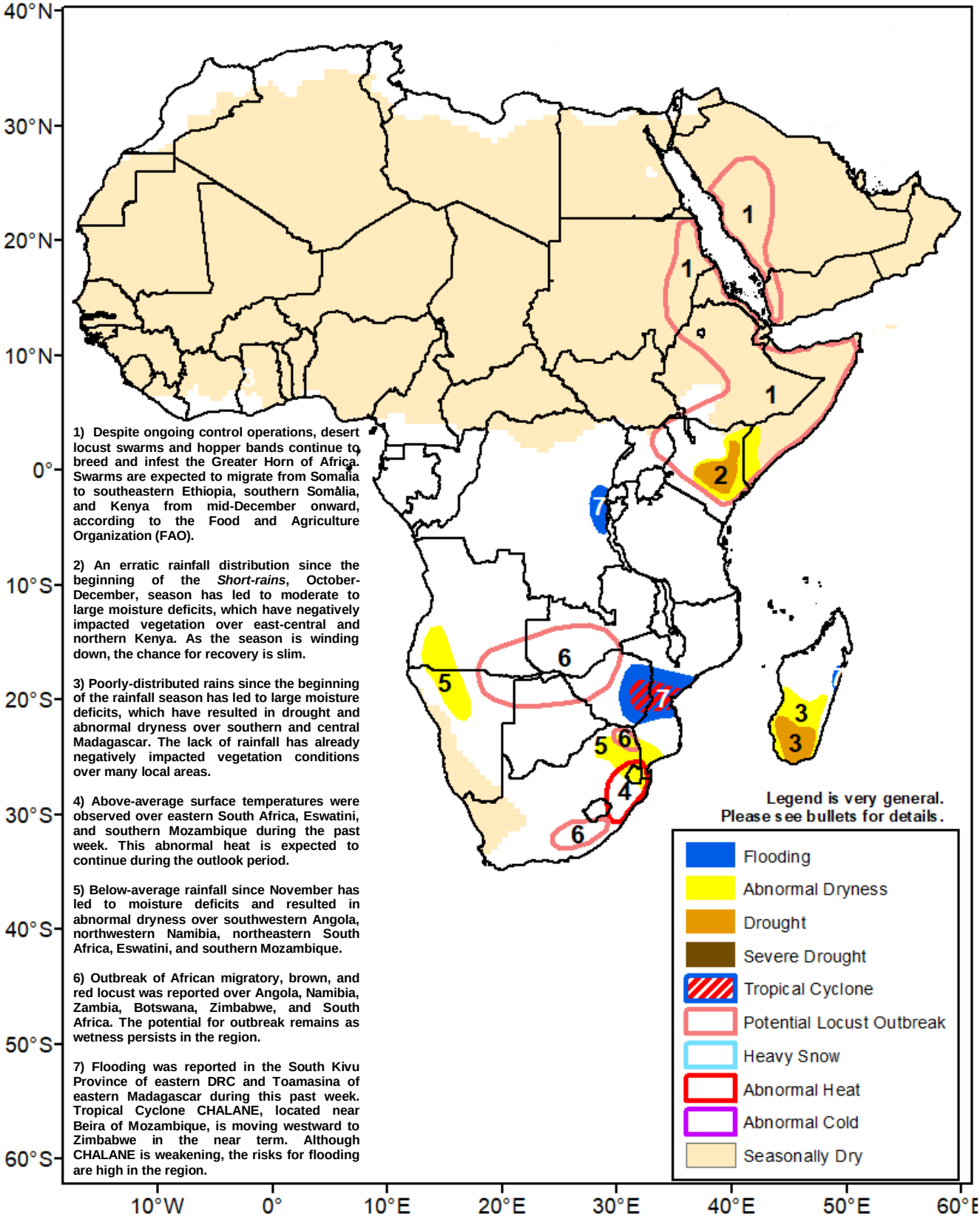
Climate Prediction Center's Africa Hazards Outlook
December 31, 2020 – January 6, 2021

- **Weakening Tropical Cyclone CHALANE is moving across central Mozambique to Zimbabwe in the near-term.**



1) Despite ongoing control operations, desert locust swarms and hopper bands continue to breed and infest the Greater Horn of Africa. Swarms are expected to migrate from Somalia to southeastern Ethiopia, southern Somalia, and Kenya from mid-December onward, according to the Food and Agriculture Organization (FAO).

2) An erratic rainfall distribution since the beginning of the *Short-rains*, October-December, season has led to moderate to large moisture deficits, which have negatively impacted vegetation over east-central and northern Kenya. As the season is winding down, the chance for recovery is slim.

3) Poorly-distributed rains since the beginning of the rainfall season has led to large moisture deficits, which have resulted in drought and abnormal dryness over southern and central Madagascar. The lack of rainfall has already negatively impacted vegetation conditions over many local areas.

4) Above-average surface temperatures were observed over eastern South Africa, Eswatini, and southern Mozambique during the past week. This abnormal heat is expected to continue during the outlook period.

5) Below-average rainfall since November has led to moisture deficits and resulted in abnormal dryness over southwestern Angola, northwestern Namibia, northeastern South Africa, Eswatini, and southern Mozambique.

6) Outbreak of African migratory, brown, and red locust was reported over Angola, Namibia, Zambia, Botswana, Zimbabwe, and South Africa. The potential for outbreak remains as wetness persists in the region.

7) Flooding was reported in the South Kivu Province of eastern DRC and Toamasina of eastern Madagascar during this past week. Tropical Cyclone CHALANE, located near Beira of Mozambique, is moving westward to Zimbabwe in the near term. Although CHALANE is weakening, the risks for flooding are high in the region.

Desert locust swarms have already reached northern Kenya.

During the past week, a dry weather pattern continued over eastern Africa. While suppressed rainfall dominated the sub-region, localized light (<25 mm) rains fell over western Ethiopia, southwestern and eastern Kenya (**Figure 1**). Limited rains were also observed over northern Tanzania. This past week's rainfall totals were near to below-average over southern Kenya and northern Tanzania. Since late September, below-average rainfall was received over much of eastern Africa, with the largest deficits exceeding 100 mm in east-central Kenya and southern Somalia. This dryness has already damaged vegetation conditions and resulted in drought over the dry portions of Kenya. As the season is ending, the chance for recovery is close to nil.

On the desert locust outbreak, a recent update from the Food and Agriculture Organization (FAO) has indicated that immature swarms have already reached northern Kenya, including the Mandera, Marsabit, and Moyale region. Moreover, the recent passage of Tropical Cyclone GATI in northern Somalia has also led to favorable environments for further breeding. The locust swarms and groups are expected to migrate southwestward further, which threaten ongoing crops and the livelihood of many people over Kenya.

For next week, model rainfall forecasts suggest some increase in rainfall over eastern Africa. Moderate to locally heavy rains are possible in east-central Kenya and northern Tanzania, whereas little to light rains are expected over western and northern Kenya, southwestern Ethiopia, and southernmost Somalia.

A poorly-distributed rainfall since the beginning of the season has led to drought in southern Madagascar.

The cumulative rainfall since the beginning of October to present has remained well below-average over the western and eastern edges of southern Africa. Large (> 100 mm) seasonal rainfall deficits were observed in western Angola and portions of northwestern Namibia to the west and northeastern Mozambique and central and southern Madagascar to the east (**Figure 2**). While the onset to the season was delayed over these areas, drier-than-average pattern during November and December was the main culprit. Conversely, seasonal rainfall was well above-average across southern DRC, eastern Angola, Zambia, Botswana, and Zimbabwe. During this past week, Tropical Cyclone CHALANE made landfall in eastern Madagascar and triggered flooding in Toamasina, based on reports. CHALANE moved across the central highland and exited the Island onto the Channel of Mozambique. Moderate to heavy rains were recorded across eastern Zambia, northern Botswana, and central South Africa, while limited and reduced rains fell over Angola, central and northern Mozambique, and southern Madagascar.

Due to extended dry spells, recent remote sensing and vegetation products have already depicted degraded and well below-average conditions over many local areas of southern Madagascar. Thus, a drought polygon is posted over the region.

For next week, heavy rains are forecast across Namibia, Angola, Zambia, Malawi, northern Mozambique, southern Tanzania, central and eastern South Africa. Tropical Cyclone CHALANE, though weakening over central Mozambique, is expected to reach Zimbabwe in the near term, maintaining high risks for flooding in the region. In contrast, little rains are forecast in southern Madagascar.

7-Day Satellite Estimated Total Rainfall (mm)
Valid: December 23 – December 29, 2020

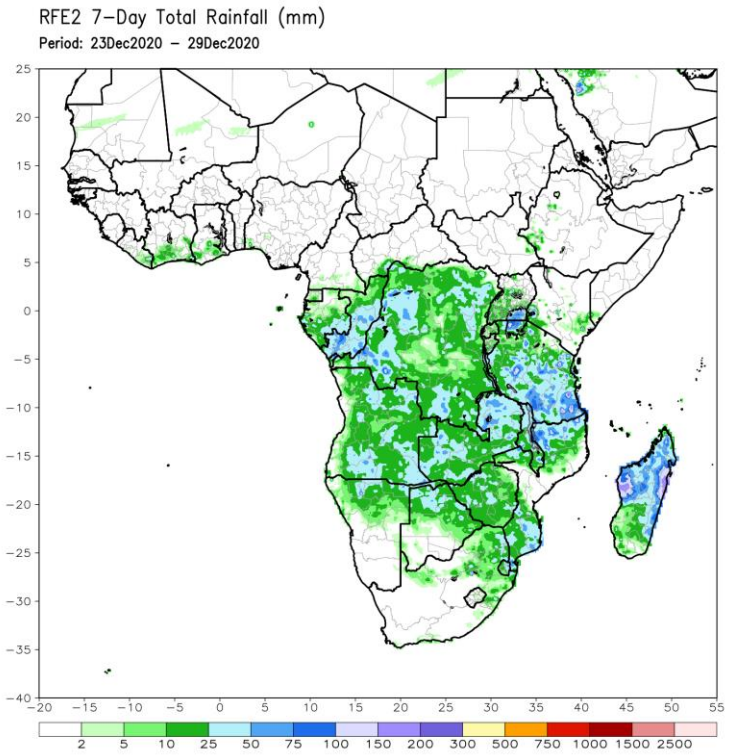


Figure 1: NOAA/CPC

3-Month Satellite Estimated Rainfall Anomaly (mm)
Valid: October 01 – December 29, 2020

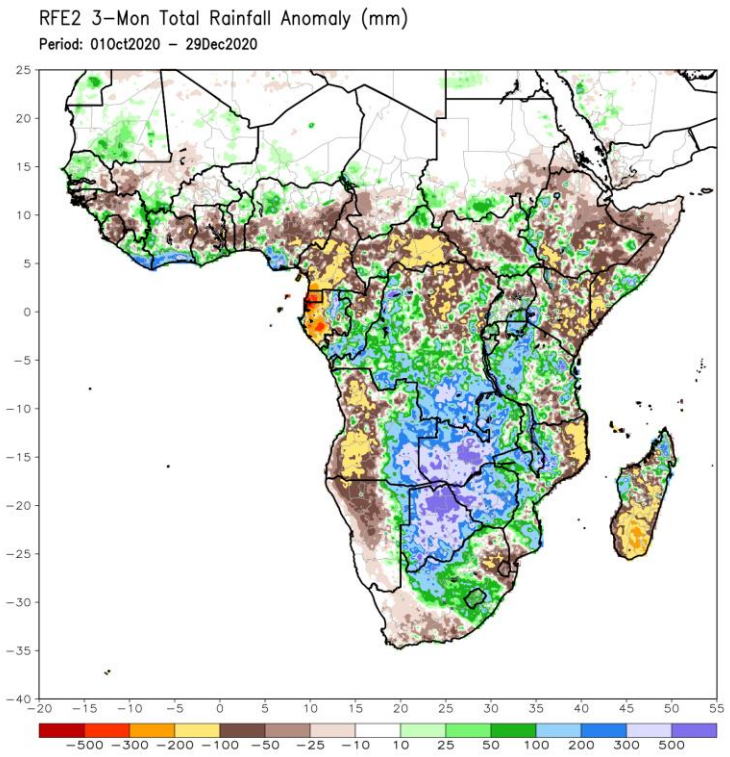


Figure 2: NOAA/CPC

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.