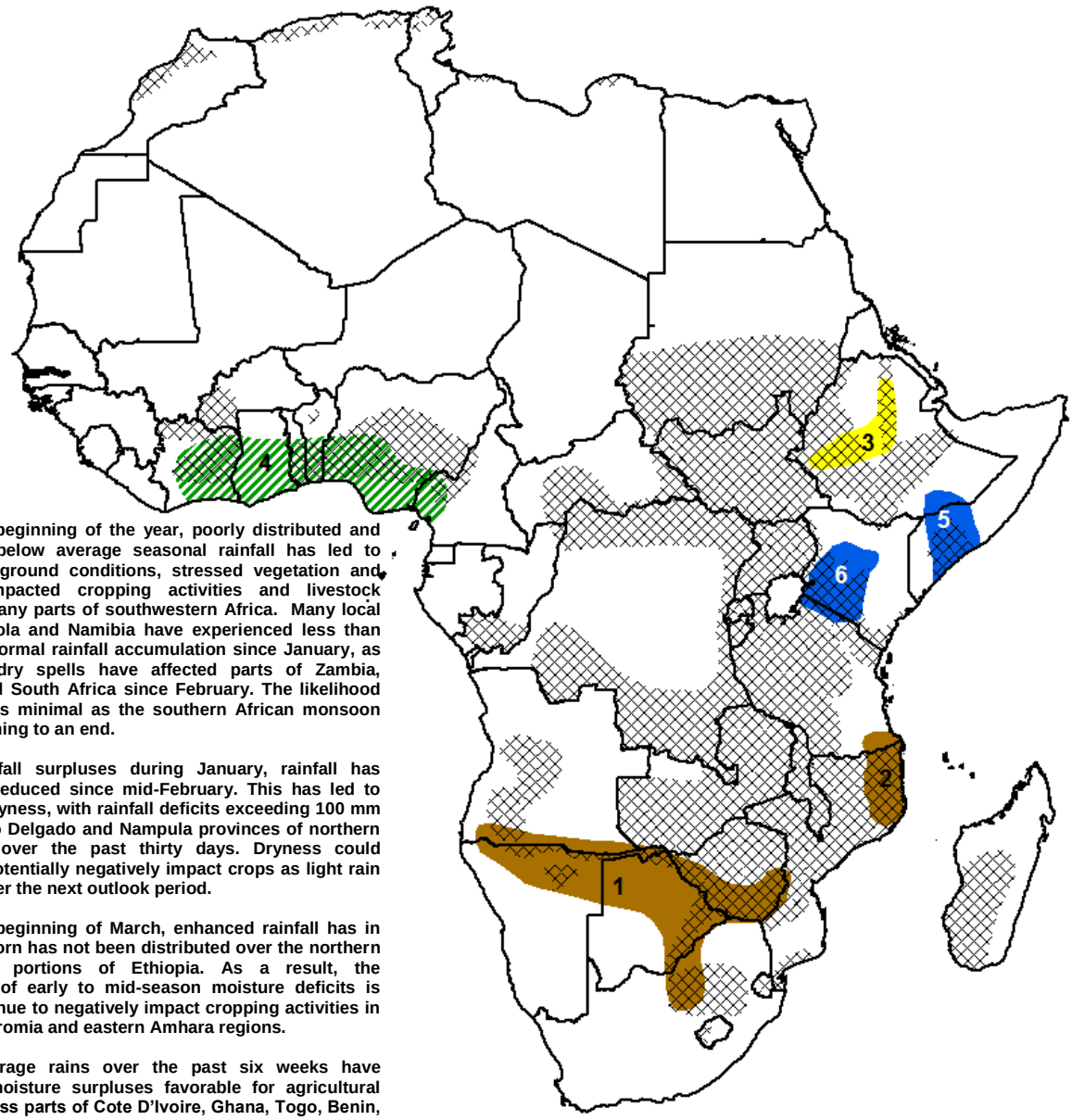
Climate Prediction Center's Africa Hazards Outlook
For USAID / FEWS-NET
April 4 – April 10, 2013

- **Heavy precipitation continues across East Africa; however many local areas in western Ethiopia are experiencing a growing delay to seasonal rainfall with developing moisture deficits.**



1) Since the beginning of the year, poorly distributed and significantly below average seasonal rainfall has led to deteriorating ground conditions, stressed vegetation and negatively impacted cropping activities and livestock throughout many parts of southwestern Africa. Many local areas in Angola and Namibia have experienced less than half of their normal rainfall accumulation since January, as pronounced dry spells have affected parts of Zambia, Botswana and South Africa since February. The likelihood for recovery is minimal as the southern African monsoon season is coming to an end.

2) After rainfall surpluses during January, rainfall has significantly reduced since mid-February. This has led to developing dryness, with rainfall deficits exceeding 100 mm over the Cabo Delgado and Nampula provinces of northern Mozambique over the past thirty days. Dryness could persist and potentially negatively impact crops as light rain is forecast over the next outlook period.

3) Since the beginning of March, enhanced rainfall has in the Greater Horn has not been distributed over the northern and western portions of Ethiopia. As a result, the development of early to mid-season moisture deficits is likely to continue to negatively impact cropping activities in parts of the Oromia and eastern Amhara regions.

4) Above-average rains over the past six weeks have resulted in moisture surpluses favorable for agricultural activities across parts of Cote D'Ivoire, Ghana, Togo, Benin, Nigeria, and Cameroon. Average to above-average rain is expected to continue over the outlook period, sustaining adequate moisture across the region.

5) Combined with significantly heavy rainfall during last week, enhanced rainfall forecast over eastern Ethiopia and southern Somalia during the outlook period elevates the risk for flooding along the Shabelle and Jubba River basins.

6) Several consecutive days of moderate to heavy precipitation has led to localized flooding, damages to infrastructure and fatalities throughout many parts of Kenya. Torrential amounts of precipitation are again forecast in many of these areas in southwestern and central Kenya during the next seven days.

Seasonal rains delayed over northern Ethiopia.

During the last seven days, heavy amounts of precipitation continued over much of the Greater Horn. The highest precipitation amounts (>75mm) were received over the Shabelle River basin of southern Ethiopia, with high totals (>50mm) observed across much of Kenya, southern and eastern Ethiopia (**Figure 1**). In northern and western Ethiopia, weekly rainfall accumulations were not as well distributed, as little to locally moderate rainfall accumulations were received across western Oromia, Amhara and Afar regions of the country. Further south, enhanced rainfall was also observed across the Lake Victoria region, bringing continued increased moisture across parts of northern Tanzania, Rwanda, Uganda and southwestern Kenya. However, locally torrential rainfall in parts of central and southern Kenya rains also triggered numerous floods, damages to infrastructure and fatalities during the last week.

The onset of continuous, enhanced rainfall since the second dekad of March has resulted in seasonal precipitation surpluses greater than 50mm across a broad portion of southern and eastern Ethiopia, southern Somalia and northeastern Kenya. In Somalia, this increase in precipitation has led to considerably improved pastoral conditions and has replenished water availability throughout many local areas in northern, central, and southern regions of the country. However, significantly above-average rainfall during the last several weeks over the Jubba and Shabelle River basins is expected to elevate the risk for downstream flooding in southern Somalia, as many local areas have already experienced 2 to 3 times their normal rainfall accumulation since the beginning of March.

Despite this increase in rains in the Greater Horn, a delayed onset and uneven spatial distribution of rainfall over parts of the Oromia, Amhara, and Afar region of Ethiopia during the past several weeks continues to sustain and increase seasonal moisture deficits in the region. At the end of March, many local areas have experienced moderate to locally large rainfall deficits (>25 mm) in the higher elevations of the country (**Figure 2**). This has already negatively affected cropping activities with a reduction of planting over many local *Belg*-producing areas of Ethiopia. A continuation of below-average rains during April is expected exacerbate ground conditions, and possibly lead to reduced crop yields.

During the upcoming outlook period, model forecasts suggest little change in the distribution of rainfall across East Africa in relation to the past week. Average to above average rains are again expected across eastern Ethiopia, Somalia and Kenya, while below-average rainfall is forecast across many anomalously dry areas of within the *Belg*-producing areas of Ethiopia

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A poor southern Africa monsoon has led to drought conditions in the southwest.

Since beginning of 2013, both the magnitude and distribution of monsoon rains across southern Africa became quite poor after a relatively average start of the season. Much of the suppressed rains were associated with persistent anomalies in atmospheric circulation which resulted in several consecutive weeks of suppressed precipitation and prolonged dry spells. As significantly below-average rains were first observed across Namibia and Angola, the extent of the dryness expanded eastward during February and March, affecting parts of Botswana, South Africa and southern Zimbabwe. The latest NDVI anomaly analysis reflects both a worsening and expansion of stressed vegetation conditions throughout southwestern Africa (**Figure 3**). With the core of the southern Africa monsoon rains migrating further equatorward during April, an increase in moisture for a seasonal recovery remains unlikely.

East Africa Satellite Estimated Rainfall (mm)
Valid: March 26th – April 1st, 2013

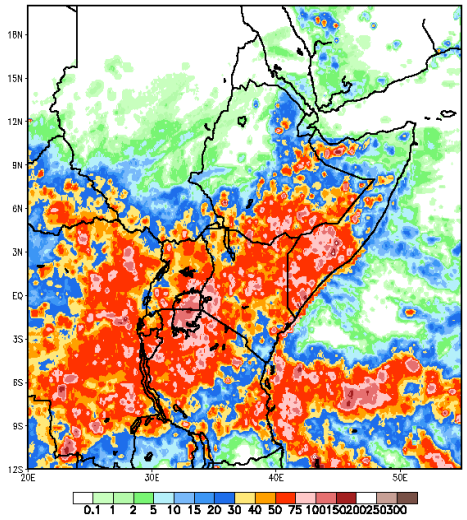

Figure 1: NOAA/CPC

East Africa Satellite Estimated Rainfall Anomaly (mm)
Valid: March 1st – April 1st, 2013

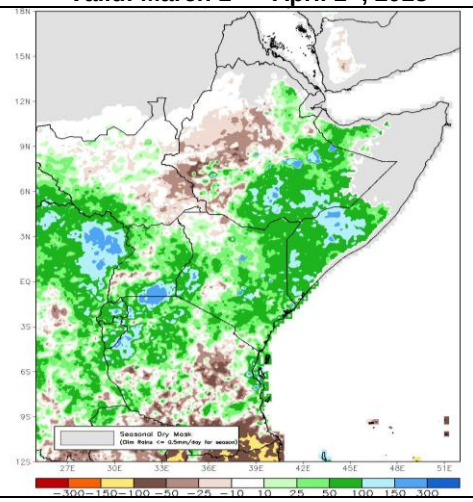

Figure 2: NOAA/CPC

Seasonal NDVI Anomaly (%)
As of: March 15th, 2012 – March 25th, 2013

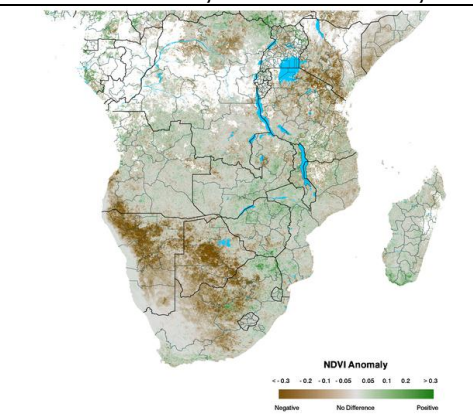

Figure 3: USGS/EROS

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.

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