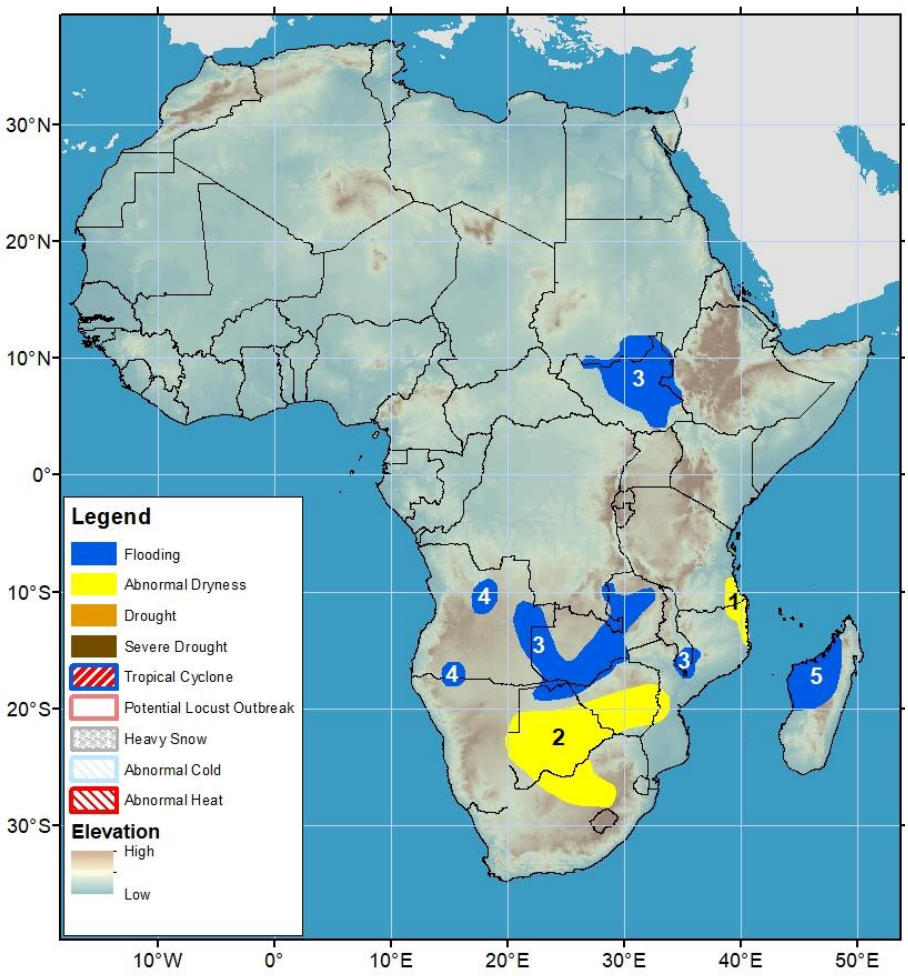
Climate Prediction Center's Africa Hazards Outlook
For USAID / FEWS-NET
9 February – 15 February, 2023

- **Suppressed rainfall over the last couple of months has led to abnormal dryness in Southern Africa.**
- **Flooding conditions have been reported in many southern African countries at the middle of the Monsoon.**



1) 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.

2) An uneven rainfall distribution since November has resulted in abnormal dryness in much of Botswana, central and southern parts of Zimbabwe, southern Mozambique, and north-central parts of South Africa.

3) Inundation extent remained unchanged in South Sudan. Flooding is intensifying upstream of the Zambezi River in western Zambia and around Lusaka along the Kafue River, resulting in floods in Zambia. Elevated flows in rivers in southern Malawi and central Mozambique have led to flooding in those areas. Also, enhanced rain has overly saturated the soil, which has resulted in flooding in western DRC.

4) Long-term heavy rainfall has caused worsening flooding in northern and southern Angola and across the border of Zambia.

5) Saturated ground conditions after Tropical Storm Cheneso impacted Madagascar 2 weeks ago plus ongoing heavy rains, has led to persistent flooding in the northwest.

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 in Angola, Zambia, Mozambique, and Madagascar.

Since early December, the accumulated rain in most parts of southern Africa's northern sectors has been below average. Seasonal rainfall deficits were between 100-300mm over southeastern Angola, northeastern Namibia, northern Botswana, Zimbabwe, and central/northern Mozambique (**Figure 2**). The drier conditions were attributable to an uneven spatial and temporal distribution in rainfall since the beginning of the season and the ongoing *La Niña* event, which also tends to bring above-average rain over southeastern portions of the sub-region. More recently, rains have increased over Angola, Zambia, Malawi, and northern Mozambique. These areas exhibit 50-100mm or larger 30-day surpluses after recent periods of heavy rain. As a result, it is reported that flooding is identified along the rivers in southern Angola and in Zambia. In Zambia, wide areas of southern and central provinces are reportedly underwater after long-term rainfall caused rivers to overflow. This has affected several communities in the southern and central provinces. According to the report, some rivers are expected to experience a second peak well into February, including the Luapala River in the Milenge district, the Kafue River in the Kitwe district, and the Zambezi River in Lukulu and Senanga districts. Heavy rainfall was also observed this past week throughout much of Madagascar.

During the next week, enhanced rainfall is expected over eastern portions of Southern Africa. 7-day totals are likely to be larger than 100mm in places and be well-above normal values. Conversely, rain is expected to be well-suppressed in western Angola and Namibia where little rainfall will accumulate.

7-Day Satellite Estimated Total Rainfall (mm)
Valid: 1 February – 7 February 2023

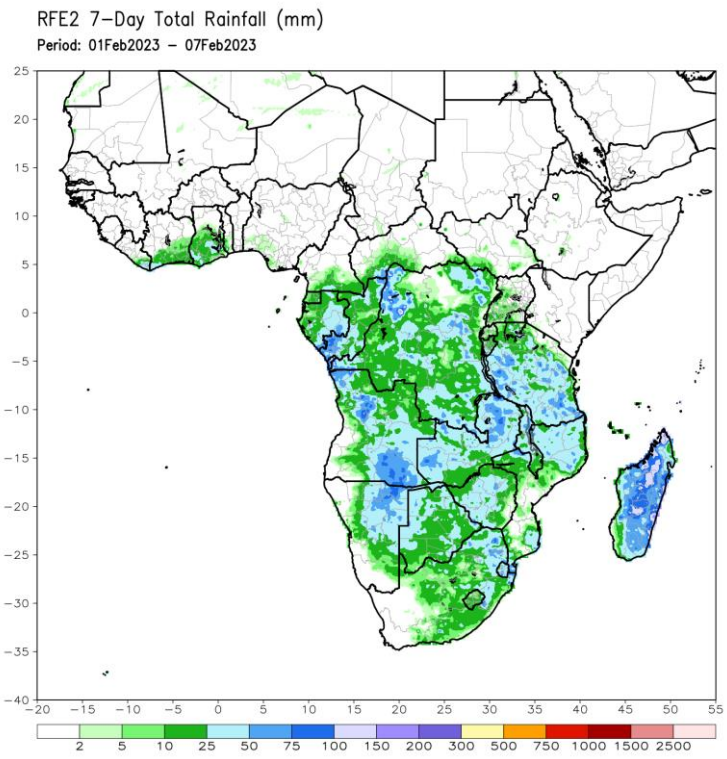


Figure 1: NOAA/CPC

Scattered moderate rain fell in Eastern Africa.

For the early part of February, most places remain dry, especially southern Ethiopia, Kenya, southern Somalia, and northern/eastern portions of Uganda (**Figure 1**). However, besides the border region with Kenya, Tanzania received light to moderate rainfall ranging between 10-50mm. These amounts were below average, especially in the South. Over the past 30 days, below average rain, with deficits ranging between 10-100mm persisted across southwestern Ethiopia, Kenya, Uganda, and northern and southeastern Tanzania, maintaining abnormal dryness over climatologically still-active portions of the sub-region in southeastern Tanzania. Since November, large (up to 200mm) seasonal rainfall deficits were observed across southern Ethiopia, much of Kenya and Somalia, and southeastern Tanzania. These negatively impacted vegetation conditions and water availability during the dry season over much of the Horn of Africa. Conversely, above-average rain with surpluses up to 100mm was depicted over parts of central Tanzania.

For next week, light to moderate rain is expected over Rwanda, Burundi, and northern Tanzania, with little rain over Uganda and the Horn. Above-average rainfall of 50-75mm is forecasted over central Tanzania.

3-Month Satellite Estimated Rainfall Anomaly (mm)
Valid: 01 December 2022 – 7 February 2023

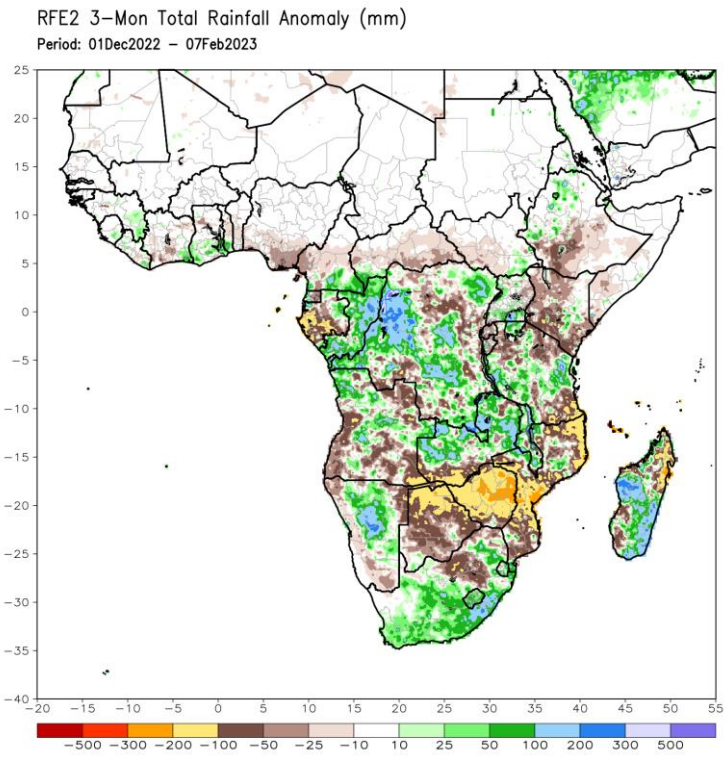
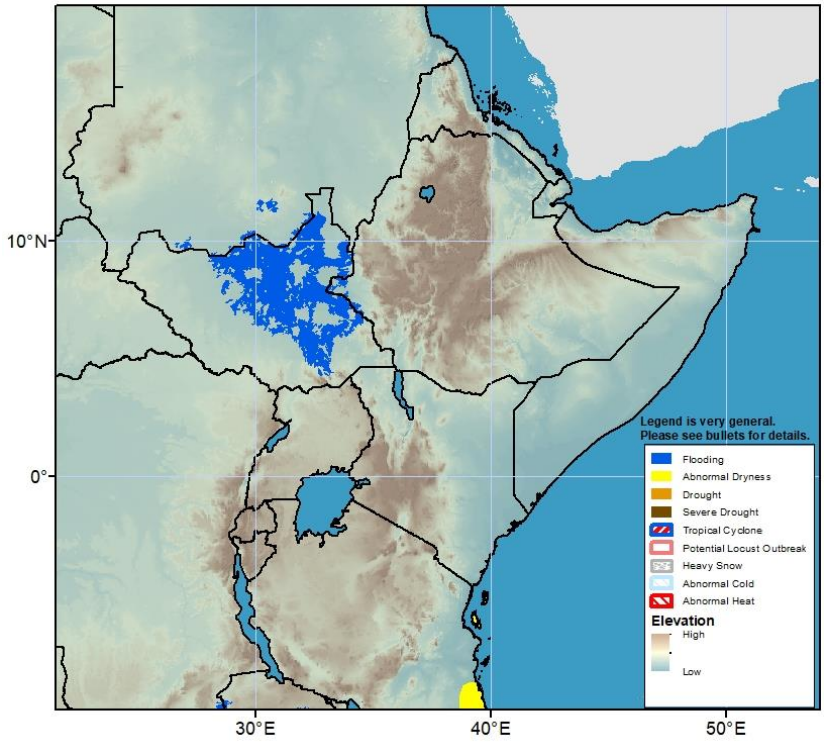
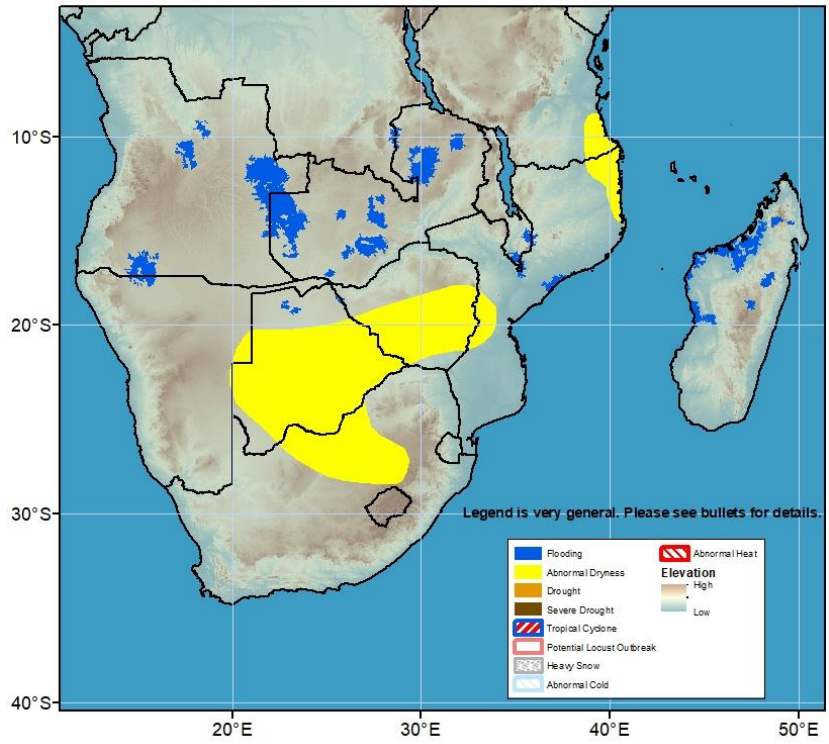


Figure 2: NOAA/CPC



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. Continuing rains after Tropical Storm Cheneso made landfall 2 weeks ago on the northeastern coast of Madagascar is flooding areas including Sambava, Nosy Boraha, and Antsohihy.

Figure 4: Hazards, focused over southern Africa