

*Drought conditions likely to persist over eastern Horn, despite increased rains in some areas*

**KEY MESSAGES**

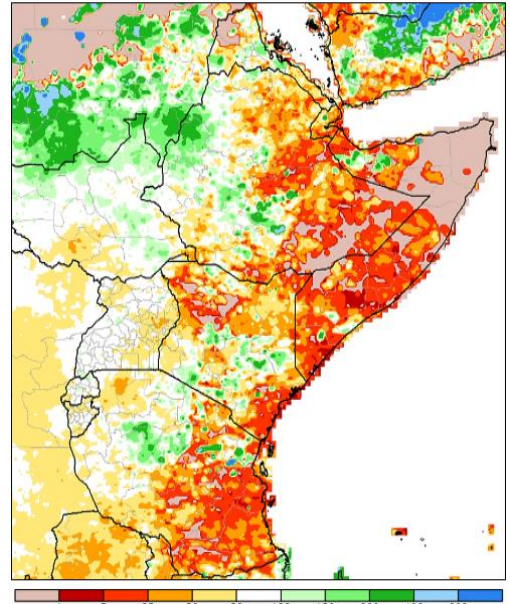
- Seasonal rainfall totals remain well below normal (less than 25 percent of average) across many areas of the eastern Horn of Africa, particularly in southeastern Ethiopia, southern and central Somalia, northeastern Kenya, and eastern Tanzania. The recent intensification of seasonal rainfall in parts of northeastern Kenya and southern Somalia may contribute to some short-term improvements in water and pasture availability, but overall regeneration of pastoral resources is likely to remain poor.
- In western areas of the region, seasonal rainfall in parts of Uganda, northwestern and central Tanzania, and Burundi are leading to below-average cropping prospects. In Rwanda, increased seasonal rainfall in November has helped to mitigate rainfall deficits and dry spells that developed in mid-October.
- During the next week, rainfall is likely to remain light across southeastern Ethiopia and southern/central Ethiopia, although moderate to heavy rainfall in northeastern Kenya may contribute to improvements in pasture and water availability. In Burundi, Rwanda, and Tanzania, heavy to moderate rainfall is also expected, which should contribute to improved cropping conditions.

**SEASONAL PROGRESS**

During the past week, rainfall intensified in parts of the eastern Horn, specifically over southern Somalia, southern Ethiopia and parts of eastern and central Kenya, where the rains were above normal, but very erratically distributed in time and space. This late increase in rainfall has helped to ease currently large moisture deficits and is encouraging late planting of short-cycle crops, specifically in Kenya, and marginal improvements in rangeland conditions.

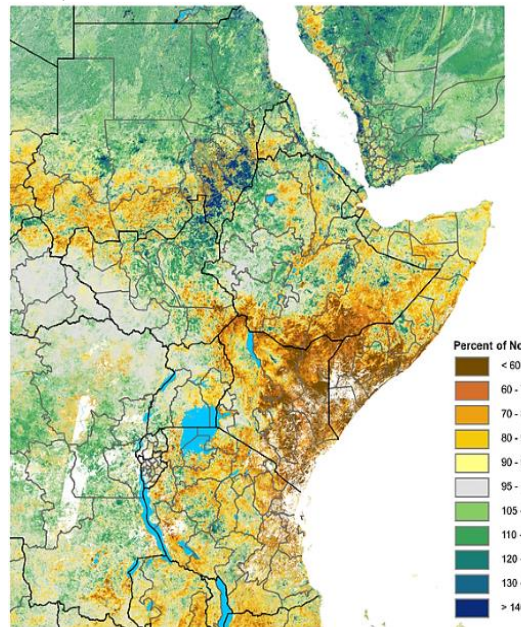
Despite some improvements in rainfall in late November, pastoral and agricultural conditions in southern Somalia and southeastern Ethiopia are not likely to fully recover due to large cumulative rainfall deficits. To date, southern and central Somalia, southeastern Ethiopia, and coastal and northeastern Kenya have received less than 25 percent of their seasonal rainfall totals between October 1 and November 21 (Figure 1). However, recent above-average rainfall will only provide short-term relief for pastoral communities in terms of pasture regeneration and surface water replenishment. Overall, the harvest prospects in rainfed cropping areas of southern Somalia are poor.

**Figure 1.** ARC2 seasonal rainfall estimate anomalies, percent of normal (1983-2009), October 1 – November 21, 2016



Source: [NOAA/NWS/CPC](#)

**Figure 2.** eMODIS/NDVI anomaly (2001-2010), November 11-20, 2016



Source: [USGS/FEWS NET](#)

Please see [http://www.cpc.ncep.noaa.gov/products/african\\_desk/cpc\\_intl/](http://www.cpc.ncep.noaa.gov/products/african_desk/cpc_intl/) and <http://earlywarning.usgs.gov/?l=en> for more information on remote sensing.

For much of the southeastern marginal agricultural zones and the coastal strip regions of Kenya, the current cropping conditions are very poor for maize and leguminous crops as the rains are forecast to end by early December. For the southeastern areas, the short rains are the most important season, accounting for up to 65 percent of annual cereal crop production. In the event rainfall continues normally into early January, prospects for may improve for late-planted crops, such as short-cycle legumes.

Meanwhile, many western areas of East Africa have received below-average rainfall in recent weeks, particularly in around the Lake Victoria Basin, parts of northwestern Tanzania, Burundi, and central Uganda. However, seasonal rainfall is expected to improve in the coming weeks, which should help ease moisture deficits in affected areas.

According to the Normalized Difference Vegetation Index (NDVI), vegetation conditions are well below average across a large of the eastern Horn, particularly in and near the Mandera triangle in southern and central Somalia, southeastern Kenya, and northeastern, eastern, and coastal Kenya (Figure 2). Vegetation conditions are also poor in neighboring areas of northern and coastal Tanzania, following poor recent rainfall and below-average *Masika* rains in northeastern bimodal areas.

The following is a country-by-country update on recent seasonal progress to date:

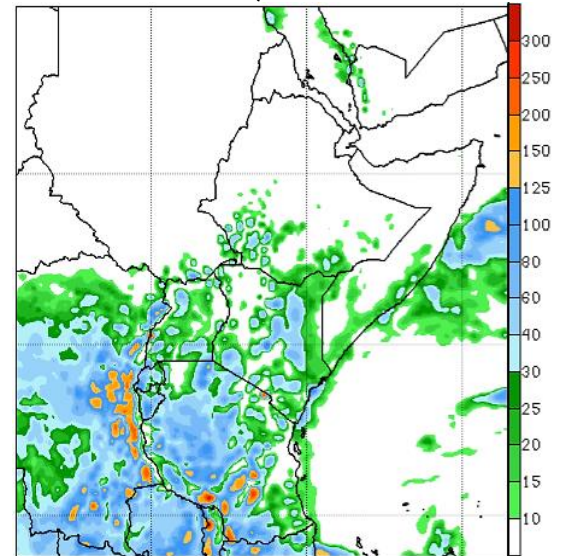
- In **Ethiopia**, current seasonal (October to December) rains have remained generally poor over southern and eastern regions of the country, which has resulted in very limited regeneration of rangeland resources in predominantly pastoral areas. Although recent rainfall may help to slightly help ease the current drought conditions, no full recovery is anticipated in the coming months until the start of the next season beginning in March.
- In **Somalia** (October to December), little to no rainfall has occurred during the first half of the October to December *Deyr* season. Rainfall amounts around 10-25 mm were received in southern regions of the country in late November, although these amounts are still below average for this time period. Drought conditions persist across southern, central, and northeastern Somalia, and vegetation conditions are the worst on record in many areas. Significantly below-average yields are expected during the January *Deyr* harvest.
- In **Kenya**, the short-rains (October to December) season for the northern and eastern counties of Kenya have had a poor start of season, with a significantly delayed onset and large cumulative rainfall deficits, coupled with uneven rainfall distribution in both time and space. The recent intensification in seasonal rains is unlikely to fully improve the current conditions in northern and central pastoral areas of the country. Similarly, for the marginal cropping areas of the southeastern lowlands and coastal zones, harvest prospects are poor due to poor seasonal progress to date and the likelihood for seasonal rains to end by early December.
- In **Sudan**, abnormally heavy rains have continued through October through November over its southern states. The rains are expected to cease in the coming weeks with the transition into the dry season.
- In **South Sudan**, rainfall since mid-August has remained well above average in northern states, where the main rainy season is ongoing. Similarly, the second rainy season in Greater Equatoria, which began in August, has so far been above average in western and central areas and slightly below average in eastern regions. Despite favorable rainfall in most areas of the country, ongoing conflict is limiting farmers' access to their fields. Production prospects are below average in most areas of the country.
- In **Uganda** and **Burundi**, the second rainfall season (September to December) had a near-normal onset, but rainfall totals have been below-average, with dry spells occurring in many areas in recent weeks. Forecasts suggest rainfall will improve during the coming weeks, which may help mitigate ongoing rainfall deficits. Overall, the forecast moderate to heavy rains for the remainder of the season may result improve harvest prospects.
- In **Rwanda**, which has a similar rainy season to Uganda and Burundi (September to November), rainfall began on time and has largely been average to above average, except with a short dry spell in mid-October. There have been some reports of localized pockets of poor, erratic rains in the east, which has affected some farmers' planting, but near-average production is expected in December.
- In **Tanzania**, the delayed onset seasonal rains for the *Vuli* (September to December) and *Msimu* (November to May) seasons has resulted in prolonged dryness in northern and central areas, and harvest prospects for *Vuli* production in January are below average.

- In **Yemen**, since mid-August the rains have remained generally favorable, especially along the western coastal regions. As a result, pasture and livestock conditions are expected to continue to show improvements. Above-average rainfall should be favorable for crop growth and livestock productivity in Yemen, although civil insecurity is likely to limit crop and livestock production.

## FORECAST

The short-term NOAA/GFS rainfall forecast through December 6, 2016 indicates a gradual southward shift of rainfall, which is likely to result in reduced amounts or the end of seasonal rainfall in Sudan, much of Ethiopia, South Sudan, and Somalia by early December (Figure 3). Moderate to heavy rainfall is likely to continue in southern coastal areas of Somalia and northeastern and eastern Kenya during the next two weeks. The coastal areas of Kenya, which have continued to experience drier-than-normal conditions, are likely to receive substantial amounts of rain, which would be very beneficial for regeneration of rangeland resources in the short-term. Moderate to heavy rains are also forecast for Uganda, Rwanda, Burundi, and western Kenya. Meanwhile, the southward shift of the rainfall system (ITCZ) into Tanzania is expected to result in an intensification of its seasonal rains, with DRC receiving very heavy rains across its border with Uganda, Rwanda, Burundi, and western Tanzania.

**Figure 3.** 2<sup>nd</sup> Week GFS-Rainfall forecast (mm), Valid until December 6, 2016



Source: [NOAA/CPC](#)