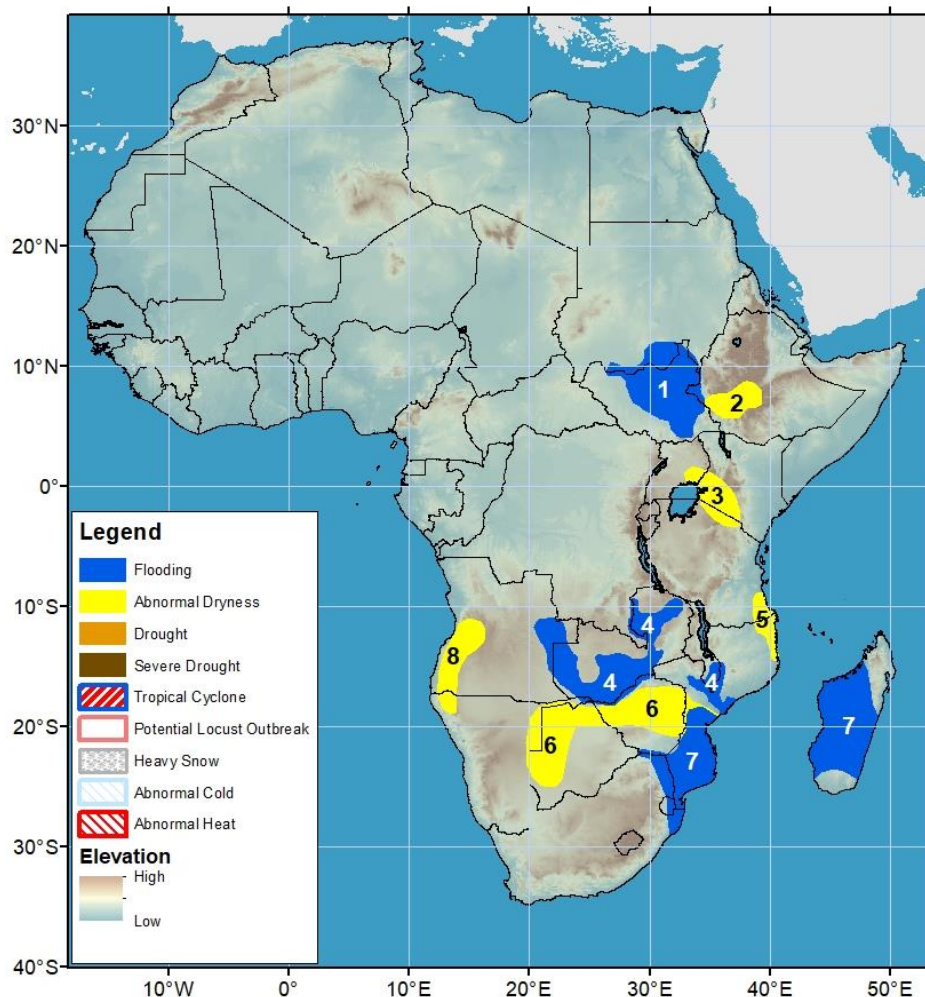


Climate Prediction Center's Africa Hazards Outlook For USAID / FEWS-NET 2 March – 8 March, 2023

- It has been a dry start to 2023 in East Africa so far, with abnormal dryness appearing already.
- Tropical Cyclone Freddy made a second landfall in southern Mozambique with widespread torrential rain.



- 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.
- 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.
- 7) Tropical Cyclone Freddy made landfall in southeastern Madagascar on 21 February and Mozambique a few days later. It brought strong winds and torrential rains to both countries. The remnant low is expected to linger in the area keeping in place flooding rains.
- 8) 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.

Questions or comments about the hazard's outlooks may be directed to Dr. Wassila Thiaw, Head, International Desks/NOAA, wassila.thiaw@noaa.gov.
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Flooding conditions are present in Mozambique and Madagascar as a result of TC Freddy.

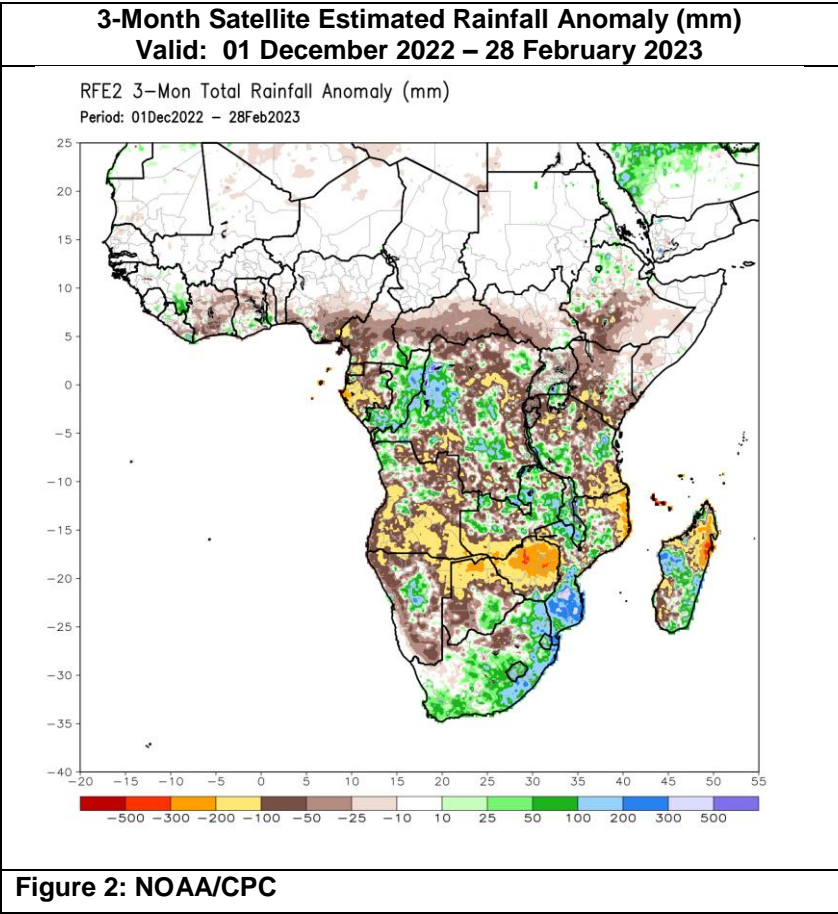
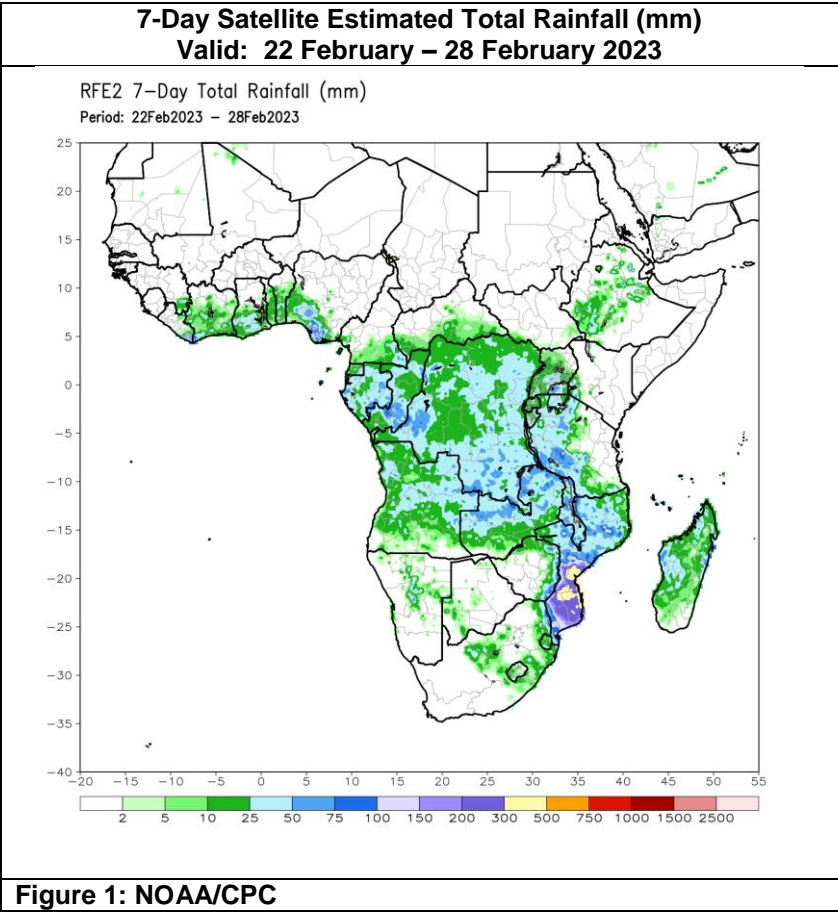
Since early December, the accumulated rain in many parts of southern Africa's northern sectors has been below average. Seasonal rainfall deficits are between 100-300mm over southern Angola, northern Namibia, northern Botswana, Zimbabwe, and northern Mozambique (**Figure 2**). More recently, larger deficits are expanding in coverage throughout Angola, Namibia and Zambia. The area of heavy rains was relegated to eastern South Africa, Eswatini, southern Mozambique, and southeastern Botswana. These areas exhibit 30-day surpluses of 50-200mm. Still, flooding lingers along the rivers in Zambia. The persistent heavy rains in Botswana, southern Zimbabwe, eastern South Africa, and southern Mozambique have led to flooding, especially in Mozambique. As such, already saturated soils were overcome when TC Freddy impacted the region last week. The storm left deadly destruction in Madagascar before crossing the channel and pummeling southern Mozambique with torrential rain. 200-500mm of rainfall led to widespread deadly and destructive floods affecting some 80 thousand people. Though Freddy brought some localized heavy rains to Madagascar, northern parts of the country have experienced a drying trend in recent weeks.

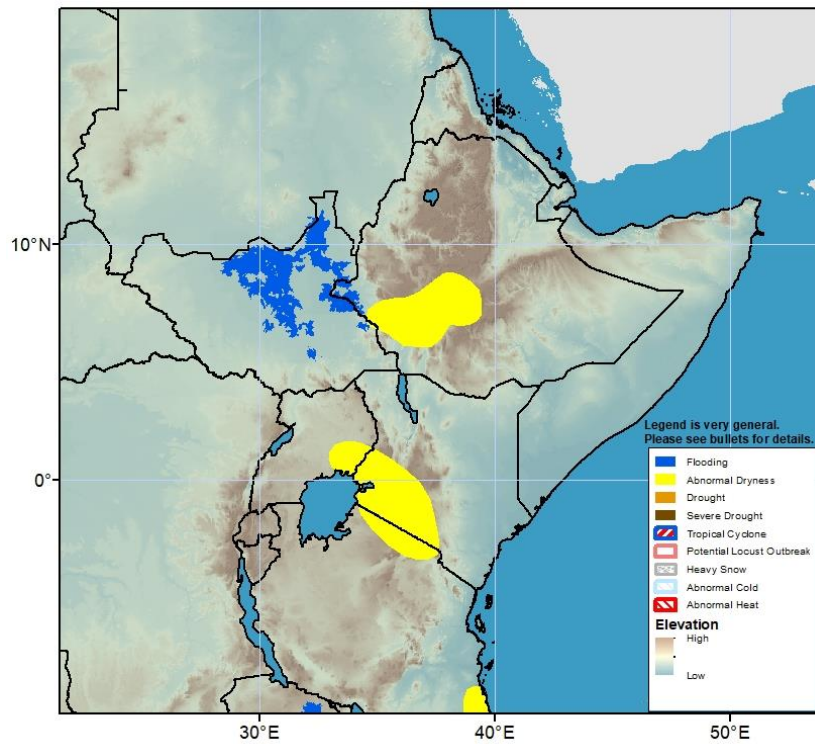
During the next week, the remnants of Freddy will slowly move across the Mozambique Channel back towards Madagascar, likely bringing 100-200mm of additional rainfall to the area. Rivers and tributaries will continue to rise in Mozambique. Moderate rainfall (50-75mm) is expected over portions of central Angola, Zambia, Malawi, and western Tanzania. Conversely, rain is expected to be well-suppressed in Namibia, Botswana, and western Zimbabwe where only light rainfall will accumulate.

Expanding coverage of light rains in East Africa.

For the final week of February, many places remained dry, including Kenya, northern Uganda and Eastern Tanzania (**Figure 1**). Light to locally moderate (10-50mm) scattered shower activity occurred over central and southwestern Ethiopia. Over the past 30 days, below average rain, with deficits ranging between 10-100mm, persisted across southwestern Ethiopia, western Kenya, Uganda, and most of Tanzania. As dry spells are present since the start of the year and deficits are increasing above 50mm, abnormal dryness is placed in 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 reinforce the already negatively impacted vegetation conditions and water availability that has persisted through the dry season over the Horn.

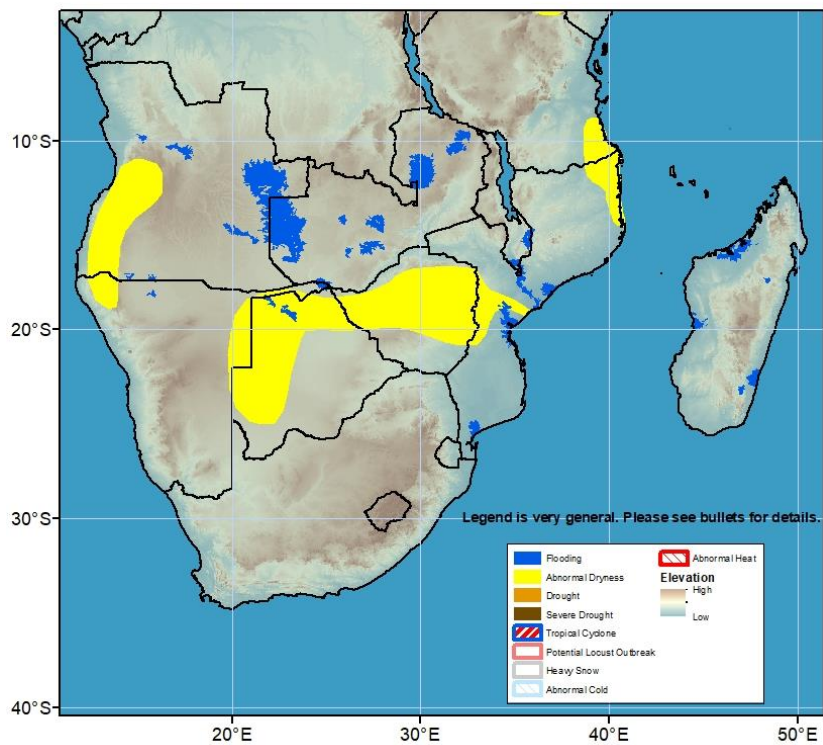
For next week, some light rain showers are possible in central rift valley regions of Ethiopia. However, the overall pattern is still for near or below-normal rains across the region.





Inundation extent remained unchanged in South Sudan.

Figure 3: Hazards, focused over Eastern Africa



Flooding along the Kafue River with rising water levels has resulted in floods in Zambia. Flooding in areas of southern Angola and across the border in Namibia have led to fatalities in the municipality of Cuvelai and the city of Ondjiva. Extreme rainfall in Maputo, Mozambique has led to deadly river flooding. Continuing rains starting with Tropical Storm Cheneso on the northeastern coast of Madagascar is flooding areas including Sambava, Nosy Boraha, and Antsohihy. Tropical Cyclone Freddy is bringing further rain and wind to Madagascar.

Figure 4: Hazards, focused over southern Africa