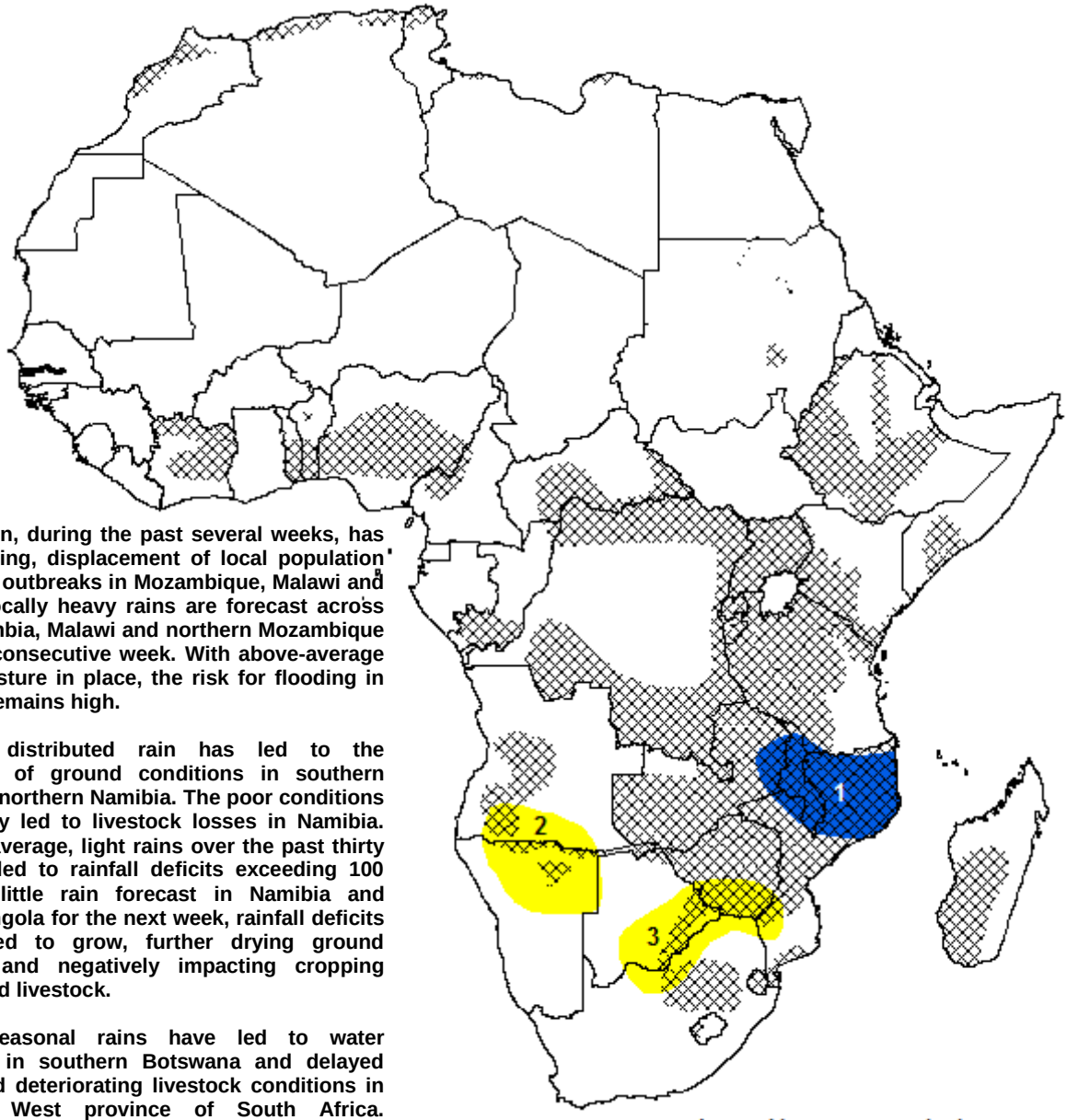
Climate Prediction Center's Africa Hazards Outlook
For USAID / FEWS-NET
February 28 – March 6, 2013

- **During the past week, Tropical Cyclone Haruna caused fatalities, damages to infrastructure and the displacement of thousands of residents.**
- **Seasonal and monthly rainfall deficits expand across Namibia, Botswana, South Africa and Zimbabwe.**



1) Heavy rain, during the past several weeks, has led to flooding, displacement of local population and cholera outbreaks in Mozambique, Malawi and Zambia. Locally heavy rains are forecast across parts of Zambia, Malawi and northern Mozambique for a sixth consecutive week. With above-average ground moisture in place, the risk for flooding in the region remains high.

2) Poorly distributed rain has led to the degradation of ground conditions in southern Angola and northern Namibia. The poor conditions have already led to livestock losses in Namibia. The below-average, light rains over the past thirty days have led to rainfall deficits exceeding 100 mm. With little rain forecast in Namibia and southern Angola for the next week, rainfall deficits are expected to grow, further drying ground conditions and negatively impacting cropping activities and livestock.

3) Poor seasonal rains have led to water restrictions in southern Botswana and delayed planting and deteriorating livestock conditions in the North West province of South Africa. Meanwhile, little to no rainfall since the second dekad of January has led to a fast development of thirty-day rainfall deficits exceeding 50mm in western Botswana, Zimbabwe and parts of northern South Africa and southern Mozambique. With light rain (<10mm) forecast for the next week, a fourth to fifth consecutive week of dry conditions is possible. This will increase rainfall deficits, maintain dry conditions and further negatively impact crops and livestock.

Tropical Cyclone Haruna caused damages in Madagascar.

The impacts from Tropical Cyclone Haruna were felt across southwest Madagascar with the largest impacts occurring in the Morombe and Toliara districts. 13 fatalities have been reported with 17,000 affected. The torrential rains (>100mm) resulted in the flooding of rice fields, the overflowing of the Fiherenana River and numerous dam failures, which caused widespread flooding. The moderate to heavy rains (>25mm) associated with Haruna extended across Madagascar and the Mozambique Channel to coastal areas in northern Mozambique. Elsewhere, heavy rains (>50mm) were recorded in Tanzania, Malawi, northern Zambia and localized areas in Angola. The heavy, above-average weekly rains in Tanzania have helped to reduce seasonal deficits. Moderate rains (10-30mm) were recorded across Angola and into northern Namibia, which provided some relief to dry conditions. In contrast, light rains (<10mm) were observed farther south in Namibia, Botswana, Zimbabwe, South Africa and southern Mozambique (**Figure 1**).

Thirty-day rainfall anomalies in southern Africa indicate a growing drying trend across much of the region. Outside of strong rainfall surpluses across northern Mozambique and Madagascar (>100mm) and near average conditions in Tanzania, Zambia and central/eastern Angola, rainfall deficits are prevalent. The largest rainfall deficits (50-150mm) are located across southern Angola, Namibia, Botswana, Zimbabwe, southern Mozambique and localized areas in northern South Africa (**Figure 2**). The dry conditions in Namibia and Angola are the result of light, below-average rains which extend back ninety days. Meanwhile, the conditions in Botswana, South Africa, Zimbabwe and southern Mozambique have resulted from little to no rain since a very wet end to the second dekad of January. The poor rains have already negatively impacted ground and livestock conditions in Namibia, Botswana and South Africa.

An analysis of ground conditions in southern Africa during the second dekad of February indicates that mediocre to poor conditions exist across cropping areas in northern South Africa, southern Zimbabwe, northern Namibia and parts of southern Mozambique (**Figure 3**). This is reflective of the dry conditions during the past 30-60 days. With rains climatologically expected to end by April, a longer than usual rainfall season is required to compensate for the recent poor rains and, for parts of Zimbabwe, South Africa, southern Mozambique and Lesotho, a delayed onset to the current rainfall season.

For the next week, heavy rain (>50mm) is forecast across central/eastern Angola, northern/western Zambia, Malawi and northern Mozambique. In contrast, moderate rain (10-40mm) is expected in South Africa, while little to no rain (<10mm) is forecast for dry areas in southern Angola, Namibia, Botswana, Zimbabwe, and southern Mozambique. The lack of rains will increase seasonal rainfall deficits, worsen ground conditions and maintained a dry trend that has continued since late January.

Satellite Estimated Rainfall (mm)
Valid: February 19th – February 25th, 2013

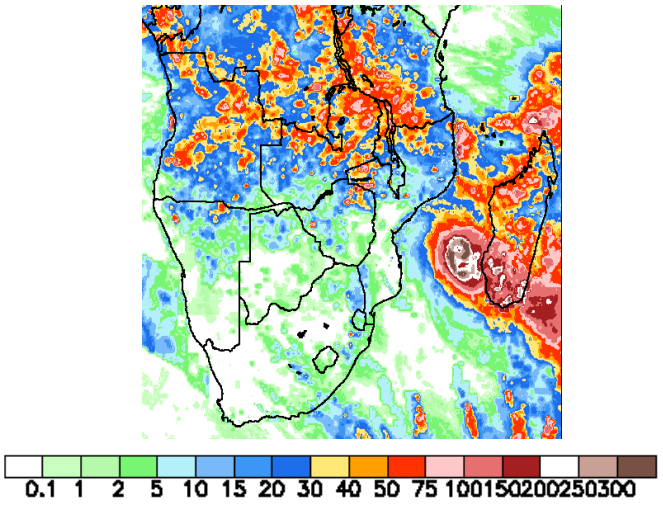


Figure 1: NOAA/CPC

Satellite Estimated Rainfall Anomaly (mm)
Valid: January 27th – February 25th, 2013

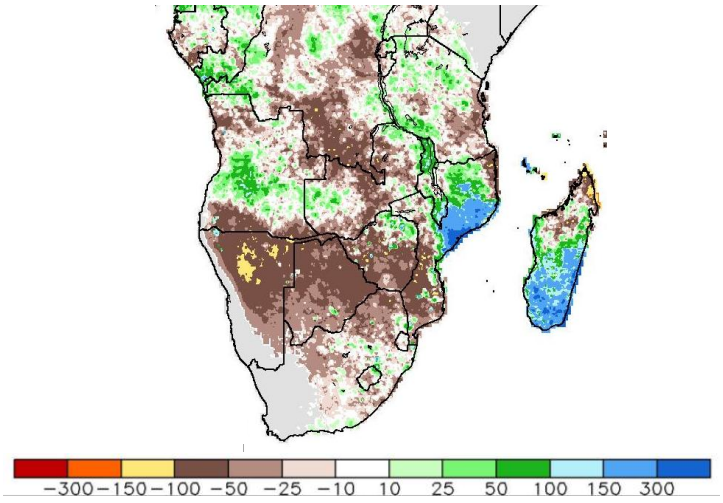


Figure 2: NOAA/CPC

Water Requirement Satisfaction Index (WRSI)
Valid: As of the second dekad of February, 2013

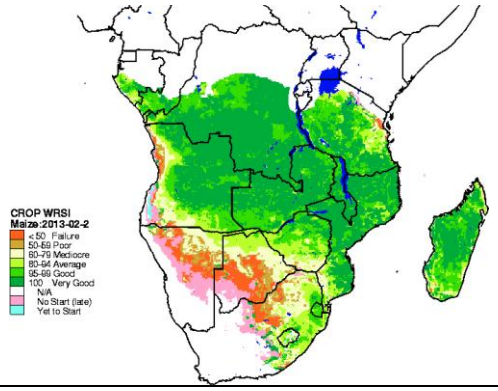


Figure 3: USGS/EROS

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.