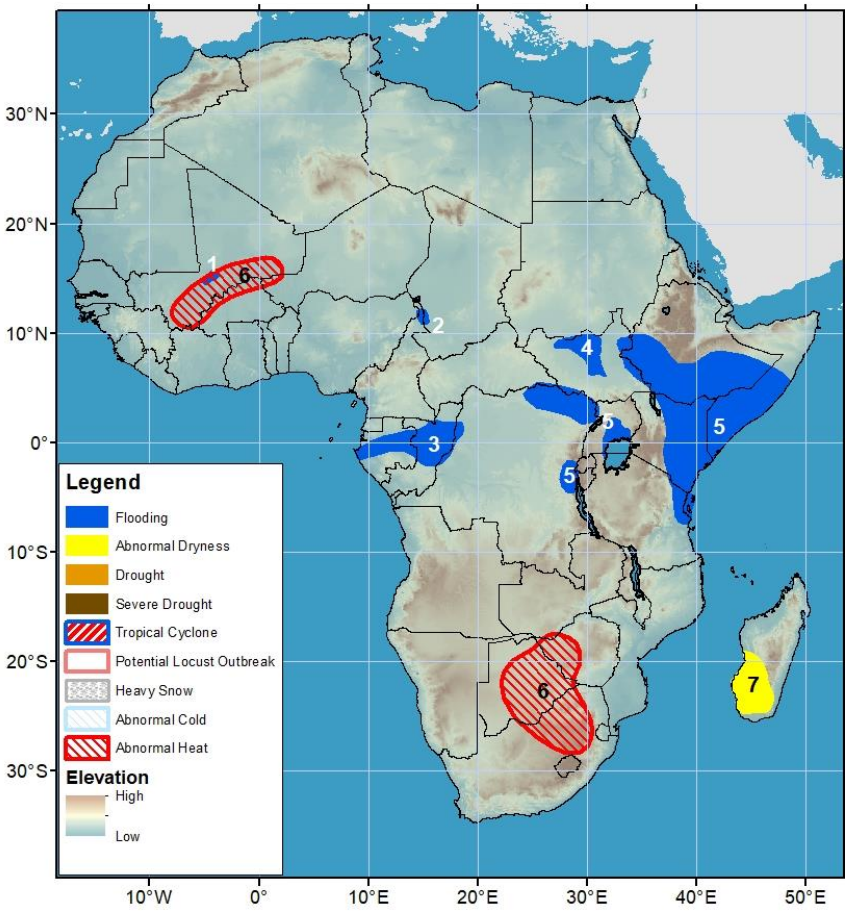
Climate Prediction Center's Africa Hazards Outlook
For USAID / FEWS-NET
30 November – 6 December 2023

- **Heavy rainfall persisted for another week in Eastern Africa, reinforcing widespread historic level flooding.**
- **Hotter than average temperatures and light rain was observed across southern Africa.**



1) **The previous season's torrential and above-average rain has caused floods to linger along the Niger River delta in central Mali, though conditions are improving.**
2) **Flooding is maintained over the past week in southern Chad but is improving.**
3) **Flooding is ongoing in Congo and Gabon due to recent heavy rainfall which is forecast to persist into the outlook period.**
4) **Flooding conditions persist in the Sudd wetlands.**
5) **The river levels of the Juba and Shabelle Rivers have reached bankful level along their lengths in Somalia. The torrential rain is leading to widespread serious flooding in Ethiopia's southern parts as well Kenya that has already led to many fatalities and displaced many thousands of people. Recent heavy rains also have caused ongoing inundation central portions of Uganda. Flood models indicate high streamflow due to ongoing rains in northeastern DRC. Reports indicate that 4 fatalities and 4 thousand displaced people have resulted**
6) **An abnormal heat hazard is placed over a region of southern Africa including Botswana, Zimbabwe, and central South Africa. In association with suppressed rain and cloud cover, maximum temperatures are expected to be 4-6°C warmer than average during the outlook period and average hotter than 33°C. Abnormal heat exceeding the 85th percentile is forecast in Mali and Burkina Faso.**
7) **Due to a delayed start to the rainy season, abnormal dryness is placed in Madagascar where rainfall has been less than 50% of normal over the past 30 days.**

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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Heavy rainfall continued to occur in East Africa, especially in Kenya and southern Somalia.

While rains have decreased this past week in Ethiopia and central Somalia an axis of torrential rain was still present over Uganda, Kenya, and southern Somalia. The highest 7-day totals, in Kenya, exceeded 150 mm (**Figure 1**). Very heavy rains exceeding 100mm were also observed across northeastern DRC. Moderate to heavy rainfall also occurred in northern Tanzania and South Sudan. This week was another in a long succession of much wetter than average weeks across the Greater Horn which has lead to record breaking seasonal rainfall totals and widespread flooding. OND rainfall season anomalies have reached 200-500 mm above average over southern Ethiopia, southern Somalia, Kenya, and eastern Tanzania according to satellite estimates. In many cases, these totals are 2 to 6 times the average seasonal totals to date (**Figure 2**). The rain gauge at Kenya Met department headquartes has so far surpassed the 1997 totals – a notable historical benchmark. In Somalia, bankfull water levels along the Juba and Shabelle rivers are occurring. According to reports at least 226 fatalities have occurred across East Africa, with more than 2.5 million people likely affected. Positively, rains have caused rapid greening of vegetation acoss the region.

During the outlook period, drying conditions are expected in Ethiopia, Somalia, and northern Kenya. However, heavy and above-average rainfall will continue across southern Kenya and Tanzania likely totaling 25-150 mm. More riverine and flash flooding is expected. Wetter than average conditions are also expected in Uganda, and eastern DRC.

7-Day Satellite Estimated Total Rainfall (mm)
Valid: 22 November – 28 November 2023

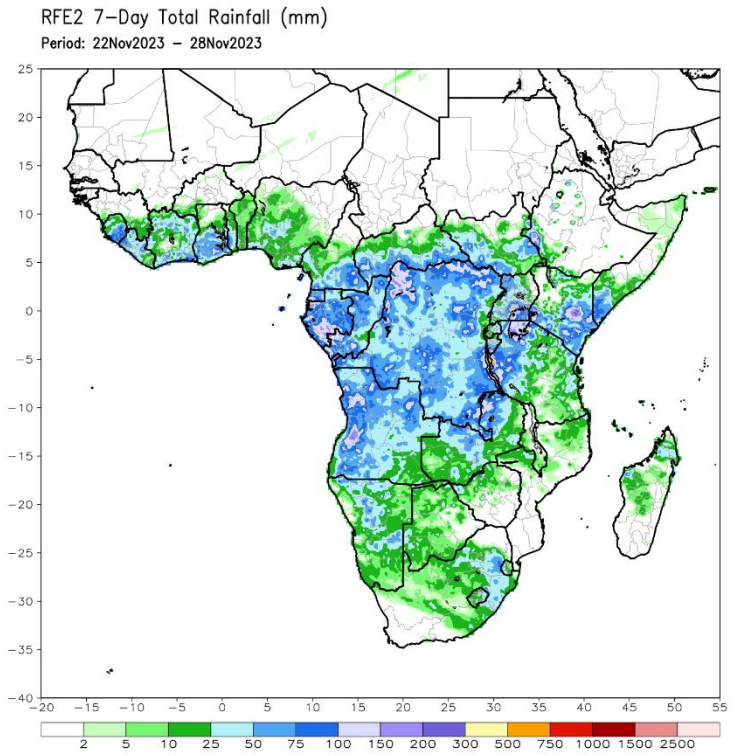


Figure 1: NOAA/CPC

Light and generally below-average rainfall observed over Southern Africa.

Over the past week, light to moderate rain showers were scattered across much of Southern Africa with totals of 5-25 mm and localized patches of more than 25 mm. The greatest rainfall (75-150 mm) was recorded in northern/western Angola and northern Zambia (**Figure 1**). The past 7 days' rainfall in many portions of Zambia, Botswana, Zimbabwe, Mozambique, eastern South Africa and Madagascar resulted in negative rainfall anomalies, with the largest anomalies (25-50 mm) in Zambia and Madagascar. During the past 30 days, rains have been largely suppressed. Some positive 30-day anomalies are observed in northern Madagascar, northern Mozambique and northern Angola, but the majority of the region exhibits negative anomalies between 25 and 100 mm. Where inadequate rainfall has been occurring the longest in Angola and northern Namibia, degradation of vegetation health is already observed according to satellite observed vegetation indicies

During the outlook period, rainfall is expected to be light and suppressed below normal in eastern Botswana, Zimbabwe, South Africa and western/southern Madagascar. However, heavier and above-average rainfall is likely in Angola and northern Zambia (75-150 mm).

3-Month Satellite Estimated Percent of Average Rainfall (%)
Valid: 01 October – 28 November 2023

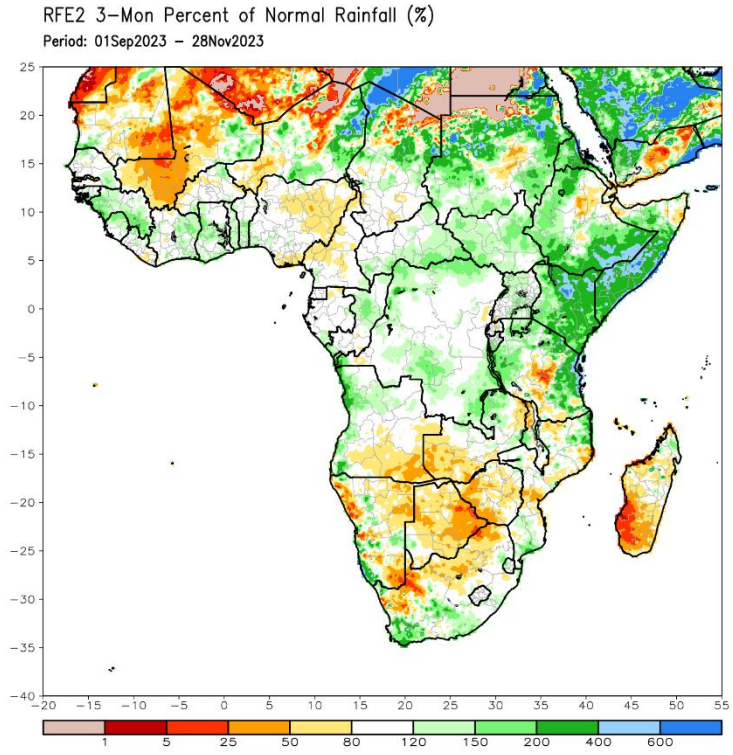
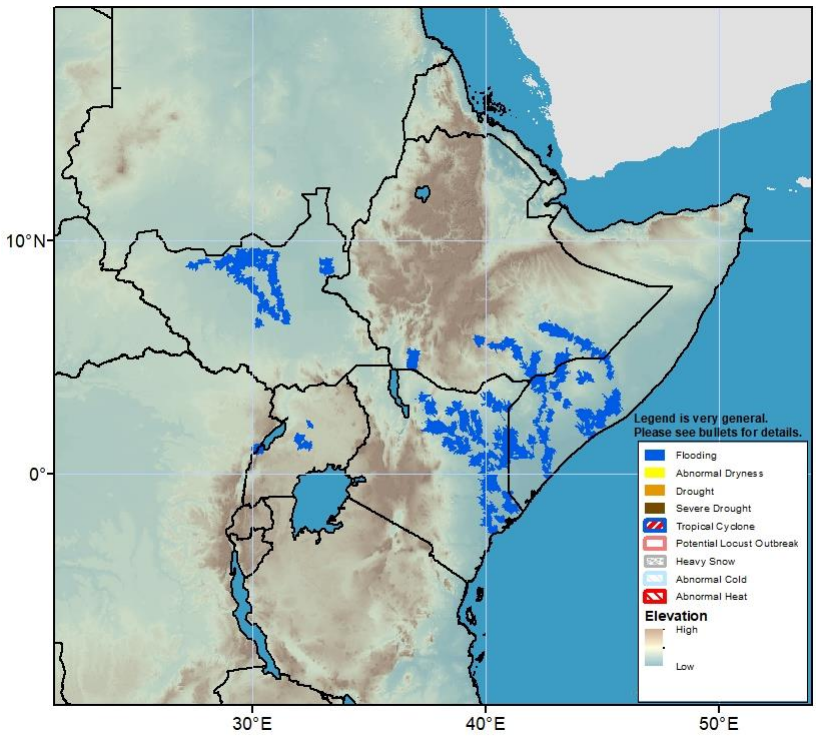
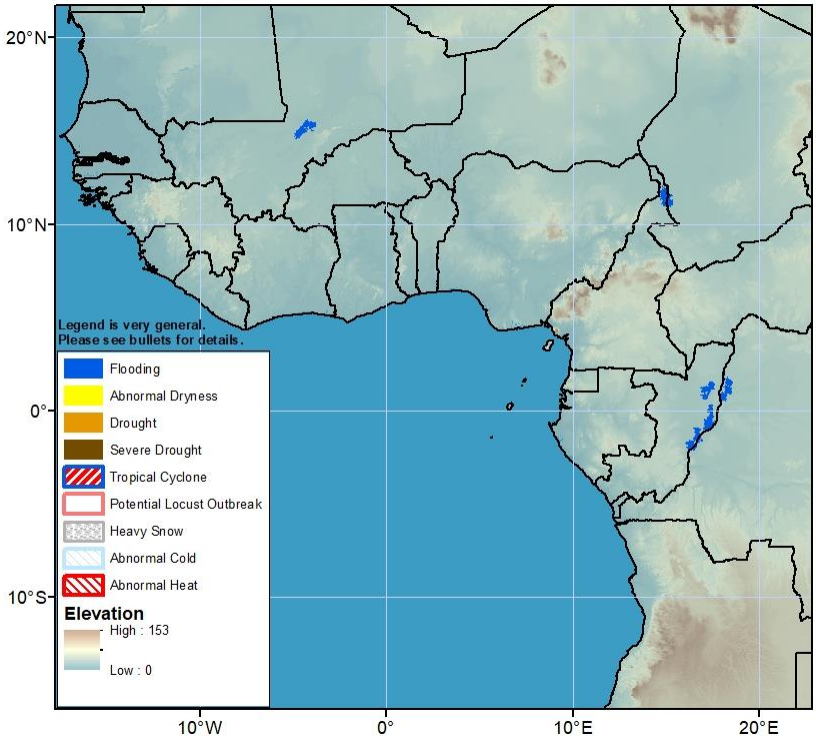


Figure 2: NOAA/CPC



Flooding is ongoing in South Sudan's Sudd Wetlands.
Inundation is increasing along the Juba and Shabelle Rivers with most stations showing bankful levels.
Streamflow near Juba River's outlet will be above the 10 year return period for the next few days .
Widespread deadly flooding also extends into eastern and northern Kenya. Millions of people in the region are affected.

Figure 3: Hazards, focused over Eastern Africa



Inundation conditions are lingering but have improved in Central Mali.
Flooding conditions improved substantially in southern Chad.
Recent heavy rains have caused inundation along the Congo river basin in Congo.

Figure 4: Hazards, focused over West Africa