

*Short-term pasture and water improvements likely over the Eastern Horn with late season rainfall*

**KEY MESSAGES**

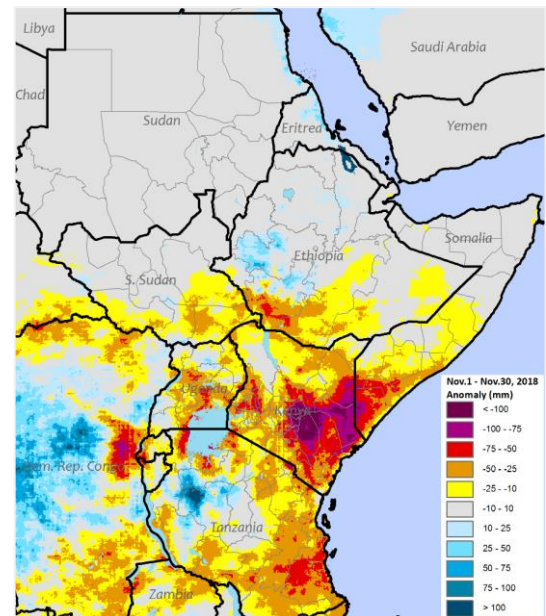
- In November, seasonal rainfall deficits persisted across much of the Eastern Horn of Africa. Although moderate to heavy rainfall was received in late November/early December, it is expected the positive impacts of this rainfall will be short-lived and most significant in pastoral livelihood zones. The late season rainfall is expected to have a minimal impact on crop development in southern Somalia and Kenya, where production losses upwards of 30-40 percent are now expected.
- In Uganda, Rwanda, and Tanzania, increased rainfall in November has reduced crop moisture stress and near average production is expected in these countries. However, below-average harvests are likely in some worst-affected areas.
- Short-term rainfall forecasts indicate increased likelihood for continued moderate to heavy rains over much of Kenya, southern Ethiopia, and Somalia over the next two weeks. However, rainfall over these areas is expected to subside by mid-December, and overall the season will likely be shorter than normal and significantly below average. Meanwhile, heavy to locally very heavy rainfall is forecast for parts of Uganda, Tanzania, Rwanda, and Burundi.

**SEASONAL PROGRESS**

In November, seasonal rainfall deficits of 25 to 100 millimeters (mm) persisted over much of southeastern Ethiopia, southern Somalia, Kenya, Uganda, western Rwanda, southern South Sudan, and northern and eastern Tanzania (Figure 1). A few areas, namely Lower Juba of Somalia and central and eastern regions of Kenya, recorded deficits greater than 100 mm. November, is typically the peak month of rainfall during the October–December *Deyr*/short rains season and the persistent widespread rainfall deficits are expected to have a negative impact on crop development and pasture and water availability in many areas.

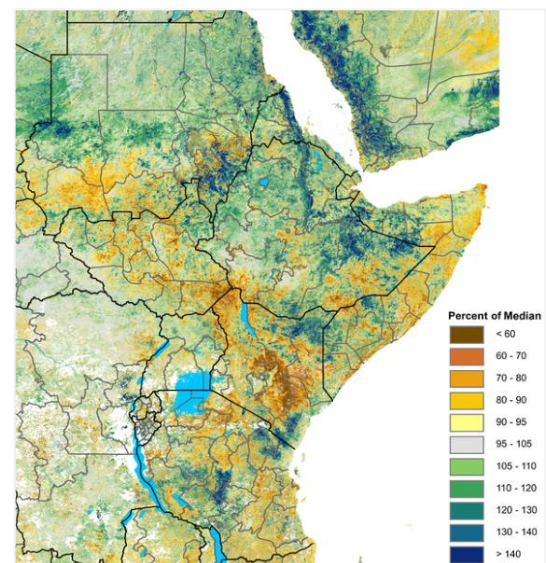
However, in early December, heavy rainfall in localized areas of southern Ethiopia, central and southern Somalia, and northeastern and highland regions of eastern Kenya has helped ease the prolonged dryness. Although these rains are expected to replenish some water sources and support pasture and browse regeneration in the short-term, rainfall amounts were insufficient to support long-term availability of these resources.

**Figure 1.** CHIRPS-Preliminary-based seasonal rainfall accumulation anomalies, November 1-30, 2018, compared to 1981-2010 average



Source: USGS/FEWS NET

**Figure 2.** eMODIS/NDVI percent of normal, November 21- 30, 2018, compared to 2007-2016 average



Source: USGS/FEWS NET

Current vegetation condition, as depicted by the Normalized Difference Vegetation Index (NDVI), reflects the mixed performance of the rainy seasons in East Africa, with significantly drier-than-normal vegetation conditions across eastern and northwestern Kenya, southeastern Somali region of Ethiopia, and much of central and northeastern Somalia (Figure 2). Similarly, vegetation conditions are below average across the Lake Victoria basin regions of northern Tanzania and Turkana of Kenya, and to a lesser extent across South Sudan and parts of southern Sudan. However, vegetation conditions are average or above average across much of the Mendera triangle. Additionally, vegetation conditions remain above average over much of northern Ethiopia and Sudan as a result of the above-average June–September rainfall season in northern East Africa.

The January short/*Deyr* harvest is expected to be below average in the southeastern lowlands of Kenya and southern Somalia rainfed cropping zones, as a result of the significantly below-average rainfall performance and delayed onset of rainfall, which reduced the length of the growing season by more than a month. Although rainfall deficits persisted across much of Uganda and Tanzania and parts of Rwanda during the first half of the rainy season, increased rainfall in the latter half of the season has reduced crop moisture stress. Early estimates indicated near-average harvest prospects, though with localized areas of below-average production in southwestern Uganda, northwestern Rwanda, northwestern Tanzania, and western Burundi.

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

- **In Somalia**, rainfall has intensified over southern and central regions in the past two weeks, most notably in Bay and the Upper Shabelle River basin, helping ease the cumulative seasonal rainfall deficits. However, the southern coastal regions and the Juba River basin continued to observe significant deficits (25 to 50mm) for the past month. The northern pastoral zones received light to moderate rains of less than 25mm, which is near normal for November. Overall, increased rainfall in late November and early December has supported improvements in rangeland and water availability in central and southern pastoral and agropastoral livelihood zones. However, this late season rainfall is unlikely to significantly improve crop conditions as the prolonged deficits in October and much of November led to significant crop water stress that will not be reversed by 1-2 weeks of rainfall. For significant improvement, rainfall would need to continue into early 2019; however, forecasts are indicating rainfall is likely to cease by mid to late December.
- **In Ethiopia**, the overall performance of November rainfall was near-normal, with the exception of southern regions which accumulated significant rainfall deficits of 25-50 mm. Vegetation conditions improved in most areas following the favorable November rainfall, though vegetation conditions are significantly below average in parts of southeastern Somali and southwestern SNNP regions. The unseasonal rains over parts of northern and central Ethiopia are likely to somewhat constrain the ongoing harvesting in these regions.
- **In Kenya**, rainfall during the November peak of the short rains season was significantly below average. Areas worst affected include Garissa, Tana, Wajir, Isiolo, Taita-Taveta, lower Makueni, and Kitui counties, as well as parts of northwestern and southwestern regions of the country. Rangeland conditions are significantly poorer than normal. Rainfall over the past 1-2 weeks is likely to support short-term improvement to rangeland resources and water availability, though rainfall was erratic and not all areas will benefit from these improvements. Cropping conditions over the short-rains dependent areas of southeastern marginal agricultural zones are currently poor and are not expected to improve much in the coming weeks despite the late season rainfall. However, rangeland resources and crops in the eastern highlands (Embu, Meru and parts of Machakos counties) are expected to see improvements.
- **In Sudan**, November was seasonally dry, which was conducive to ongoing harvesting. Vegetation conditions are generally above average across the country, as a result of the favorable June–September rainfall season. However, parts of southern and central Darfur have drier-than-normal vegetation conditions.
- **In South Sudan**, rainfall deficits persist over southern States, in particular Eastern Equatoria State, which has had prolonged successive below-average rainfall performance. Pasture and water resources and crop development are all likely to be negatively impacted.
- **In Uganda**, most crops planted in early into mid-September are now in favorable vegetative stages. Moderate to heavy rainfall is forecast to continue in December and this is likely to result in average yields in most areas, despite early season deficits. However, in parts of southwestern Uganda where crop water stress is more significant, production short falls are still expected.
- **In Rwanda**, despite the late onset of rainfall and total seasonal deficits to date, cumulative rainfall received during the season has still been sufficient for maize development, and cropping conditions remain generally favorable. However,

there are localized areas of concern over northwestern regions of country bordering Uganda. Meanwhile, **Burundi** has continued to receive relatively heavy rainfall and while cropping conditions are favorable, there is a risk of flooding in flood-prone lowland areas due to forecast continued moderate to very heavy rainfall in the coming weeks. Flood risks also exist over western regions of Rwanda.

- **In Yemen**, western coastal and central highlands regions observed slightly above-average rainfall between October and early December. These rains are expected to be largely beneficial for restoring water resources and regenerating rangeland conditions. The rest of the country has received normal rainfall, with the exception of southwestern Yemen where rainfall has been below average. Overall, it remains challenging to assess ground conditions in the country due to protracted conflict and is assessment based on remote observations.

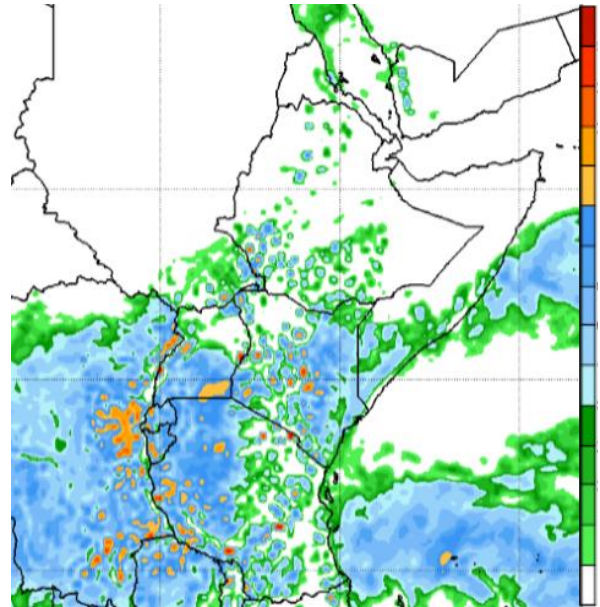
## FORECAST

The short-term rainfall forecast for the next 1-2 weeks indicates an increased likelihood for continued moderate to locally heavy rains across southern Somalia, Kenya, central and southern Uganda, Rwanda, Burundi, and much of western and coastal Tanzania. Rainfall over the Eastern Horn of Africa is forecast to gradual subside by mid-December.

Overall, the forecast rainfall will be beneficial in the short-term for rangeland resources over parts of the Eastern Horn of Africa, though unlikely to significantly improve crop prospects. According to FEWS NET's [December 2018 alert](#), crop and livestock production is likely to be below average as a result of the poor performance of the *Deyr*/short rainy season.

Although there is at least an 80 percent chance of an El Niño forming during the 2018-2019 Northern Hemisphere winter, the current ENSO status remains neutral. If an El Niño does develop as expected, it is likely to be mild and too late to drive increased rainfall over the Eastern Horn.

**Figure 3.** Week I GFS-Rainfall forecast (mm), valid through December 04 - 11, 2018



Source: NOAA CPC