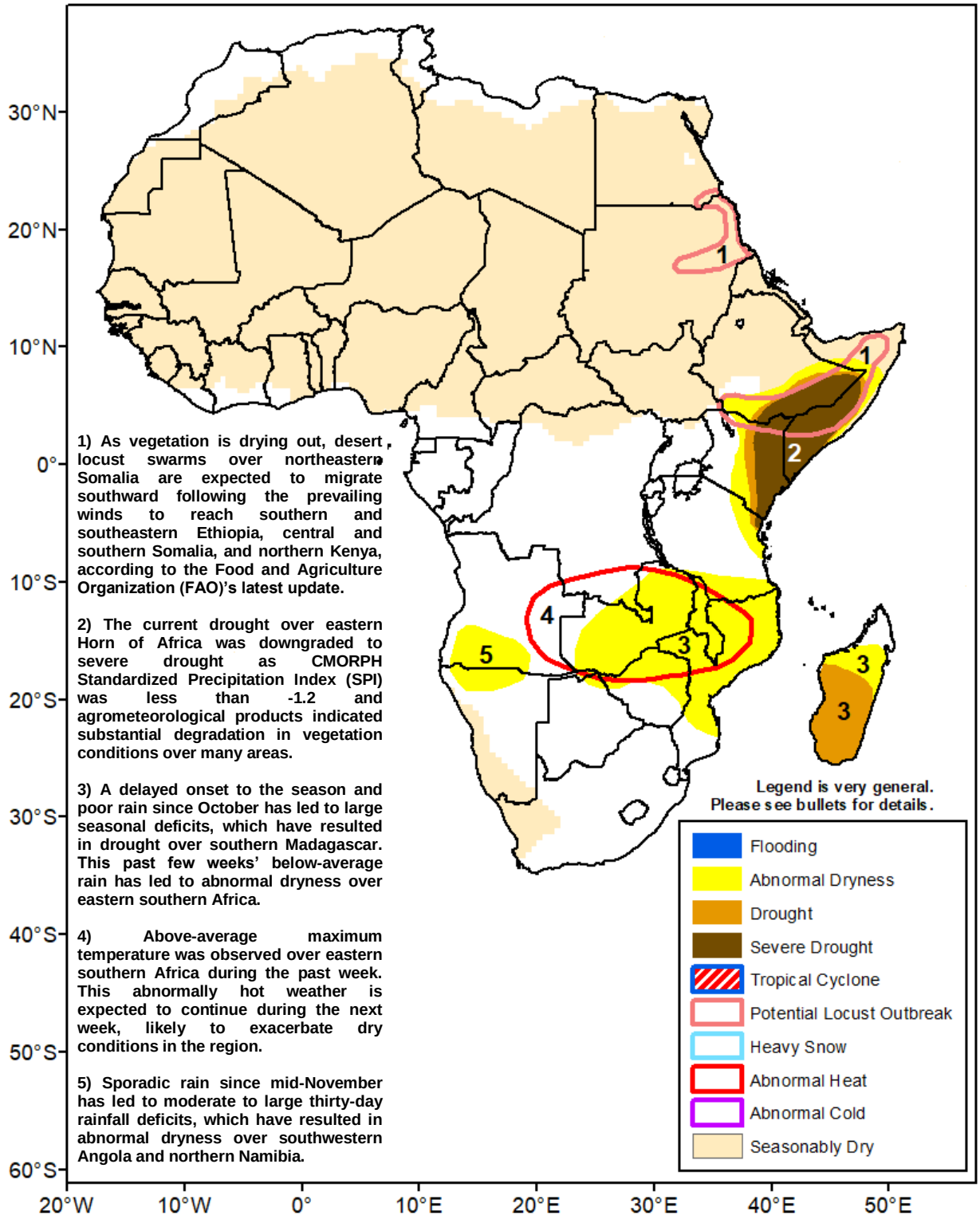
Climate Prediction Center's Africa Hazards Outlook
23 – 29 December 2021

- **Ending October – December rainfall season maintains severe drought in the Horn of Africa.**
- **Insufficient rain and above-average temperature exacerbated dryness in eastern southern Africa.**



1) As vegetation is drying out, desert locust swarms over northeastern Somalia are expected to migrate southward following the prevailing winds to reach southern and southeastern Ethiopia, central and southern Somalia, and northern Kenya, according to the Food and Agriculture Organization (FAO)'s latest update.

2) The current drought over eastern Horn of Africa was downgraded to severe drought as CMORPH Standardized Precipitation Index (SPI) was less than -1.2 and agrometeorological products indicated substantial degradation in vegetation conditions over many areas.

3) A delayed onset to the season and poor rain since October has led to large seasonal deficits, which have resulted in drought over southern Madagascar. This past few weeks' below-average rain has led to abnormal dryness over eastern southern Africa.

4) Above-average maximum temperature was observed over eastern southern Africa during the past week. This abnormally hot weather is expected to continue during the next week, likely to exacerbate dry conditions in the region.

5) Sporadic rain since mid-November has led to moderate to large thirty-day rainfall deficits, which have resulted in abnormal dryness over southwestern Angola and northern Namibia.

A poor October – December rainfall season has led to severe drought in eastern Horn of Africa.

An analysis of the cumulative rainfall since the beginning of October has shown that well below-average rain was received over the Horn of Africa. Seasonal deficits ranged between 100 – 200 mm over southern Ethiopia, southern Somalia, and eastern Kenya (**Figure 1**). While increased rains fell over eastern Kenya during the recent weeks, the amounts were not sufficient to fully erode the long-term deficits. Moreover, the season is already closing, leaving little to no chance for a full recovery. In contrast, long-term moisture surpluses increased inundated areas along the White Nile in the northern parts of the Sudd Wetlands in South Sudan, based on recent remote sensing products.

The latest vegetation products were consistent in indicating well below-average biomass production and degraded ground conditions over the dry portions of eastern Horn of Africa. The poor performance of the *Short-Rains*, October – December, rainfall season is expected to substantially reduce crop yields and negatively impact the livelihoods of many people, according to reports.

During the outlook period, suppressed rainfall is forecast over much of the Horn of Africa. This dry weather pattern will likely maintain severe drought conditions in the sub-region. However, moderate and likely above-average rain is to continue over eastern Kenya and southernmost Somalia, which may increase short-term moisture surpluses over many local areas.

3-Month Satellite Estimated Rainfall Anomaly (mm)
Valid: 01 October – 21 December 2021

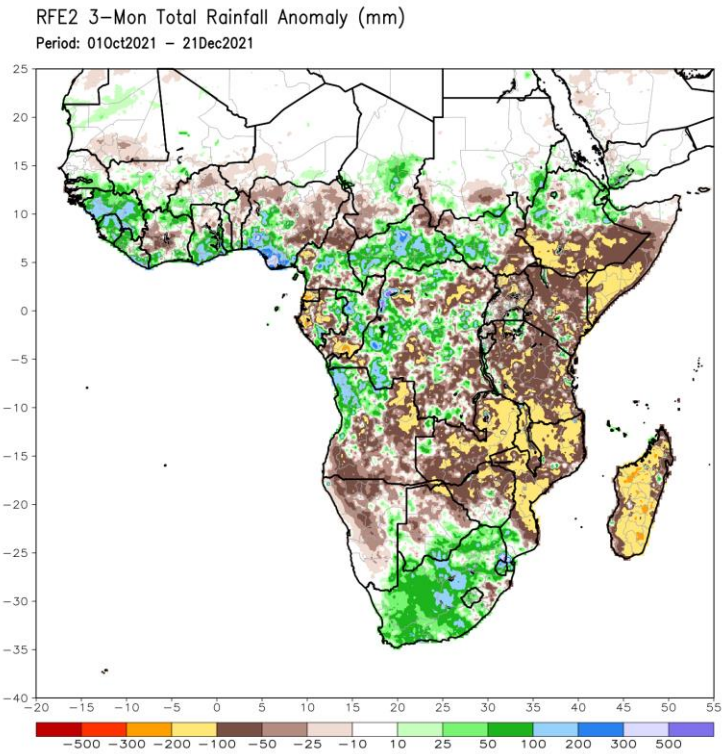


Figure 1: NOAA/CPC

Insufficient rain since the beginning of the season has resulted in drought in southern Madagascar.

During the past week, while moderate to locally heavy rains were observed over central Zambia, central South Africa, southern Mozambique, and western Madagascar, limited rains were registered elsewhere (**Figure 2**). Over Madagascar, below-average rainfall has continued since October, resulting in large seasonal deficits ranging from 100 – 200 mm. The delayed onset to the season and erratic rainfall distribution has led to drought over the southern and central parts of the Island. Over eastern southern Africa, the past few weeks 'suppressed rainfall strengthened thirty-day rainfall deficits and led to abnormal dryness across Zambia, Malawi, northern Zimbabwe, and central and northern Mozambique. To the west, deficient rain since mid-November also has strengthened short-term deficits, leading to abnormal dryness over southwest Angola and northern Namibia.

Vegetation remained stressed and conditions were well below-average over southwest Angola, central Mozambique, and southern Madagascar, based on the most recent vegetation health index (VHI) and evapotranspiration anomaly products. Conditions may further deteriorate if favorable rains do not return over the upcoming weeks.

During the outlook period, dry conditions are forecast to return over eastern southern Africa. Additionally, maximum temperature could exceed 6 degrees Celsius or more over the region, likely to add heat stress to vegetation in the region. Light to locally moderate and below-average rain is expected over southern Angola, Namibia, and Madagascar, likely to maintain dryness. In contrast, heavy rains are forecast in northern Angola and eastern South Africa.

7-Day Satellite Estimated Total Rainfall (mm)
Valid: 15 December – 21 December 2021

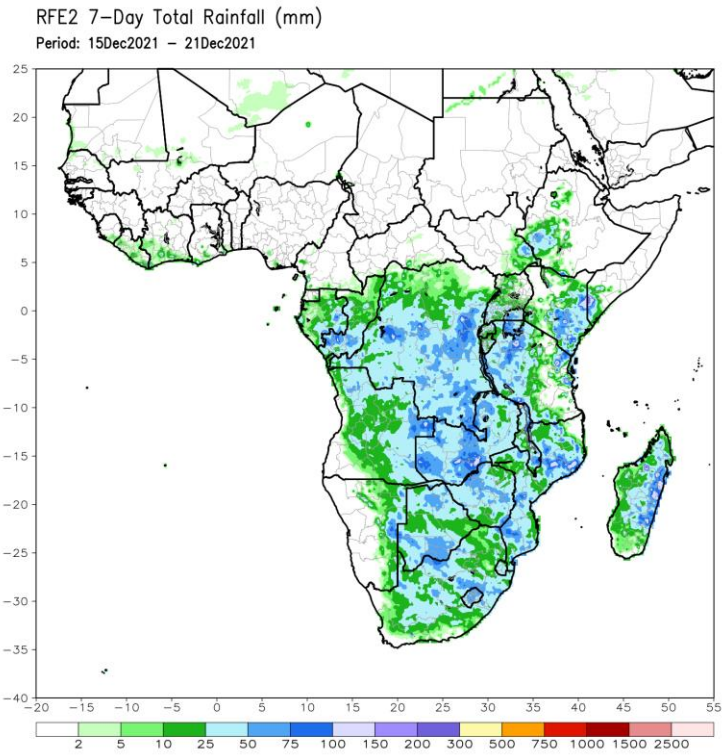


Figure 2: NOAA/CPC

Note: The hazards outlook map on page 1 is based on current weather/climate information and short and medium range weather forecasts (up to 1 week). It assesses their potential impact on crop and pasture conditions. Shaded polygons are added in areas where anomalous conditions have been observed. The boundaries of these polygons are only approximate at this continental scale. This product does not reflect long range seasonal climate forecasts or indicate current or projected food security conditions.

Questions or comments about this product may be directed to Wassila.Thiaw@noaa.gov or 1-301-683-3424.

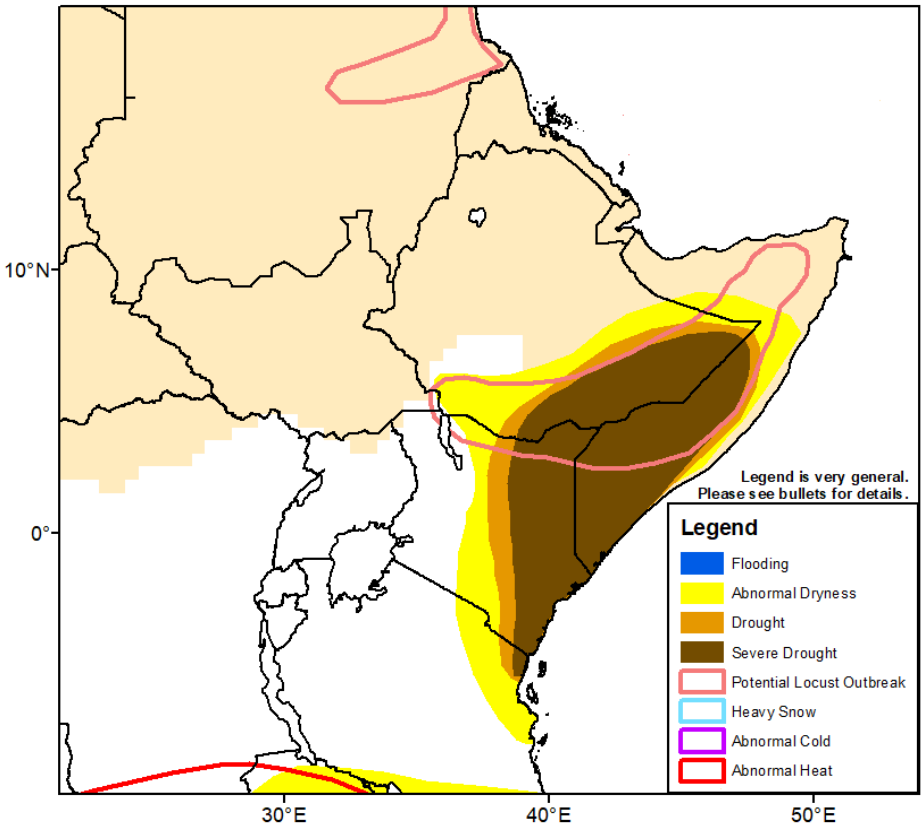


Figure 3:
Hazards, focused over eastern Africa

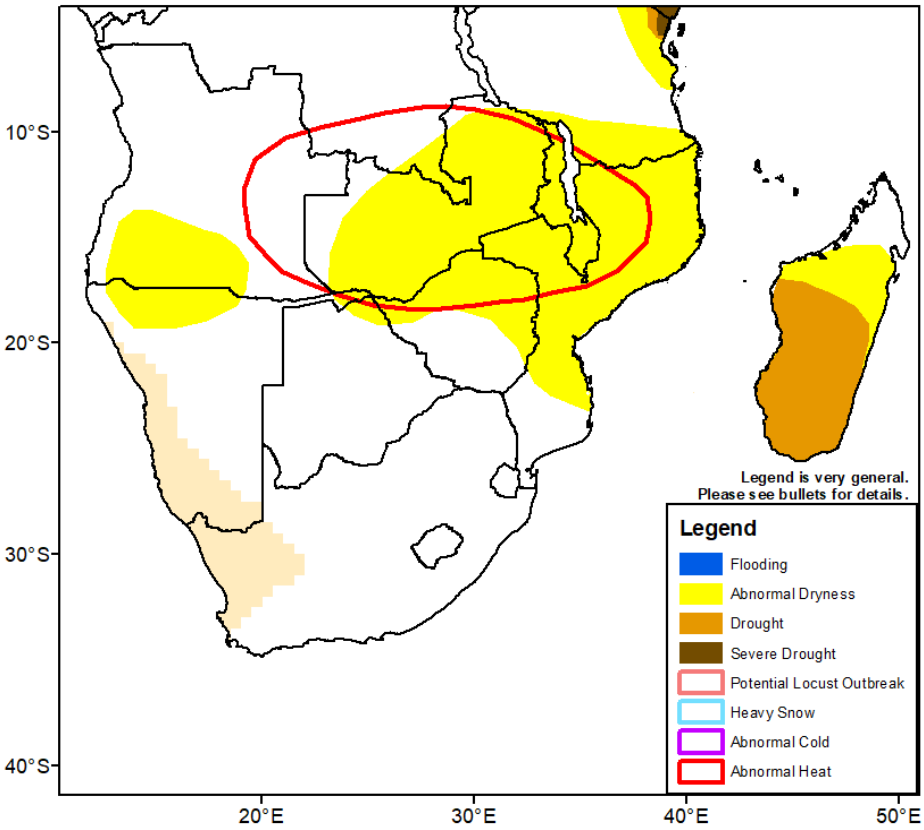


Figure 4: Hazards, focused over southern Africa