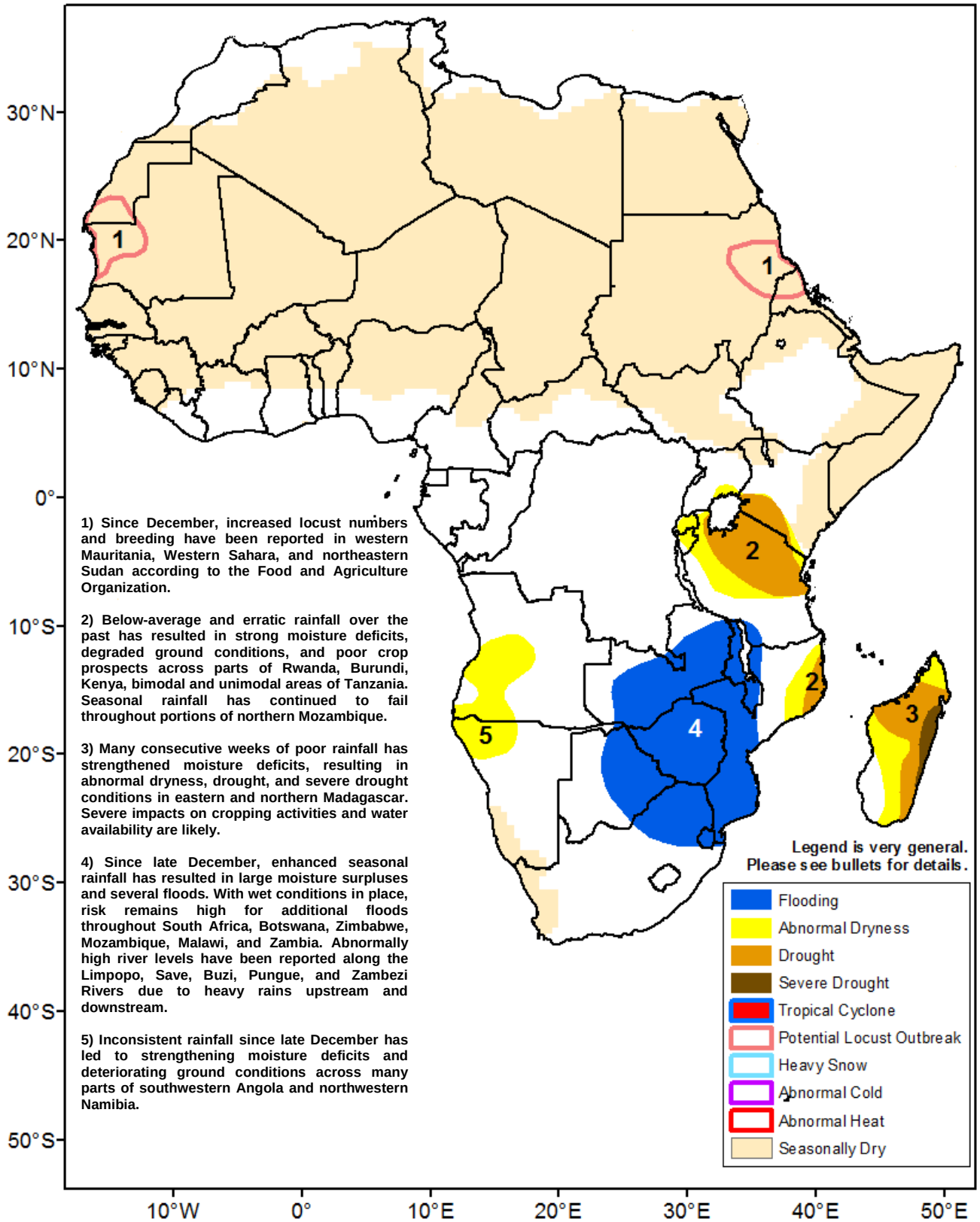
Climate Prediction Center's Africa Hazards Outlook
February 23 – March 1, 2017

- **Tropical Cyclone Dineo made landfall in southern Mozambique last week bringing damaging winds and heavy rain**



Both large moisture surpluses and deficits continue to impact different parts of the region significantly.

The pattern switched back to wetter than normal for large parts of southern Africa during the last week. Much of the enhanced rainfall can be attributed to tropical cyclone Dineo. Dineo made landfall in Inhambane province of Mozambique. Its impacts included fatalities, structural damage and power outages from strong winds, 100-200mm of rain, and a minor storm surge. The heavy rain (>100mm) spread farther inland across parts of eastern South Africa and Zimbabwe (**Figure 1)**. Significant, but unrelated rainfall was also observed over much of Zambia, central South Africa, and southeastern Angola. Little change was observed throughout much of Madagascar, Tanzania and in northern Mozambique, as suppression of rainfall continued for those areas.

Analysis of the percent of normal rainfall during the last 30 days reveals reinforcement of the pattern that has been largely in place since the end of 2016. Many areas of Botswana Zimbabwe southern Mozambique and South Africa have observed more than twice their normal rainfall totals for the period. This leads to continued widespread threat of flooding, especially in areas affected by Dineo. On the other hand, much of Madagascar, northeastern Mozambique, and Tanzania, report around 50-80% of normal rainfall during the last 30 days. Local areas of eastern Madagascar show less than 25% of normal rainfall, an extreme deficit for the period. Such conditions can rapidly affect cropping activities and water availability. Another area of dryness exists in western Angola.

Combining the previous 30 days into the monsoon season as a whole, two historically significant extremes are observed over the region. Persistent enhancement of rainfall has led to cumulative totals that rank in the wettest 3% of seasons for many parts Botswana, Zimbabwe, South Africa and southern Mozambique (**Figure 2**). Conversely, areas of long-term suppression of rainfall in northern Mozambique and Madagascar have resulted in rainfall performance that falls in the driest 3% of seasons.

In eastern Africa, influence from a large mid-latitude system has brought early season enhancement of rains. Large parts of Kenya, Ethiopia, and Eritrea, received 10-50mm of rain. Early season surpluses are welcome following a failed rainfall season last year.

Heavy rainfall looks to again be a big story for the outlook period. Enhanced rain, likely in excess of 100mm, is forecasted for Zimbabwe, southern Botswana, Zambia, Malawi, and southern Tanzania (**Figure 3**). This forecast will keep flash flood and river flooding threats high. Meanwhile, southern Mozambique and South Africa should return to a more normal rainfall pattern. Models suggest possible above-average rainfall amounts for Madagascar, which may put a small dent in moisture deficits in some areas. In eastern Africa, enhanced rains are forecast to continue into the outlook period for central Ethiopia and Kenya.

Satellite-Estimated Rainfall (mm)
Valid: February 15 – February 21, 2017

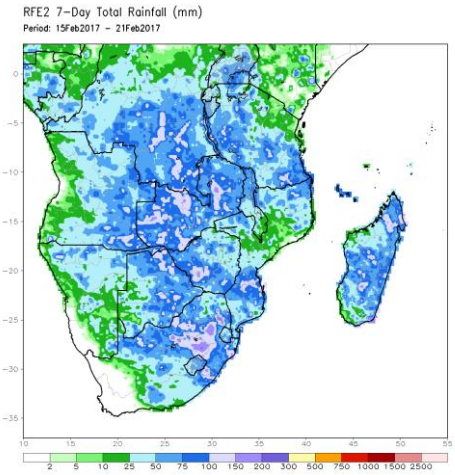


Figure 1: NOAA/CPC

ARC2 30-Day Percent of Normal Rainfall
Valid: January, 23 – February 21, 2017

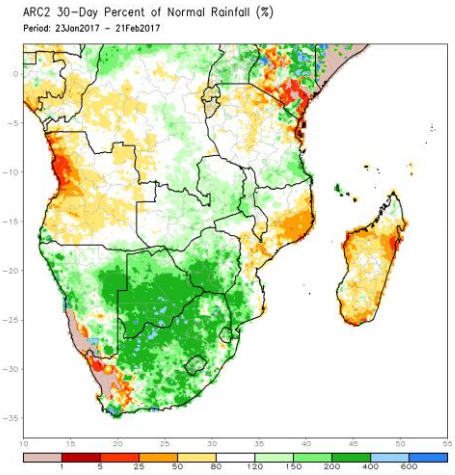


Figure 2: NOAA/CPC

GFS Ensemble Mean Precipitation Forecast (mm)
Valid: February 23 – March 1, 2017

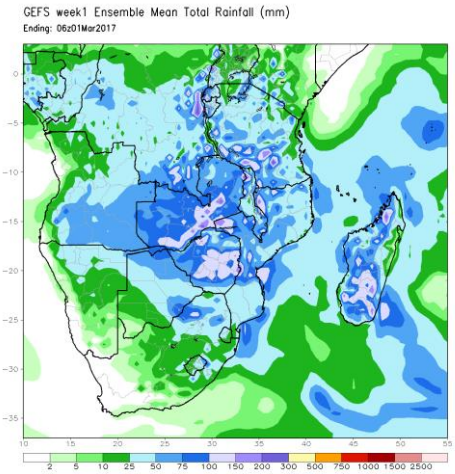


Figure 3: NOAA/CPC

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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