

Drought conditions exacerbated by above-average surface temperatures over Eastern Horn

KEY MESSAGES

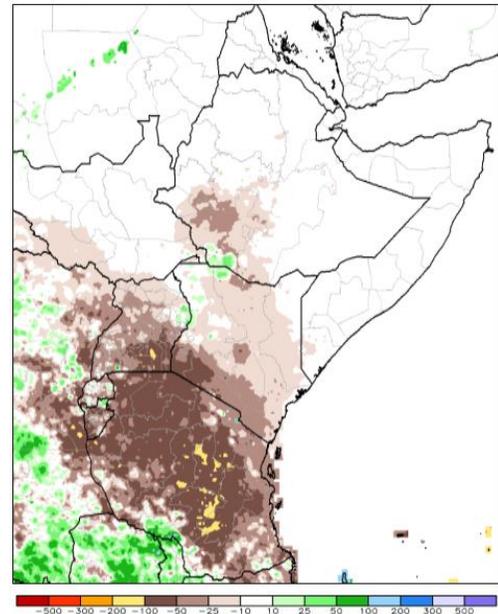
- As this is the dry season for most areas in the region, the hotter-than-normal land surface temperatures across the Eastern Horn, which are forecast to continue, are exacerbating drought conditions in many areas of Somalia, eastern Kenya, and southern Ethiopia. As a result, a rapid depletion in water and pasture resources is likely to continue in pastoral areas.
- Rainfall since early January has continued to be below-average in unimodal Tanzania, following a delayed onset, causing crop moisture stress in key agricultural zones. Similarly, in the bimodal cropping regions of Uganda, Rwanda, and Burundi, end of the season rainfall in January was not sufficient to support full maize crop growth in many areas, likely affecting yields.
- During the next two weeks, seasonal rainfall is expected to intensify in Tanzania, Rwanda, Burundi, and eastern DRC, but the amounts are unlikely to fully eliminate the current large cumulative deficits, especially in Tanzania. Seasonally dry weather is expected to prevail over northern areas of East Africa.

SEASONAL PROGRESS

Since early January, the majority of the East Africa region has remained dry and much hotter-than-normal, intensifying the ongoing drought conditions, following the poor October to December 2016 season. The worst drought-affected regions are across much of Somalia, eastern Kenya, southern and southeastern Ethiopia, and northeastern Tanzania. Some of these areas have had drought conditions persisting through 2016 into early this year. Along the coastal regions of Kenya and southern Somalia, the current land surface temperature are also extremely high and well above the recent 10-year average temperatures.

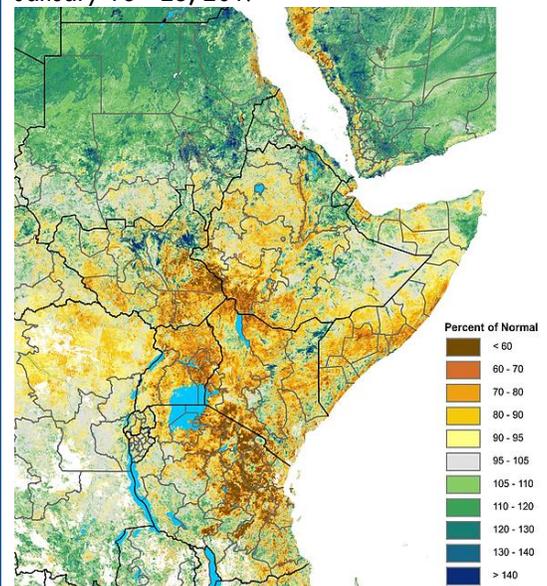
Meanwhile, the current *Msimu* seasonal rains in Tanzania are well below average (less than 50 percent of normal), and were also significantly delayed (more than one month), in the northern, central, and eastern regions of the country. This has resulted in moisture stress for the late-planted crops in key producing regions of the country. Figure 1 depicts the regional rainfall anomalies from January 1-29, which shows the large rainfall deficits across Tanzania (-50 to -100 mm), and also deficits in Uganda, Rwanda, Burundi, eastern DRC, southern and southeastern regions of Kenya, where the October to December seasonal rains often extend into January.

Figure 1. ARC2 seasonal rainfall estimate anomalies, as percent of normal (1983-2009), January 1 - 29, 2017



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

Figure 2. eMODIS/NDVI anomaly (2001-2010), January 16 - 25, 2017



Source: [USGS/FEWS NET](#)

Please see http://www.cpc.ncep.noaa.gov/products/african_desk/cpc_intl/ and <http://earlywarning.usgs.gov/?l=en> for more information on remote sensing.

Vegetation conditions remain below average across many areas in the region according to the Normalized Difference Vegetation Index (NDVI) (Figure 2), which reflects the recent poor seasonal rains and the ongoing atypically high land surface temperatures. In Rwanda and Burundi, NDVI suggests vegetation conditions are better than other areas in the region but more mixed. The drought conditions have had adverse impacts on rangeland resources (pasture and water resources) among the pastoral and agro-pastoral communities in the Eastern Horn. These conditions are expected to worsen in the coming months with the forecast for continued higher than normal temperatures until the onset of the *Gu/long* rains seasons in late March/early April, which is expected to be below average. The ongoing rapid depletion of rangeland resources is likely to result in increased conflicts among pastoralists and/or wildlife over dry season grazing lands, along with competition for scarce water resources.

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

- In **Ethiopia**, current rangeland resources continue to rapidly deteriorate in southern and southeastern pastoral regions, following the well below-average seasonal rains. The lowland cropping areas of east and central Oromia, along with the Rift Valley regions of SNNPR, were also adversely affected by the 2016 poor, successive seasonal rains.
- In **Somalia**, large expansive regions of the country, including both the pastoral and agro-pastoral regions, are currently under severe drought conditions (SPI < -2), which is expected to continue until the onset of the *Gu* season in early April. As a result, the sorghum harvest for the 2016 *Deyr* cropping season is expected to range from less than 40 percent of normal to failure.
- In **Yemen**, the ongoing conflict and high diesel prices, which are limiting irrigated agricultural activities, remain the primary drivers for food insecurity in the country, severely constraining both agricultural production and food access.
- In **Kenya**, the extremely poor short rains are expected to lead to near total maize crop failure in southeastern and coastal marginal agricultural areas. Leguminous crops were also affected, and the harvest is estimated to be up to 60 percent below average. Bimodal regions of western Kenya also experienced below-average rains, with expectations for up to 10 percent below-average long rains maize production. Presently, the worst-drought affected regions in Kenya are in the northern, southern, and eastern pastoral areas.
- In **Tanzania**, following significant *Vuli* crop losses in the bimodal areas due to below-average rainfall, the current *Msimu* season (November to February), is also proving unfavorable for maize cropping conditions. Some of the maize crop is already wilting at the tasseling stage. Below-average cumulative *Msimu* rainfall is expected through April, despite some enhanced rainfall in the near-term. As a result, there is an increased likelihood for reduced yields in key cropping zones, whose agricultural production has a significant impact on the region in terms of both exports and cereal prices.
- In **eastern DRC**, especially in the plains of Ruzizi and Tanganyika, there has been significantly below-average Season A rainfall, which has affected the maize crop. A recent FEWS NET assessment found that pests, particularly caterpillars, have been attacking seedlings due to the lack of rains.
- In **Uganda, Rwanda, and Burundi**, the September to December seasons' cropping conditions were affected by the erratic and below-average rainfall performance in these countries. In addition, January rainfall was not sufficient in many areas to support adequate maize growth for later-planted crops. As a result, below-normal yields are expected during the current second season/Season A harvesting. Parts of northern Uganda pastoral areas of Karamoja have also been affected by the ongoing drought.

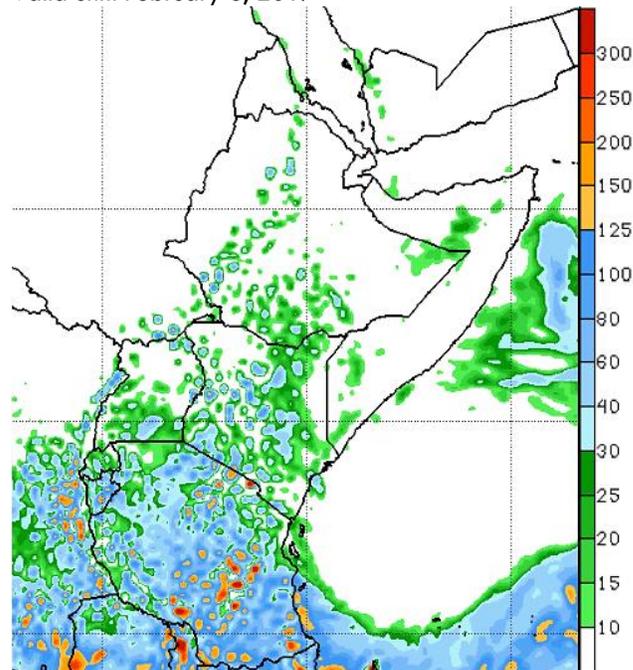
FORECAST

The short-term NOAA/GFS rainfall forecast (Figure 3) through February 6, 2017, indicates an increased likelihood for an intensification of *Msimu* seasonal rains in Tanzania and surrounding countries, such as Rwanda, Burundi, and the DRC. The forecast rains are unlikely to cover the large cumulative rainfall deficits in Tanzania. However, the rains are expected to help with water replenishment and pasture regeneration in areas that have remained generally drier-than-normal over the past few months, especially in northern, central, and eastern Tanzania.

Meanwhile, the rest of the region is expected to experience unseasonal light to moderately heavy rains in the coming week, particularly in Kenya, parts of southern Somalia and southern Ethiopia. This could help provide some minor relief to the current hotter-than-normal and dry conditions.

The consensus seasonal rainfall and temperature forecasts for the *Gu/long* rains (March to May 2017) are expected to be issued by ICPAC in early February. It is worthwhile to note most global climate forecasts are indicating a transition from La Niña, which often correlates to drought in East Africa. However, the lingering effects of the current weak La-Niña are likely to result in below-average rains across much of the Eastern Horn but with localized rainfall variations. For updates, on the latest March to May seasonal rainfall forecast refer to www.ipcac.net.

Figure 3. 1-Week GFS-Rainfall forecast (mm), Valid until February 6, 2017



Source: NOAA/CPC