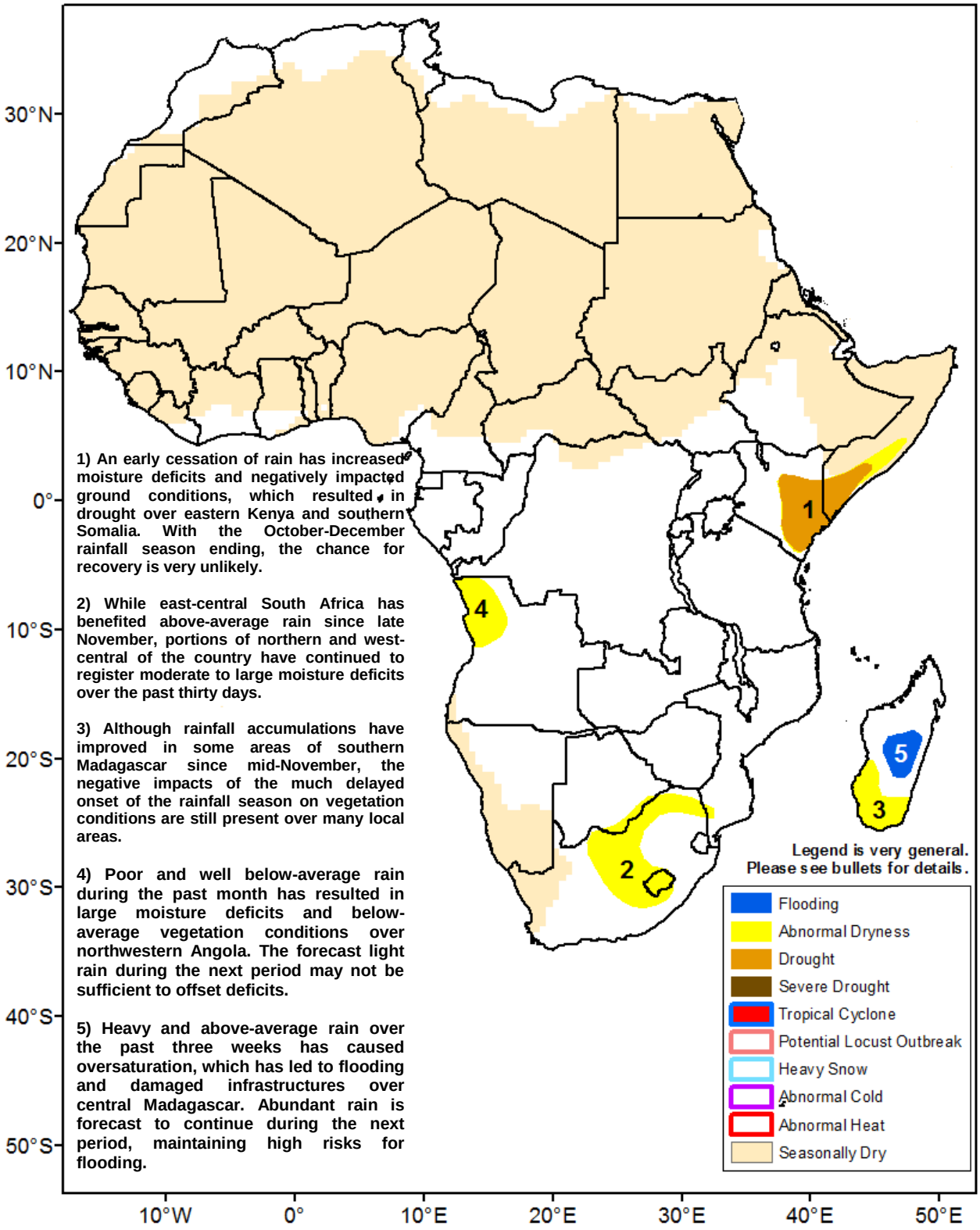
Climate Prediction Center's Africa Hazards Outlook
December 14 – 20, 2017

- **Early suppression of rain has resulted in drought over eastern Kenya and southern Somalia.**
- **Uneven rainfall distribution has led to abnormal dryness over parts of Angola, South Africa, and Madagascar.**



1) An early cessation of rain has increased moisture deficits and negatively impacted ground conditions, which resulted in drought over eastern Kenya and southern Somalia. With the October-December rainfall season ending, the chance for recovery is very unlikely.

2) While east-central South Africa has benefited above-average rain since late November, portions of northern and west-central of the country have continued to register moderate to large moisture deficits over the past thirty days.

3) Although rainfall accumulations have improved in some areas of southern Madagascar since mid-November, the negative impacts of the much delayed onset of the rainfall season on vegetation conditions are still present over many local areas.

4) Poor and well below-average rain during the past month has resulted in large moisture deficits and below-average vegetation conditions over northwestern Angola. The forecast light rain during the next period may not be sufficient to offset deficits.

5) Heavy and above-average rain over the past three weeks has caused oversaturation, which has led to flooding and damaged infrastructures over central Madagascar. Abundant rain is forecast to continue during the next period, maintaining high risks for flooding.

The cessation of seasonal rain has worsened conditions in the Horn of Africa.

During the past observation period, drier weather pattern prevailed over the Greater Horn of Africa. Suppressed rain was observed throughout Eastern Africa, except light to locally moderate rain in southwestern and southeastern Kenya (**Figure 1**). Farther south, little to light rain was recorded over the bimodal region of northern Tanzania. For the fourth consecutive week, rainfall total was below-average over eastern Kenya and portions of southern Somalia. As a result, thirty-day negative rainfall anomalies increased, with deficits now ranging between 50-200mm. Since the beginning of October, western Kenya, southern Ethiopia, and some areas of Somalia along the border with Ethiopia, have received above-average rain, while eastern Kenya, north-central Tanzania, and southernmost Somalia have accumulated below-average rain (**Figure 2**). The reduction in rain since late November has already negatively impacted ground conditions in the region. An analysis of recent Normalized Difference Vegetation Index anomaly indicated worsening, with below-average conditions in eastern Kenya and portions of southern Somalia. Other drought indices also indicated drought like conditions. As the Short-Rains, October-December, rainfall season is ending, the likelihood for recovery is unlikely.

During the next seven days, model rainfall forecasts suggest the return of light to locally moderate rain over central and southern Kenya. If the forecast rain verifies, it may reduce moisture deficits partially over local areas of the region.

7-Day Satellite Estimated Rainfall (mm)
Valid: December 06 – December 12, 2017

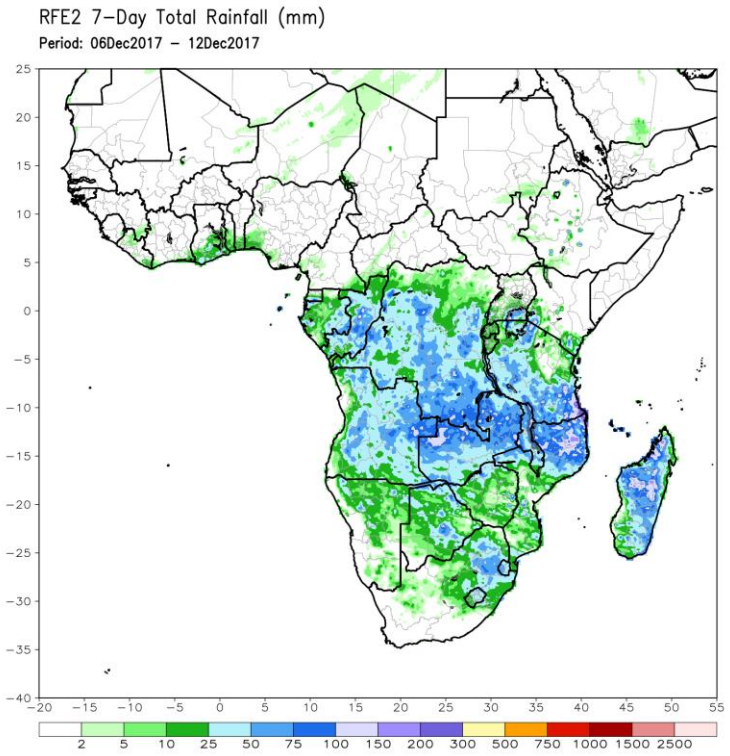


Figure 1: NOAA/CPC

An uneven Southern African monsoon rain has left many areas with moisture deficits.

An analysis of the cumulative rain since October to date has indicated that drier than average conditions were observed over northwestern and southern Angola, northern Botswana, west-central South Africa, northern Zimbabwe, southern Mozambique, and coastal areas of western Madagascar, while wetter than average conditions were registered over central Angola, Zambia, southern Tanzania, northern Mozambique, Madagascar, and central South Africa (**Figure 2**). Over northwestern Angola and west-central South Africa, dry spells since early November have increased moisture deficits, which have negatively impacted ground conditions, according to recent vegetation indices. Over east-central South Africa and Madagascar, however, above-average rain over the recent weeks has resulted in seasonal surpluses. During the past week, a widespread distribution of rainfall was observed with the largest amounts across the northern portions of Southern Africa and Madagascar. In contrast, limited with little to no rainfall persisted in northwestern Angola, Zimbabwe, and southern Mozambique.

For next week, heavy rain is forecast across central and eastern Angola, Zambia, Malawi, northern Mozambique, Lesotho, and Madagascar. This maintains elevated risks for flooding over central Madagascar. Little to light rain is expected elsewhere.

Satellite Estimated Rainfall Anomaly (mm)
Valid: October 01 – December 12, 2017

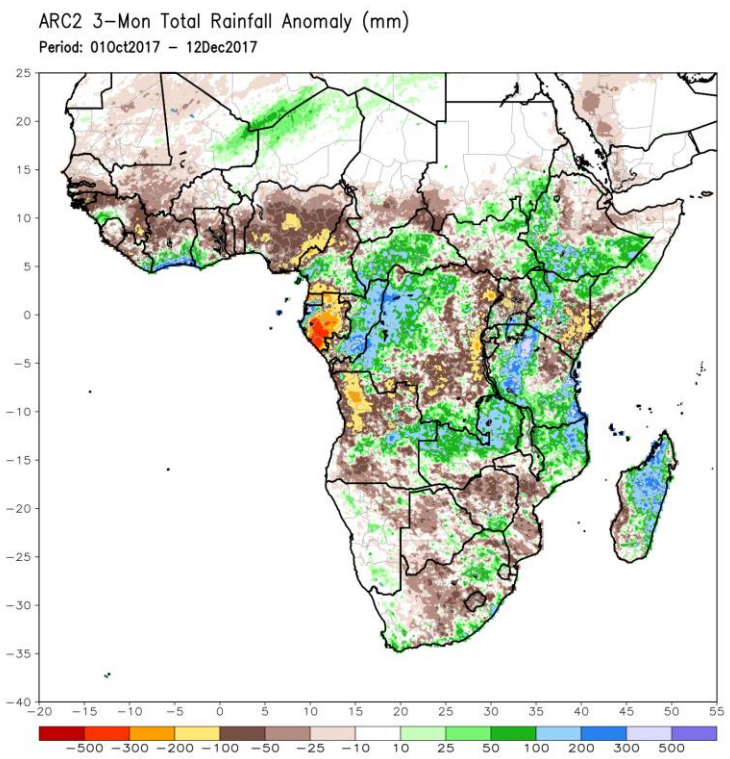


Figure 2: NOAA/CPC

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.

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