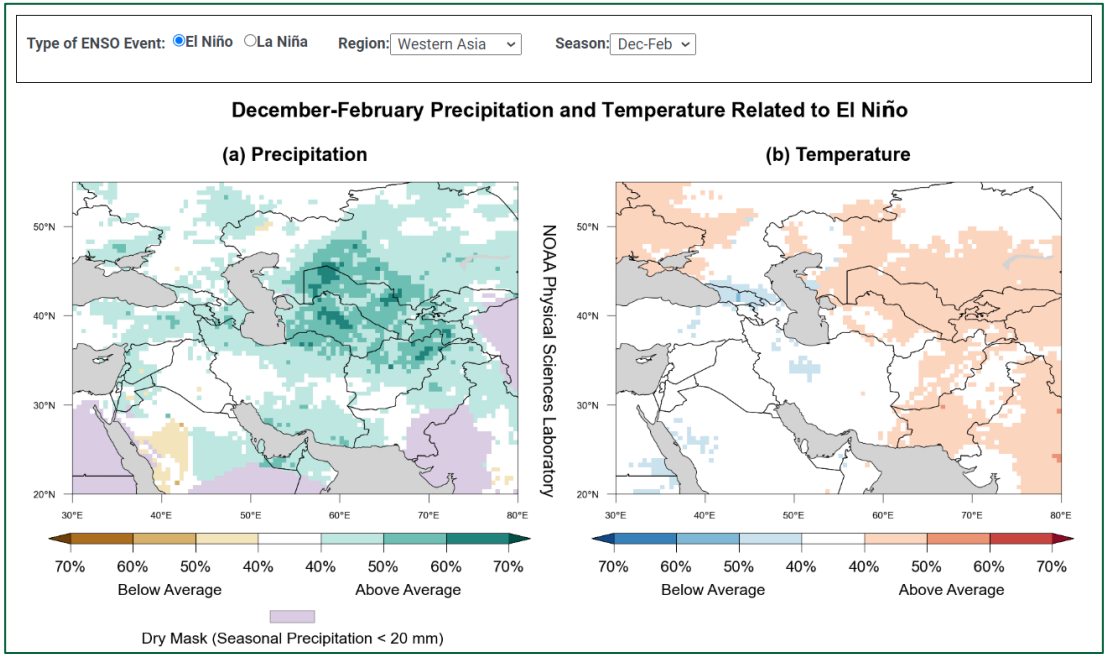
El Niño and +IOD related to precipitation anomalies





Precipitation related to ENSO

https://psl.noaa.gov/enso/fewsnet/



Assumption 1 of 4

El Niño-Southern Oscillation

El Niño, which is now moderate in intensity, is expected to remain the dominant ENSO state into northern hemisphere spring 2024 before transitioning to neutral. La Niña is likely to become the dominant ENSO state in mid-2024. **No Change**

Assumption 2 of 4

Indian Ocean Dipole

The Indian Ocean Dipole (IOD) is neutral and will remain so into

Northern Hemisphere summer. **No Change**

Assumption 3 of 4

Subtropical Indian Ocean Dipole

The subtropical Indian Ocean dipole (SIOD) is negative and expected to remain so through the southern Africa wet season. **No Change**

Assumption 4 of 4

Madden-Julian Oscillation

Forecast MJO phases 7 and 8 and 1 indicate an increased likelihood of above-average precipitation in East Africa and Afghanistan in early-to-mid-April 2024.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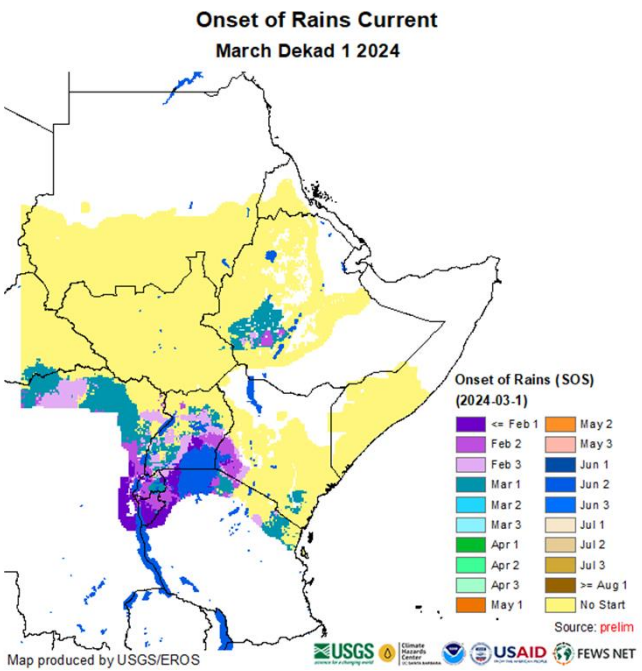
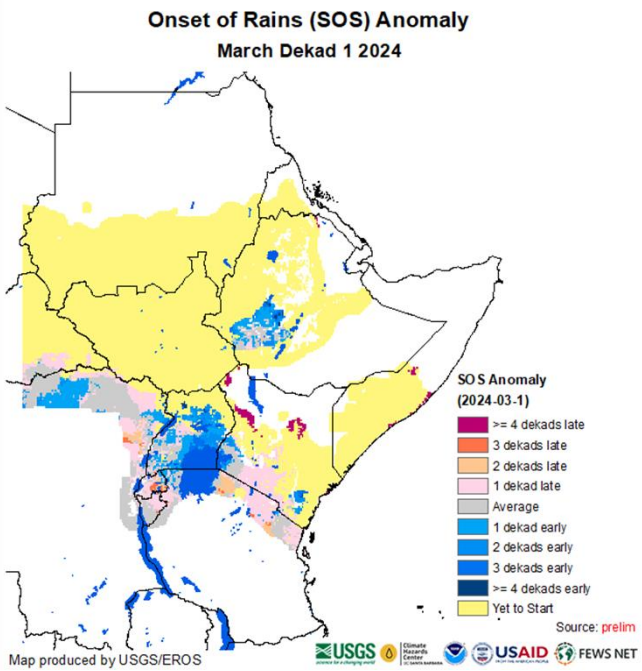
East Africa

March-May 2024 Precipitation Onset

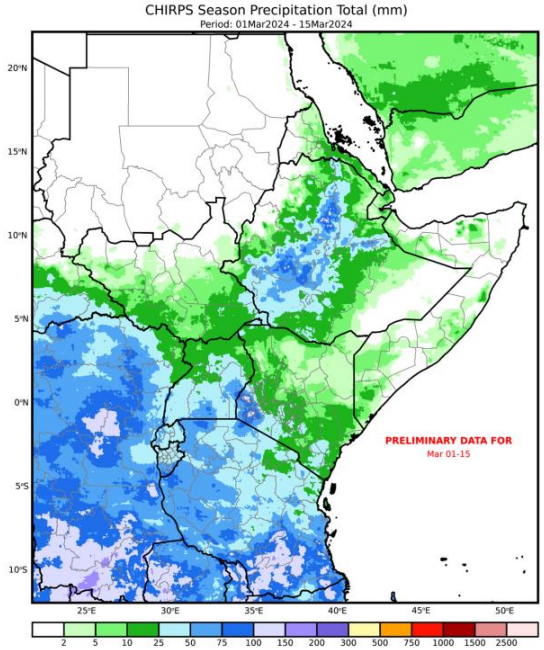
Seasonal rains have yet to be fully established

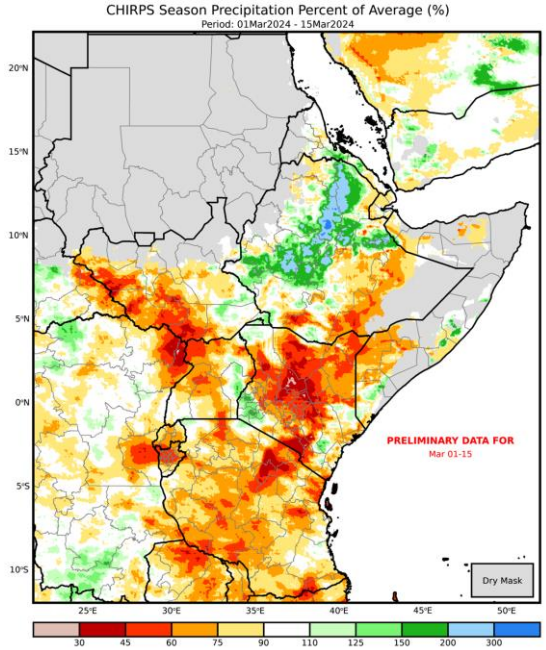


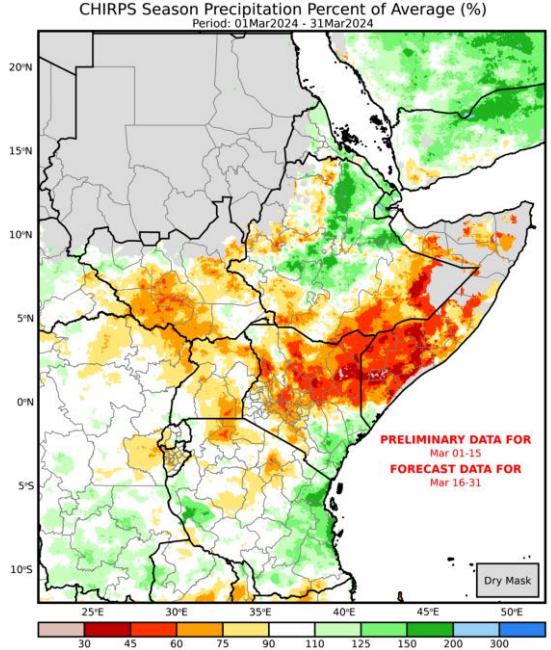


March-May 2024 Precipitation Onset

Uneven onset in space and time

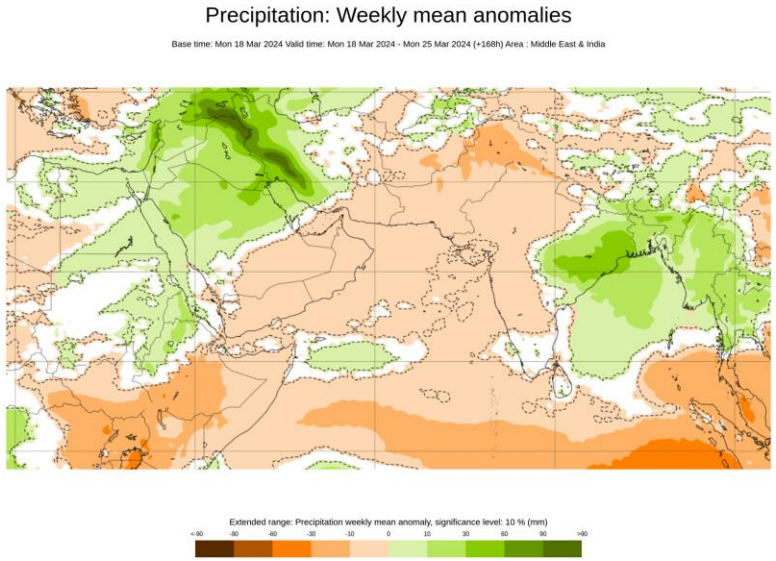


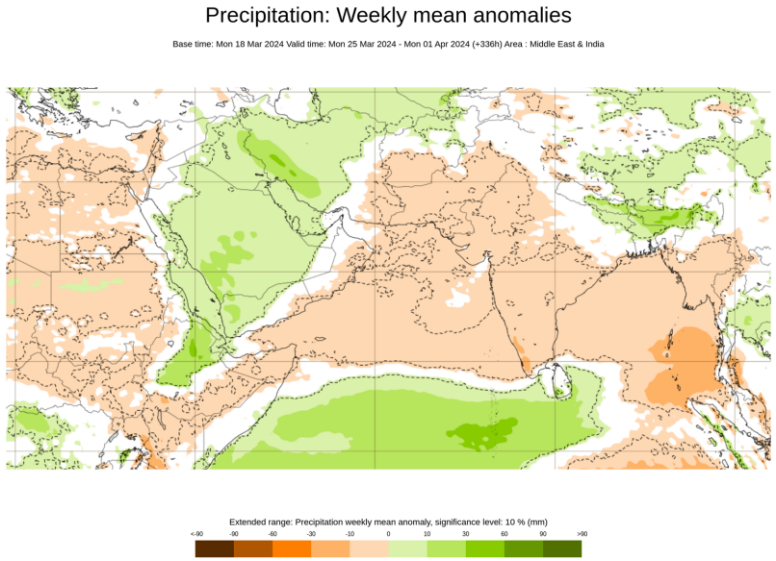




Weekly Precipitation Forecast

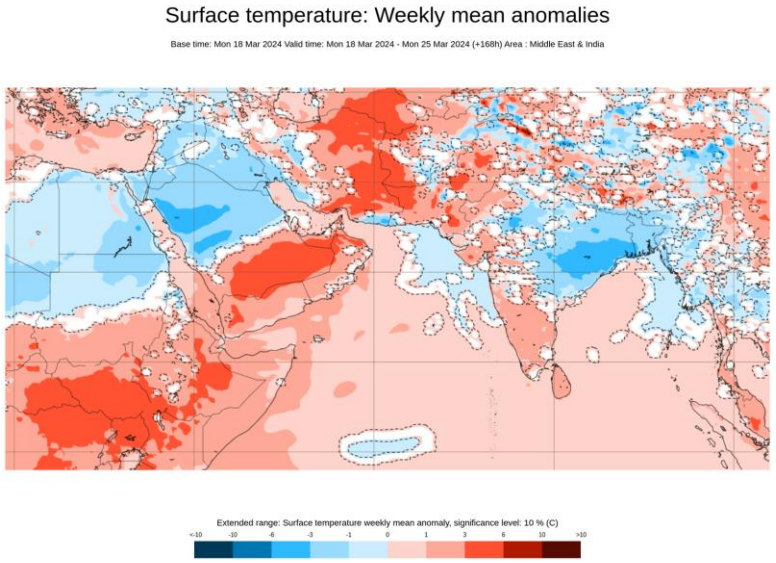
Below average in Week 1

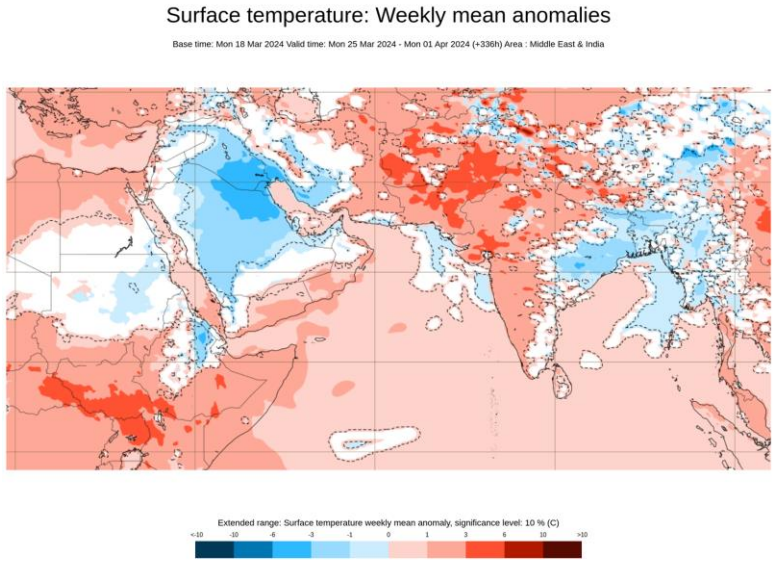




Weekly Temperature Forecast

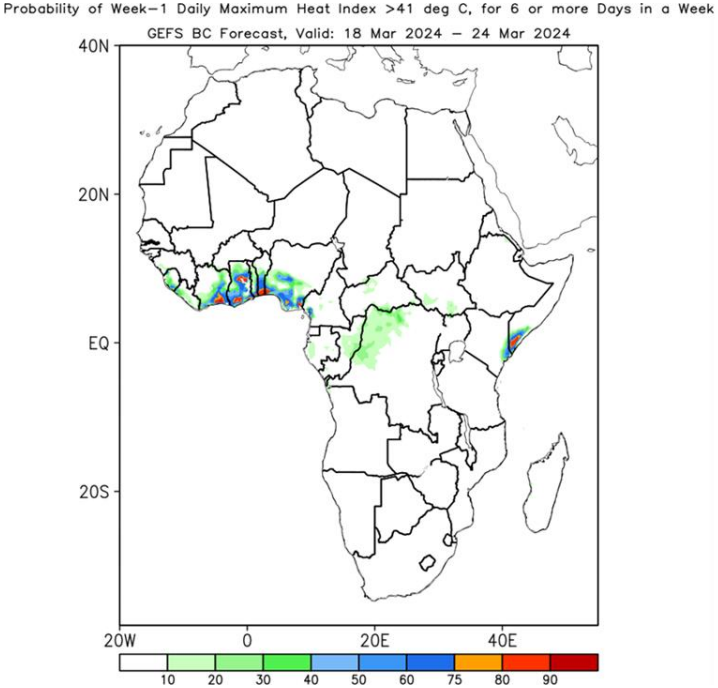
Above average temperatures most likely

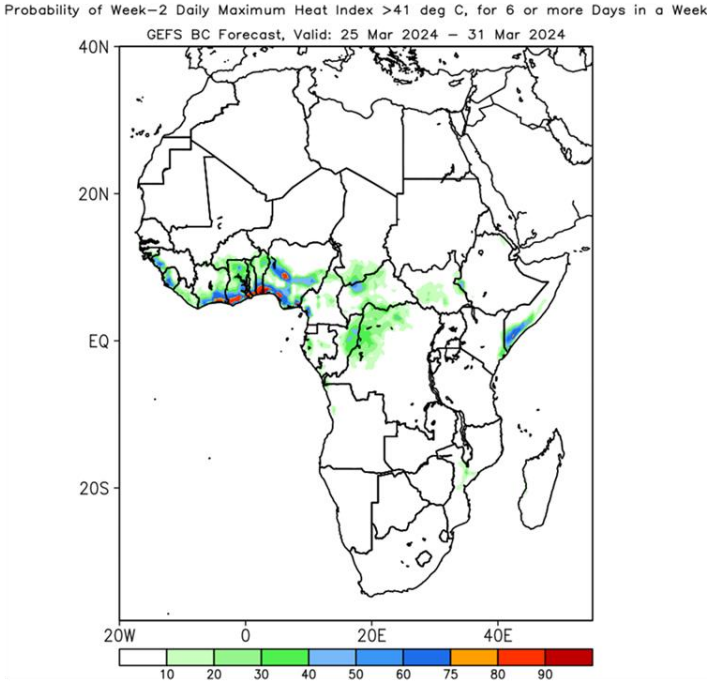




Weekly Heat Index

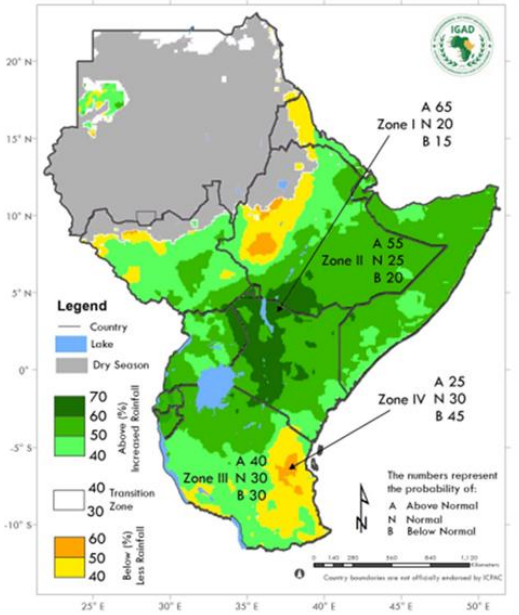
High heat indices likely in parts of east Africa

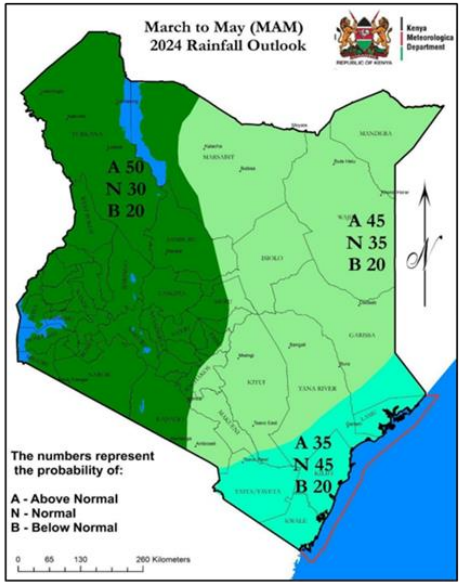


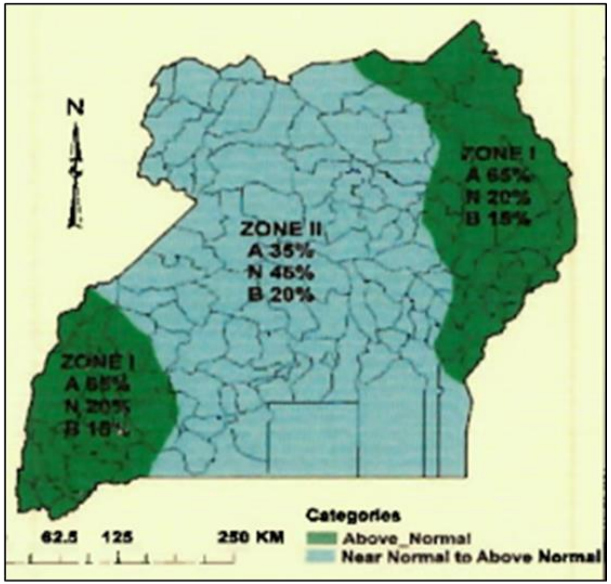


March-May 2024 Precipitation Forecasts

Above average precipitation most likely

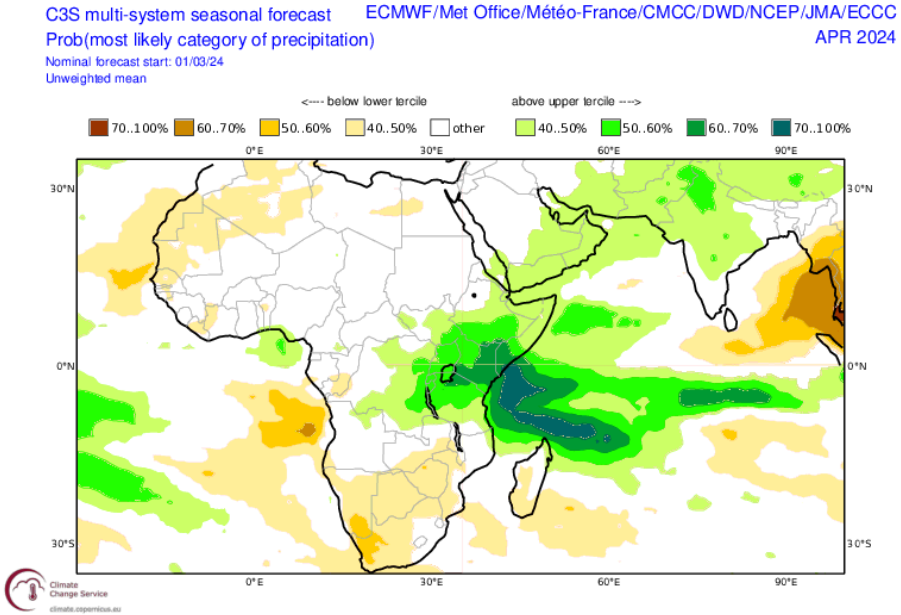


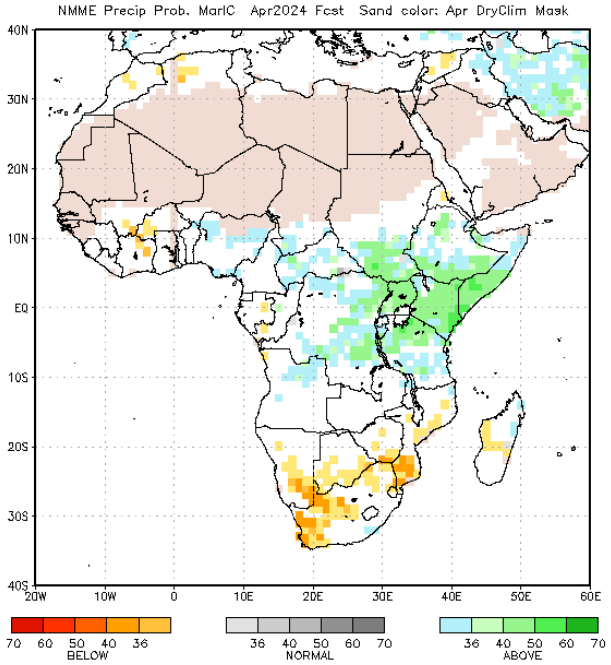




April 2024 Precipitation Forecast

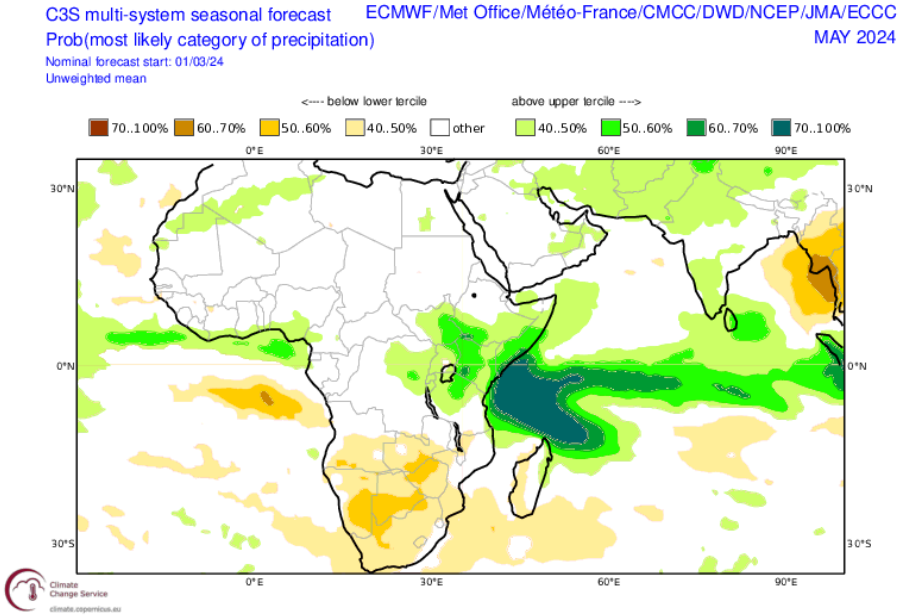
Above average most likely

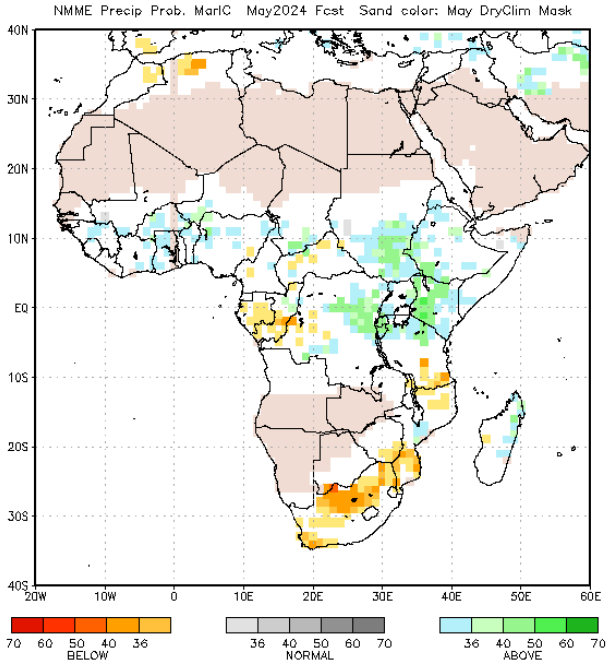




May 2024 Precipitation Forecast

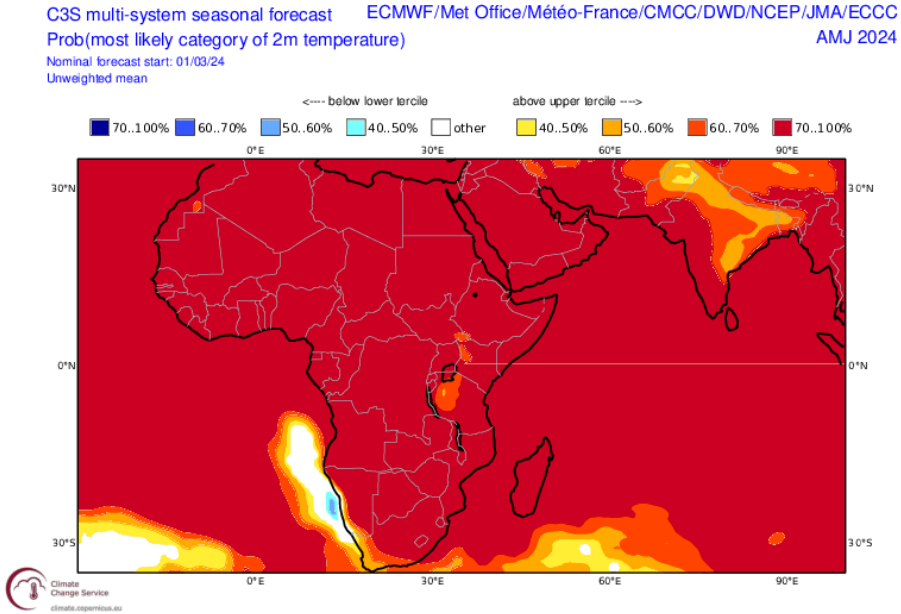
Above average most likely

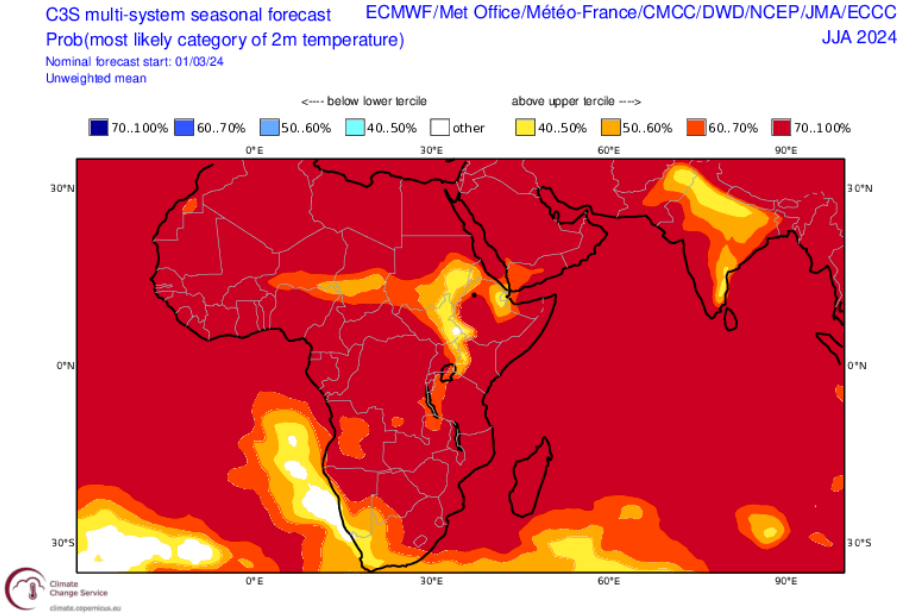




Temperature Forecasts

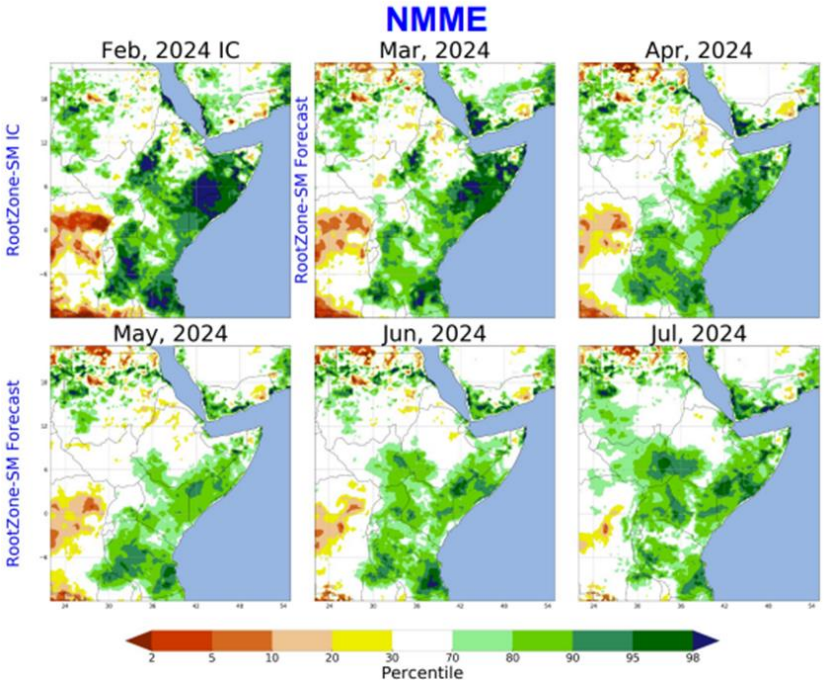
Above average most likely





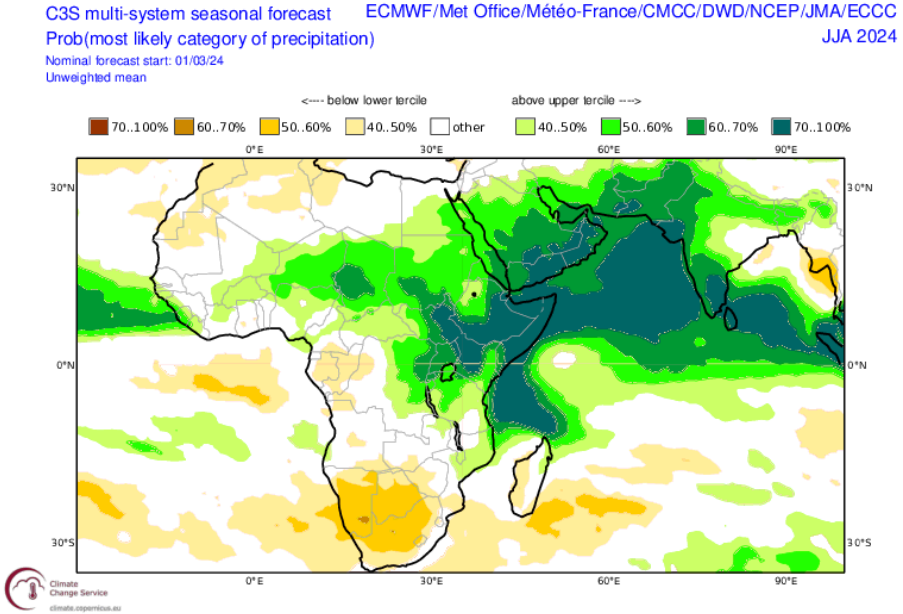
Soil Moisture Forecasts

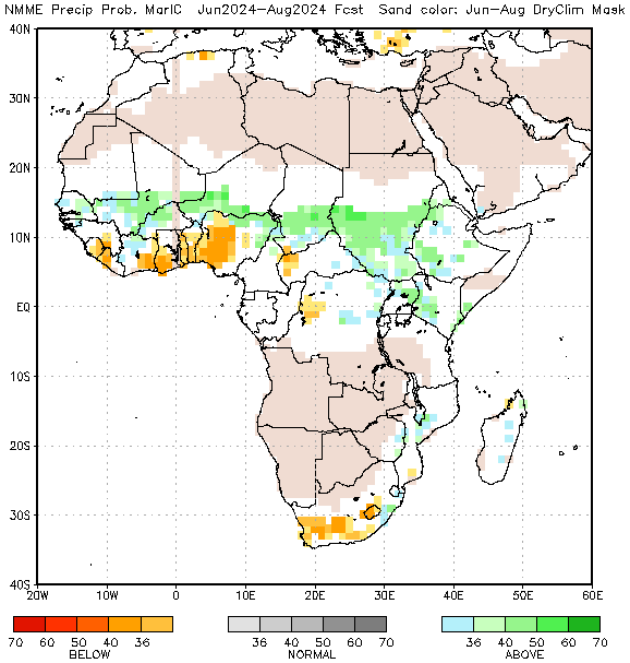
Above average most likely



June-September 2024 Precipitation Forecasts

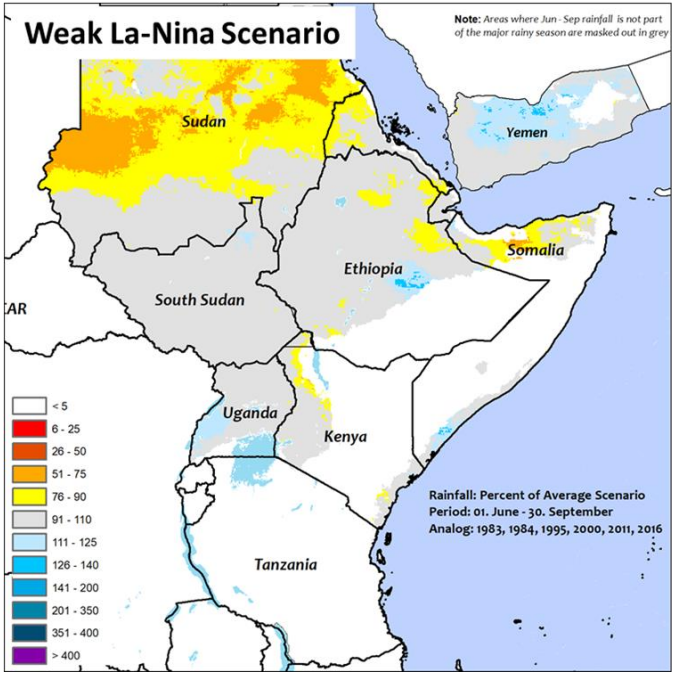
Above average, though confidence differs between forecasts

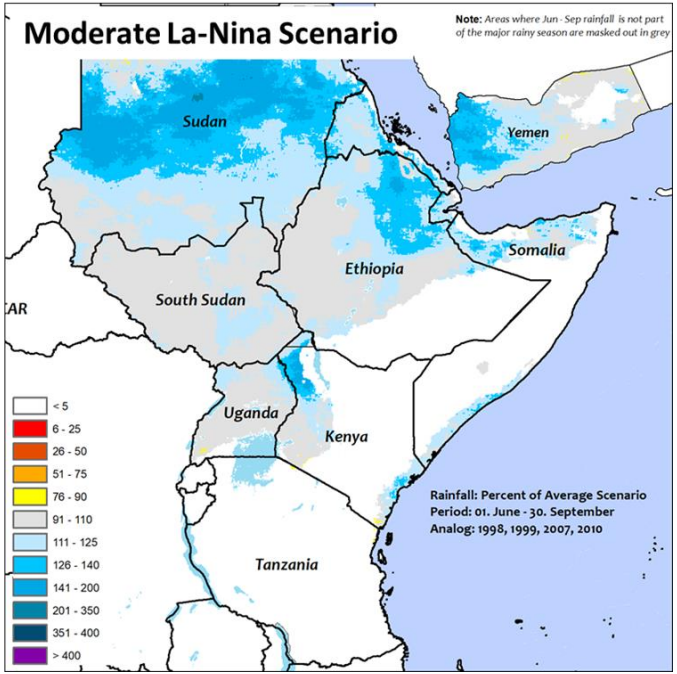




June-September 2024 Precipitation Scenarios

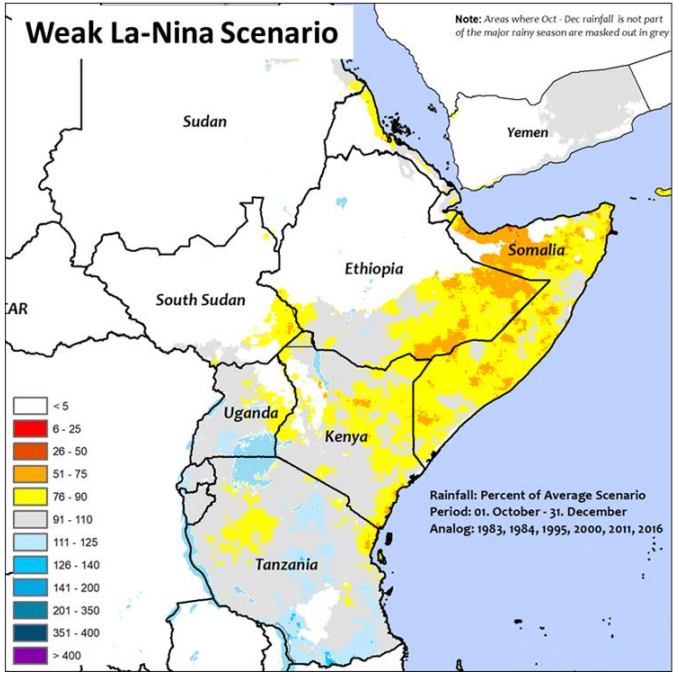
Stronger La Nina related to greater precipitation surpluses

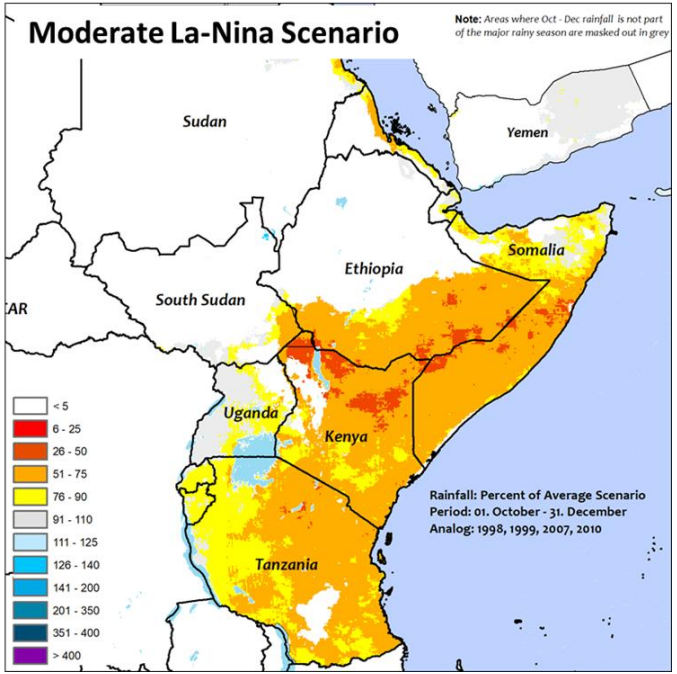




October-December 2024 Precipitation Scenarios

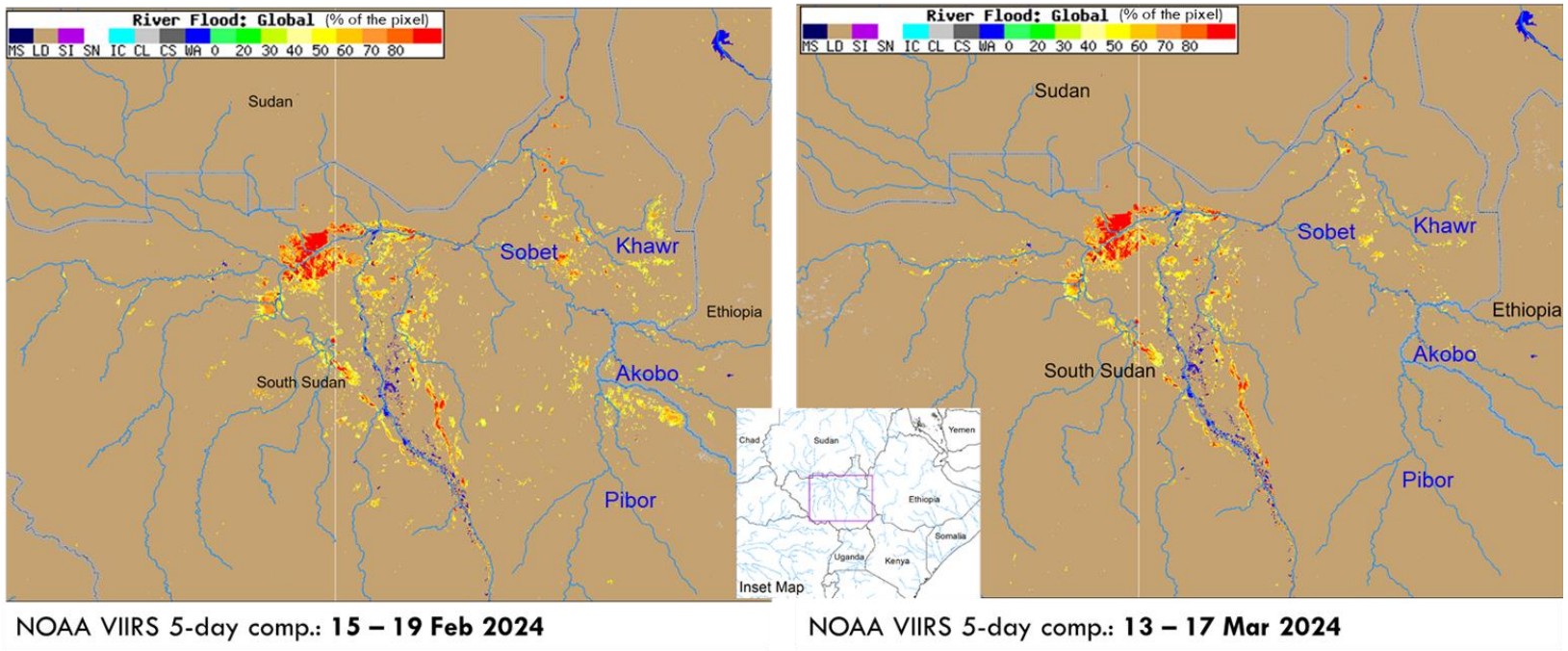
Stronger La Nina related to greater precipitation deficits





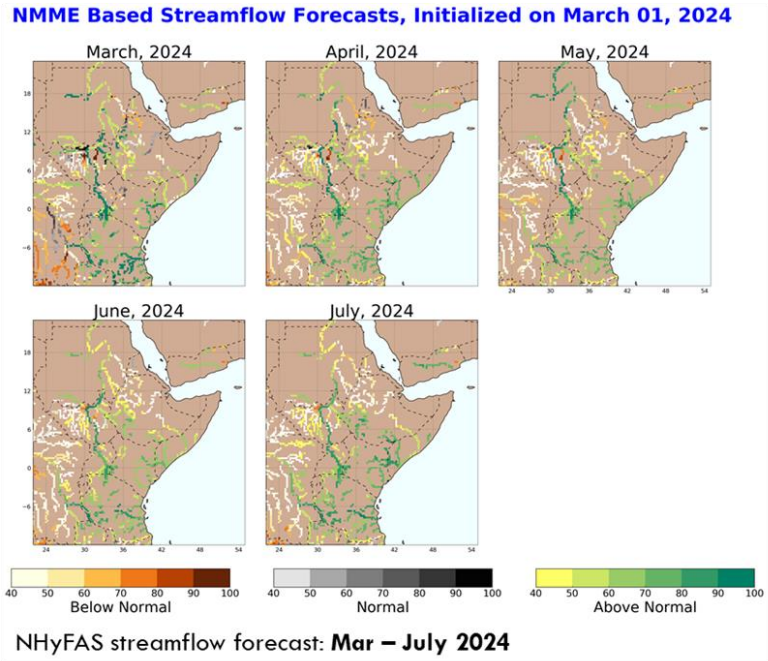
Flooding

Inundated area continues in South Sudan, though less in Khawr, Akobo, Pibor

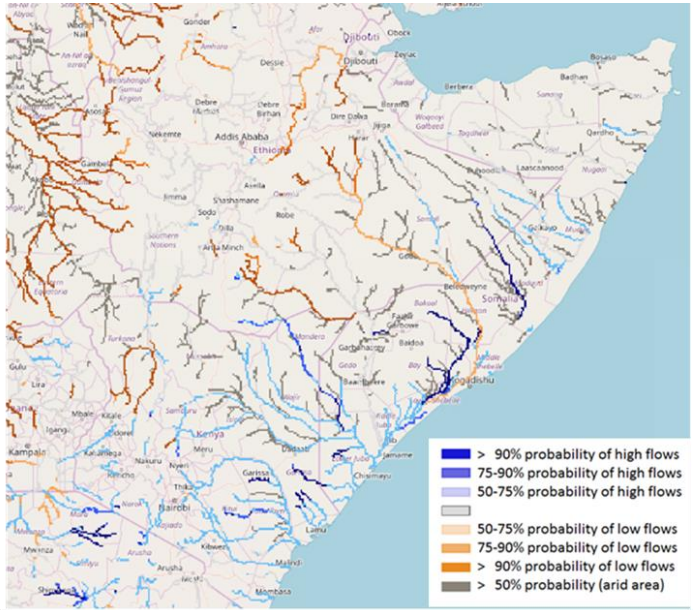


Streamflow Forecast

Above average discharges in Juba, Shabelle, Lak Dera and Tana Rivers during April to June



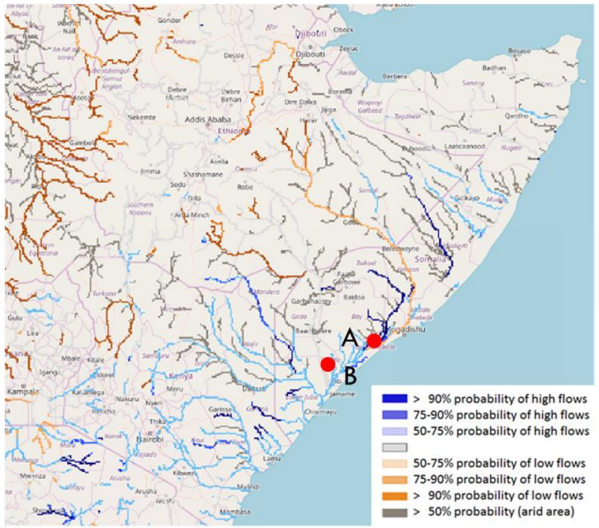
NHyFAS streamflow forecast: **Mar – July 2024**



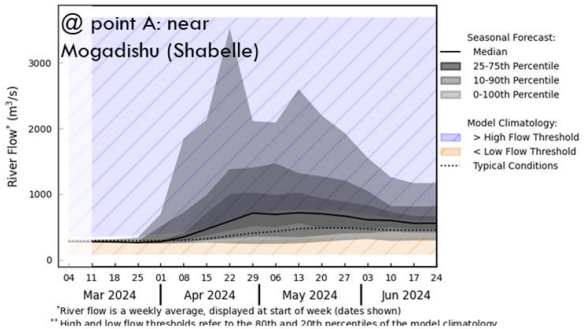
GloFAS streamflow forecast: **Mar – Jun 2024**

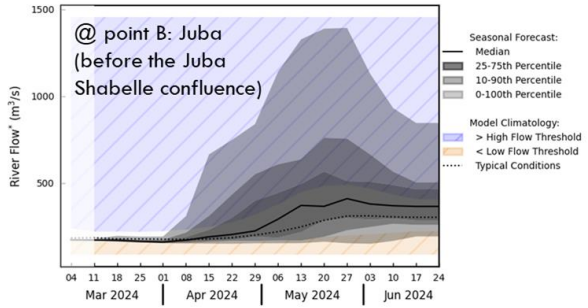
Streamflow Forecast

Above average discharges in Juba, Shabelle, Lak Dera and Tana Rivers during April to June



GloFAS streamflow forecast: **Mar – Jun 2024**





GloFAS streamflow forecast: **Mar – Jun 2024**

Assumption 1a of 3

Early 2024 rainy seasons in the Horn

The February-May 2024 belg rainy season in Ethiopia is likely to be average with isolated areas receiving above-average rainfall over the southwestern rift-valley regions of the country.

Assumption 1b of 3

Early 2024 rainy seasons in the Horn

Based on precipitation to date and ECMWF forecasts through the end of March, precipitation in March is most likely to be below average at the beginning of the long rains/gu/genna season in northern and eastern Kenya, Somalia, and southern/southeastern Ethiopia. A late onset is expected in some areas. Despite this, based on ensemble forecasts for April and May, cumulative rainfall for the season is most likely to be above average, though with localized areas of average rainfall. In Somalia where the season spans April to June, cumulative rainfall is most likely to be above average, with localized areas of ~~above-~~average rainfall.

Assumption 1c of 3

Early 2024 rainy seasons in the Horn

The March-May 2024 diraac/sugum rains in northern pastoral areas of Ethiopia are likely to be average. **No Change**

Assumption 1d of 3

Early 2024 rainy seasons in the Horn

Based on precipitation to date and ECMWF forecasts, cumulative rainfall in February and March is likely to be below average (?). However, based on ensemble forecasts, precipitation in April and May, as well as overall cumulative rainfall during the February-May 2024 main rainy season in Burundi, is most likely to be above average. **No Change**

Assumption 1e of 3

Early 2024 rainy seasons in the Horn

Based on ensemble forecasts, the March to May 2024 first-season rains in bimodal Uganda and in bimodal South Sudan are likely to be above average in Uganda. **No Change**

Assumption 2a of 3

2024 rainy season beginning April and beyond

The June to September kiremt rainfall season in Ethiopia is most likely to be above average with isolated areas of average rainfall. **No Change**

Assumption 2b of 3

2024 rainy season beginning April and beyond

The June to September karan/karma rainfall season in northeastern Ethiopia and northwestern Somalia is assumed to be above average. However, notable uncertainty exists given the long lead time and conflicting ensemble forecasts. **No Change**

Assumption 2c of 3

2024 rainy season beginning April and beyond

Based on the NMME and WMO forecasts, the start of the June to September rainy season in Sudan is likely to be above average. **No Change**

Assumption 2d of 3

2024 rainy season beginning April and beyond

Based on NMME and WMO forecast, the start of the June to September rainy season in unimodal South Sudan is likely to be above average. Based on current persistent flood extents, above-normal river water levels projected to remain above-normal over the coming months, and the forecast of above-average rainfall both during the MAM season in the southern bimodal zone and in the main June-September season, there is an increased likelihood that seasonal flood extent will be above normal and similar to recent years of severe flooding. **No Change**

Assumption 2e of 3

2024 rainy season beginning April and beyond

Based on the NMME forecast, the April-September 2024 unimodal rainfall season in Karamoja, Uganda, is likely to be above-average, though there is uncertainty given the long-range nature of the forecast. **No Change**

Assumption 2f of 3

2024 rainy season beginning April and beyond

The July to September hagaa rains in southern Somalia are assumed to be average. However, uncertainty exists given the long lead time, expectations for emerging La Nina conditions, and conflicting ensemble forecasts. **No Change**

Assumption 2g of 3

2024 rainy season beginning April and beyond

Based on expectation for a transition from El Nino to ENSO Neutral to La Nina the February to August Long rains in unimodal Kenya are expected to be above average. **No Change**

Assumption 3a of 3

Non-rainfall assumptions

NMME-based rootzone soil moisture forecasts indicate that soil moisture will remain above average in much of the greater horn through at least April/May 2024, and among the highest on record in parts of Somalia and southeastern Ethiopia. Given this and expectations for average to above-average rainfall during the March-May/April-June long rains season in the Horn, an above-average risk of flooding exists during late April and May in Shabelle and during May and June in Juba, Lak Dera and Tana River catchments ~~the rainy season~~.

Question: In assumption 3a on soil moisture forecasts, I added a statement about risk of flooding during the long rains season (Mar-May; Apr-Jun for Somalia). We would greatly appreciate any refinement and additional detail regarding level of risk in the most likely scenario, timing of risk, and areas most at risk.

Assumption 3b of 3

Non-rainfall assumptions

Above-average temperatures are most likely through at least

September 2024. **No Change**

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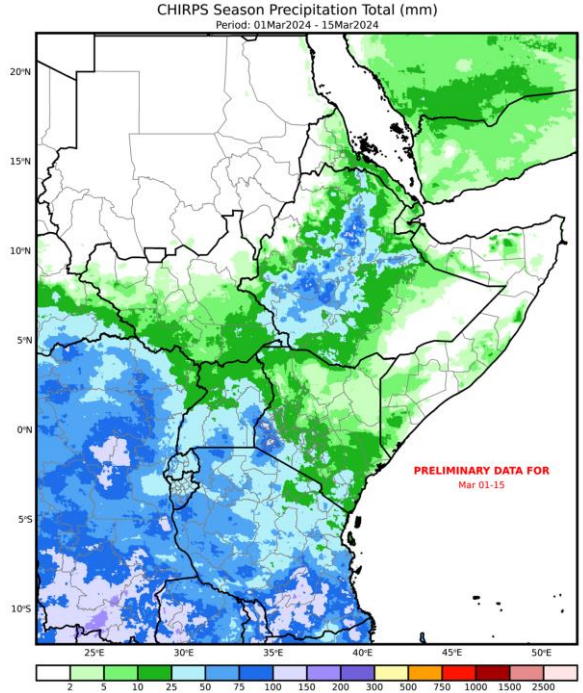
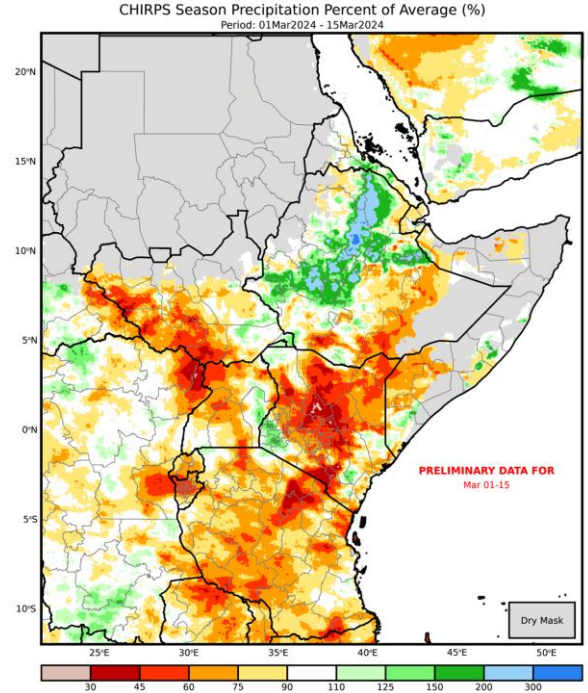
Yemen

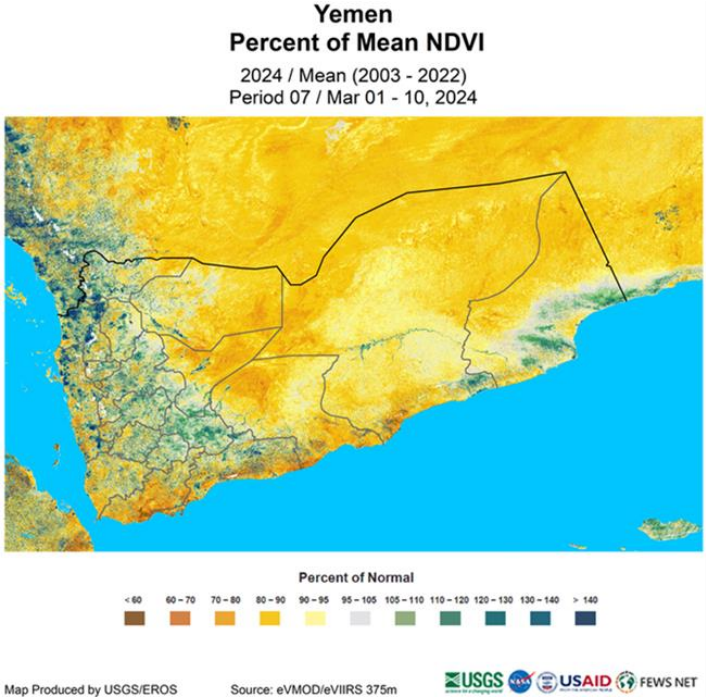
Season to Date Precipitation

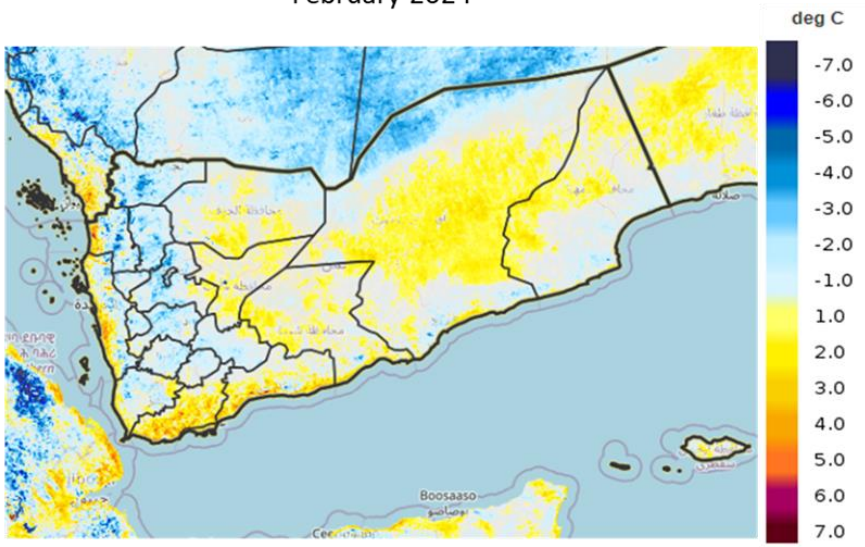
Light precipitation early in the season





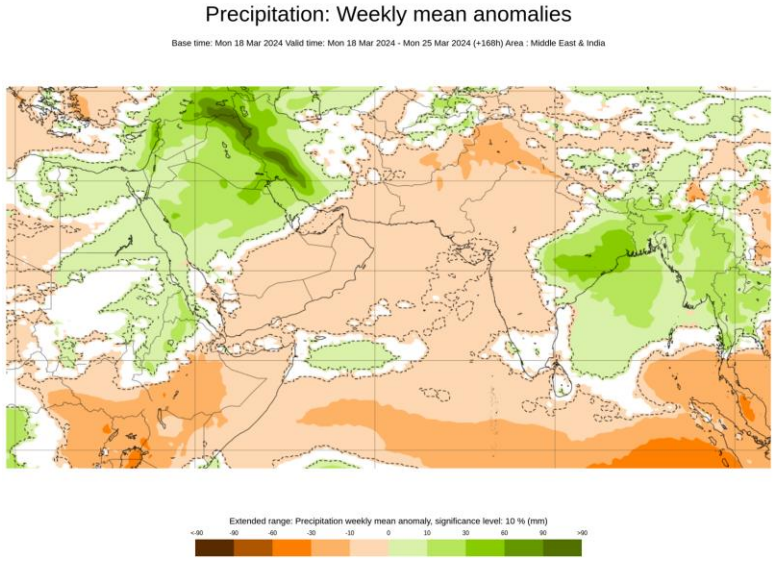
Land Surface Conditions

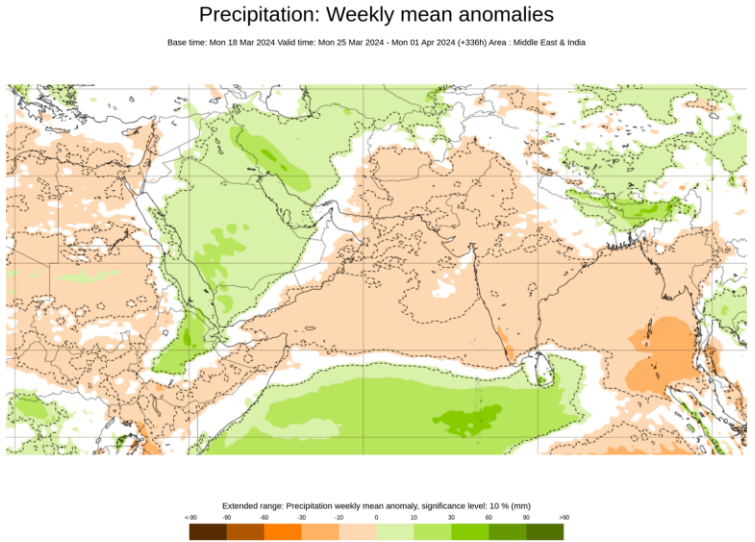




Weekly Precipitation Forecast

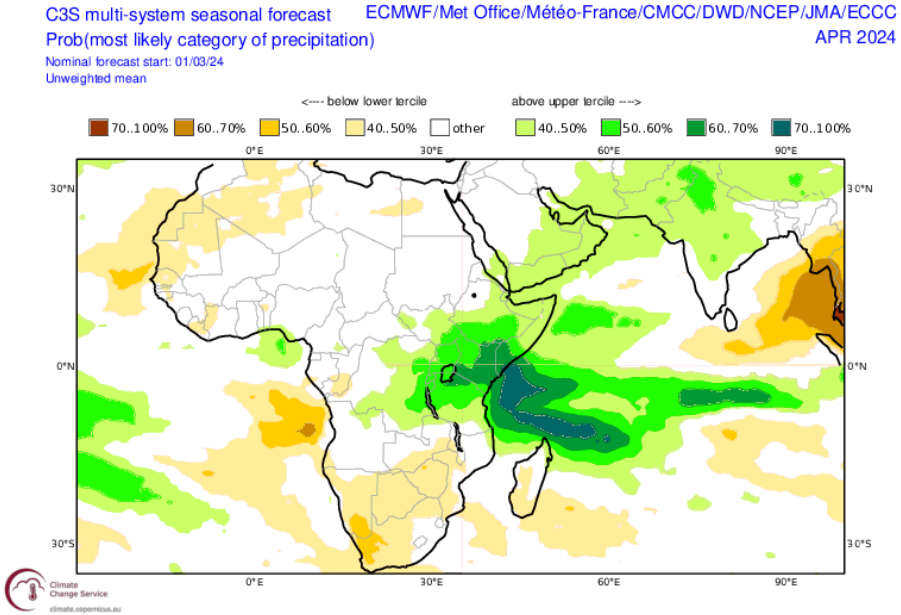
Below average in Week 1 and above average in Week 2

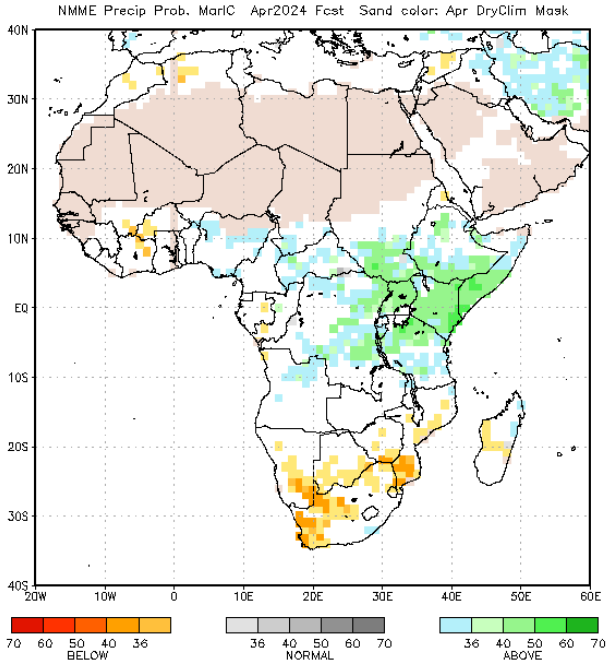




April 2024 Precipitation Forecast

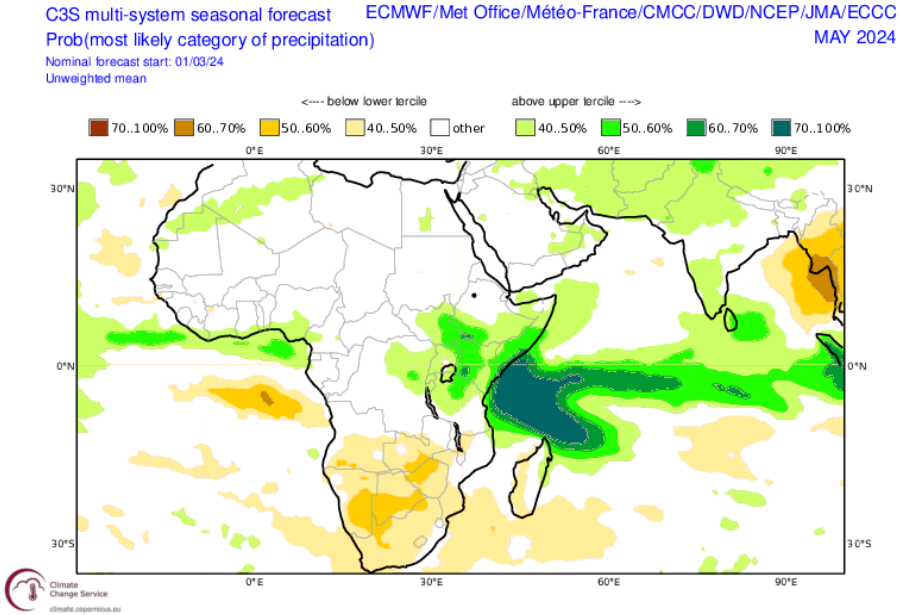
Tilt in odds to above average

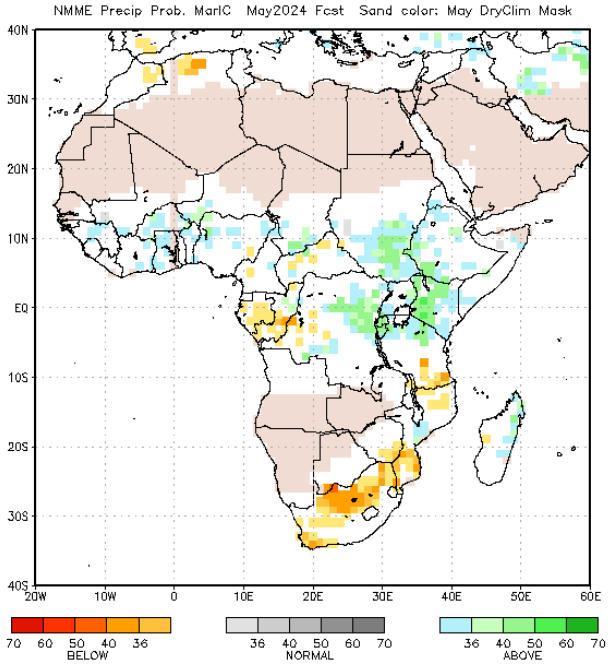




May 2024 Precipitation Forecast

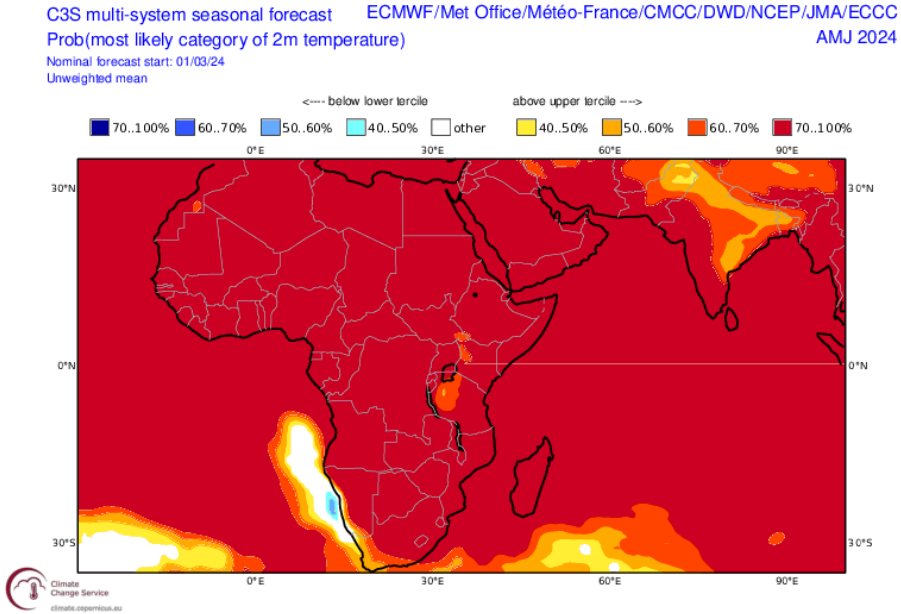
No tilt in odds

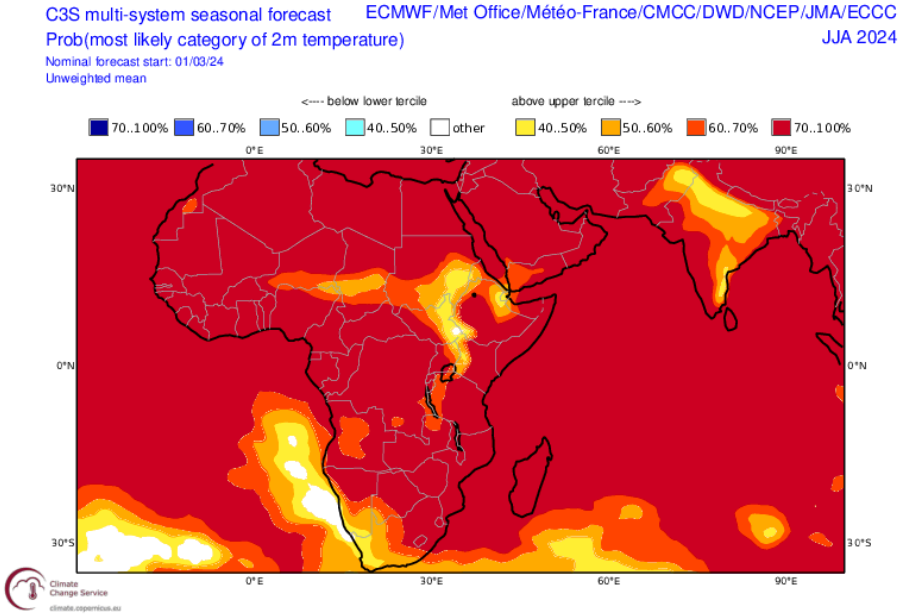




Temperature Forecasts

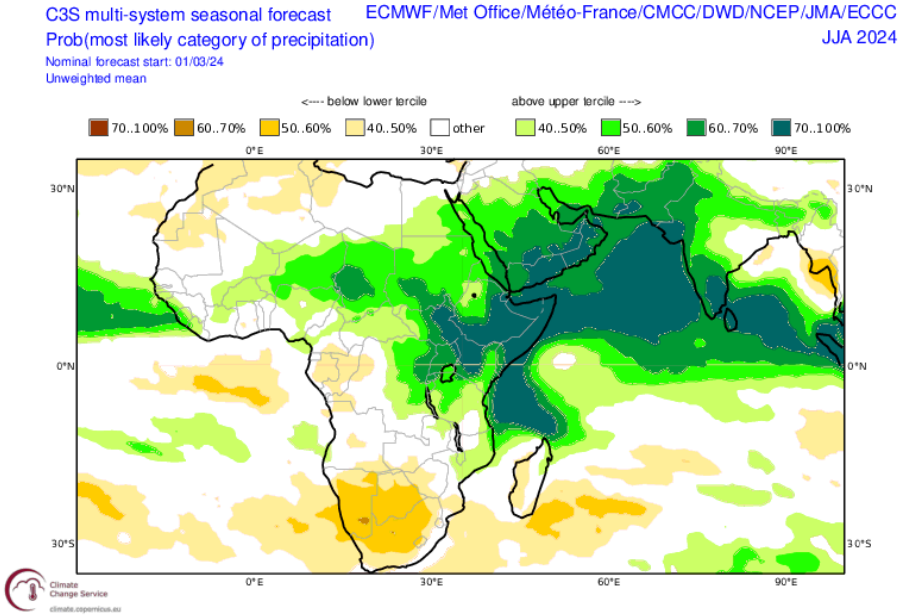
Above average most likely

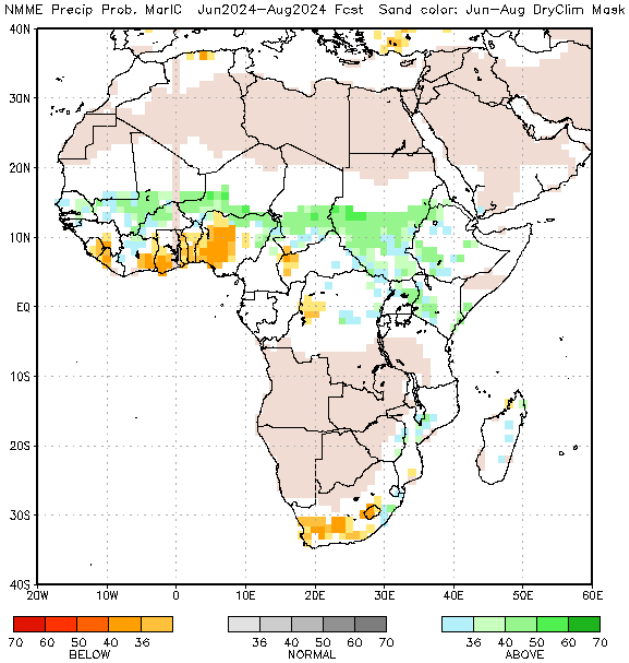




June-August 2024 Precipitation Forecast

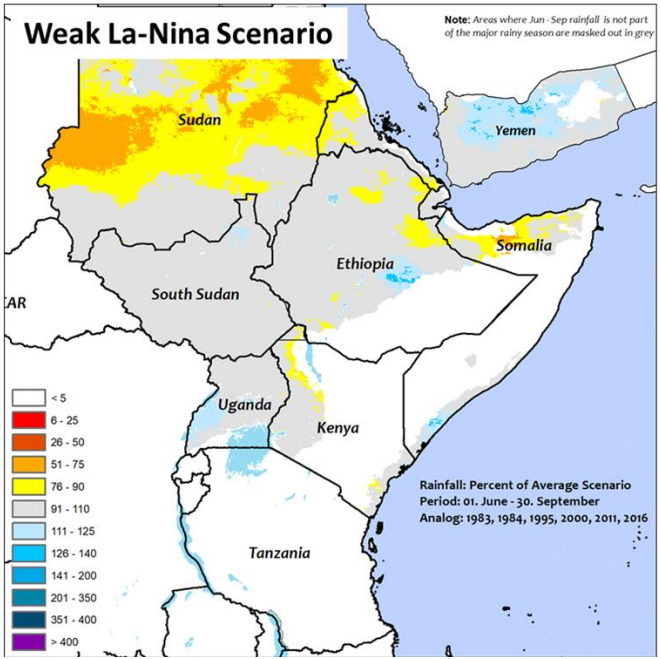
Above average, though confidence differs between forecasts

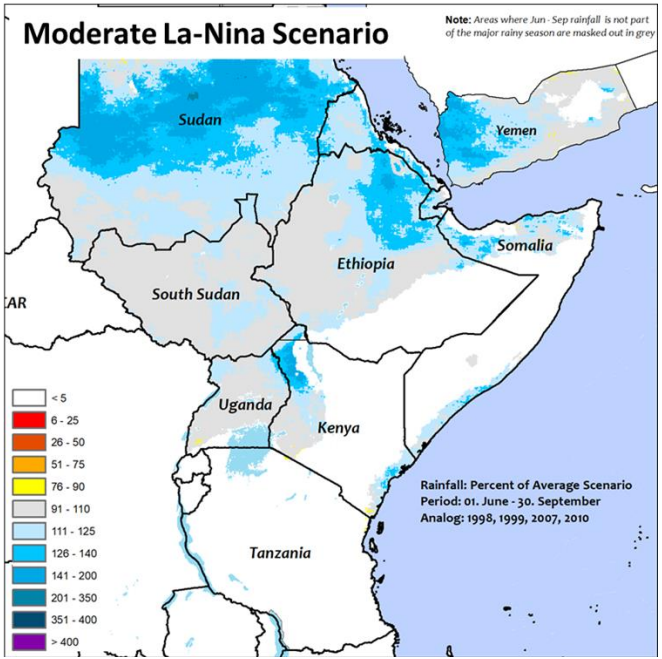




June-September 2024 Precipitation Scenarios

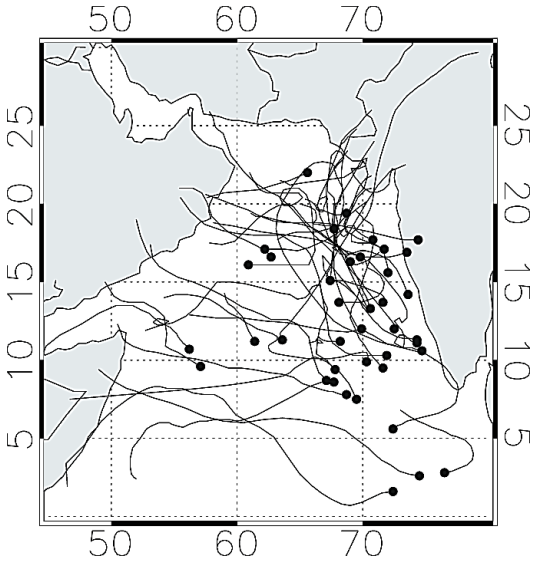
Stronger La Nina related to greater precipitation surpluses

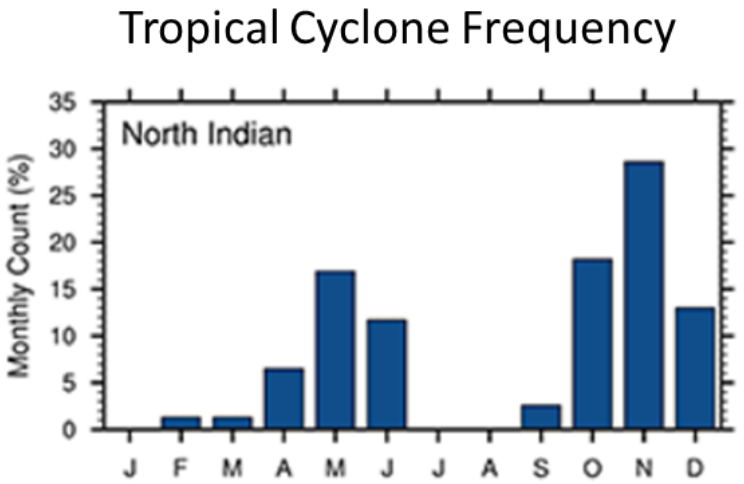




Cyclones

Are seasonal, yet don't commonly affect Yemen





Cyclones

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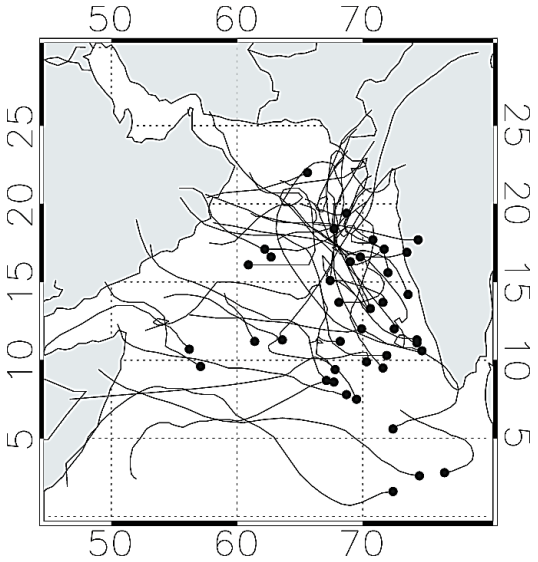

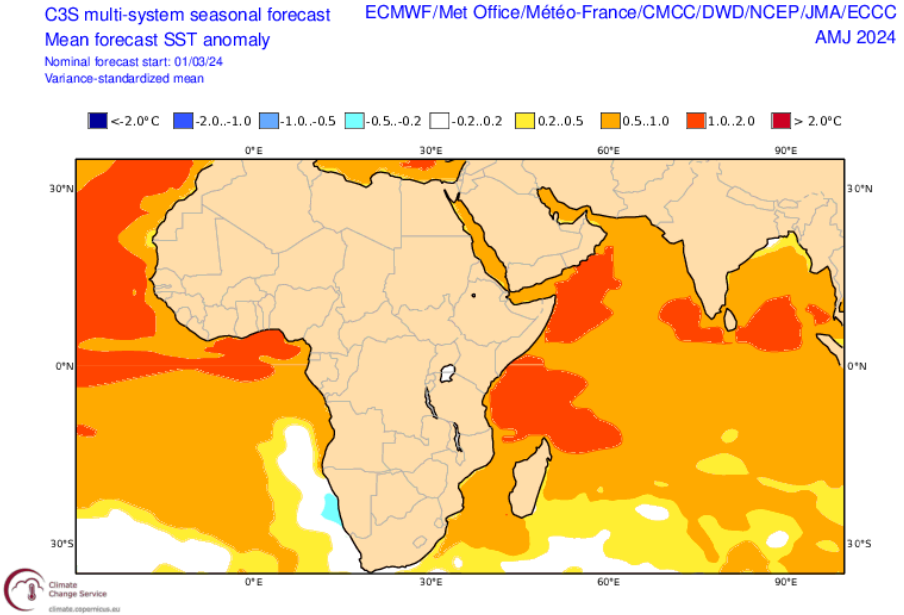

Assumption 1 of 5

Based precipitation to date and GEFS forecasts, cumulative rainfall in March is likely to be near average. Given this and ensemble forecasts for April and May, cumulative rainfall in Yemen's March to May 2024 first rainy season is most likely to be above average, though uncertainty exists given diverging forecasts.

Assumption 2 of 5

No Change

Based on available ensemble forecasts and expectations for emerging La Nina conditions, cumulative rainfall in Yemen's July to September 2024 second rainy season is anticipated to be above average.

However, notable uncertainty exists given the long lead time and conflicting ensemble forecasts.

Assumption 3 of 5

No Change

Risk of cyclone strikes and associated flooding for Socotra and the southern Aden Gulf coast is highest from mid-April to mid-June and from October to December. In the peak period from mid-April to May 2024 and from mid-June to at least September, risk of cyclone strikes will likely be above average due to forecast above-average sea surface temperatures in the Arabian Sea, though risk will still be low overall given the rarity of cyclone strikes in Yemen.

Assumption 4 of 5

No Change

Based on ensemble forecasts through July and historical trends, above-average temperatures are most likely across most of the country through at least September 2024.

Assumption 5 of 5

No Change

Vegetation conditions are currently sparse and near average, though anomalies are mixed. Vegetation conditions are expected to continue to seasonally decline in March 2024 during the dry period, improve through May during the first rainy season, seasonally decline during the dry period through June/July, and then finally improve from July to September 2024 during the second rainy season. Given expectations for above-average temperatures, deterioration during dry periods is likely to be faster than normal. Overall, vegetation conditions are likely to remain mixed compared to the average, though with more areas likely to see below-average vegetation conditions due to the above-average temperatures until at least the middle of July to September rainy season when rainfall will improve conditions.


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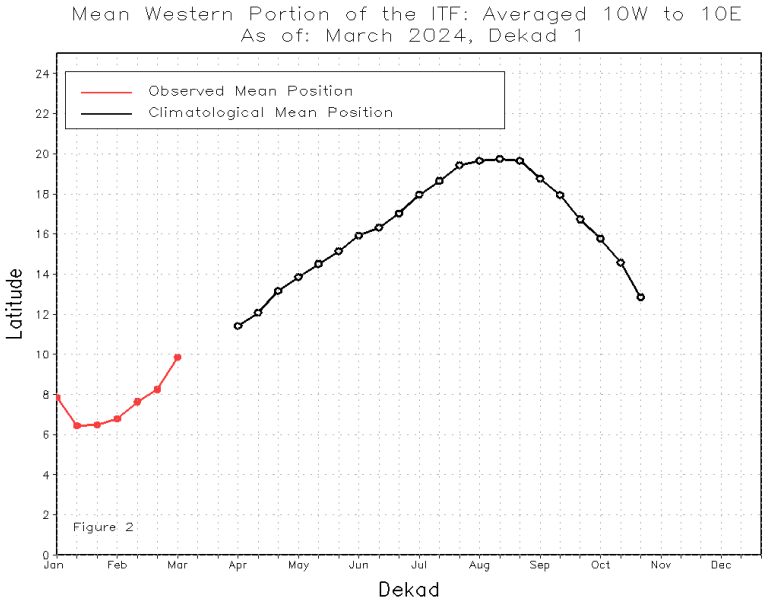
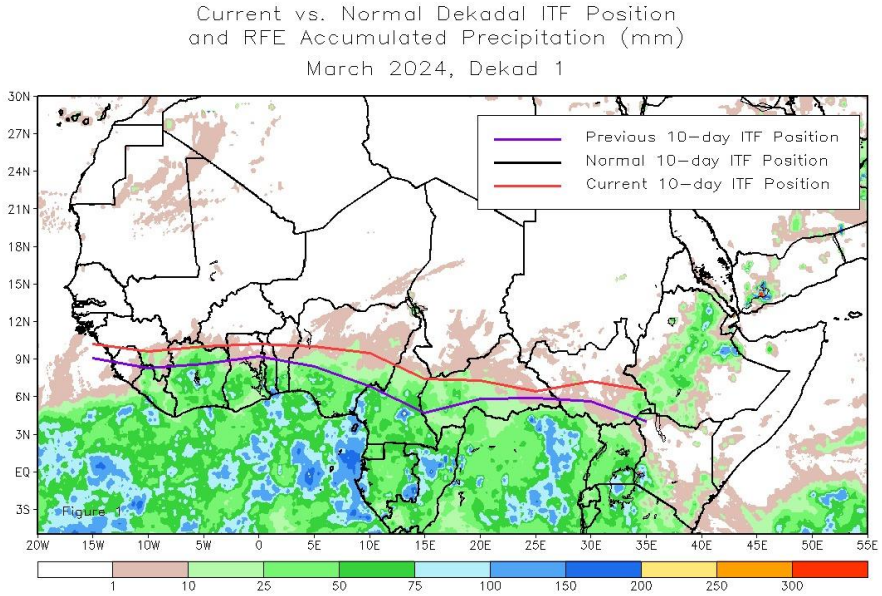
West Africa

ITF and its Movement

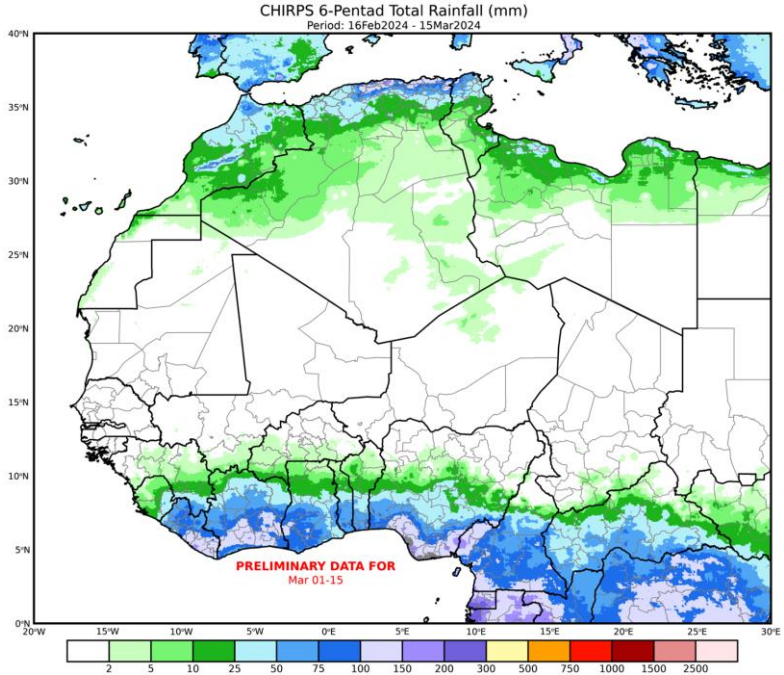
Continues its northward ascent, signaling onset of 2024 season

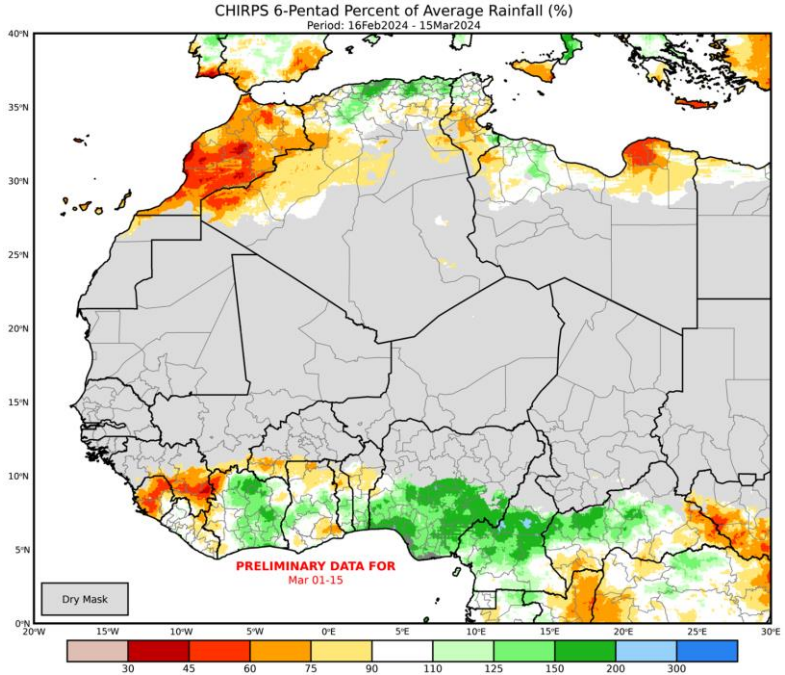




Recent Precipitation

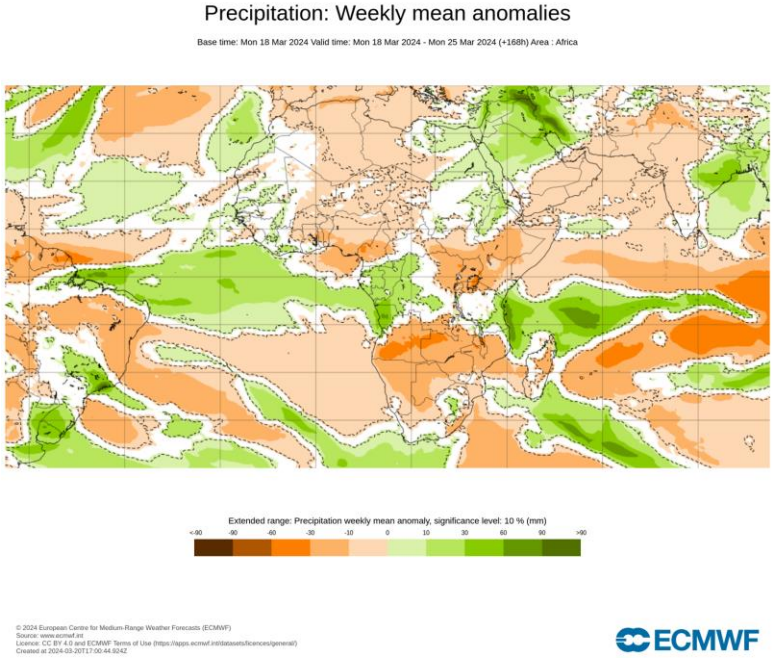
Season began in bimodal zone with mixed precipitation anomalies

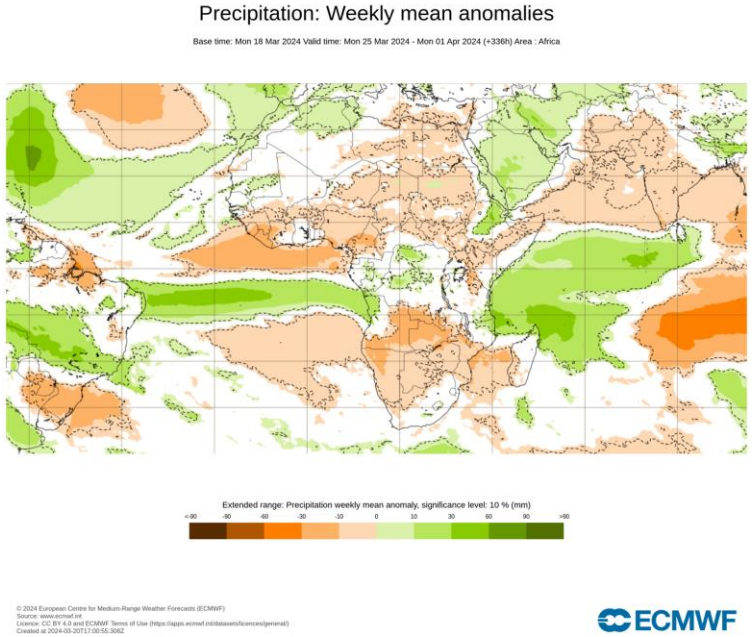




Weekly Precipitation Forecast

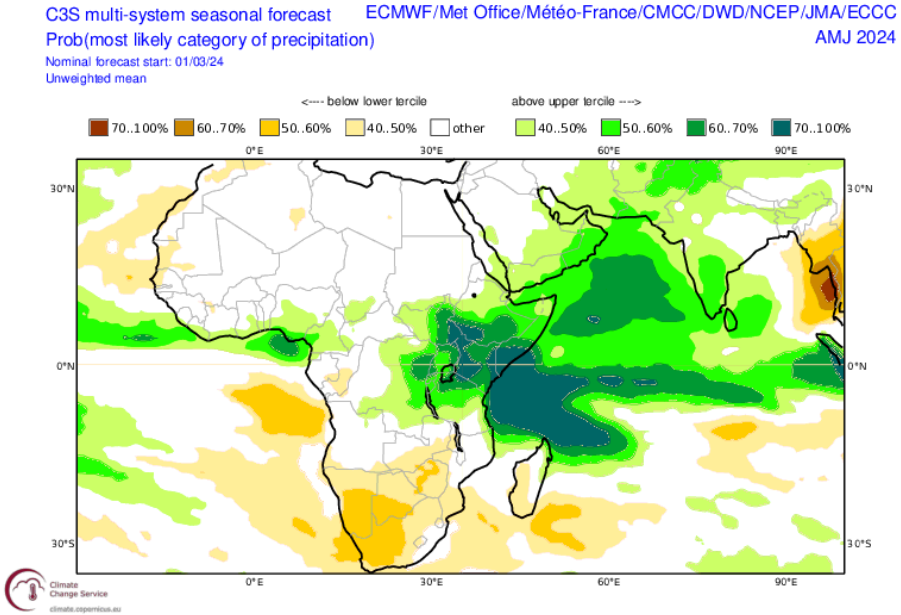
Large anomalies not forecast

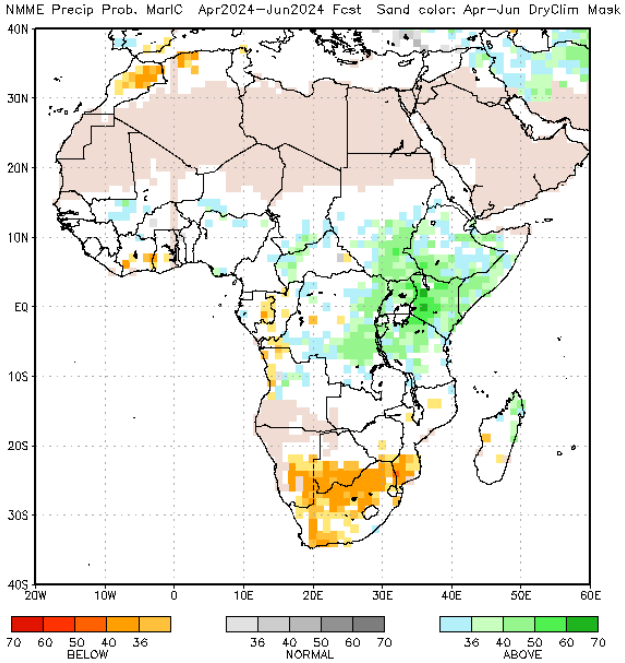




April-June 2024 Precipitation Forecast

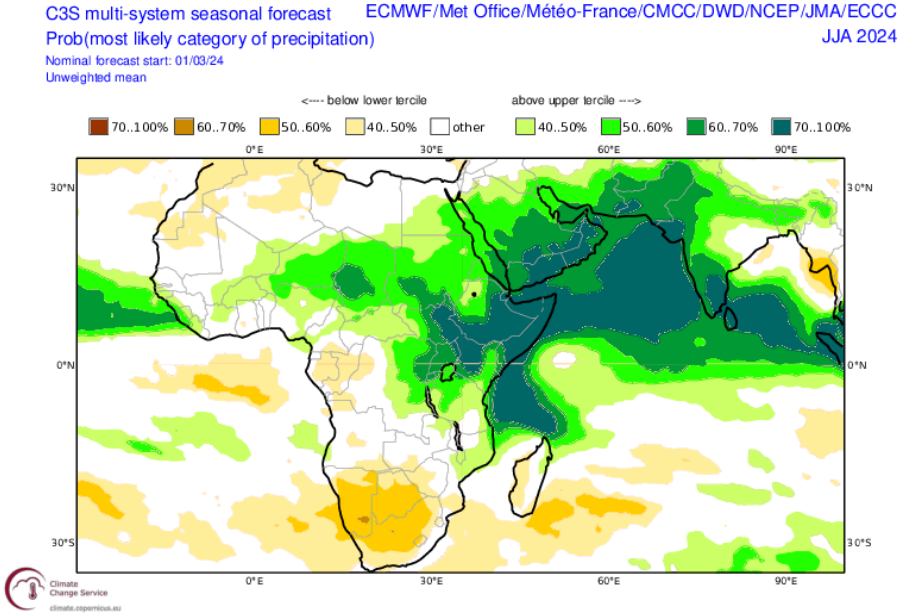
Little tilt in odds to above or below average

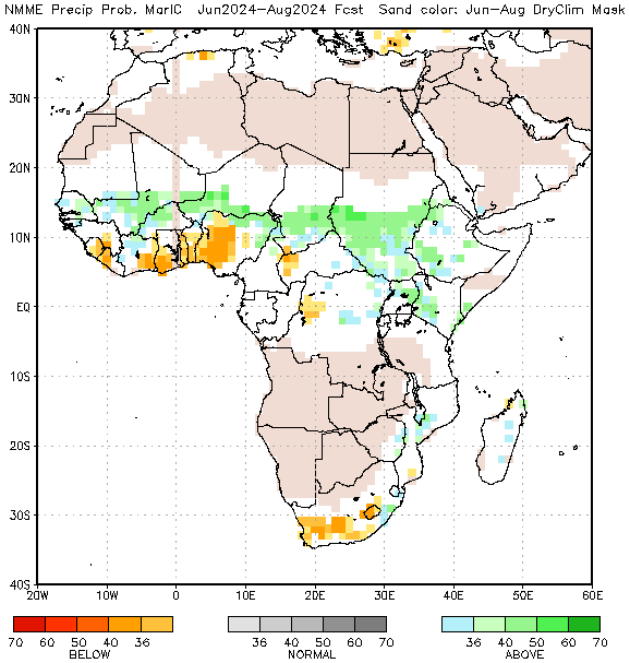




June-August 2024 Precipitation Forecast

Tilt in odds to above average in the Sahel





Assumption 1 of 3

Start of 2024 season

The 2024 rainy season has started on time, following a normal ascent of the ITCZ. Rainfall began ~~is expected to begin~~ in late February/early March in bimodal areas. A normal start to the rainy season is expected in the Sahel.

Assumption 2 of 3

March to May rainfall

March-May 2024 rainfall is anticipated to be average in the Gulf of Guinea and bimodal zones, including southern Nigeria, bimodal Cameroon, Togo, Liberia, and Cote D'Ivoire. In northern Nigeria, rainfall is anticipated to begin on time in May 2024. **No Change**

Assumption 3 of 3

June to September rainfall (No Changes)

A. Average to above average rainfall is forecast over the Sahel from June to September, however, given the long lead time, confidence in the forecast is relatively lower.

B. Despite forecast favorable rainfall, poor spatio-temporal distribution of rainfall during key crop development periods can lead to localized below-average 2024/25 production.

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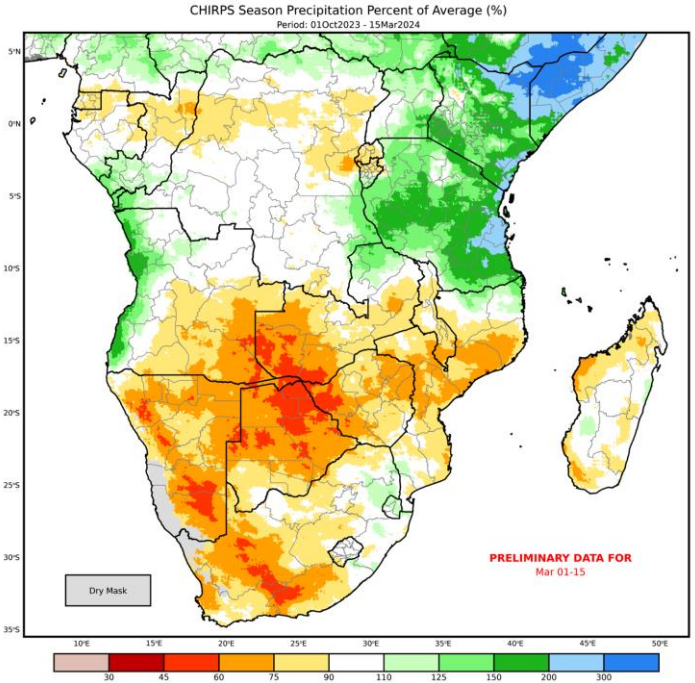
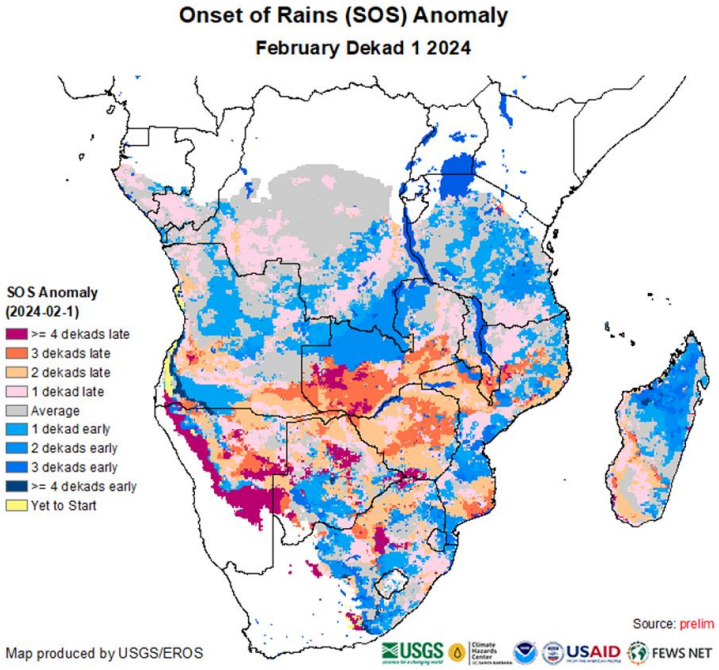
Southern Africa

2023-24 Precipitation Performance

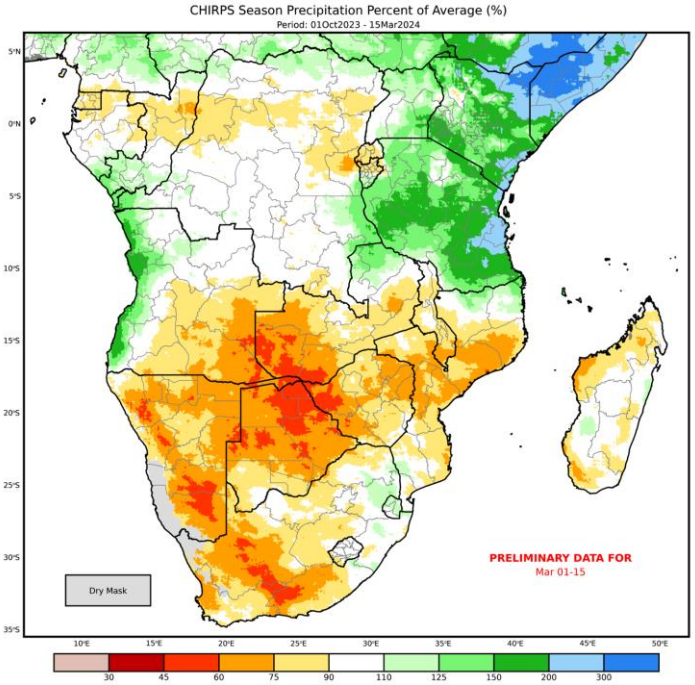
Precipitation started late and has been below average

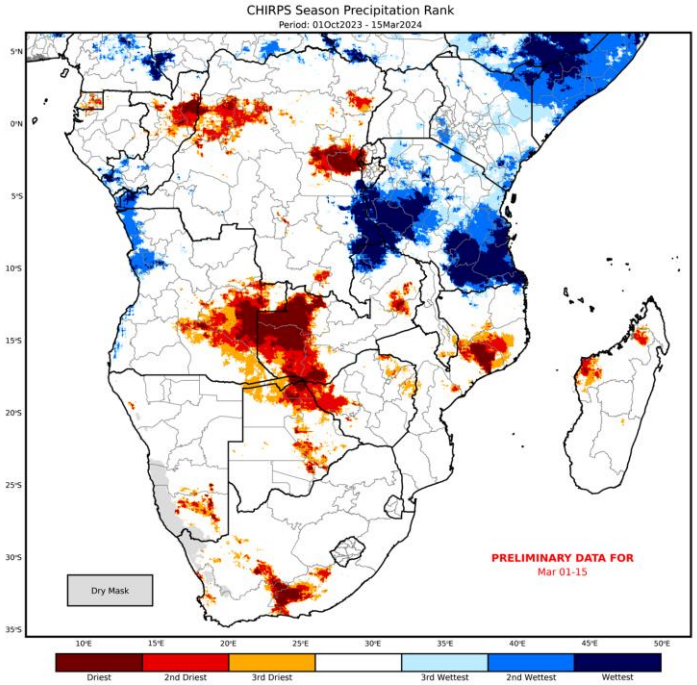




2023-24 Precipitation Performance

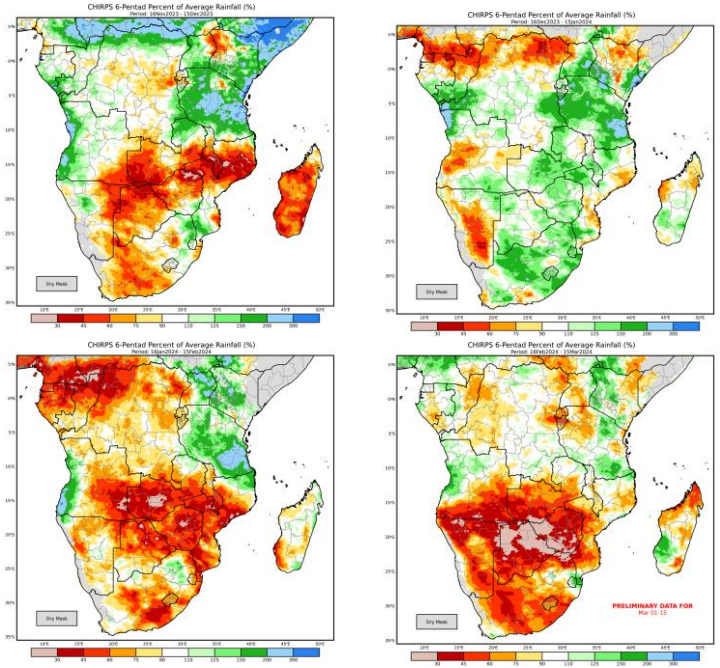
Record and near-record low precipitation in many areas





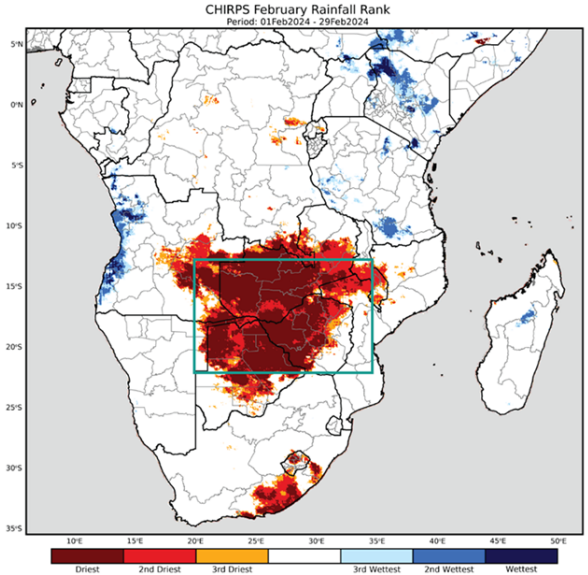
2023-24 Precipitation Performance

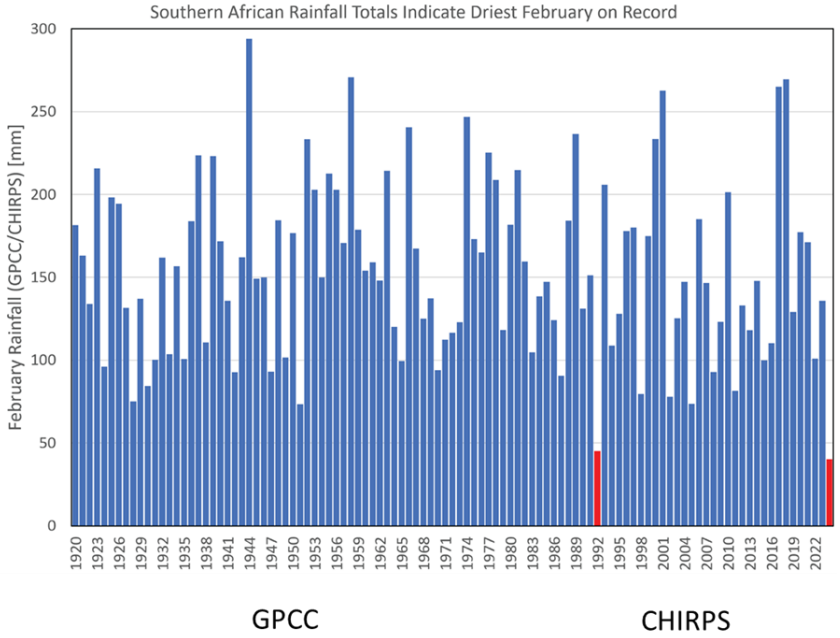
Precipitation well below average except for mid-Dec to mid-Jan



February 2024 Precipitation

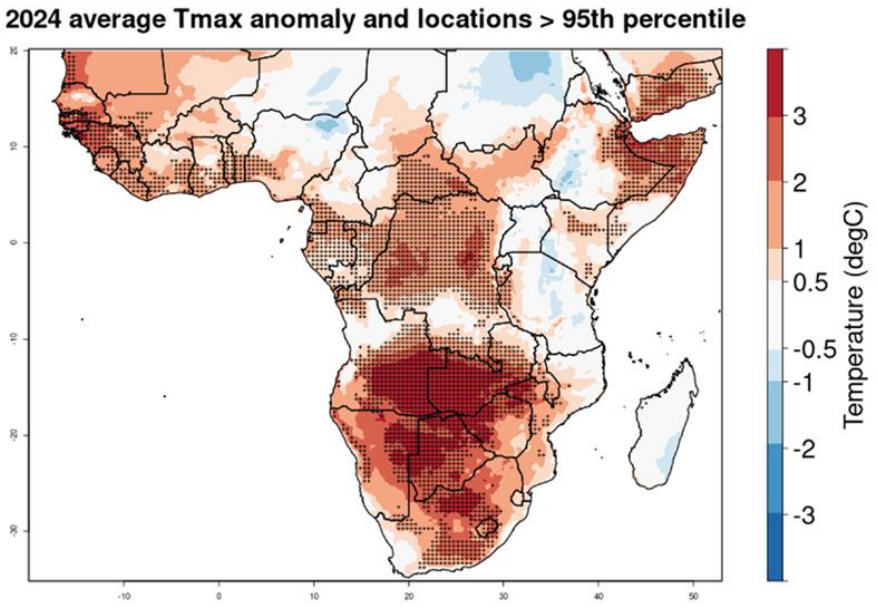
Driest on record in Central Southern Africa

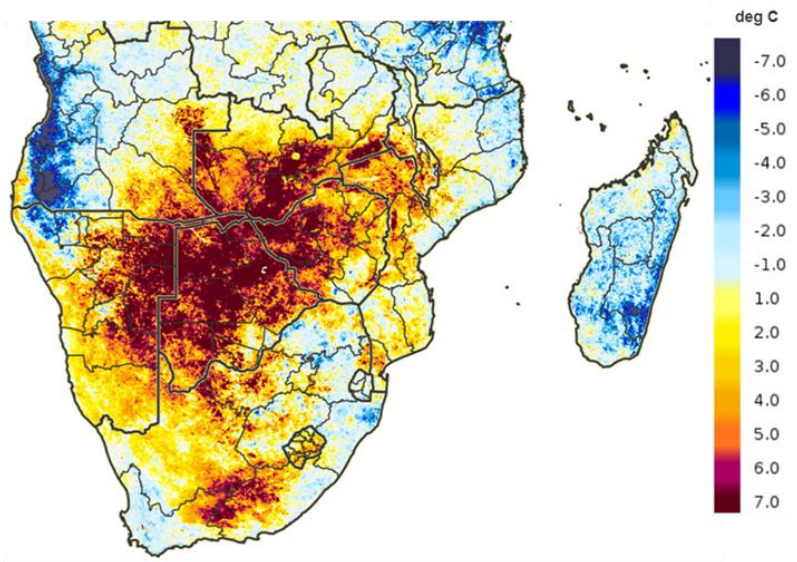




February 2024 Temperatures

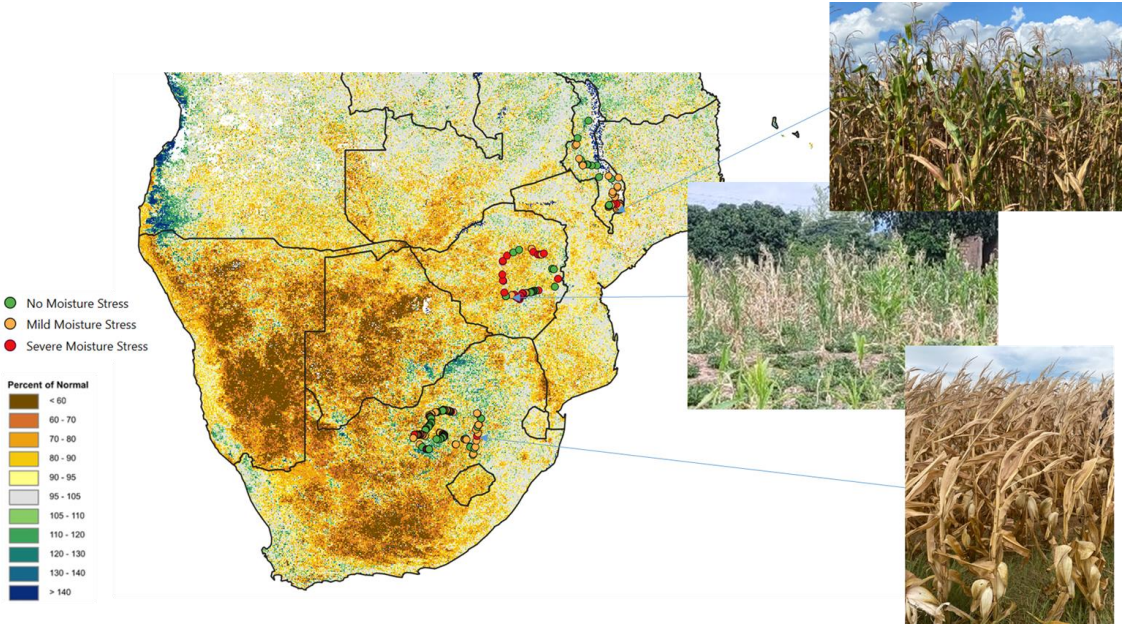
Impressive and widespread warmth





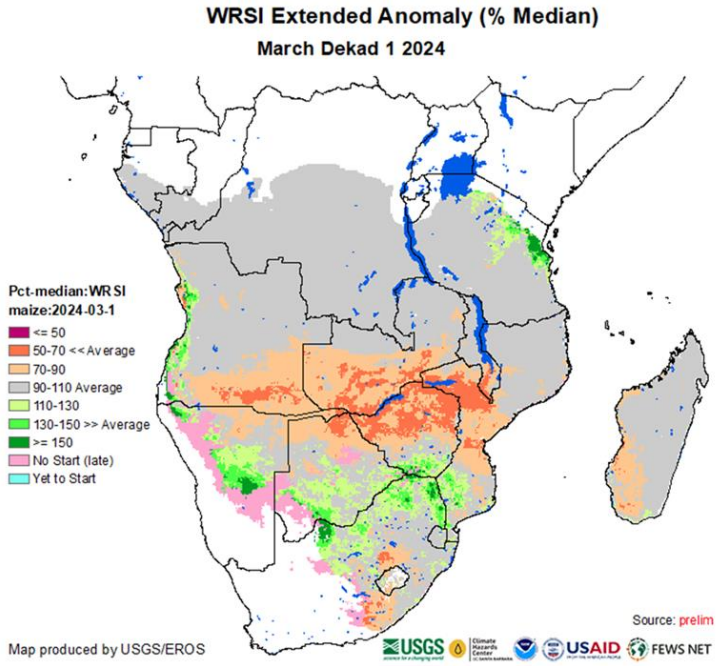
Vegetation Conditions

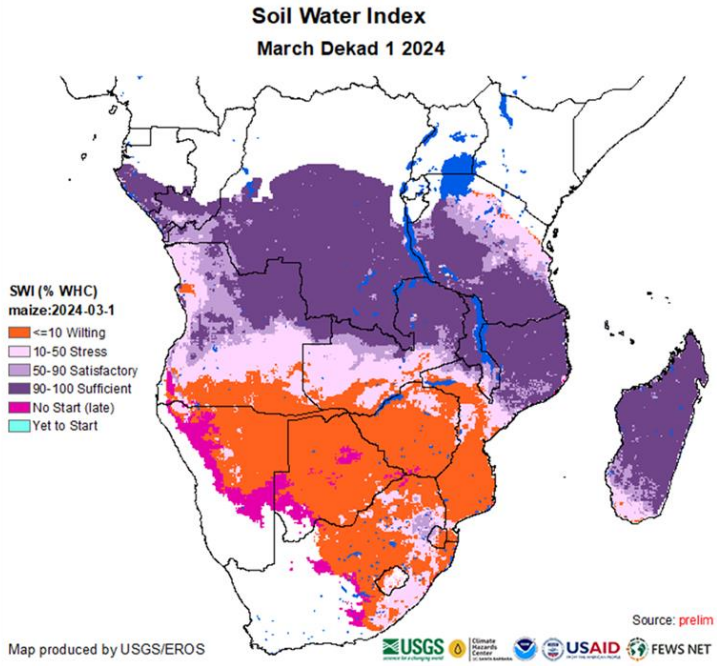
Poor vegetation with widespread crop failures



Cropping Prospects

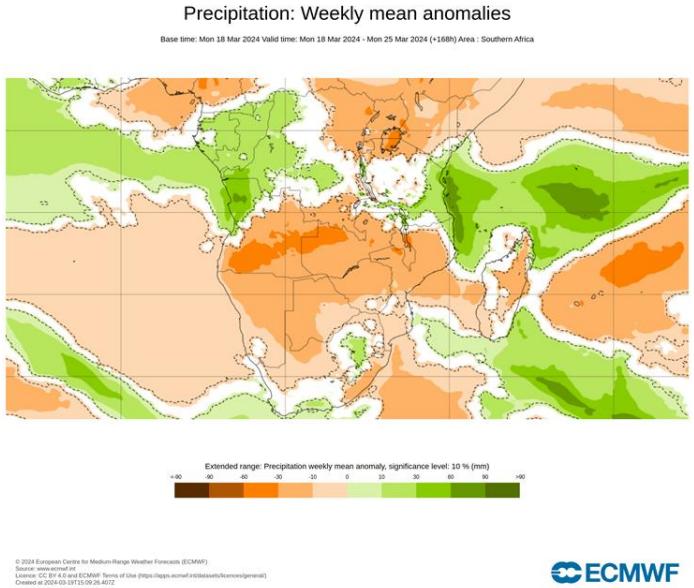
Poor prospects just about everywhere except Maize Triangle

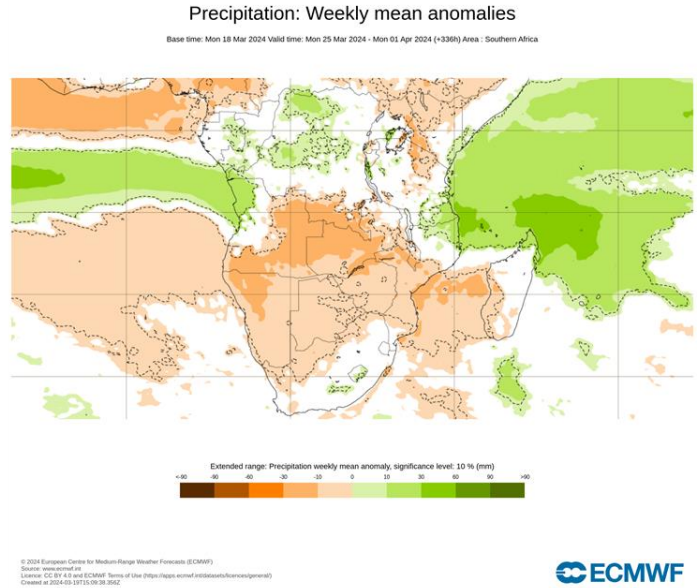




Weekly Precipitation Forecast

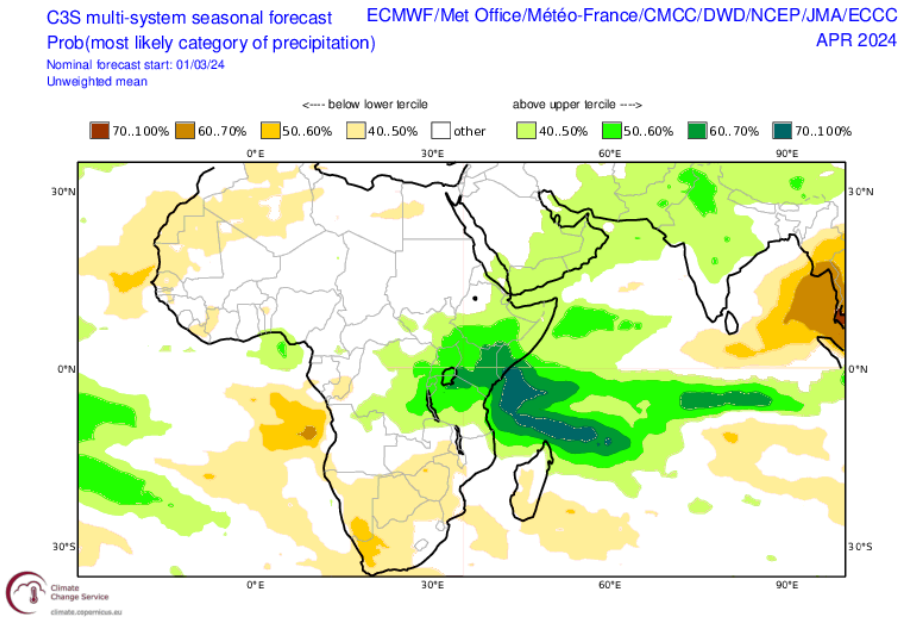
Widespread below average perhaps signaling an early end of season

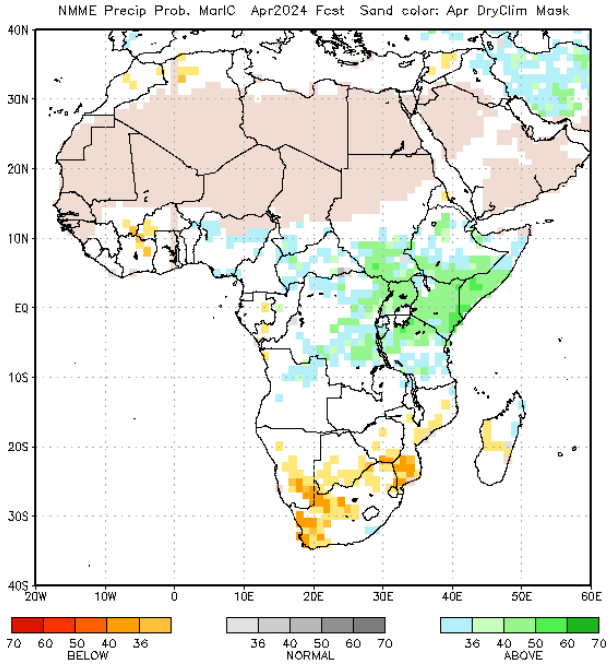




April 2024 Precipitation Forecast

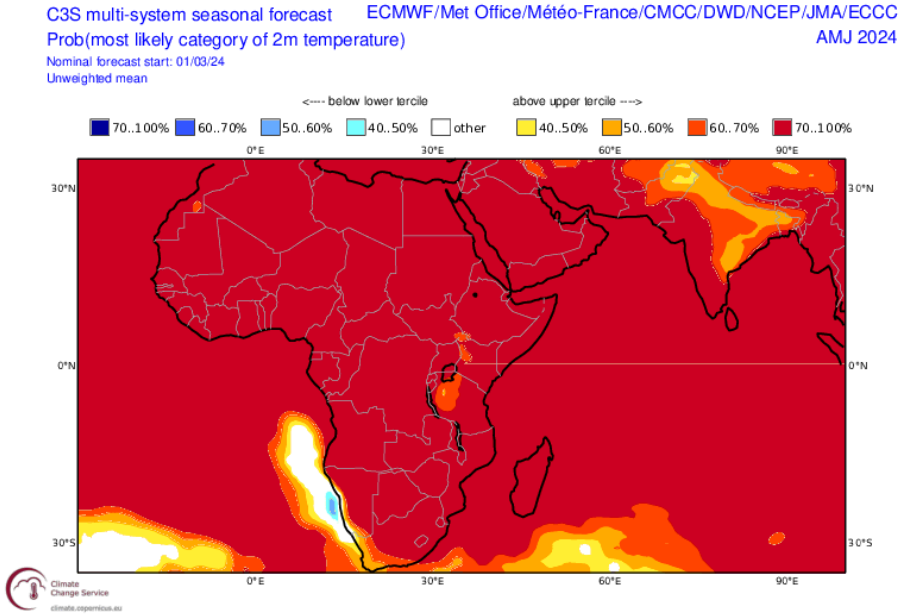
Tilt in odds to below average

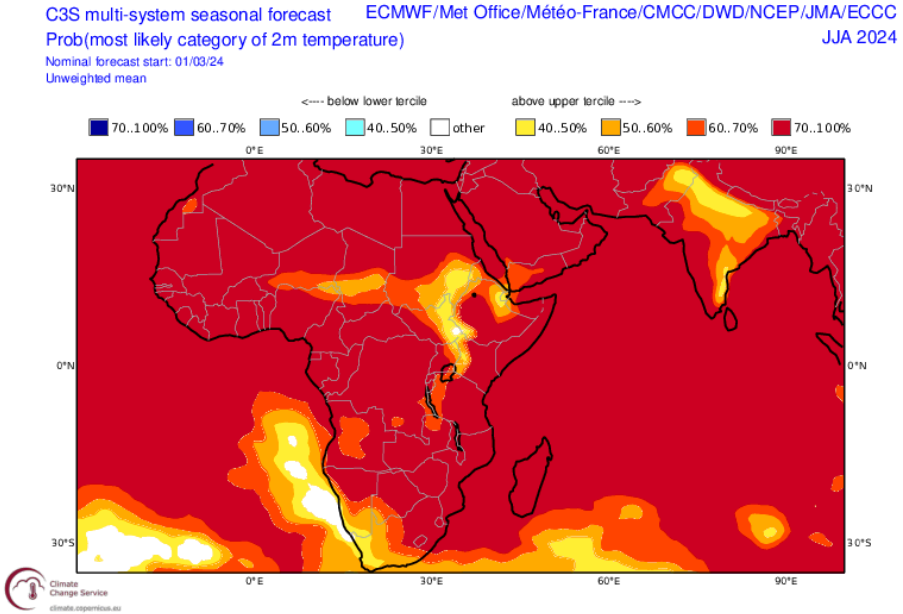




Temperature Forecasts

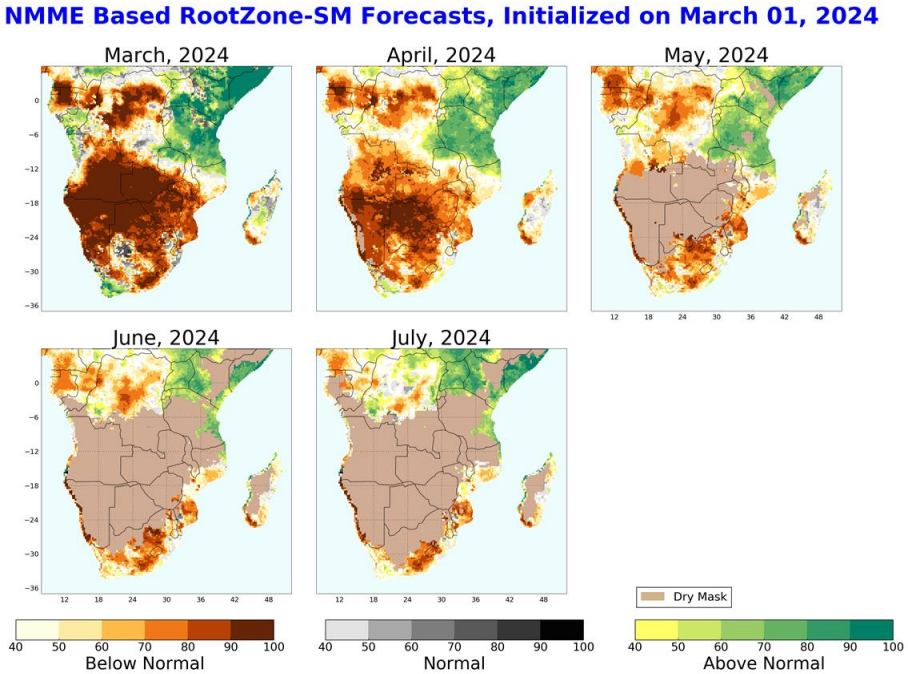
Above average most likely





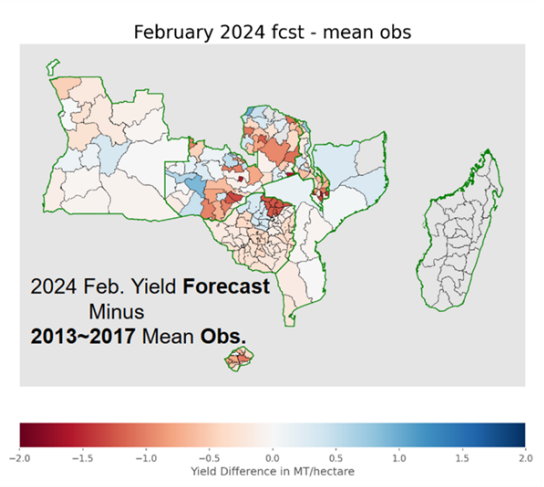
Soil Moisture Forecast

Below average most likely to end the wet season

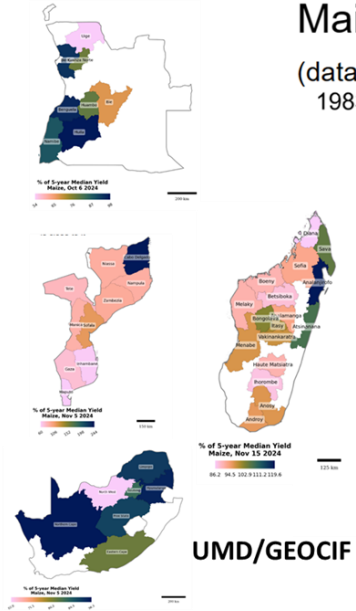


Agricultural Yield Forecasts

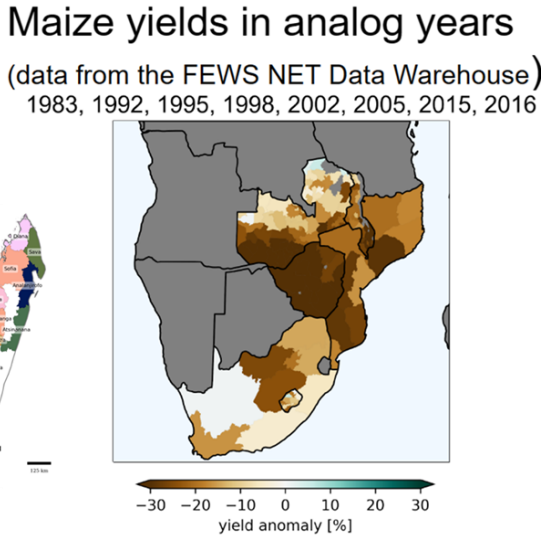
Below-average yields most likely



UCSB CHC/CAPE



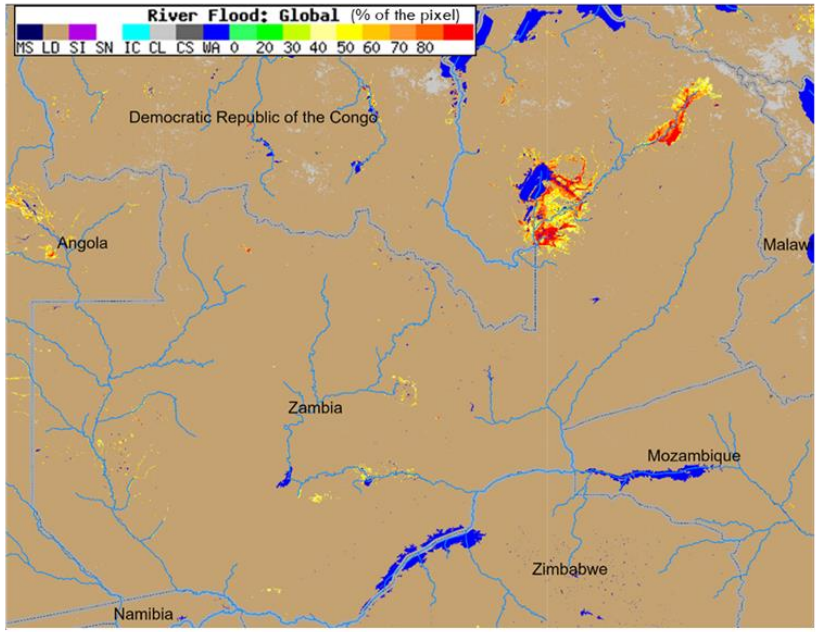
UMD/GEOCIF



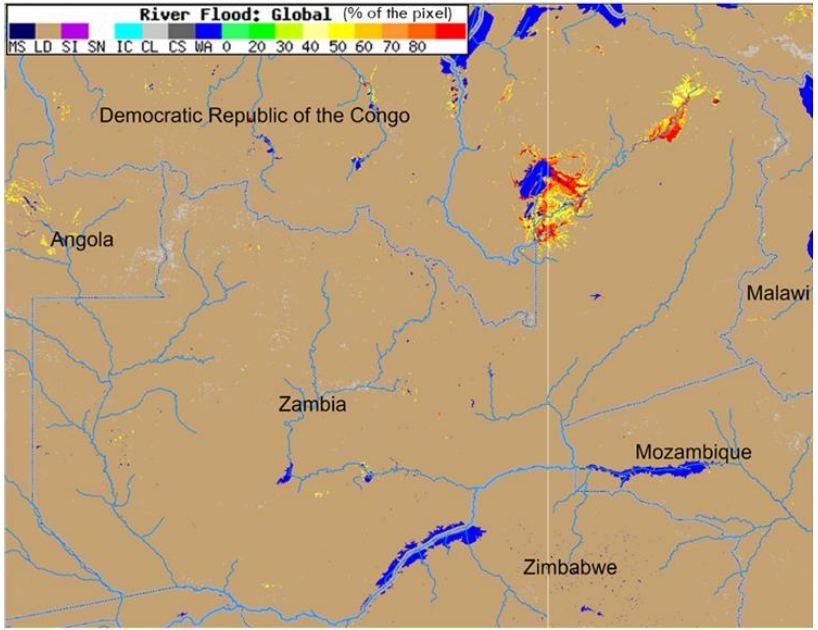
NASA/Analog Years

Flooding

Widespread flooding generally unchanged since mid-February



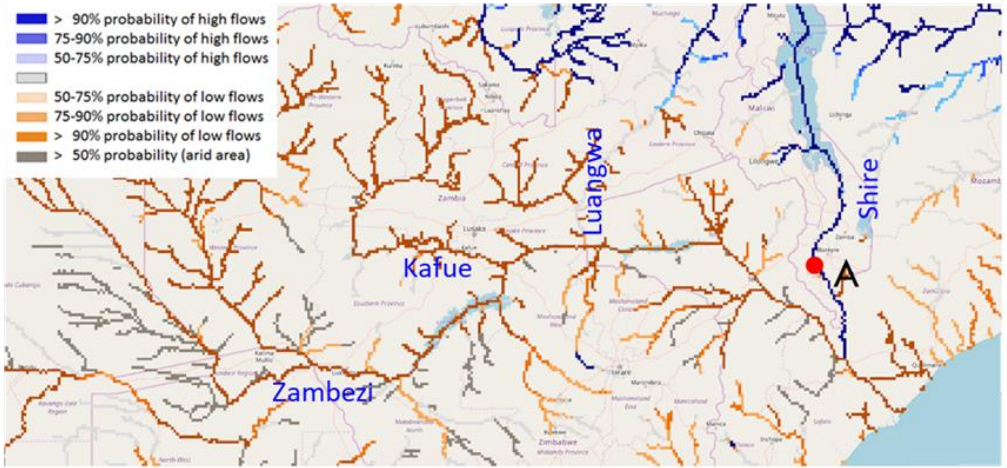
NOAA VIIRS 5-day comp.: **15 – 19 Feb 2024**



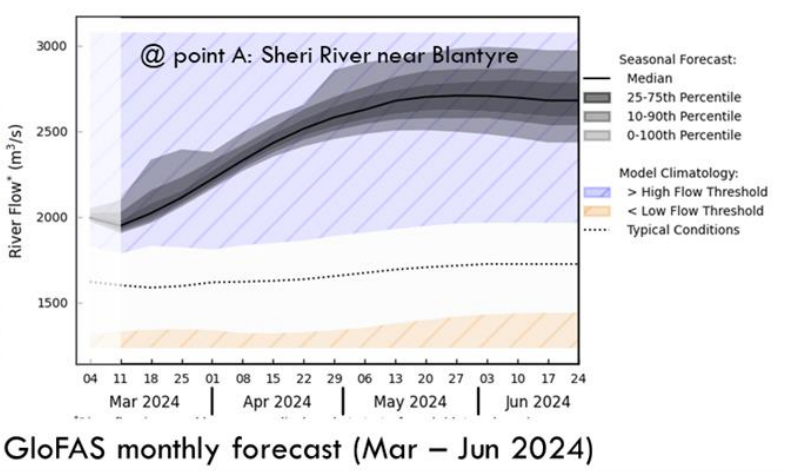
NOAA VIIRS 5-day comp.: **13 – 17 Mar 2024**

Flooding Forecast

Widespread below average except for Sheri River



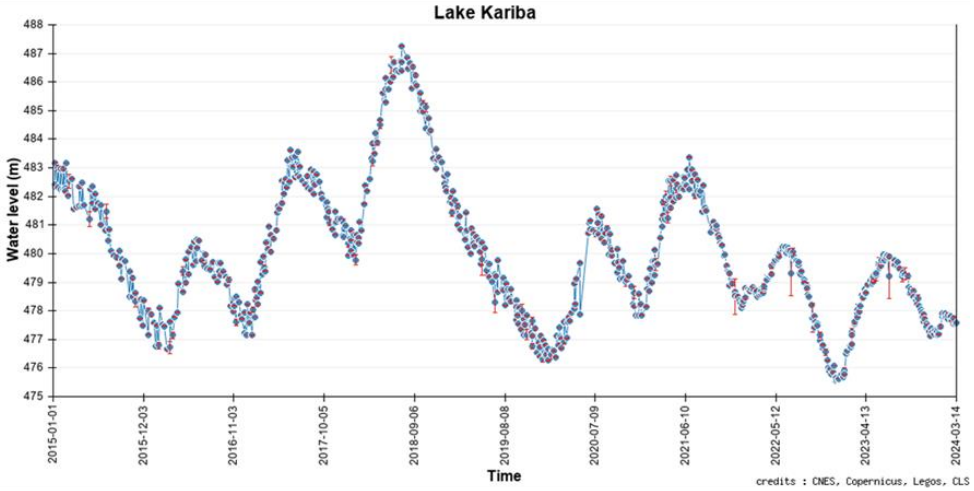
GloFAS seasonal forecast Mar - Jun 2024



GloFAS monthly forecast (Mar – Jun 2024)

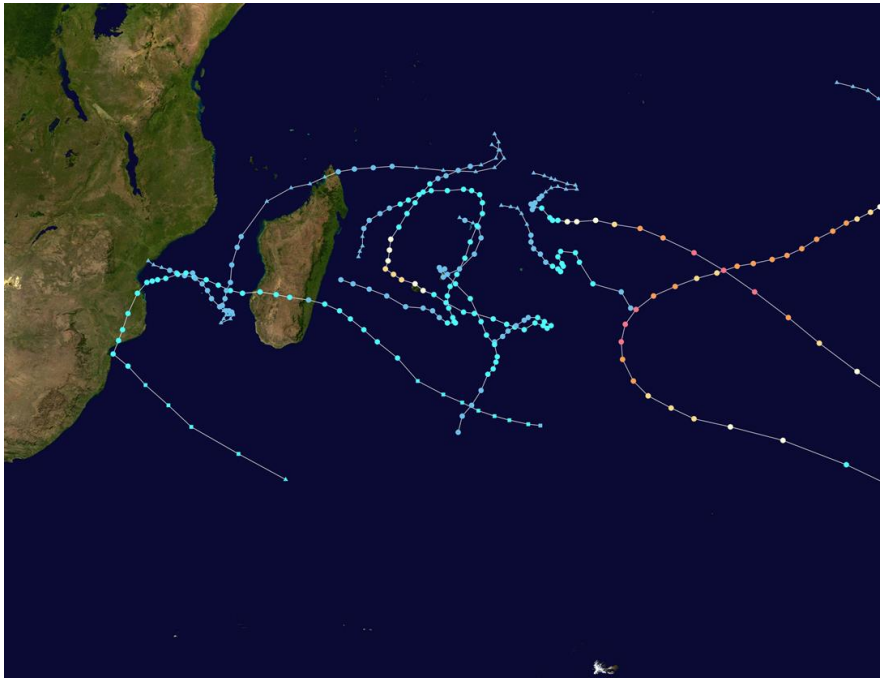
Lake Kariba Water Level

Low water level in part due to below-average precipitation



Tropical Cyclones

Two cyclones have struck Madagascar and Mozambique to date



Assumption 1 of 5

Based on rainfall to date, El Niño, SIOD, and dynamical forecasts the 2023/24 rainy season is expected to be cumulatively below-average in ~~southern and~~ central Mozambique, Zimbabwe, southern and parts of northern Malawi, southern, eastern and north-western Madagascar, southern DRC, parts of Maize Triangle of South Africa, most of Zambia, and eastern/south-eastern Angola, resulting in below-average harvests. However, rainfall is expected to be cumulatively average to above average in parts of the Maize Triangle of South Africa, ~~northern Malawi~~, Lesotho, northern Mozambique, northern Madagascar, and much of central and southern DRC supporting crop growth. ~~Northeastern and central DRC will have below-average seasonal rainfall.~~

Assumption 2 of 5

Precipitation in March, as the rainy season concludes, is likely to be below-average according to short and medium range forecasts. ~~However, there is no tilt in the odds of below-average, average, or above-average r~~ Rainfall is likely to be below average in April across most of Zimbabwe, Madagascar, southern Malawi, and ~~parts of~~ southern Mozambique. ~~However, rainfall is likely to be below-average in southern Mozambique.~~ Rainfall will likely be above-average in eastern DRC in April.

Assumption 3 of 5

No Change

Above-average temperatures are most likely across the region

through September 2024.

Assumption 4 of 5

No Change

Normal to below-normal precipitation and resultant soil moisture in central and southern parts of the region is expected to negatively impact the 2023/24 agricultural season and upcoming harvest.

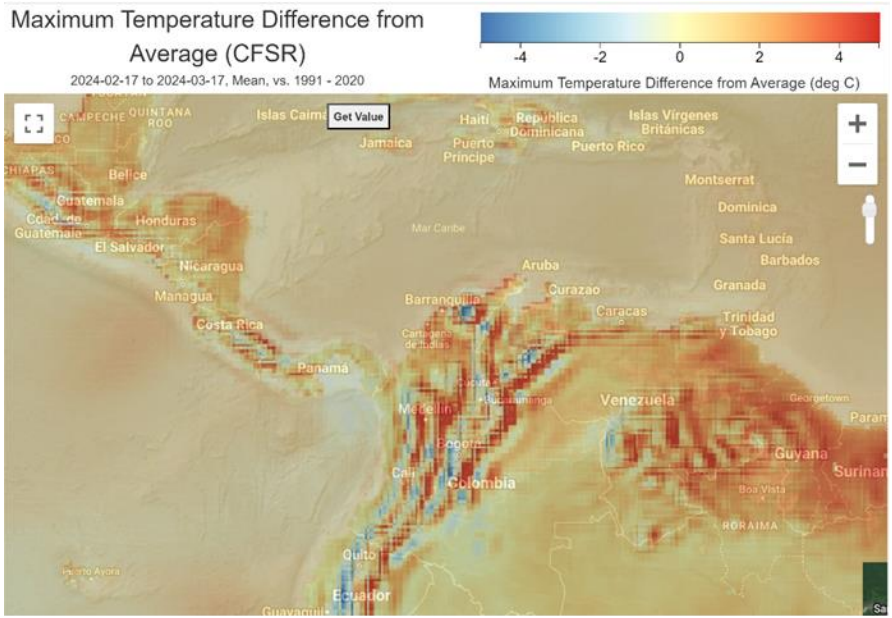
Assumption 5 of 5

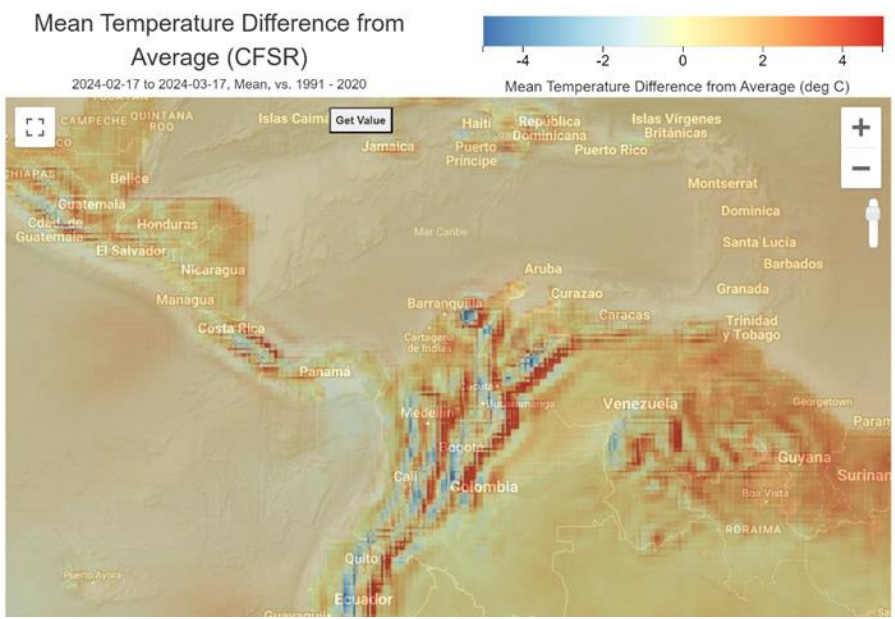
Between December 2023 and March 2024, a near-average number of cyclone strikes had occurred by late March in Madagascar and Mozambique. ~~The main Madagascar and Mozambique area is forecast to have reduced tropical cyclone activity, while the east of Madagascar, up to the edge of eastern Madagascar, is forecast to have average to above-average tropical storm activity.~~

Latin America and the Caribbean

Observed Temperatures

Widespread above average

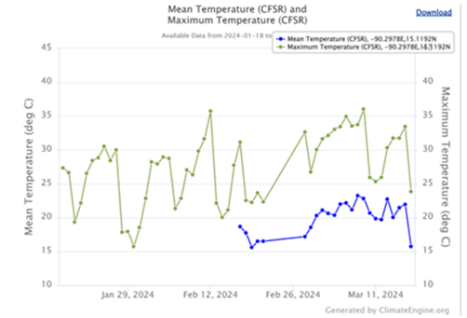




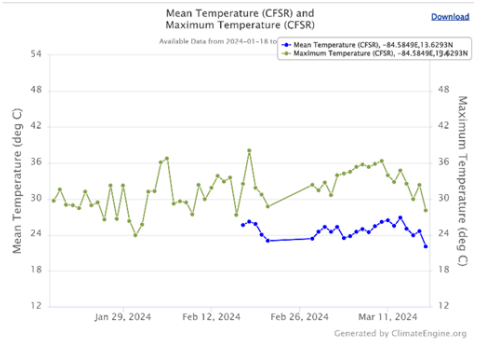
Observed Temperatures

High daily maximum and mean temperatures recently

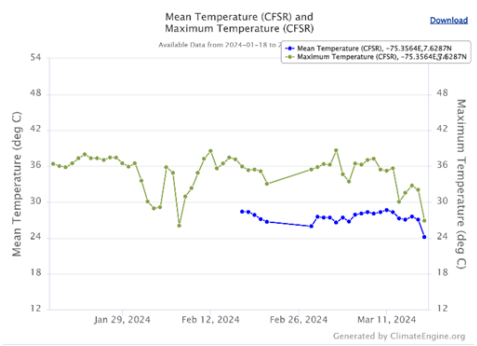
Guatemala



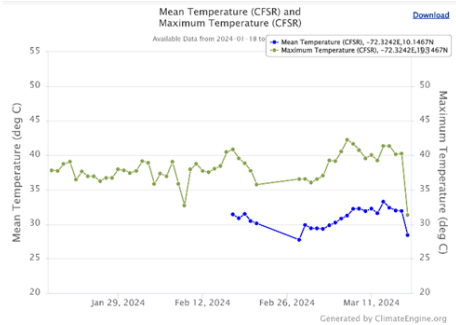
Colombia



Nicaragua

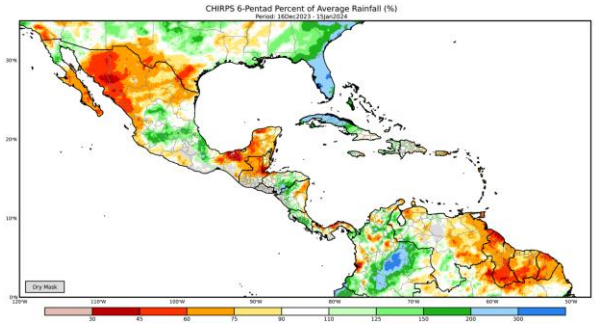


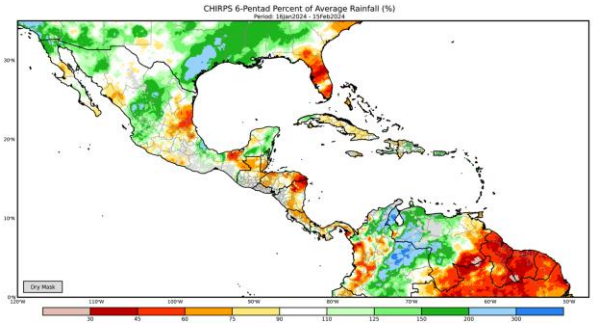
Venezuela

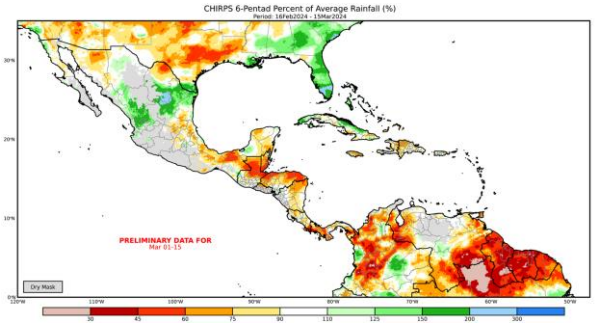


Observed Precipitation

Generally below average, likely related to the ongoing moderate El Nino

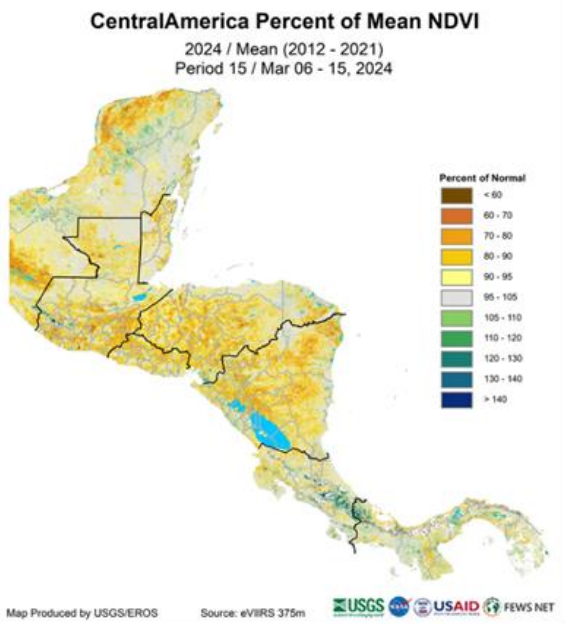


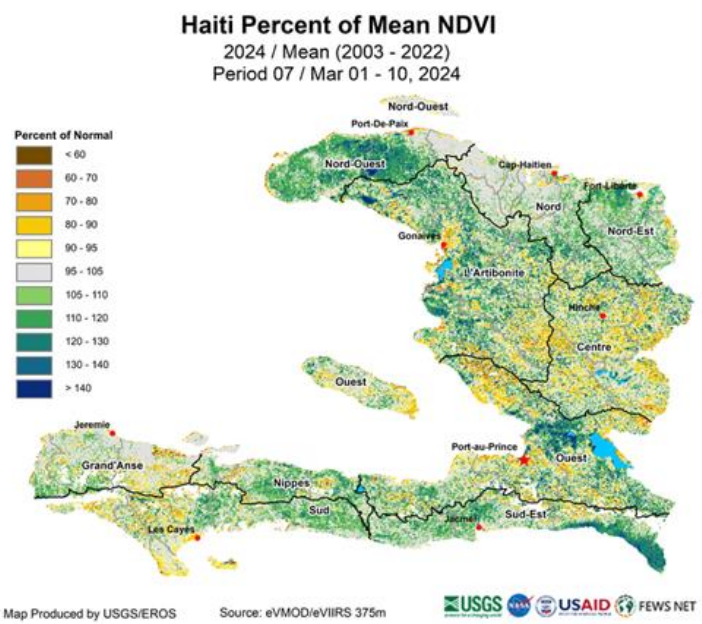


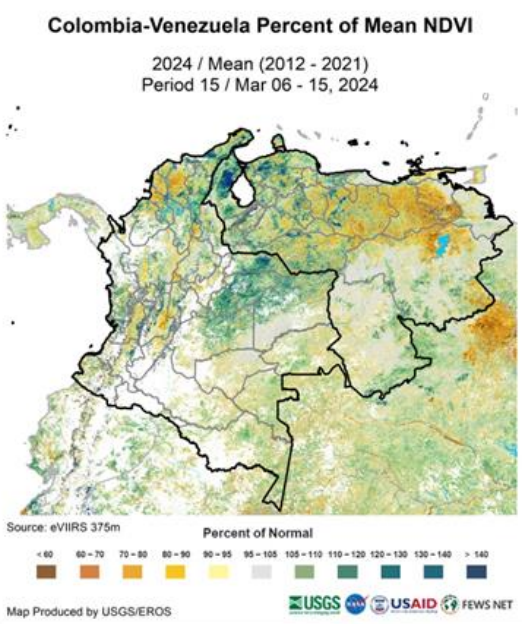


Vegetation Conditions

Well below average in Central America due to prolonged dryness and heat

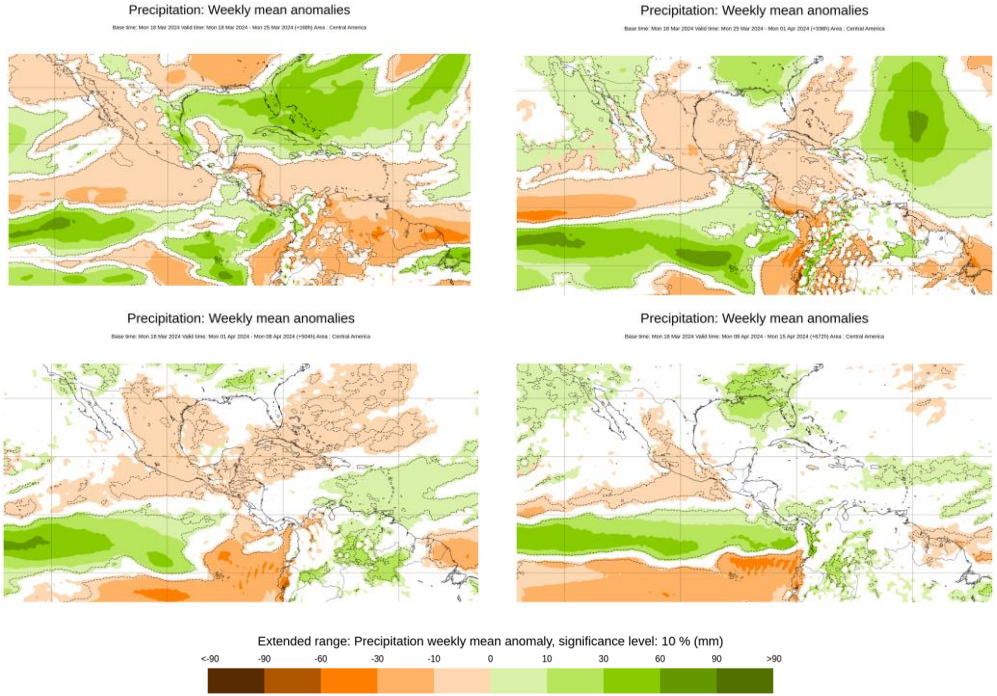






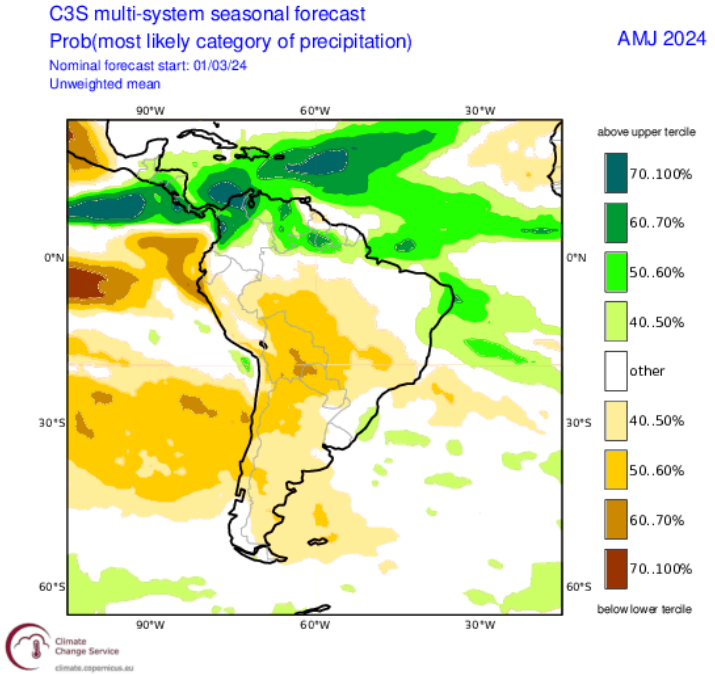
Weekly Precipitation Forecast

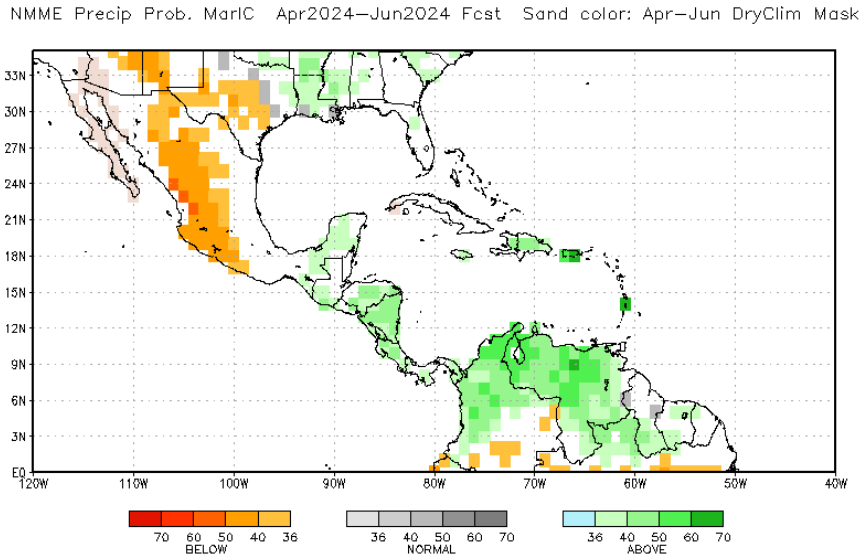
Erratic precipitation most likely through mid-April



April-June 2024 Precipitation Forecast

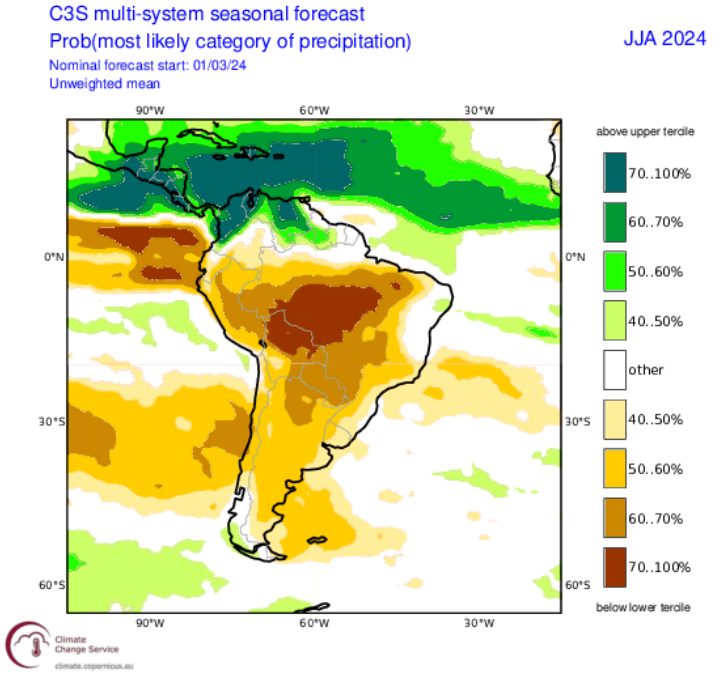
Above average regionwide

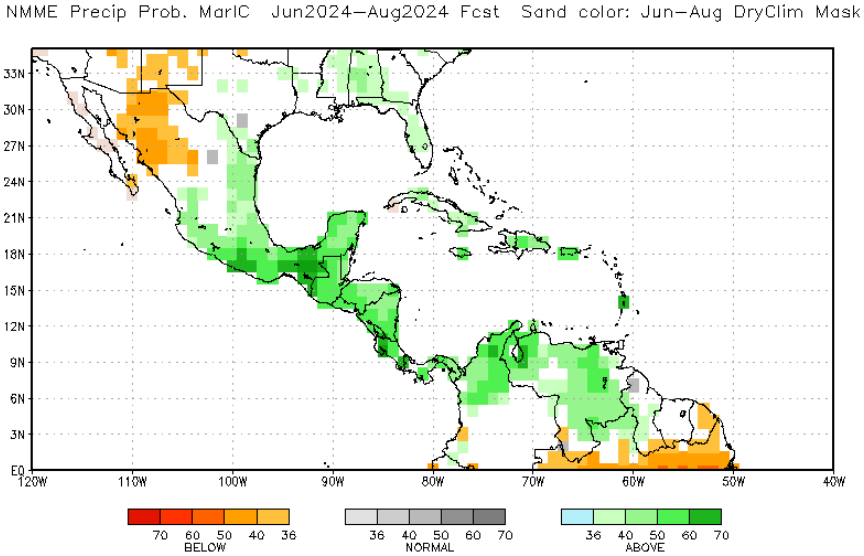




June-August Precipitation Forecast

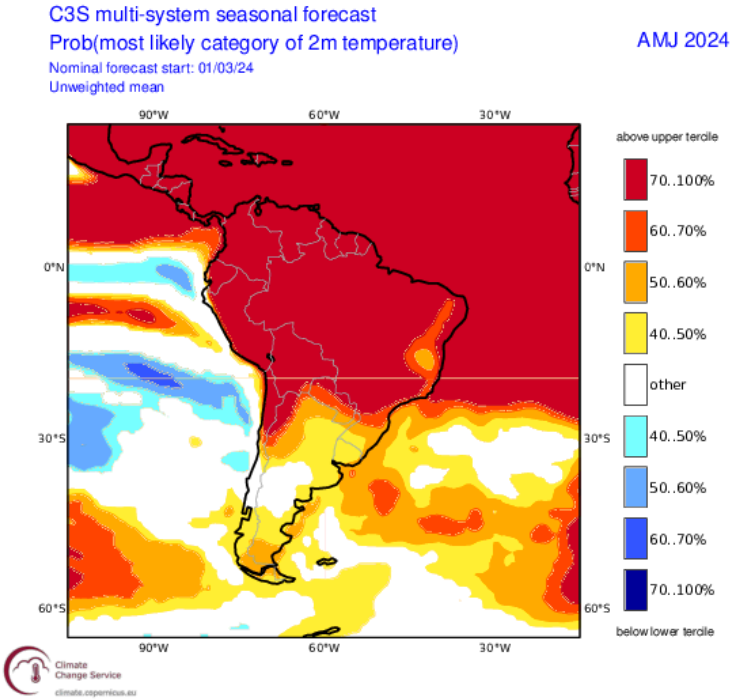
Above average regionwide

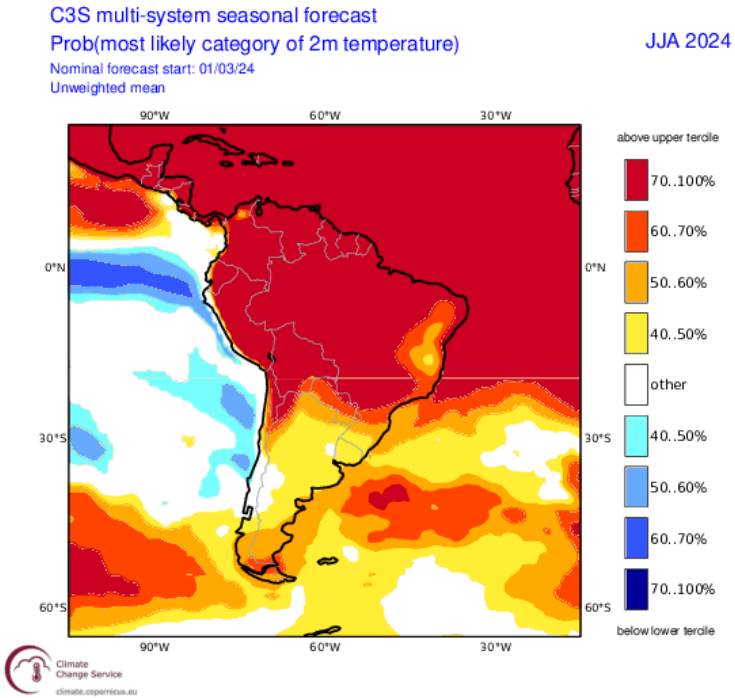




Temperature Forecast

Above average regionwide





Assumption 1 of 4

Regional

Above-average cumulative rainfall is expected in LAC over the primera season, though with an irregular distribution across time and space. A prolonged period with a deficit of rainfall towards the beginning of the season, coupled with elevated temperatures may lead to a postponement of sowing activities.

Assumption 2 of 4

Haiti

- ~~Average to~~ above-average rainfall and above-average temperatures are expected during the beginning of the Printemps season.
- Elevated temperatures could reduce soil moisture levels during the early phenological stages.

Assumption 3 of 4

Central America (No Changes)

- Average cumulative rainfall is expected during the start of the primera season; however, the distribution of rainfall timing will be erratic which could delay sowing.
- Erratic distribution of rainfall, combined with persistent dry conditions in the last five months and a forecast of above-average temperatures, could reduce yields due to inconsistent and deficit soil moisture conditions impacting crop development.
- An increase in cumulative rainfall compared to last year combined with the persistence of above-average temperatures could produce pests and diseases in crop production areas as the season progresses.
- The dry spell is expected to have an average duration.

Assumption 4 of 4

South America (No Changes)

- Rainfall accumulation will continue to increase in the coming months, shifting to above-average cumulative rainfall in both Colombia and Venezuela (according to seasonal progress), which will support agricultural activities.
- Above-average temperatures will continue across South America through July 2024, contributing to reduced soil moisture conditions in the areas with below-average rainfall during the beginning of 2024 and the areas affected by forest fires.

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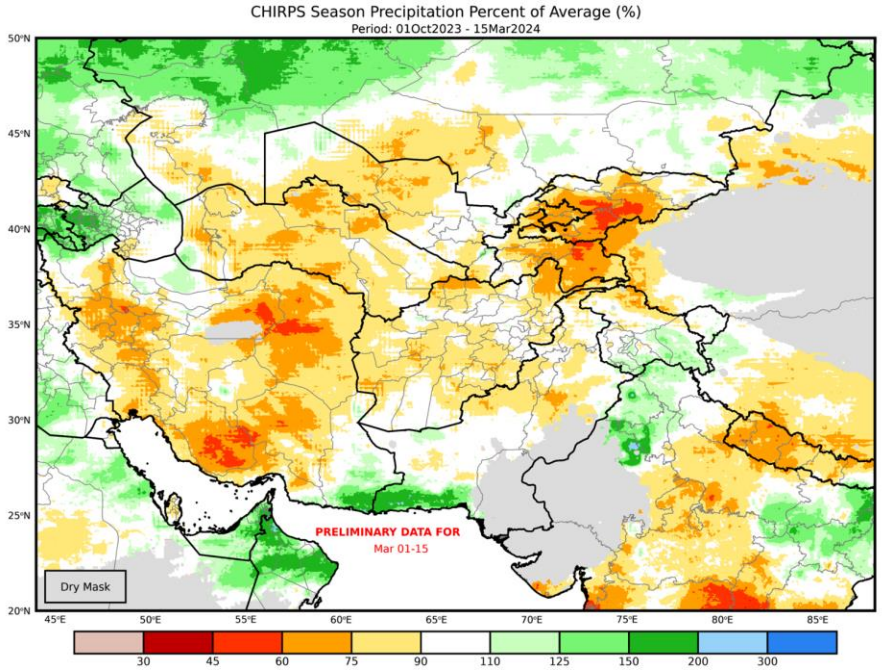
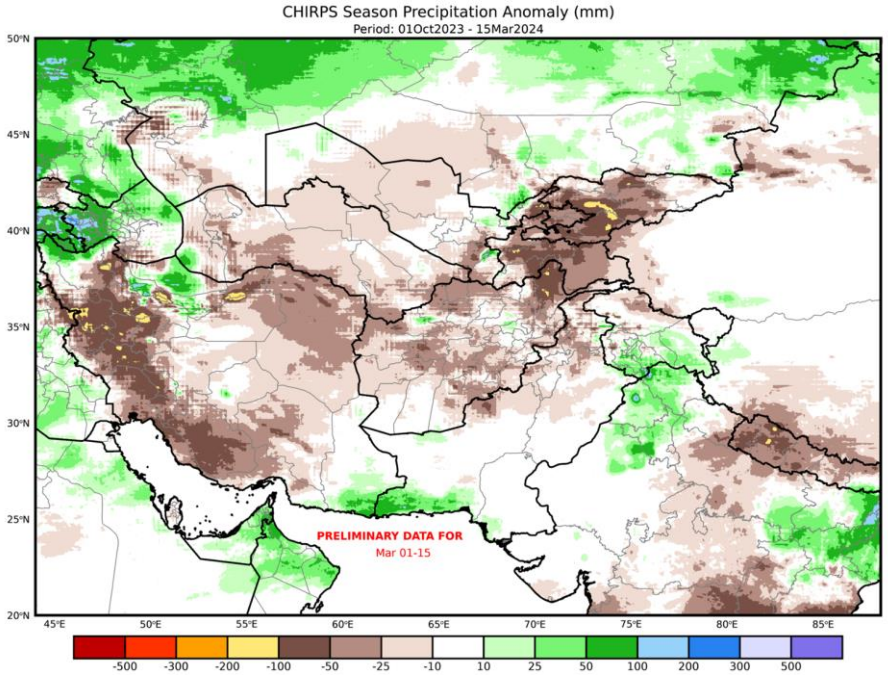
Afghanistan and Central Asia

2023-24 Wet Season Precipitation

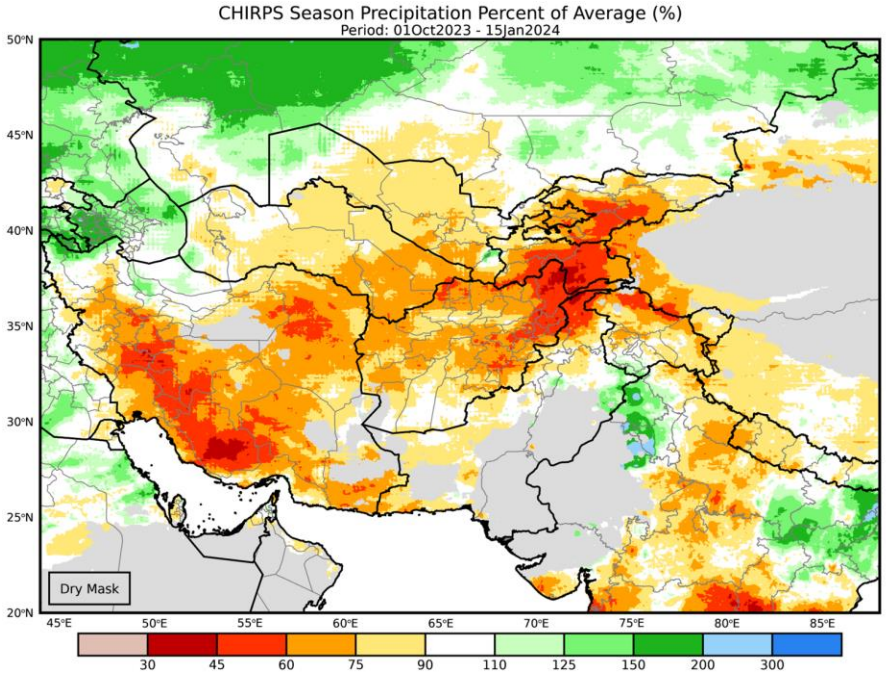
Widespread average and below average

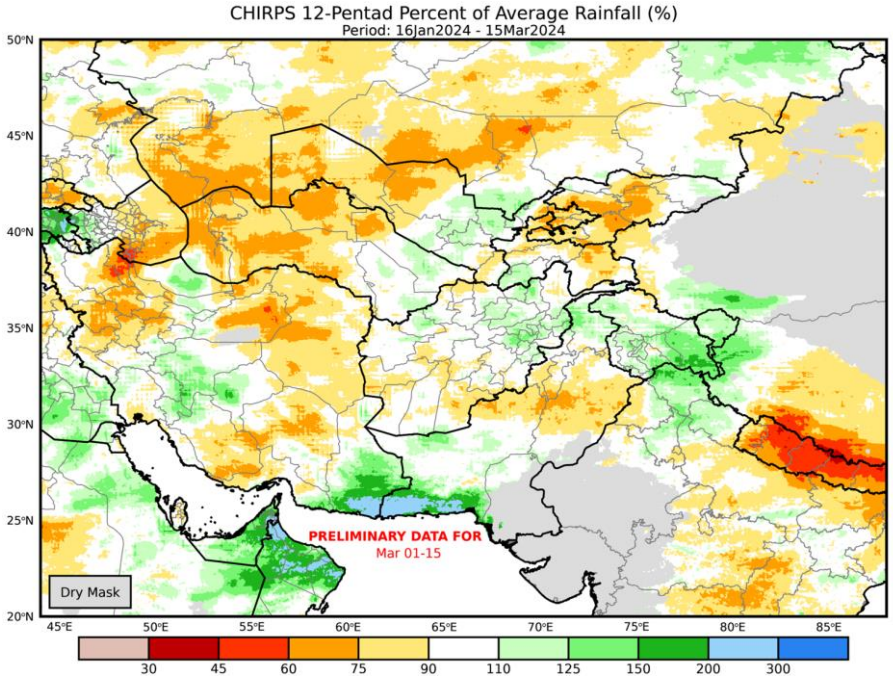




2023-24 Wet Season Precipitation

Well below average in first half of season, average and above in second half





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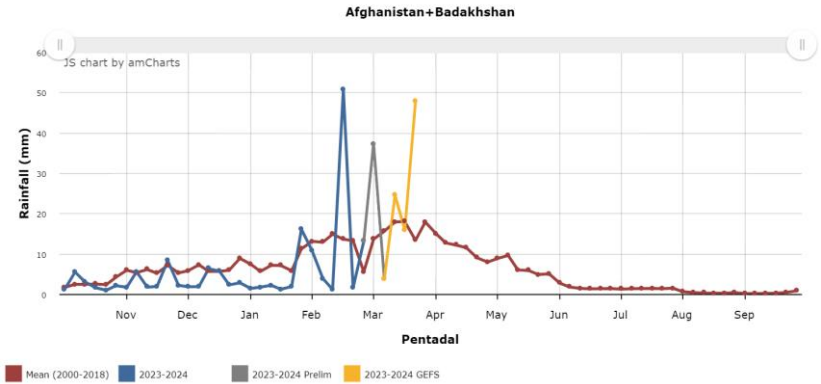
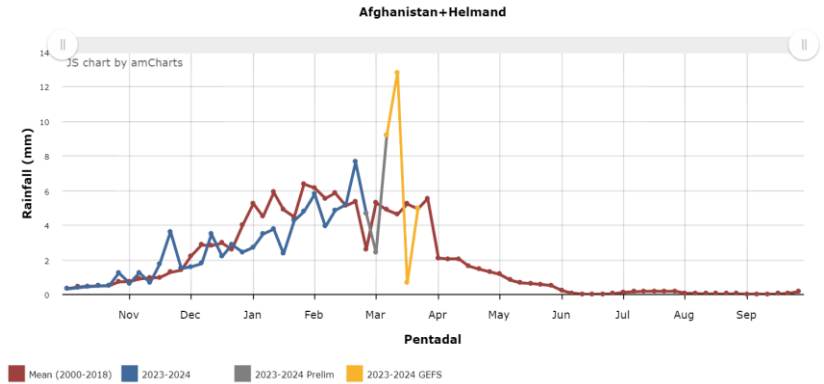
2023-24 Wet Season Precipitation

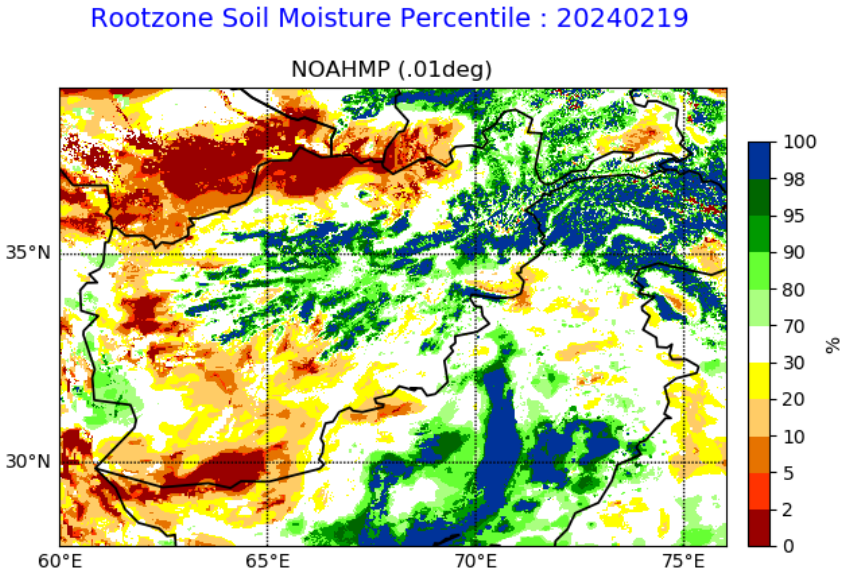
Well below average in first half of season, average and above in second half

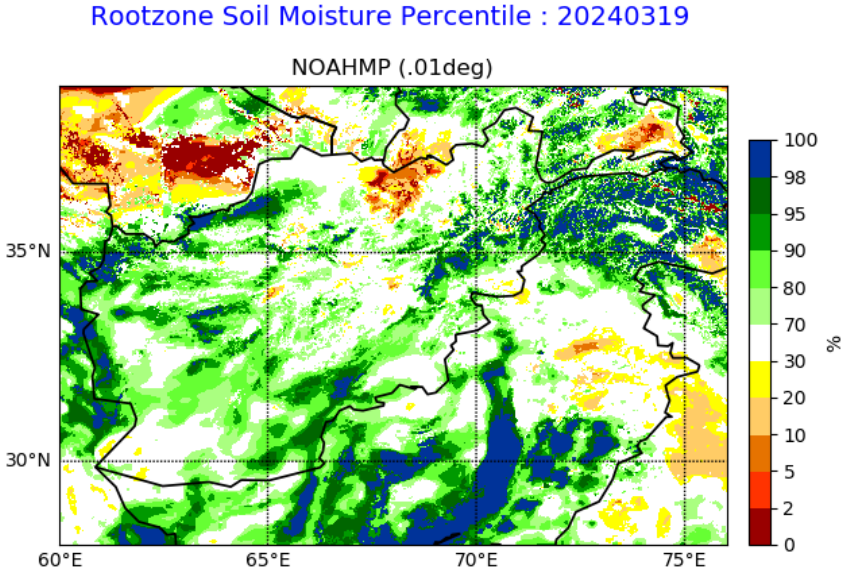




Soil Moisture

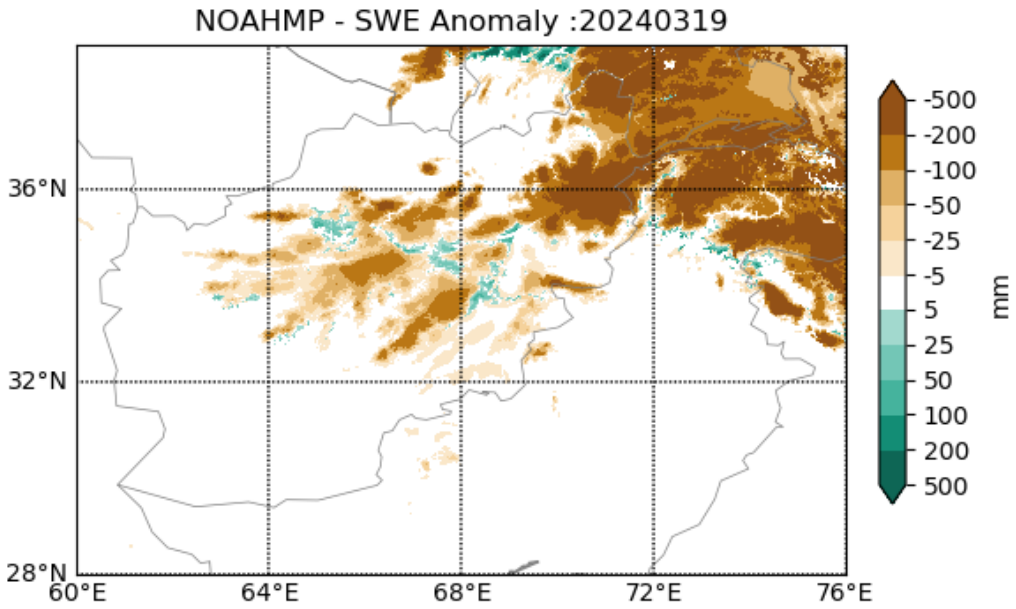
Strong improvements over the last month

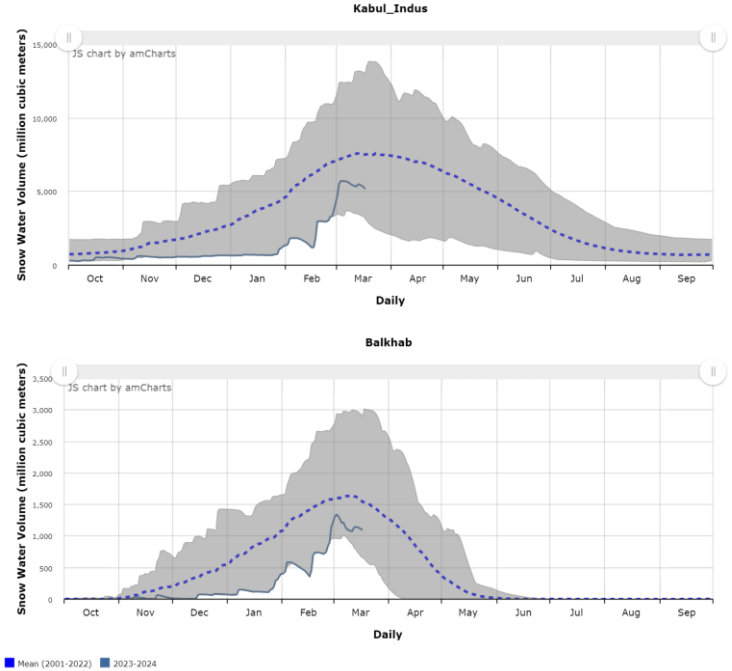




Snow Water Volume

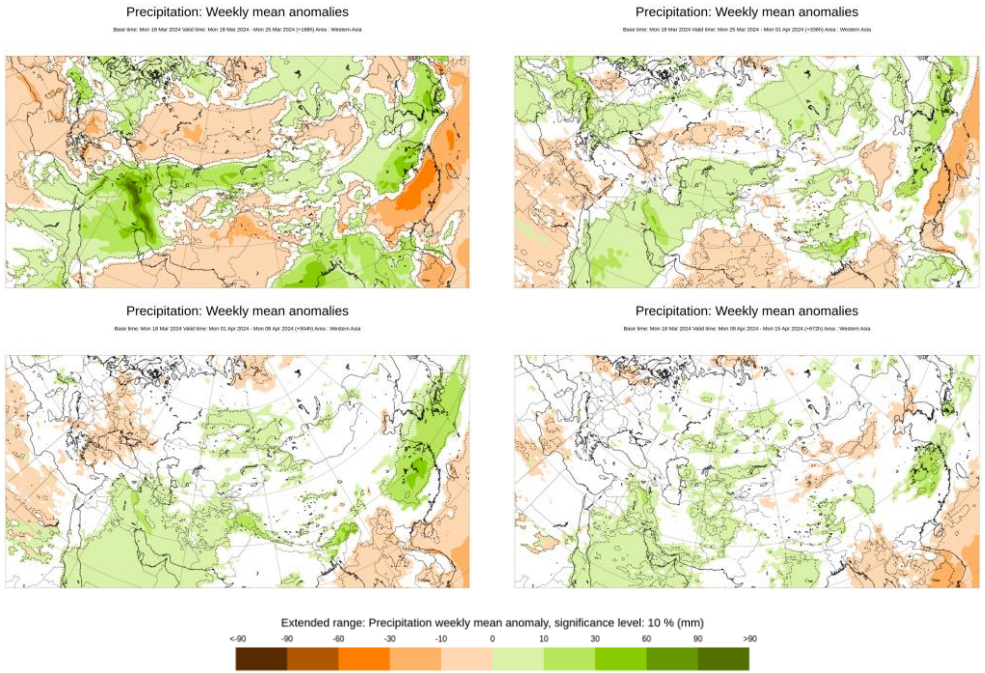
Strong improvements, following precipitation





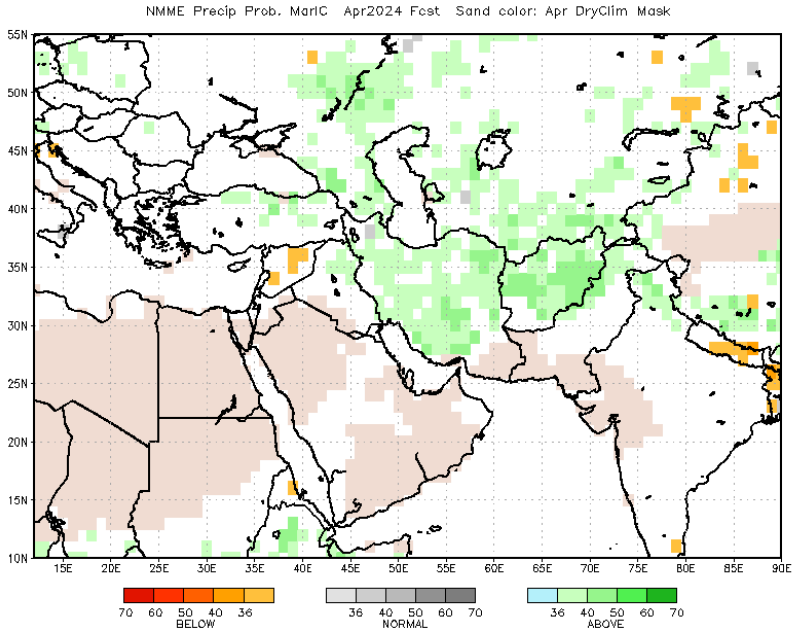
Weekly Precipitation Forecasts

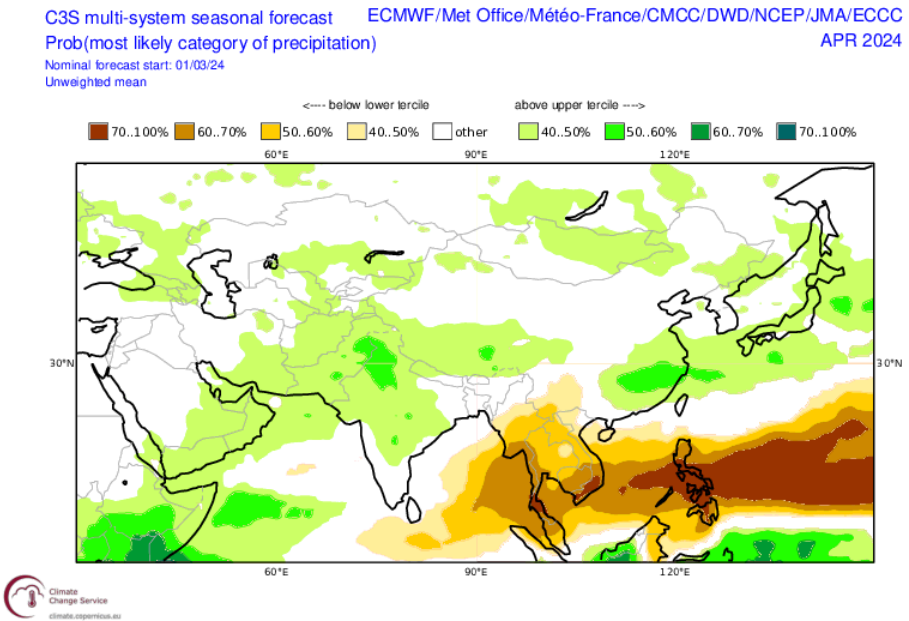
Above average most likely in Weeks 3 and 4



April 2024 Precipitation Forecast

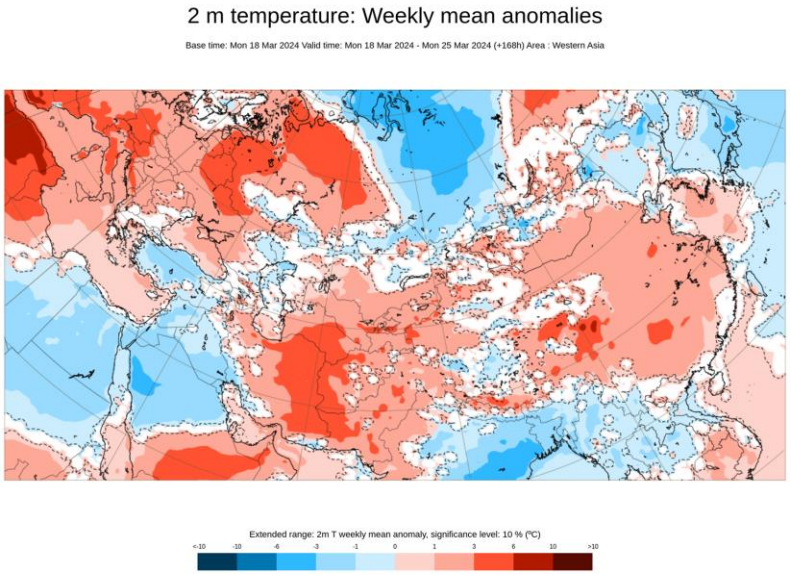
Above average most likely

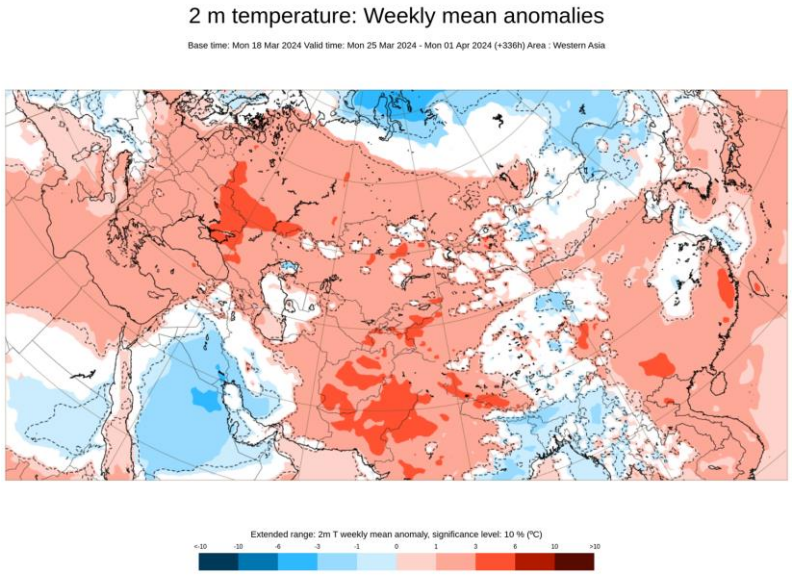




Weekly Temperature Forecasts

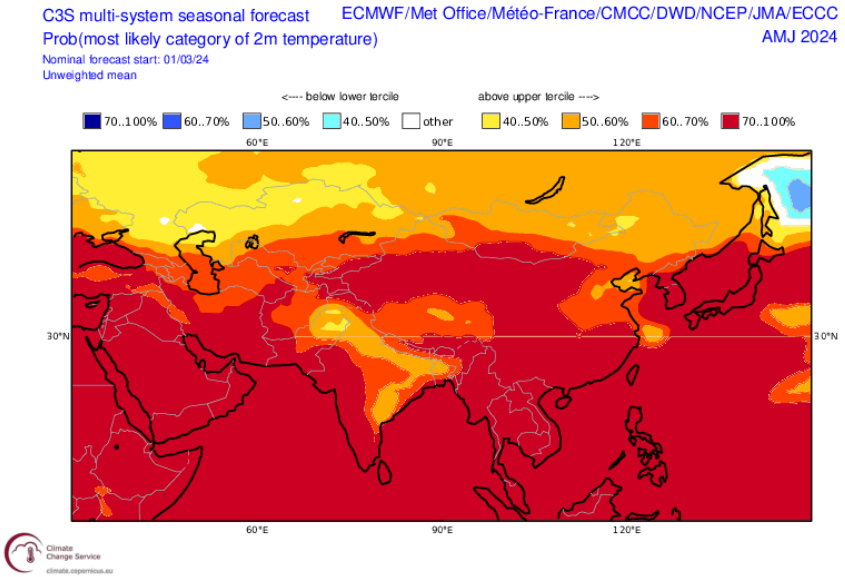
Above average most likely

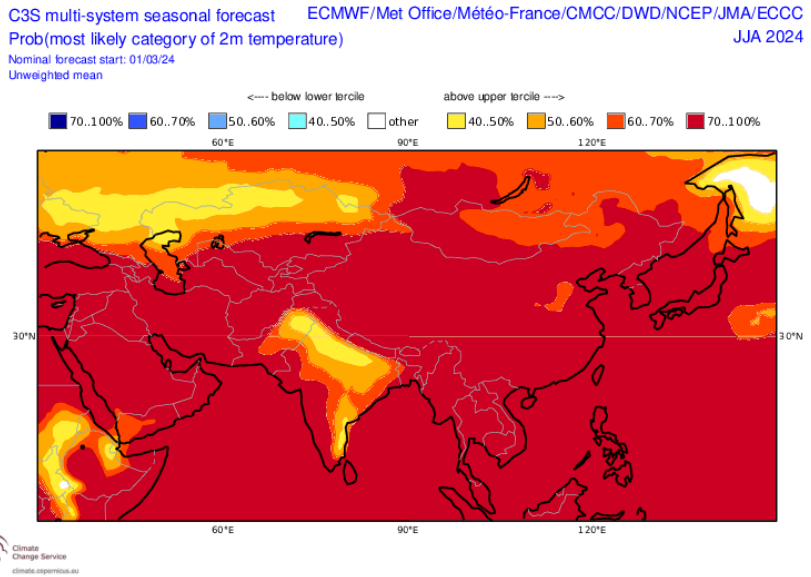




Seasonal Temperature Forecasts

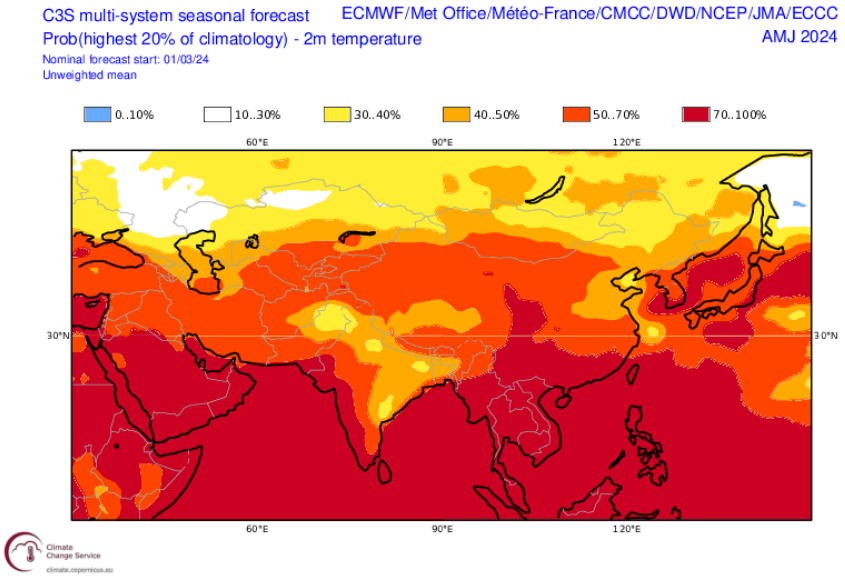
Above average most likely

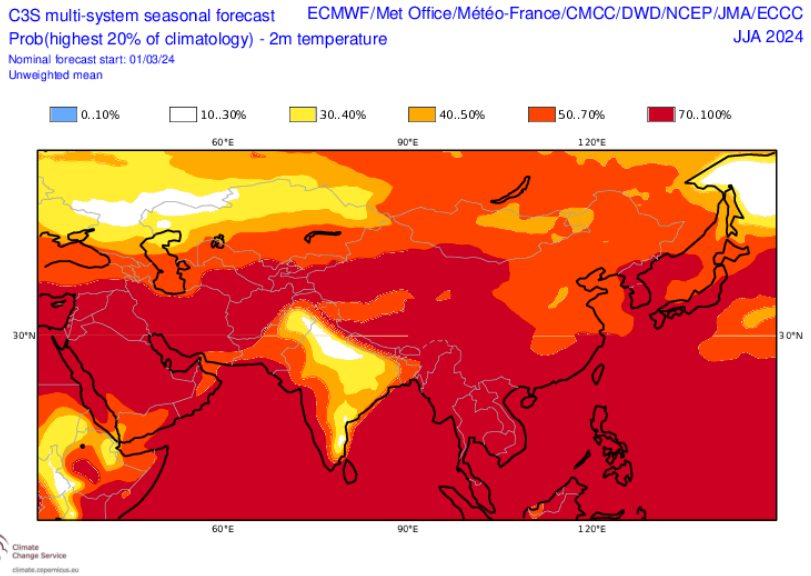




Extreme Seasonal Temperature Forecasts

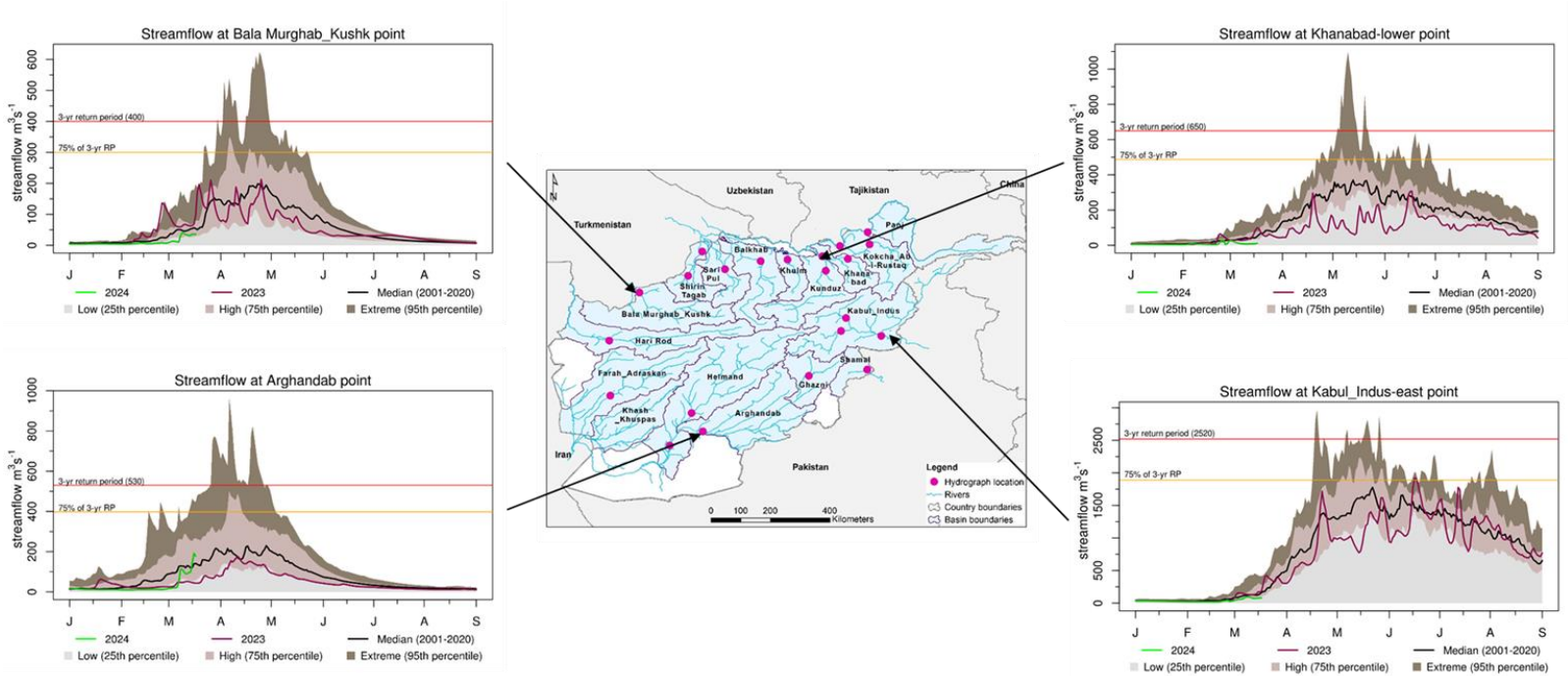
2-3-fold increase in upper quintile compared to climatology





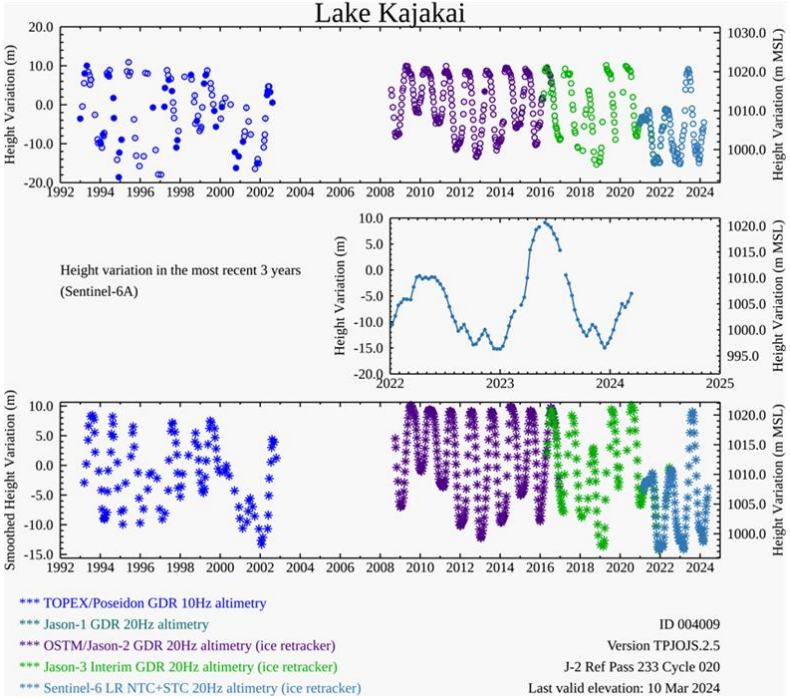
Recent Streamflow

Awaiting the time of year for peak flows, generally low flow otherwise



Water Level at Kajakai Reservoir

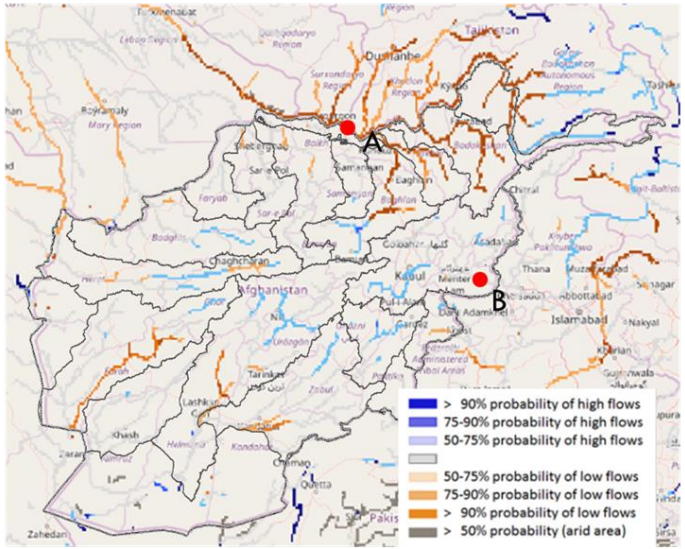
Rising, as is typical in spring



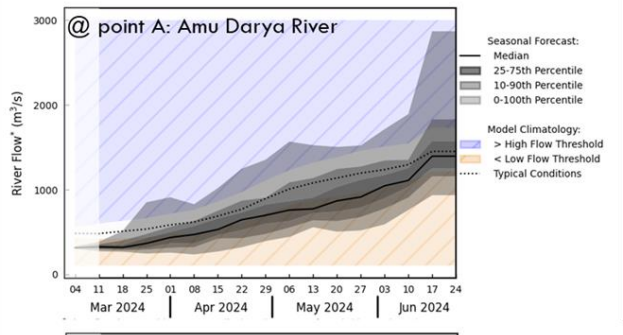
USDA monitoring reservoirs

Streamflow Forecast

Below average in the northern and near average central and south



GloFAS seasonal forecast Mar - Jun 2024



GloFAS monthly forecast (Mar – Jun 2024)

Assumption 1 of 6

Above-average mean temperatures are most likely through August 2024. Extreme temperatures during April-June ~~January-March~~ and June-August ~~March-May~~ (exceeding the upper quintile) are 2-3 times more likely than climatology. However, there will likely be cold spells with below-average temperatures at various points during the ~~winter and~~ spring, similar to recently observed conditions.

Assumption 2 of 6

The consequences of the above-average temperature may be:

- Early blooming of stone fruits, mainly almond, in the country, especially in the northern, northeastern, and central regions. Temperature variation during January and February: warm temperatures in January may let almond trees enter the blooming stage earlier than expected, leading to a severe impact on production from possible frosts and freezing temperatures in early spring ~~February and March~~.
- ~~Earlier than normal flash floods are likely due to the above-average temperatures (late February and early March). This may distract the farmers and the agricultural activities at the beginning of the season and impact standing crops in the eastern and southern provinces.~~
- The healthy and positive germination and development of sown wheat seeds are a concern in localized dry spells with above-average temperatures.
- Moisture stress in rainfed crops and rangelands and reduce water availability, mainly in the downstream areas that may experience extended dry spells.

Assumption 3 of 6

Precipitation for the 2023/24 winter wet season, from October 2023 to March 2024, is most likely to be near-average ~~below average~~ with isolated areas below average in Afghanistan.

Assumption 4 of 6

Above average precipitation in Afghanistan is most likely for the March to May 2024 Spring wet season. Spring rains are expected to have normal timing and distribution, with minimal adverse impact on typical agricultural activities through flooding.

Assumption 5 of 6

Below-average snowpack is expected in the coming months, given below-average antecedent precipitation. However, there will be more snow than in 2023, given recent accumulations due to above-average precipitation. Above-average temperatures are likely to result in an early snow melt during March to May 2024.

Assumption 6 of 6

No Change

Farmers are expected to use the spring window for completing the wheat planting process this season. The upcoming harvest is expected to be at a near-average level, but the success of the coming cropping season depends on timely and well-distributed precipitation in the coming months & the availability of irrigation water in the summertime.

Assumption 7 of 6

Rangeland vegetative conditions during the 2024 spring (March-May) are most likely to be above average in most areas, with some below-average areas also due to low soil moisture and above-average temperatures. During summer (June-September), most areas will turn to below-average, due to below-average cumulative 2023/24 precipitation, above-average temperatures or both.

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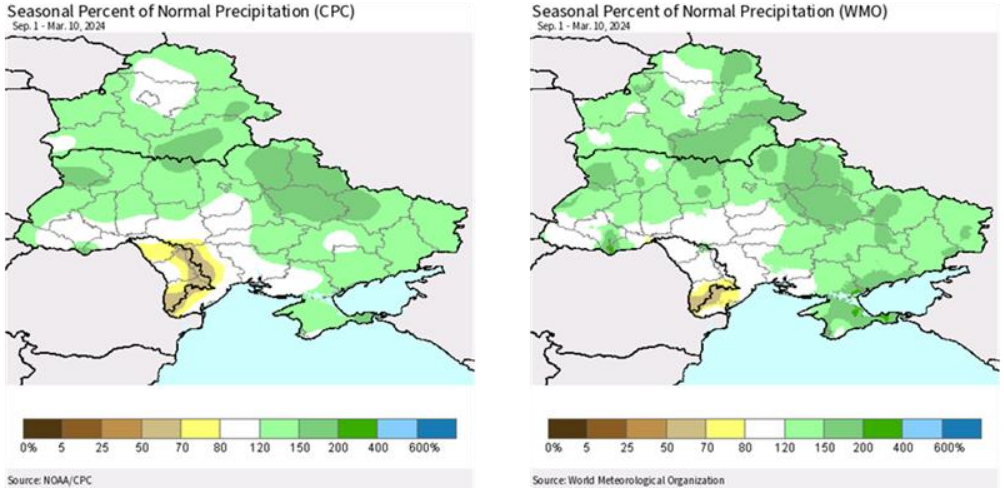
Ukraine

Cold Season Precipitation

Generally above average except for southwest

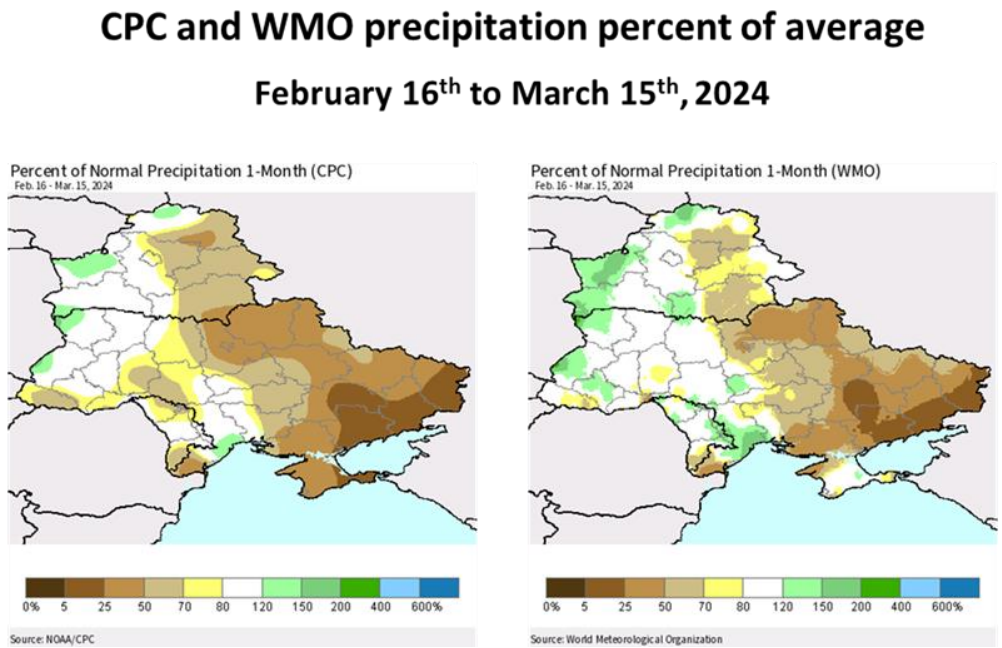
CPC and WMO precipitation percent of average

September 1st, 2023 to March 10th, 2024



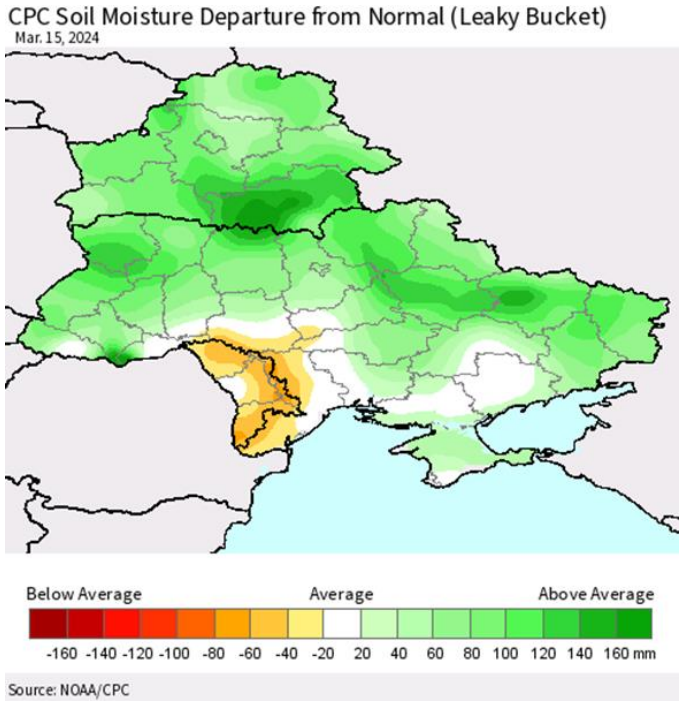
Recent 30-Day Precipitation

Below average especially the eastern half of the country



Soil Moisture

Sufficient soil moisture for planting in most areas, following precipitation

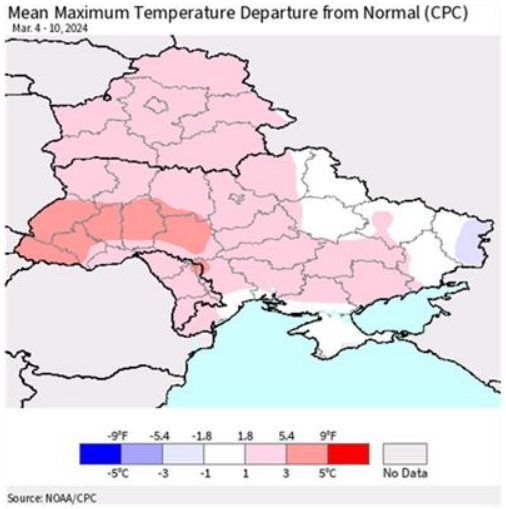


Snow Cover

Little snow cover left amid above-average temperatures

Past week average maximum temperature anomaly and (lack of) snow cover

March 4th to 17th, 2024

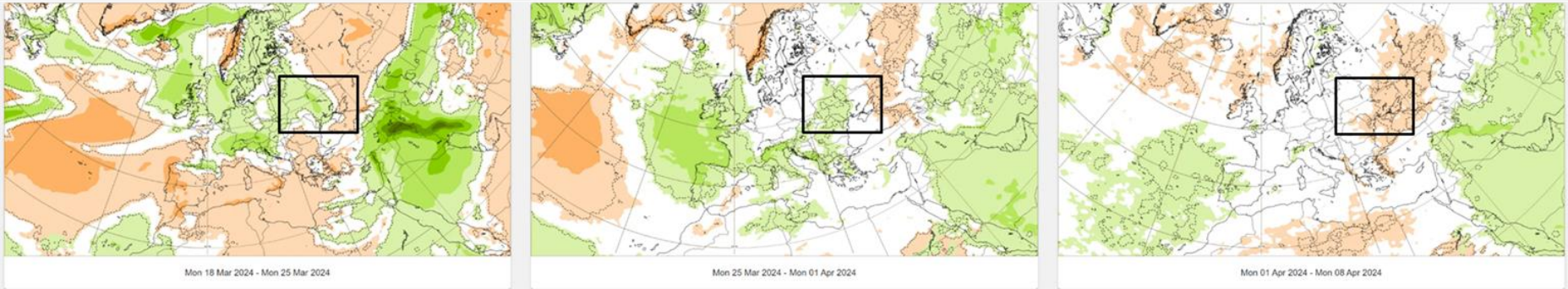


Weekly Precipitation Forecast

Above average in the west and below average in the east

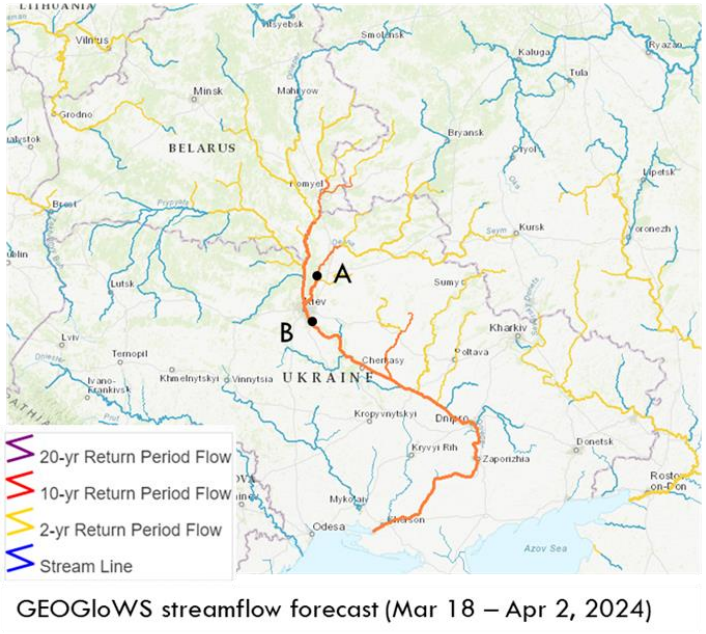
ECMWF Extended Range forecast weekly precipitation anomalies

March 18th to April 8th, 2024

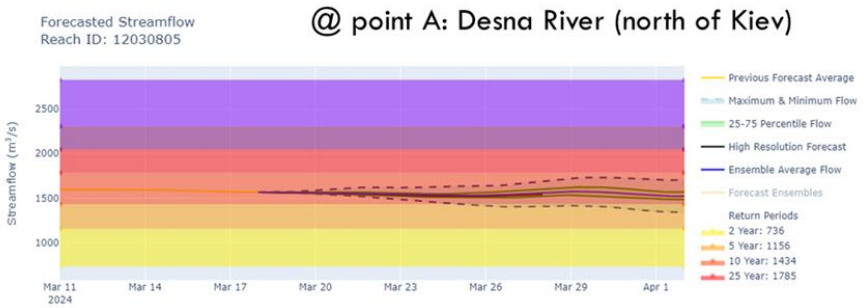


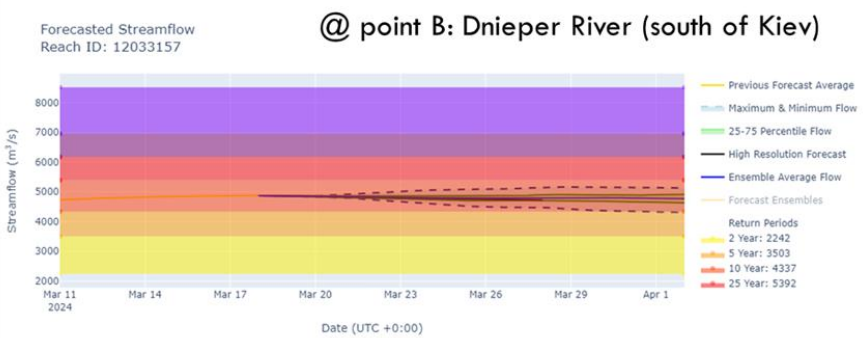
Streamflow Forecast

Discharges on the Desna and Dnieper Rivers are at 10-year return period level



GEOGloWS streamflow forecast (Mar 18 – Apr 2, 2024)



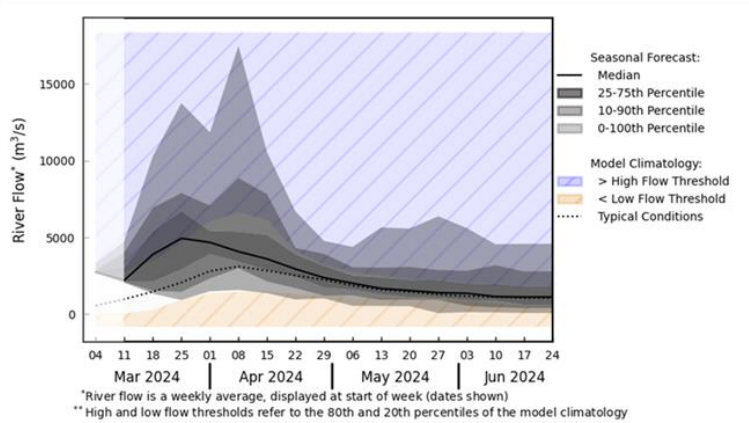


Streamflow Forecast

The high discharges in the Dnieper River are expected to continue until early May of 2024

GloFAS streamflow forecast: **Mar – Jun 2024**

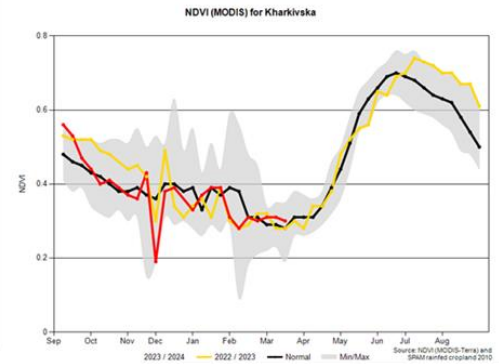
@ point A: On the Dnieper River (south of Kiev)

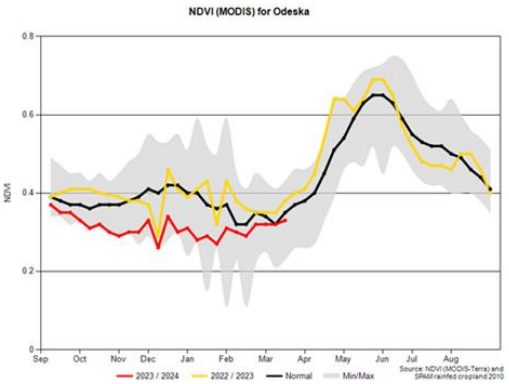


GloFAS streamflow forecast: **Mar – Jun 2024**

Green-up Expected in Next 1-2 Months

NDVI in two high production wheat cropping areas



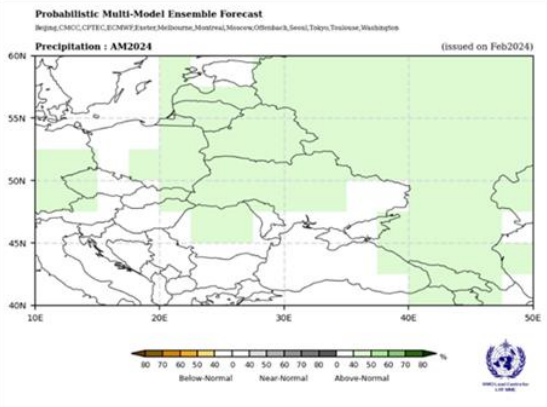


Precipitation Forecast Through Spring

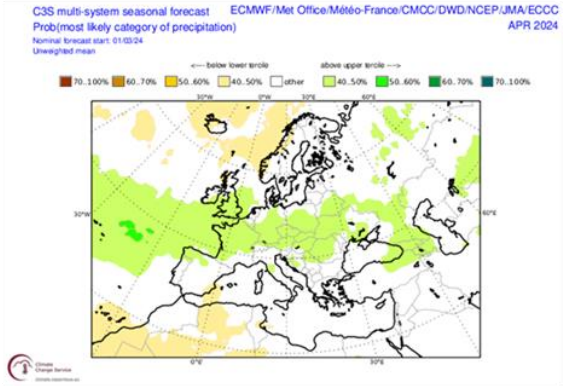
Slight tilt in odds to above average

WMO, C3S, and NMME probabilistic forecasts for precipitation tercile

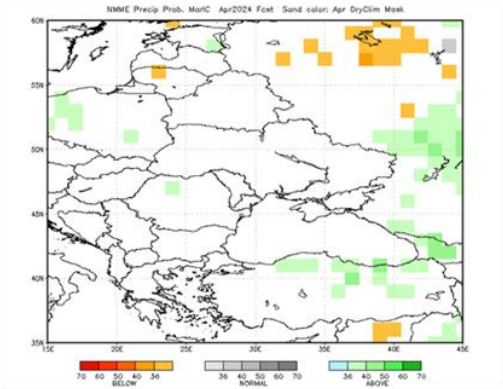
April to May 2024 (WMO)



April 2024 (C3S)



April to June 2024 (NMME)

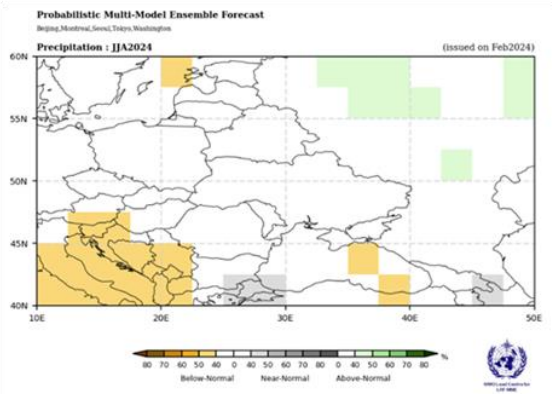


Precipitation Forecast Through Summer

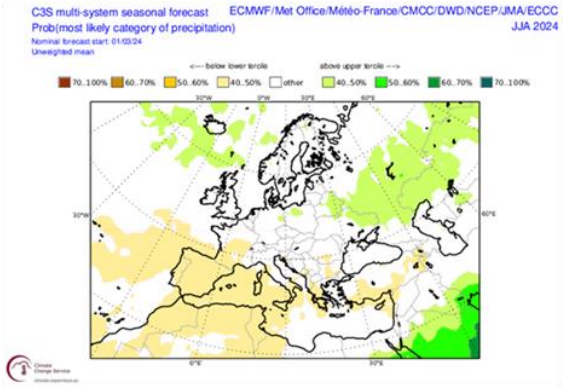
No tilt to above or below average

WMO, C3S, and NMME probabilistic forecasts for precipitation tercile

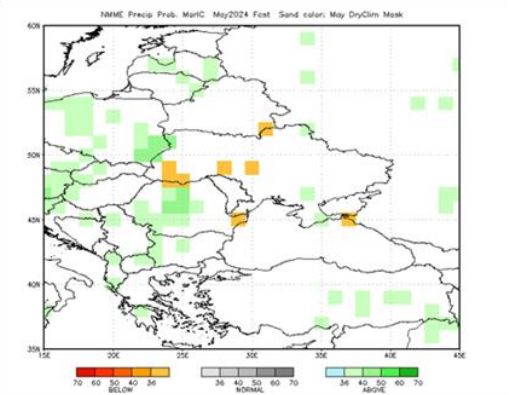
June to August 2024 (WMO)



June to August 2024 (C3S)



June to August 2024 (NMME)

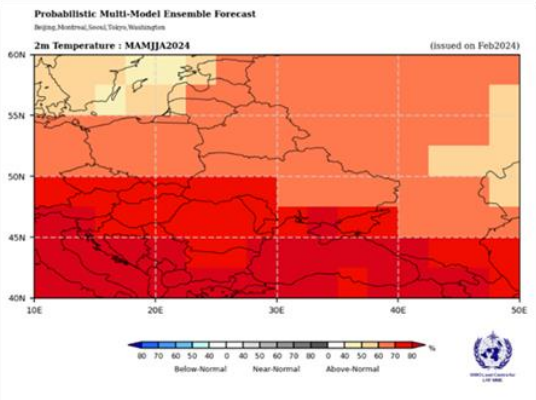


Temperature Forecast

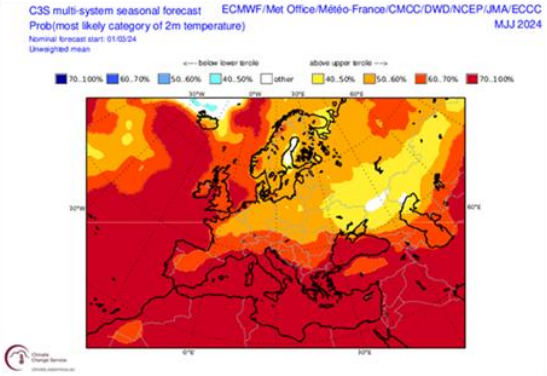
Above average most likely

WMO, C3S, and NMME probabilistic forecast for 2m temperature tercile

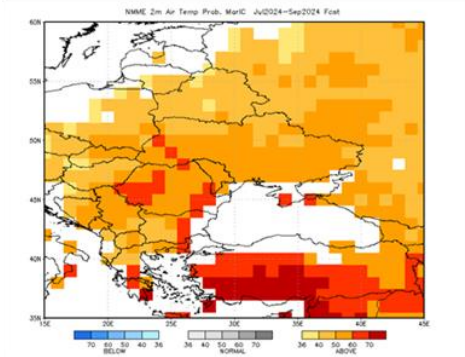
March to August 2024 (WMO)



May to July 2024 (C3S)



July to September 2024 (NMME)



GEOGLAM Update

As of February 2024

- Another very warm and short winter is coming to an end in Ukraine. No risks were identified for winter wheat.
- On the contrary, due to high winter temperatures, plant growth and development took place in many areas.
- This was extremely favorable, especially for the southern regions, in particular Kherson and Odesa, where in the fall there was a very severe drought and the plants did not have time to form seedlings before the beginning of winter. A large part of crops has improved. According to the analysis, today only 7% of crops may be low-yielding.
- During the cold period, the amount of precipitation reached 121-210% of the norm. This indicates that the soil moisture is optimal for the active growth of wheat.
- Only in the southern regions (Odesa, Mykolaiv, Kherson), where a deficit of winter precipitation was observed, an insufficient amount of moisture in the spring is likely, but it is still too early to talk about drought.

Assumption 1 of 3

No Change

Rainfall during Ukraine's spring planting period in April/May 2024 is assumed to be average. However, some uncertainty exists due to conflicting ensemble forecasts. Regardless, rainfall is anticipated to be sufficient to support planting.

Assumption 2 of 3

No Change

Temperatures are most likely to be above average through at least

September 2024.

Assumption 3 of 3

No Change

Rainfall during the main crop growing season for spring cereal crops, from June to August/September, is most likely to be average and sufficient for crop growth despite above-average temperatures.

March 2024
FEWS NET Seasonal Forecast Review

Prepared by Andy Hoell
andrew.hoell@noaa.gov