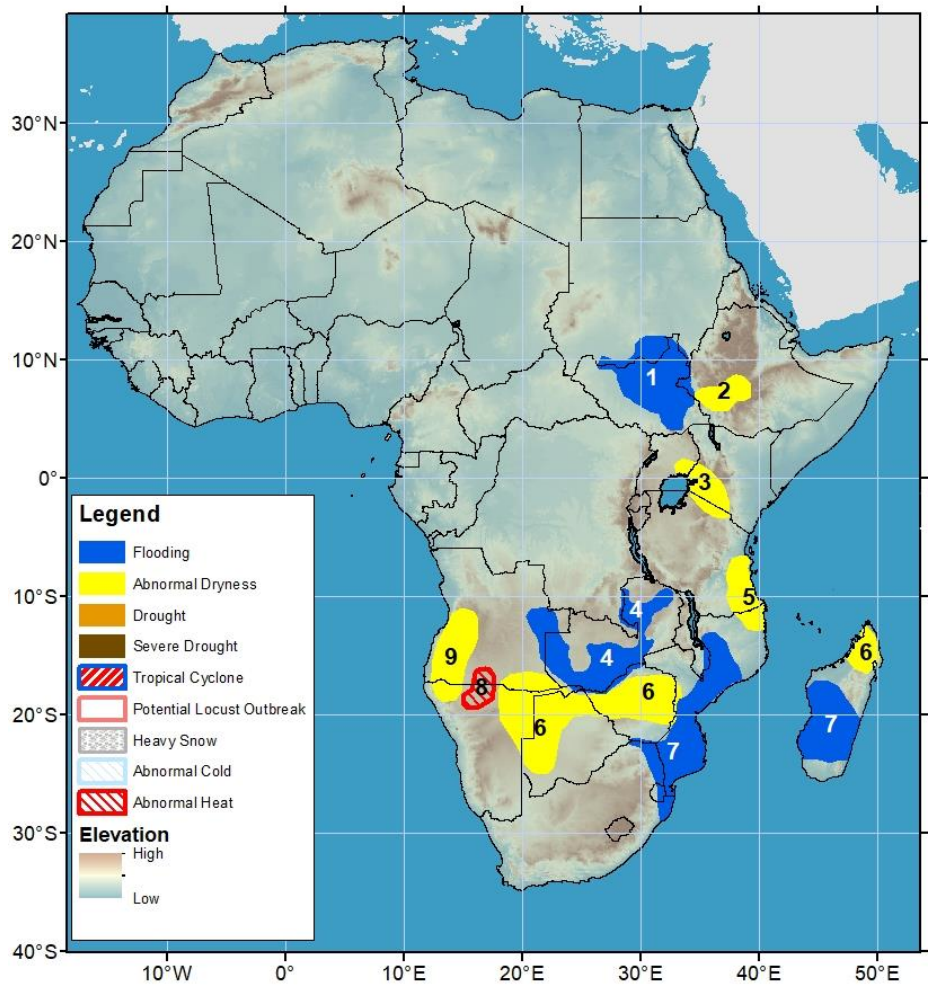
Climate Prediction Center's Africa Hazards Outlook
For USAID / FEWS-NET
16 – 22 March, 2023

- **It has been a dry start to 2023 in East Africa so far, with abnormal dryness appearing already.**
- **Abnormal dryness continued over southeastern Tanzania and parts of southern Africa.**



1) The extent of Inundation remained unchanged in South Sudan.

2) Lack of substantial rainfall since the start of 2023 has grown moisture deficits leading to abnormal dryness in southwestern Ethiopia. Recent rainfall events have slightly reduced the dryness over the southern Rift Valley.

3) Little rain since 1 January has led to growing deficits of more than 50mm and abnormal dryness in western Kenya and Uganda.

4) Flooding is present along the Zambezi River in eastern Angola and western Zambia and around Lusaka along the Kafue River. Elevated flows in rivers in southern Malawi and central Mozambique are leading to additional flooding in those areas.

5) Suppressed rainfall since November last year and corresponding soil moisture ranking less than the 30th percentile have led to abnormal dryness in southeastern Tanzania and northeastern Mozambique.

6) An uneven rainfall distribution since November has resulted in abnormal dryness in much of Botswana, central parts of Zimbabwe, central Mozambique, and north-central parts of South Africa. Northern Madagascar has shown significant dryness in recent months.

7) While the tropical storm that reorganized from TC Freddy is fast dissipating, central and northern Mozambique regions are expected to get heavy rainfall that can lead to flooding.

8) Warmer than average hot spells with 4-6ºC are expected across parts of Angola and Namibia.

9) Lack of rainfall and extended dry spells since the beginning of 2023 have led to abnormal dryness in southwestern Angola.

Note: The Hazards outlook map is based on current weather/climate information, short and medium-range weather forecasts (up to 1 week), sub-seasonal forecasts up to 4 weeks, and assesses the potential impact of extreme events on crop and pasture conditions. Shaded polygons are added in areas where anomalous conditions have been observed and predicted to continue during the outlook period. The boundaries of these polygons are only approximate at the spatial scale of the map. This product considers long-range seasonal climate forecasts but does not reflect current or projected food security conditions. FEWS NET is a USAID-funded activity whose purpose is to provide objective information about food security conditions. Its views are not necessarily reflective of those of USAID or the U.S. Government. The FEWS NET weather hazards outlook process and products include participation by FEWS NET field and home offices, NOAA-CPC, USGS, USDA, NASA, and several other national and regional organizations in the countries concerned.

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Flooding conditions are present over Central and northen Mozambique and southern Madagascar as a result of the remnants of TC Freddy that landfall for the second time as Tropical Storm in Mozambique.

Since early December, the accumulated rain in many parts of southern Africa's northern sectors has been below average. Large negative 3-month anomalies ranging between 100-300 mm still persisted over Zimbabwe, northern Botswana, southern Zambia, and southern and western Angola (**Figure 2**). On the other hand, torrential rains and flooding have dominated over Madagascar, while heavy rainfall reaching 100 mm was recorded over northern Zambia, Malawi and few places over Tanzania. Weekly rainfall totals reached 200 mm over central Mozambique.

During the next week, the tropical storm affecting the region is expected to dissipate after dumping heavy rainfall over central and northern Mozambique. Weekly rainfall totals are predicted to be more than 100 mm in central/northern Mozambique, northern Zambia, southern DRC and northeastern Angola, while 50-75 mm rainfall totals are forecasted over much of central and northern Angola, northern and Central Zambia, Malawi, and southern and western Tanzania.

7-Day Satellite Estimated Total Rainfall (mm)
Valid: 7 March – 13 March 2023

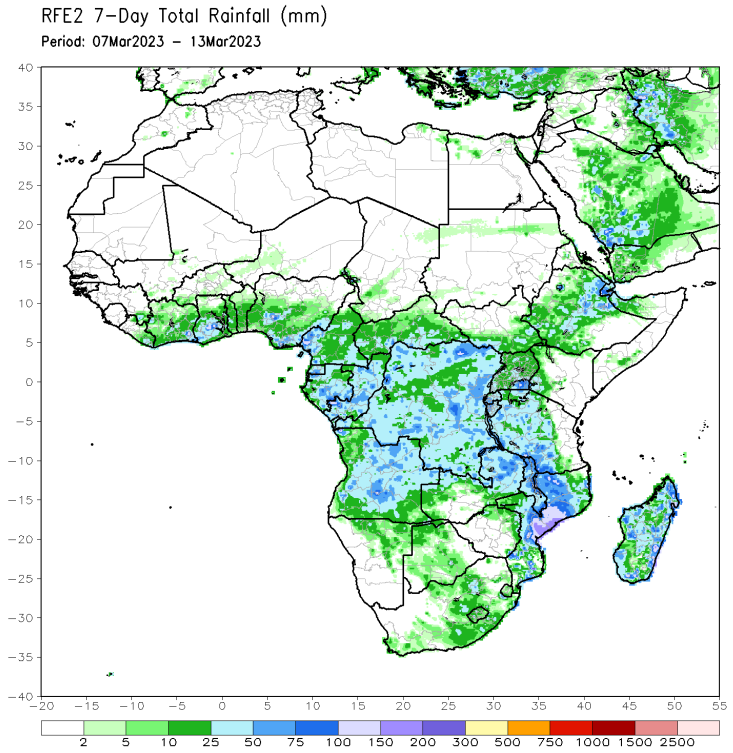


Figure 1: NOAA/CPC

Expanding coverage of light to moderate rains in Eastern Africa.

An extended rainfall covered much of the Rift Valley from southern to northeastern Ethiopia and produced a weekly rainfall total of up to 50-75 mm in the escarpments of the Rift Valley regions. Rwanda, Burundi, and northern Tanzania received 25-75 mm rainfall totals. Western Kenya and much of Uganda had up to 25 mm of rainfall for the week (**Figure 1**). Over the past 30 days, below average rain, with deficits ranging between 10-50mm persisted at some locations in southern and southwestern Ethiopia, southern Kenya, Uganda, and eastern Tanzania. As dry spells are present since the start of the year and deficits are increasing above 50mm, abnormal dryness is placed in eastern Tanzania, southwestern Kenya, neighboring Uganda, and southwestern Ethiopia. Last year's OND rainfall season was very poor in the region. This trend continues as the area remains moisture starved as the 'Belg' rainfall season begins. This will likely worsen the already negatively impacted vegetation conditions and water availability that has persisted through the dry season over the Horn.

For next week, a gradual increase in rainfall activities is predicted. As a result, some light to moderate rain showers are predicted along the rift valley regions of Ethiopia. Significant rainfall amount is predicted in southern Ethiopia and northern Kenya, which had been severely dry since the last OND season.

3-Month Satellite Estimated Rainfall Anomaly (mm)
Valid: 01 January 2022 – 13 March 2023

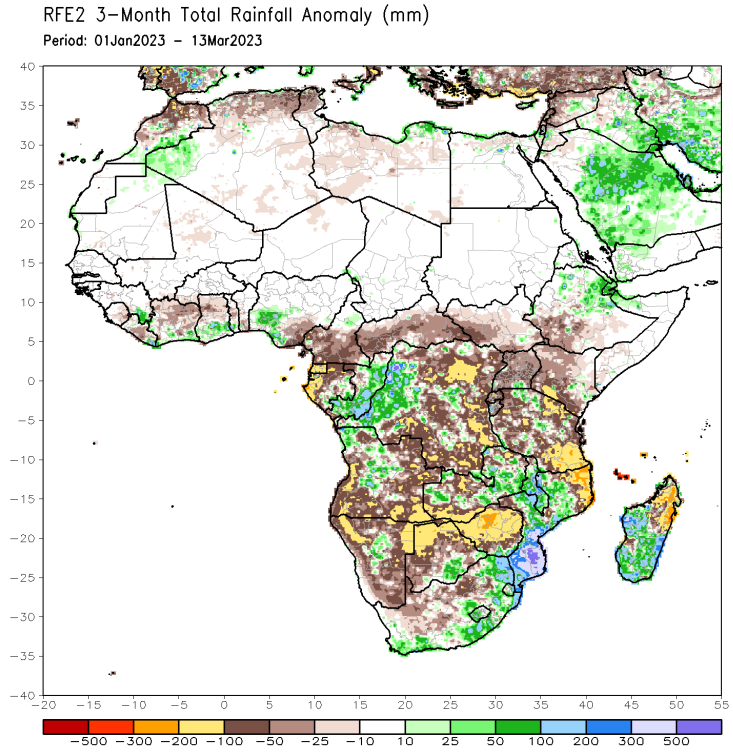
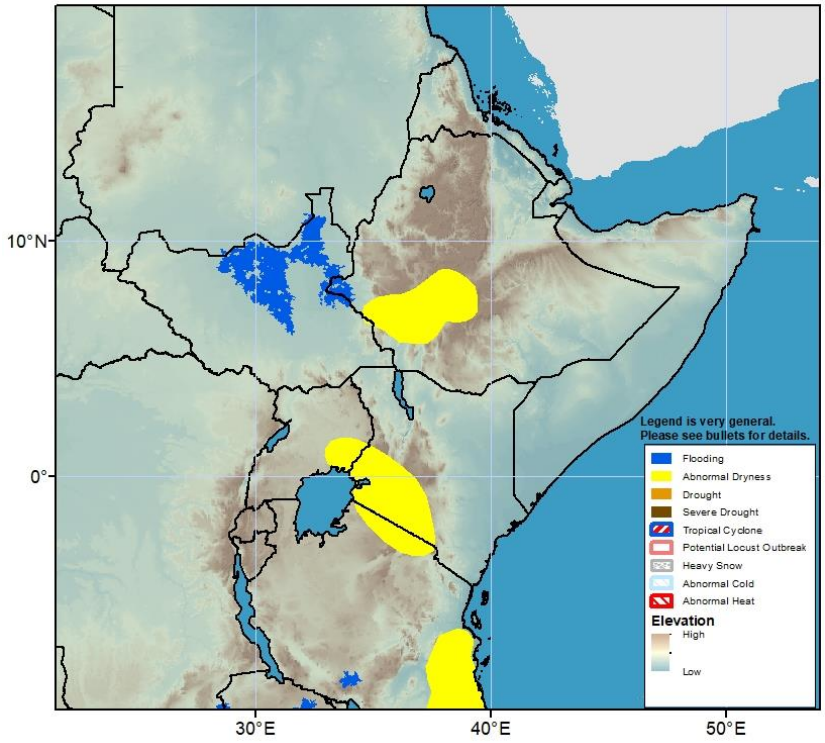
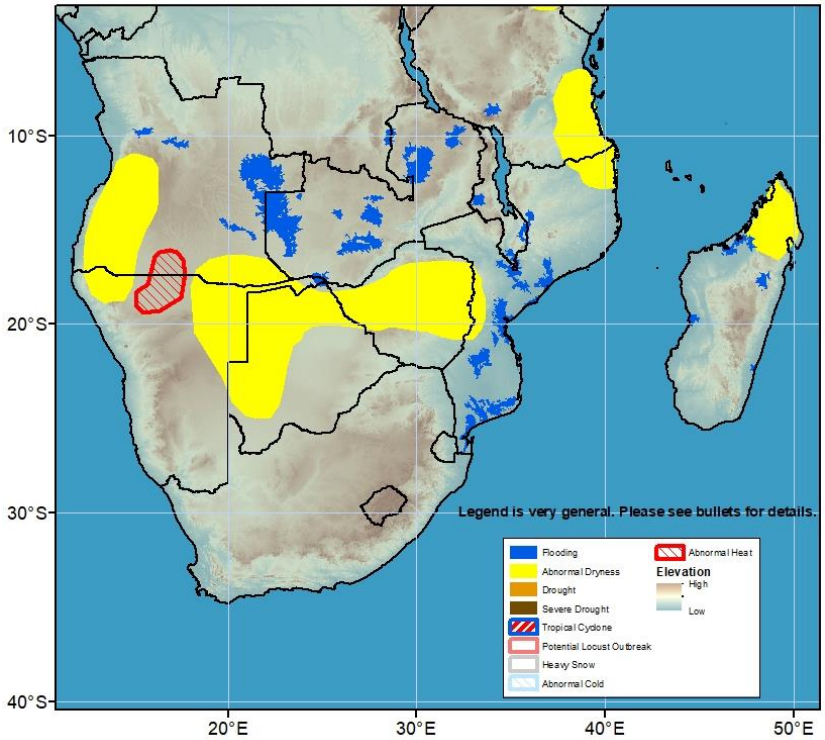


Figure 2: NOAA/CPC



Inundation extent remained unchanged in South Sudan.

Figure 3: Hazards, focused over Eastern Africa



Flooding conditions remained unchanged in Zambia. Many rivers in central Mozambique and southern Malawi may get streamflow at 10- to 20-yr return period level in the next two weeks.

Figure 4: Hazards, focused over southern Africa