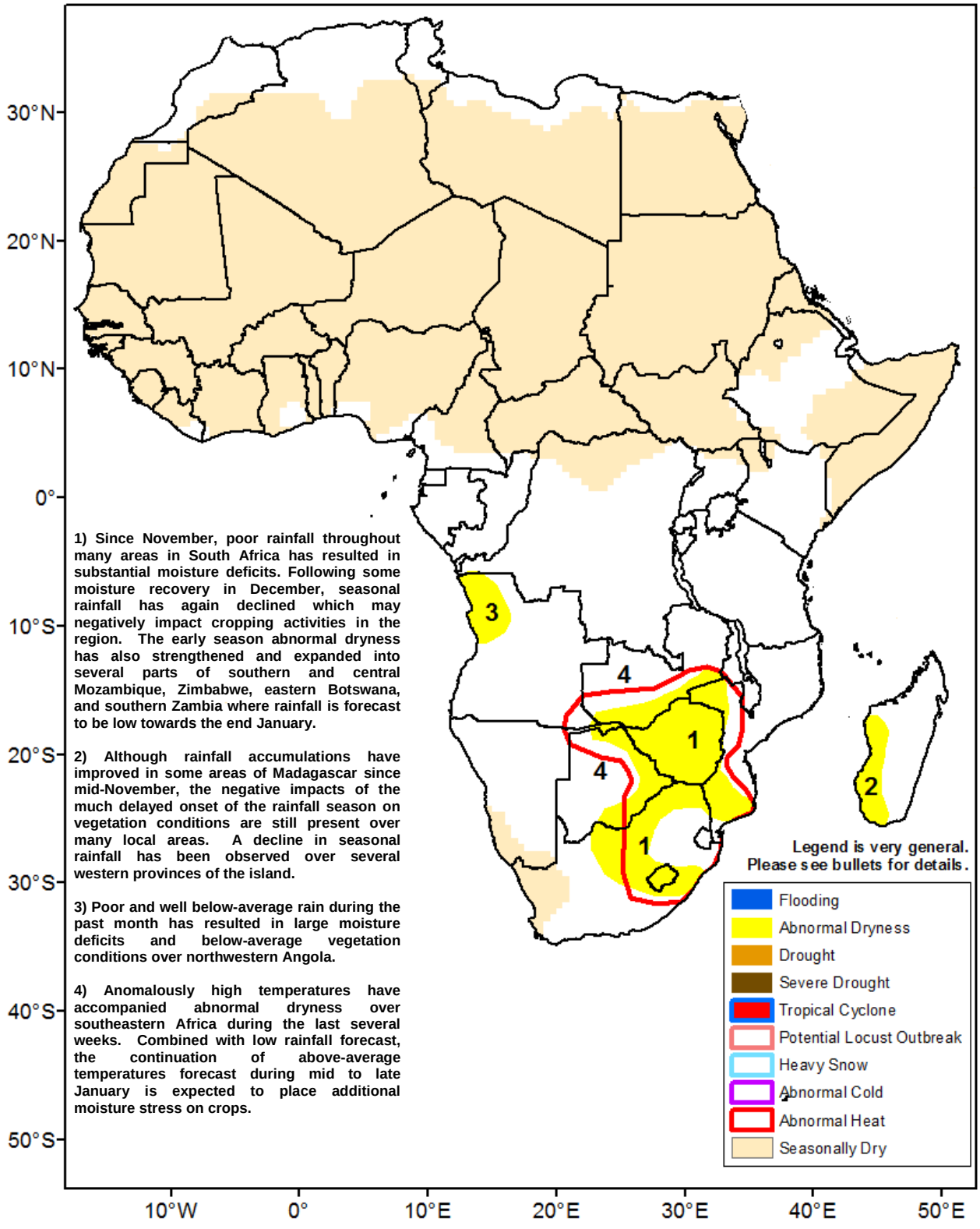
Climate Prediction Center's Africa Hazards Outlook
January 18 – January 24, 2018

- **The continuation of seasonally suppressed rainfall throughout many countries in southern Africa has led to substantial moisture deficits and an increased likelihood for adverse crop impacts.**



1) Since November, poor rainfall throughout many areas in South Africa has resulted in substantial moisture deficits. Following some moisture recovery in December, seasonal rainfall has again declined which may negatively impact cropping activities in the region. The early season abnormal dryness has also strengthened and expanded into several parts of southern and central Mozambique, Zimbabwe, eastern Botswana, and southern Zambia where rainfall is forecast to be low towards the end January.

2) Although rainfall accumulations have improved in some areas of 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. A decline in seasonal rainfall has been observed over several western provinces of the island.

3) Poor and well below-average rain during the past month has resulted in large moisture deficits and below-average vegetation conditions over northwestern Angola.

4) Anomalously high temperatures have accompanied abnormal dryness over southeastern Africa during the last several weeks. Combined with low rainfall forecast, the continuation of above-average temperatures forecast during mid to late January is expected to place additional moisture stress on crops.

Strengthening abnormal dryness pattern continues throughout southern Africa.

In the last seven days, heavy rainfall activity continued across many anomalously wet regions of northeastern Zambia, northern Malawi, northern Mozambique, northern Madagascar, and southern Tanzania, with satellite estimated accumulations exceeding 100mm for many local areas. However, this heavy rainfall pattern has acted to deprive many areas towards the south of normal seasonal rainfall for another week, as limited and poorly distributed precipitation totals were registered during mid-January. Although a slight increase in rainfall was received over portions of South Africa and central Mozambique compared to last week, light rainfall accumulations (<25mm) were widespread throughout many anomalously dry regions of Namibia, Botswana, Zimbabwe, southern Zambia, and western Madagascar (**Figure 1**).

An analysis of percent of normal rainfall anomalies suggests a strong north-south dipole anomaly pattern, with positive anomalies developing over Tanzania, northern Malawi, and northern Mozambique, and significant negative anomalies developing much of Zambia, western Mozambique, the Caprivi Strip region of Namibia, Botswana, Zimbabwe, and South Africa since mid-December (**Figure 2**). Over the past several weeks, the shape and persistence of this dipole anomaly over southern Africa points to an anomalous monsoon circulation pattern during this timeframe, as seasonal moisture has been unable to thrive throughout much of the southeastern portion of the continent. Here, short-term rainfall anomalies have markedly strengthened and expanded over the past several weeks, resulting in widespread significant moisture deficits (25-80 percent of normal) at a time where monsoonal rainfall should be near its peak in terms of its intensity and coverage. In addition, abnormally high temperatures since mid-December have accompanied abnormal dryness mainly over South Africa and Botswana increasing evapotranspiration and moisture stress. Consequently, the combination of heat and poor rainfall has increased the likelihood for degraded ground conditions.

Analysis of the southern Africa rainfall performance over the past 90 days indicates that the current mid-season dryness is having an impact on the longer term seasonal moisture conditions. Most notably, there are several regions in southern Africa that are also experiencing a high below-average number of rain days, suggesting that much of short-term and long-term dryness can be attributed to a lack of opportunity for rainfall due to unfavorable atmospheric conditions. Although there remains time for moisture recovery due to the length of the monsoon, the continuation of suppressed rainfall in January is still likely to result in negative impacts on current cropping activities for many southern Africa regions.

During the outlook period, models again suggest little relief to the anomalous dryness with anomalously high daytime maximum temperatures concentrated over southeastern Africa, as the higher rainfall amounts are forecast north of the Zambezi River. The development of Tropical Cyclone Berguitta in the southwestern Indian Ocean in not expected to impact eastern Madagascar during the next seven days.

7-Day Satellite Estimated Rainfall (mm)
Valid: January 9 – January 15, 2018

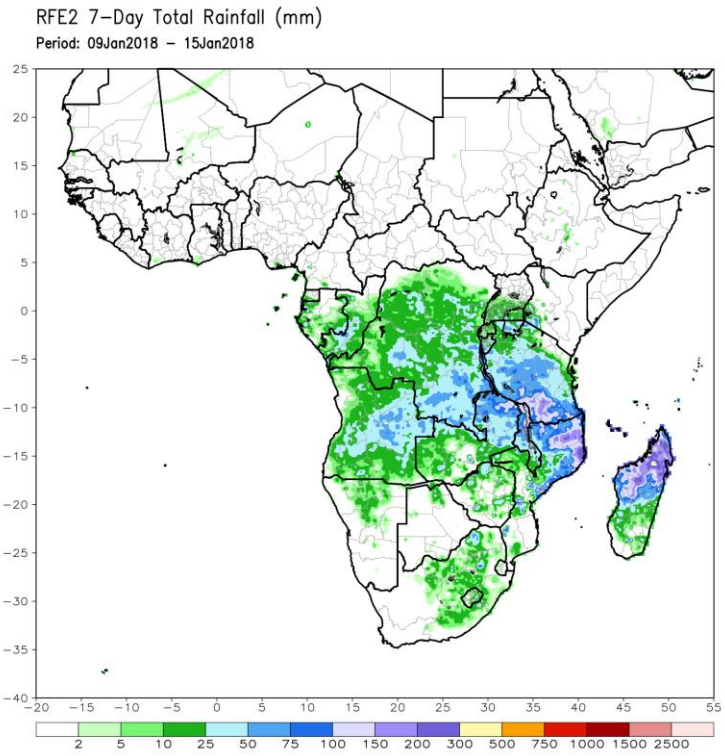


Figure 1: NOAA/CPC

Satellite Estimated Percent of Normal Rainfall (%)
Valid: December 17, 2017 – January 15, 2018

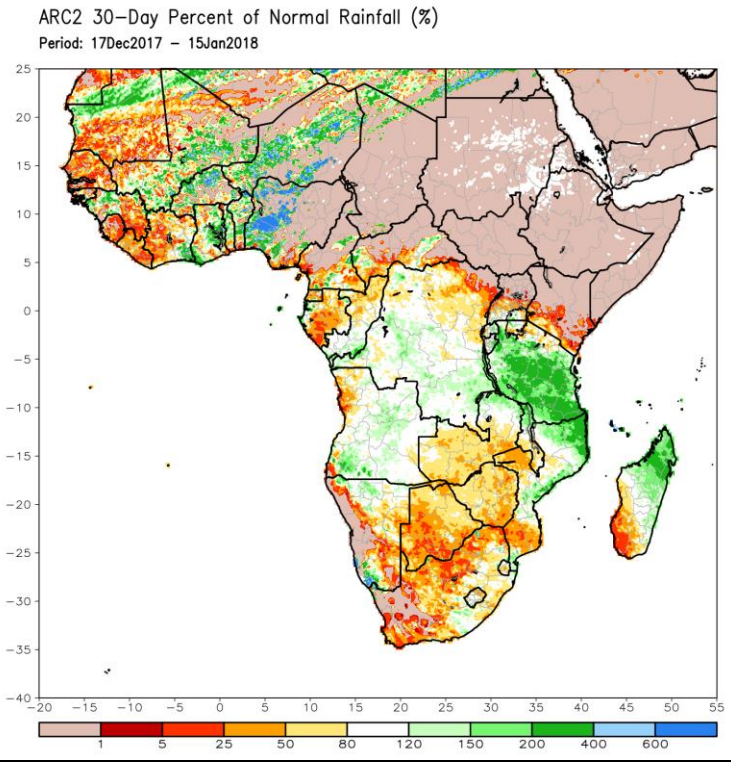


Figure 2: NOAA/CPC

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.