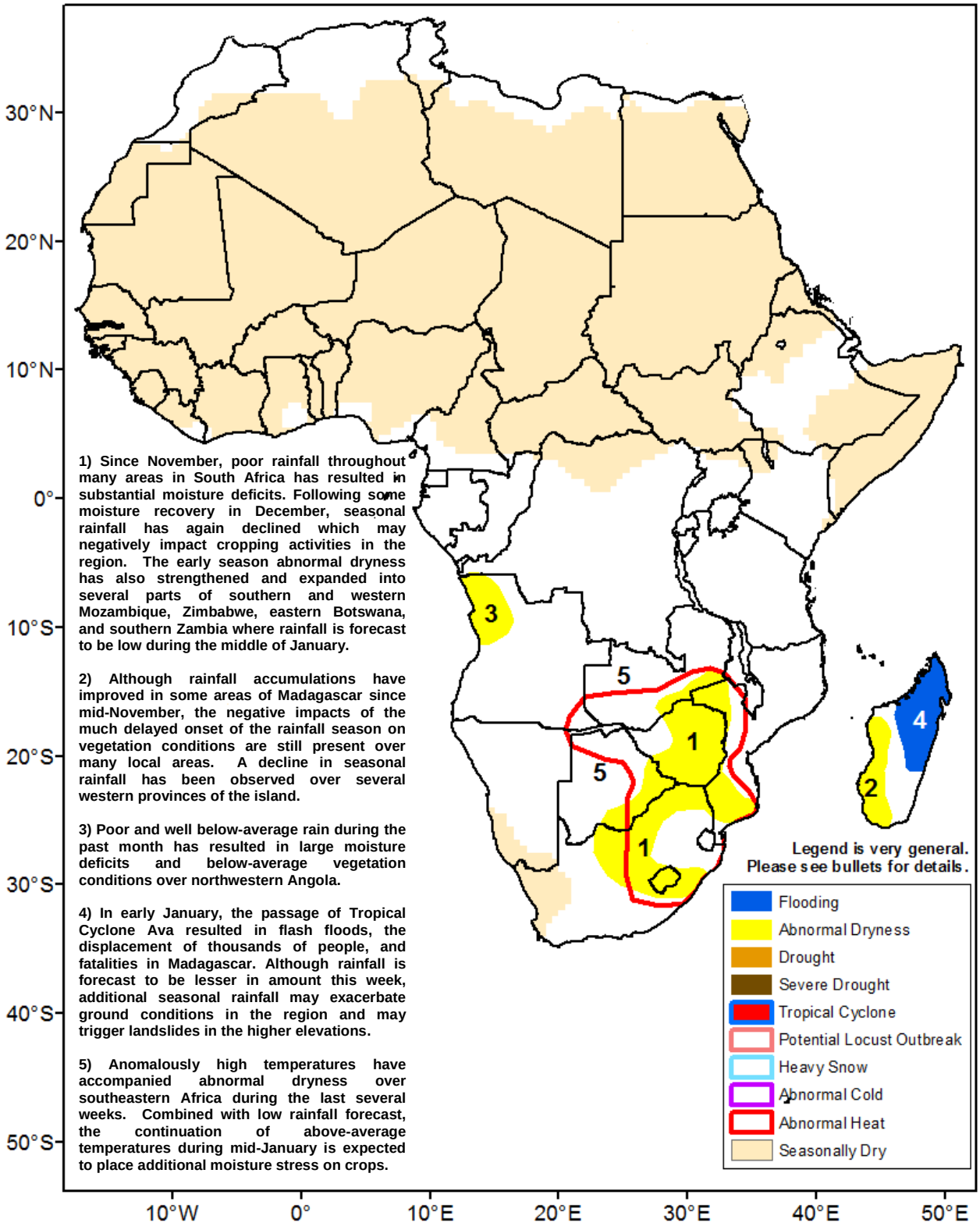
Climate Prediction Center's Africa Hazards Outlook
January 11 – January 17, 2018

- **Heavy rainfall associated with Tropical Cyclone Ava triggered flooding and the displacement of thousands in Madagascar during the last week.**



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 western Mozambique, Zimbabwe, eastern Botswana, and southern Zambia where rainfall is forecast to be low during the middle of 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) In early January, the passage of Tropical Cyclone Ava resulted in flash floods, the displacement of thousands of people, and fatalities in Madagascar. Although rainfall is forecast to be lesser in amount this week, additional seasonal rainfall may exacerbate ground conditions in the region and may trigger landslides in the higher elevations.

5) 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 during mid-January is expected to place additional moisture stress on crops.

Irregularly distributed rainfall continues throughout southern Africa.

During the last week, significantly heavy rainfall (>150mm) was received over northern and eastern Madagascar due to the passage of Tropical Cyclone Ava, with torrential rainfall accumulations also received across central and southern Tanzania, and northern Mozambique. According to gauge measurements, rainfall amounts in excess of 200mm were registered in Madagascar which led to flooding, landslides, fatalities and the displacement of thousands of people in the country. Further west, well distributed, but lesser weekly rainfall amounts were received across southern DRC, Angola and northern Zambia. Throughout many anomalously dry regions of Mozambique, Botswana, Zimbabwe, South Africa and Lesotho, rainfall was poorly distributed and much less in quantity according to satellite rainfall estimates (**Figure 1**). Many areas in southern Angola, and northern Namibia saw little to no rainfall during the last week following a period in late December where precipitation was heavy.

Since early October, the performance of southern Africa monsoon has been uncharacteristically erratic and poorly distributed, leading to both short-term and long-term moisture deficits throughout many regions and countries. A month by month analysis of satellite estimated precipitation anomalies suggests that seasonal rainfall has been discontinuous and irregular, where a combination of delayed onsets and early season dry spells combined with abnormally high temperatures have resulted in unfavorable conditions for ongoing cropping activities.

During the months of October and November, many portions of Angola, Namibia, Botswana, South Africa and Madagascar experienced a delayed start of the monsoon which led to strong early season moisture deficits. By late November and early December, satellite rainfall estimates depicted brief periods of increased seasonal rains, which did help to alleviate the early season dryness mainly throughout portions of Angola and South Africa, however, a broad scale suppression of seasonal rains since mid-December has eliminated moisture recovery, leading to the re-strengthening of moisture deficits across the western parts of the Maize Triangle region of South Africa. In addition, the recent dry pattern has left many areas in Zimbabwe, eastern Botswana, and neighboring areas of Mozambique and Zambia with below-average moisture conditions. Overall, the percent of normal analysis over southern Africa since November shows widespread abnormal dryness with many areas ranging between 25-80 percent of their normal rainfall accumulation during the timeframe (**Figure 2**). Conversely, anomalously wet conditions remain present across many northern provinces of Mozambique, eastern Madagascar, and southern Tanzania due to the heavy rainfall over the past two weeks.

During the outlook period, models again suggest little relief to the anomalous dryness and high temperatures concentrated over southeastern Africa, as the higher rainfall amounts are forecast north of the Zambezi River. Although lesser rainfall is forecast over eastern Mozambique in the wake of Tropical Cyclone Ava, additional rains could worsen the saturated ground conditions in the region.

7-Day Satellite Estimated Rainfall (mm)
Valid: January 1 – January 7, 2018

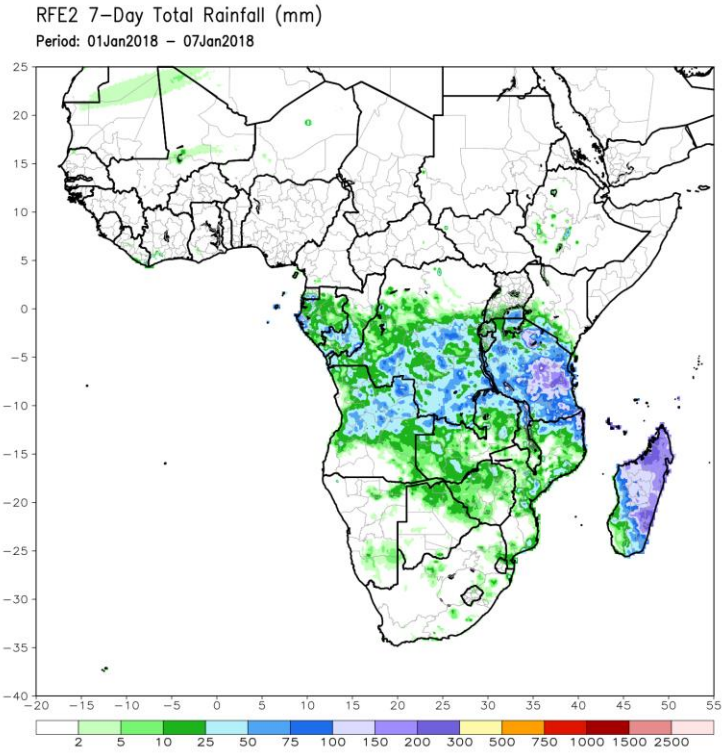


Figure 1: NOAA/CPC

Satellite Estimated Percent of Normal Rainfall (%)
Valid: November 1, 2017 – January 7, 2018

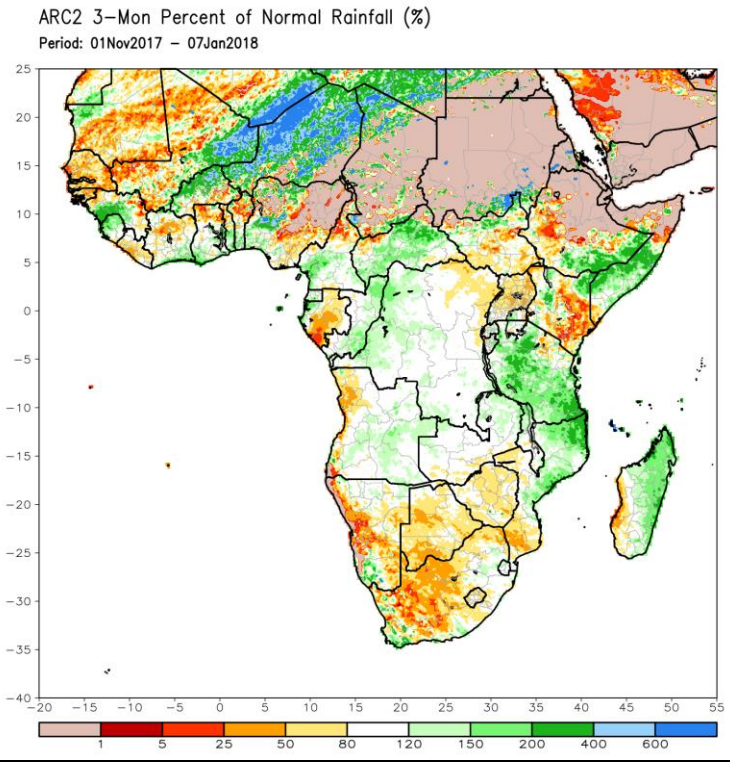


Figure 2: NOAA/CPC

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.