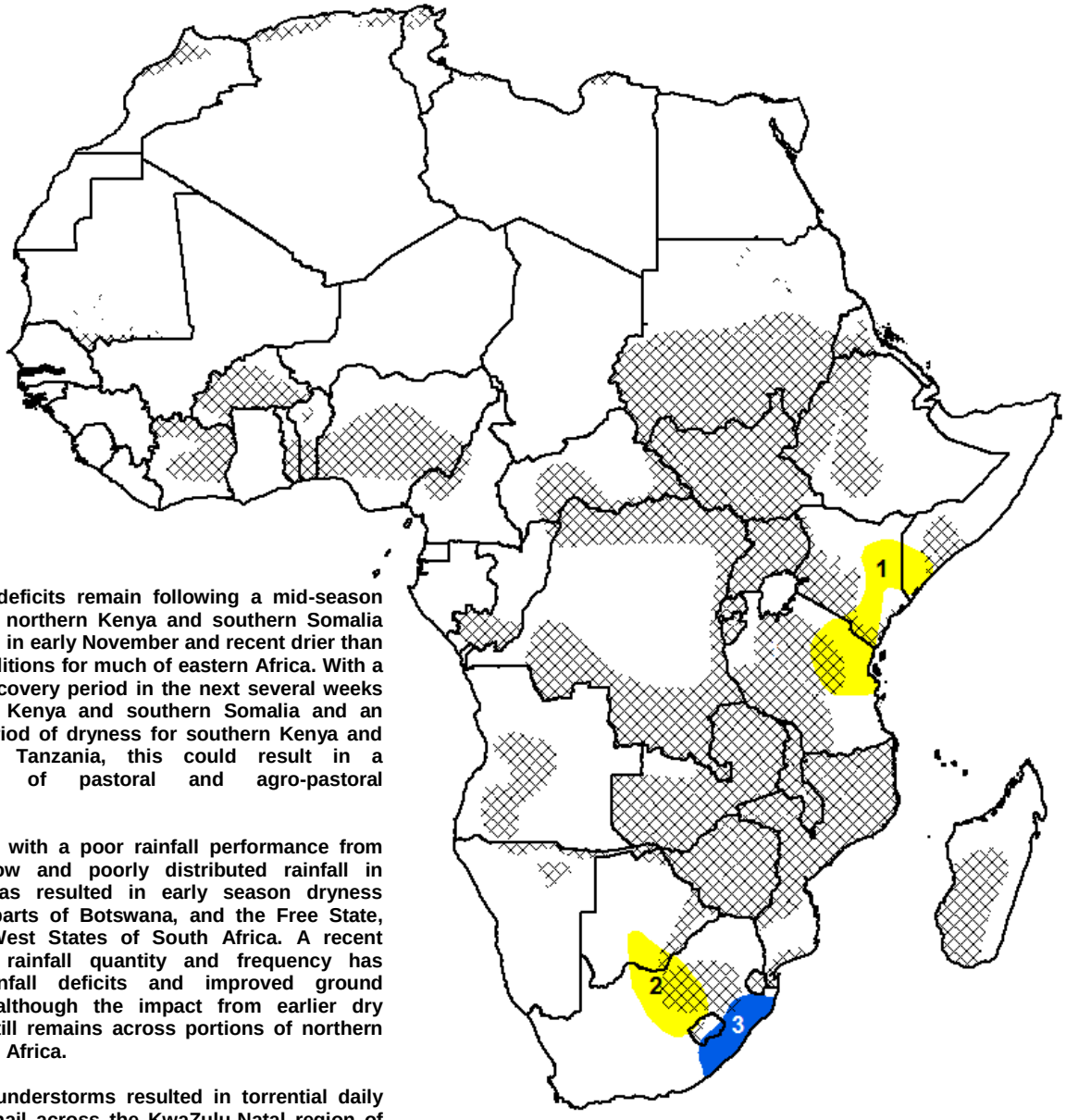
Climate Prediction Center's Africa Hazards Outlook
For USAID / FEWS-NET
December 13 – December 19, 2012

- **After a delayed start to rain in Mozambique and Zimbabwe, heavy rains returned during the past week.**
- **Locally heavy rains reduce seasonal deficits in eastern Kenya, although seasonal rainfall deficits remain.**



1) Moisture deficits remain following a mid-season dry spell for northern Kenya and southern Somalia that occurred in early November and recent drier than average conditions for much of eastern Africa. With a shortened recovery period in the next several weeks for northern Kenya and southern Somalia and an extended period of dryness for southern Kenya and northeastern Tanzania, this could result in a deterioration of pastoral and agro-pastoral conditions.

2) Combined with a poor rainfall performance from last year, low and poorly distributed rainfall in November has resulted in early season dryness throughout parts of Botswana, and the Free State, and North West States of South Africa. A recent increase in rainfall quantity and frequency has reduced rainfall deficits and improved ground conditions, although the impact from earlier dry conditions still remains across portions of northern central South Africa.

3) Strong thunderstorms resulted in torrential daily rainfall and hail across the KwaZulu-Natal region of South Africa. The copious amount of rain has resulted in flash flooding, which has caused the deaths of multiple people and damaged roads and infrastructure. With additional heavy rain forecast during the next week, the risk for flash flooding is elevated.

Heavy rains begin to fall across eastern southern Africa.

During a delayed start to the monsoon season in eastern southern Africa, rainfall deficits reached 50-100 mm, causing concerns that early season dryness could negatively impact cropping activities. Rains, during the past week though, returned to much of eastern southern Africa, helping to reduce, but not eliminate, longer-term deficits. However, average to below-average rains persisted in northern Mozambique, southern Tanzania, and northern Malawi, where the start of season is delayed 2 dekads. The heaviest rains (>50mm) were recorded in central Mozambique, Zimbabwe, Angola, Zambia and South Africa. In South Africa, moderate to heavy rains (>40mm) (**Figure 1**) have reduced or eliminated rainfall deficits. Although, the abundant rains in the KwaZulu-Natal region of South Africa resulted in flash flooding, fatalities and damages to infrastructure

Even with a return of rains to eastern southern Africa, the impacts of a delayed start to the current rainy season and a poor end to the previous season is evident in an analysis of vegetative conditions. Negative NDVI anomalies stretch across Zimbabwe and Mozambique. The recent rains will likely help to improve vegetative conditions; however, additional and consistent seasonal rains are needed to eliminate the current dry conditions. Farther south, poor vegetative conditions are present across the North West and Free State regions of South Africa (**Figure 2**), though, recent returns of average to above-average rains have helped improve conditions.

For the next week, heavy rains (>50mm) are expected for eastern South Africa, northern Mozambique, Malawi and southern Tanzania, likely reducing seasonal rainfall deficits. Farther south, below-average rains (<20mm) are forecast for southern Mozambique and southern Zimbabwe, increasing seasonal deficits. In the west, moderate to heavy rains (>30mm) are forecast for Angola and western Zambia.

Locally heavy rains help reduce seasonal deficits in Kenya.

Rainfall, during the past two weeks, across portions of eastern Kenya and coastal Tanzania, has been localized and heavy (>50mm). The above-average rains have helped to reduce or eliminate thirty-day deficits across eastern Kenya, coastal Tanzania and southern Somalia. However, dry conditions persist in northern and southern Kenya, southern Somalia and much of northern Tanzania (**Figure 3**), due to an extended period of dryness at the end of November and beginning of December. Unlike dry areas in northern Kenya and southern Somalia, where seasonal rains are expected to end by the start of 2013, there is still ample time for rains to recover across southern Kenya and Tanzania. Below-average rains also have negatively impacted maize and bean crops in the Eastern livelihood zones of Rwanda. For the next week, the heaviest rains (>30mm) are forecast for central Tanzania, while light to moderate rains (10-40mm) are expected farther north in Kenya and Somalia.

Satellite Estimated Rainfall (mm)
Valid: December 5th – December 11th, 2012

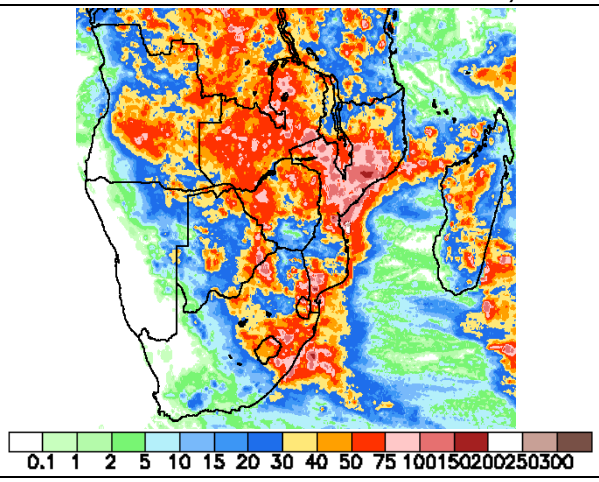


Figure 1: NOAA/CPC

NDVI Anomaly
Valid: As of the 1st dekad of December, 2012

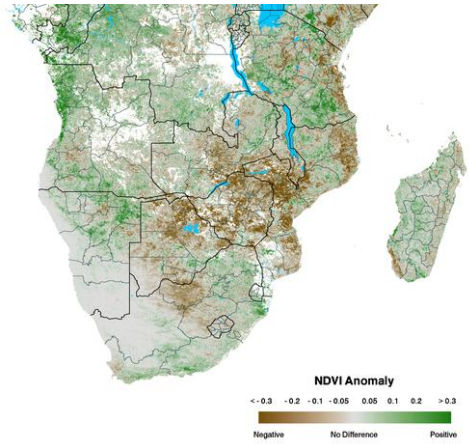


Figure 2: USGS/EROS

Satellite Estimated Rainfall Anomaly (mm)
Valid: November 12th – December 11th, 2012

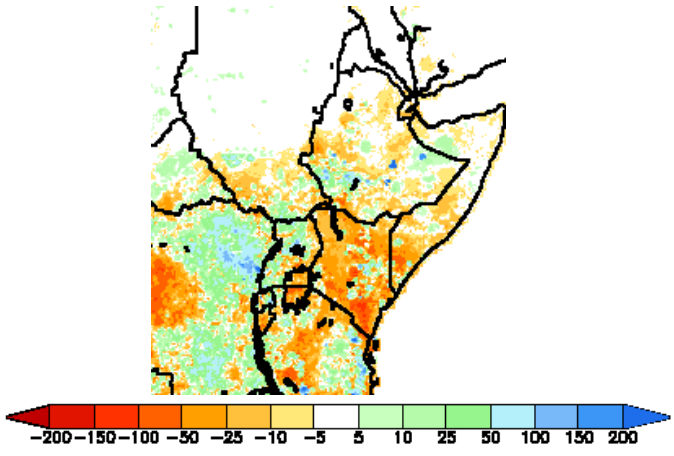


Figure 3: NOAA/CPC

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.