

*Northern seasonal rains forecast to typically subside and likely timely onset for October rains*

**KEY MESSAGES**

- The June to September seasonal rains gradually subsided in late September, marking the cessation of persistent well above-average rainfall amounts across most of the northern sector, which led to widespread flooding in Sudan. However, some areas of the region experienced significant cumulative seasonal deficits, including some central areas of Ethiopia, eastern and central South Sudan, and northern and eastern Uganda.
- Unseasonal heavy rains across Kenya’s coastal strip during the end of September caused flash flooding. Additional rainfall is forecast to continue in these coastal areas in the coming weeks, including the northeastern coastal regions of Somalia, which may lead to flash floods.
- According to the short-term rainfall forecasts, there is an increased likelihood for the timely establishment of the October to December rainy season across Uganda, Rwanda, Burundi, eastern DRC, and parts of the eastern Horn, as the tropical rainfall system shifts southwards into equatorial East Africa.

**SEASONAL PROGRESS**

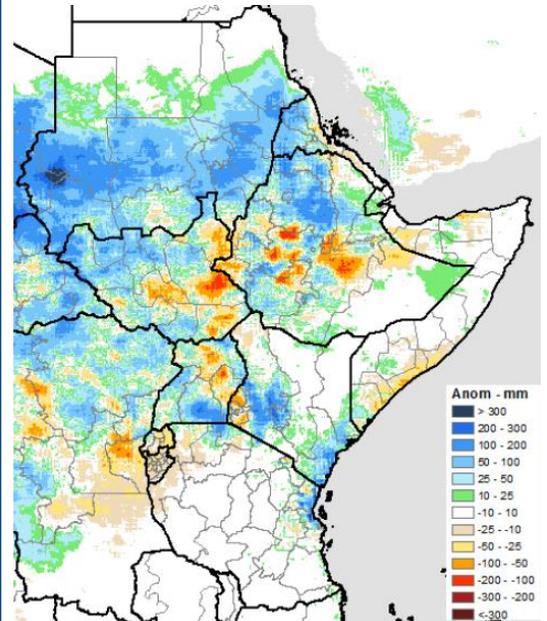
The overall performance of the June to September rainfall season was characterized by well above-average rainfall amounts, greater than 200 millimeters above normal across large areas of Sudan, which led to major flooding, as well as heavy rainfall in northern areas of South Sudan and Ethiopia, southwestern Kenya, and southern Uganda (Figure 1). However, there was below-average seasonal rainfall over Ethiopia’s northwestern Afar Region and some central areas of the country, eastern South Sudan, northern and eastern Uganda, and portions of western Yemen. Some of these cumulative rainfall deficits were quite significant, particularly in Ethiopia, South Sudan, and Uganda, representing more than 100 millimeters below normal.

As expected, at the end of September, the main tropical rainfall system, often referred to as the ITCZ, gradually started shifting southwards, marking a timely cessation of the June to September rains over much of the northern sector of East Africa.

Over the past 20 days, much of the eastern Horn has remained normally sunny and dry, apart from Kenya’s coastal strip, which experienced unseasonal flooding, with no serious adverse impacts, following heavy torrential rains during the last week of September.

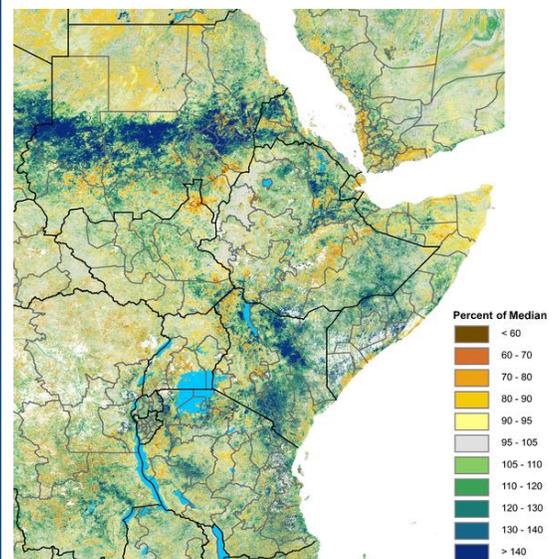
In terms of the overall impacts of the June to September seasonal rains, the latest remote sensing products, including the Normalized

**Figure 1.** CHIRPS-Preliminary-based seasonal rainfall accumulation anomalies in comparison to average (1981-2010), June 1-September 30, 2018



Source: USGS/FEWS NET

**Figure 2.** eMODIS/NDVI percent of normal (2007-2016), September 21-30, 2018



Source: USGS/FEWS NET

Difference Vegetation Index (NDVI), depicts extremely “greener-than-normal” vegetation conditions across much of central Sudan, parts of northern and eastern Ethiopia, and Yemen, excluding far western areas (Figure 2). These favorable vegetation conditions, including for both crops and rangelands, are in direct response to the generally consistently above-average rainfall performance across these areas during the June to September rainy season. However, with below-average seasonal rainfall, there were some localized areas of drier-than-normal vegetation conditions in eastern areas of South Sudan and Sudan, parts of Uganda, northeastern DRC, southwestern Ethiopia, and northeastern Somalia. In addition, with early seasonal rainfall in September, there are signs of initial vegetation recovery in Rwanda, Burundi, and eastern DRC. Despite it being the dry season, much of the eastern Horn maintained typical seasonal vegetation conditions and water resources, with few areas showing slightly drier-than-normal conditions.

According to the latest field reports and crop simulated models, the June to September cropping season is projected to have average to above-average production prospects across much of the key grains growing zones of western and central highlands of Ethiopia, western South Sudan, and the high and medium-producing areas of Kenya. Crop production prospects are also favorable in Sudan, but the macroeconomic situation may negatively impact the harvest. However, below-average and erratic seasonal rains over some areas in Ethiopia’s central and eastern Oromia, northeastern Amhara, and southern Tigray regions caused significant crop-water-stress, which is expected to result in localized below-average yields and production prospects for long-cycle crops in these regions. Also, recent crop assessment reports from northern Uganda are indicative of initial crop production shortfalls due to erratic seasonal rains over northwestern districts, and there is evidence that excessive rainfall, coupled with crop waterlogging, has led to significant below-average production prospects in Karamoja.

October often marks the establishment of the seasonal October to December rains across Uganda, Rwanda, Burundi, eastern DRC, northeastern Tanzania, Kenya, Somalia, and eastern and southern Ethiopia. There are currently good indications for the timely establishment of this rainy season, and in some cases, even an early onset.

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

- **In Somalia**, the *Karan* rainfall season was generally uneven and below average across northwestern agropastoral areas and parts of the northeastern and central pastoral livelihood zones. Meanwhile, *Gu* flooding, which occurred during the April to June seasonal rains, translated into crop production shortfalls in southern regions of Gedo and Hiiran. During the peak of the October to December *Deyr* season, there is likely to be enhanced rainfall over southern Somalia, with a heightened risk of flooding along the middle to lower Juba and Shabelle river basins. This is likely to lead to above-average *Deyr* crop production in agropastoral areas, but crop and property losses in riverine areas.
- **In Ethiopia**, the *Kiremt* rainfall season was largely favorable for key cereal-growing areas over the western and central highlands of Ethiopia. Overall, total *Meher* production prospects are expected to be average. However, with below-average *Kiremt* rainfall over parts of central and eastern Oromia, northeastern Amhara, and southern Tigray, prolonged crop-water-stress is likely to result in localized production shortfalls. The *Karan/Karma* rains over northern pastoral areas of Ethiopia have generally improved vegetation conditions, while rangeland resources remained near-normal even in areas of Somali Region, which were seasonally dry.
- **In Sudan**, as the main June to September seasonal rains cease in the country, the generally well above-average rainfall performance has remained very favorable for both crop and rangeland resources across the country. However, the extremely high cost of fuel in Sudan and other agricultural inputs has likely reduced the area planted, which may negatively impact crop production prospects. Currently the early planted crops are in maturity stages and have sufficient soil moisture, but there are localized areas of crop-water-stress over parts of the central Darfur Region. Previous widespread flooding is expected to have lingering livelihood impacts and likely lead to some slight crop production shortfalls, especially in the worst flood-affected regions in the eastern, northern, and western regions of the country. Field reports indicate that poor households in some of these flood-affected areas have replanted fast-maturing sorghum varieties, and their overall performance will rely heavily on the continued moisture in coming months.
- **In South Sudan**, remote sensing and some field information indicate there was above-average seasonal rains in the west and over parts of the central regions of the country, which led to significant flooding in areas of Northern Bahr el Ghazal, Warrap, Unity, and Jonglei states during August and September. However, since the start of the June to September season, parts of eastern and southern regions of South Sudan experienced erratic and below-average seasonal rainfall. This has increased the likelihood for significant crop production deficits in these areas, especially over eastern Kapoeta, where there could have been some cropping activities this season despite the ongoing conflict. Overall, in South Sudan,

based on satellite images and derived products, rangeland and water resources are expected to be at near-normal levels, as a result of the seasonal rainfall.

- **In Kenya**, late September into October, marks the maize harvesting period over the high to medium production areas, with slightly above-average maize production prospects. Meanwhile, rangeland resources, except in Turkana, have generally remained favorable across the predominantly pastoral and marginal agricultural areas over the northern and eastern sectors of the country.
- **In Uganda**, erratic and below-average June through September seasonal rains over parts of Uganda may impact cereal crop development in this region. In contrast, consistently above-average rains, floods and crop water-logging over the Karamoja region from March to May, followed by erratic July and August rainfall, has caused significant crop damage and estimated 60 to 80 percent decline in crop production.
- **In Rwanda, Burundi and eastern DRC**, the September to December seasonal rains are expected to be fully established this month, with increased likelihood for average to above-average cumulative rainfall amounts, which is likely to be favorable for crop development but may lead to flooding in susceptible areas. In northern areas of Rwanda and in Burundi's *Plateaux Humides* and northern *Plateaux Secs de l'Est* livelihood zones, early season rainfall has already led to early planting.
- **In Yemen**, the June to September seasonal rains were characterized by an above-average to average rainfall performance over western coastal and highlands regions, but there were near-average conditions across the country, except for some deficits in central areas. These rains are likely to be beneficial in terms of water and rangeland resources; however, it is currently difficult to determine accurately the cropping conditions and status of where and when agricultural activities occurred during the season due to the ongoing conflict.

## FORECAST

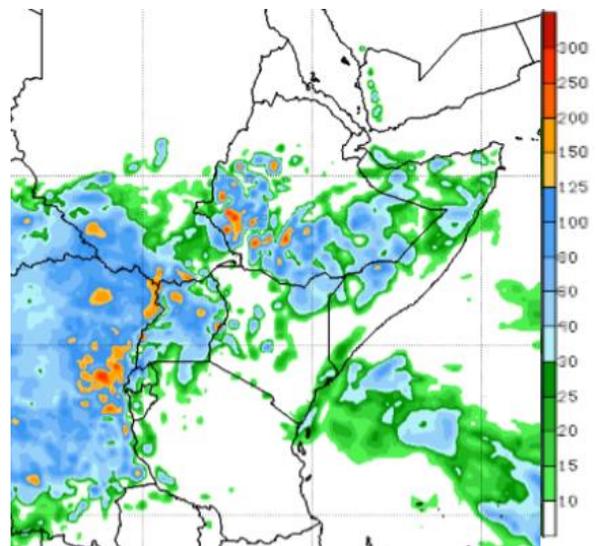
The two-week rainfall forecast, based on the GFS model, indicates an increased likelihood that the June to September seasonal rains will subside significantly over Sudan, Ethiopia, parts of northern South Sudan, and western Yemen. As a result, there is likely to be a decreased likelihood for continued flooding across these regions.

The October to December seasonal rains are expected to be fully established over much of Uganda, Rwanda, Burundi, DRC and parts of the eastern Horn by mid-October. There are also elevated flood risks for flash floods over the Kenyan coastal strip and parts of northeastern Somalia, with the forecast for moderate to very heavy rains in the coming weeks.

However, much of Kenya, Tanzania, and southern Somalia are forecast to remain generally sunny, with occasional light to moderate rains during the next two weeks. A slightly earlier-than-normal to timely seasonal rains onset is expected across these areas after mid-October.

The upcoming seasonal rains call for close monitoring due to the expected influence of the forecasted likely weak El-Niño event, coupled by a positive Indian Ocean Dipole, which often results in enhanced rainfall across the eastern Horn. As a result, this may lead to flash floods in flood-prone riverine lowland areas of southern Somalia and northeastern and eastern counties of Kenya.

**Figure 3.** Week 2 GFS-Rainfall forecast (mm), valid through October 18, 2018



Source: [USGS/FEWS NET](#)