

Well above-average seasonal rains result in widespread flooding across East Africa

KEY MESSAGES

- The onset of the October to December seasonal rains were generally much earlier than normal. Rainfall in October was well above average, resulting in widespread flooding that caused human fatalities, some crop and livestock losses, and property damage. The worst-affected areas are primarily located in southern Somalia, eastern Ethiopia, Kenya and eastern South Sudan. More than 700,000 people have been displaced in Somalia, Ethiopia, and Kenya since early October. In South Sudan, more than 900,000 people have been affected by flooding since July.
- In the medium-term, the heavy rainfall is expected to benefit crop and livestock production in parts of the Horn, namely within Somalia and Kenya. Outside of flood-prone areas, the rains have been largely beneficial to crop production and regeneration of rangeland resources, especially after prolonged severe drought conditions over the eastern Horn.
- The exceptional performance of the rainfall season is largely influenced by an exceptionally strong Indian Ocean Dipole (IOD), currently at +2.1°C. The IOD event is one of the strongest in the recent 20-year record. The super-charged IOD is expected to be sustained through the peak of the *Deyr*/short-rains season in November.
- The rainfall outlook for November is forecast to be above average. This is the peak rainfall period of the *Deyr* and short rains in the eastern Horn. With the rainfall, there is a heightened risk of additional flooding in the coming weeks.

SEASONAL PROGRESS

The October seasonal rains performance was generally characterized by earlier-than-normal onset (10-20 days) and episodic, well above average rainfall. Rainfall was more than 200 percent of normal in many areas, with anomalies ranging from 50 to 300 mm (Figure 1). The excessive rainfall resulted in widespread riverine flooding and localized flash floods. Worst-affected areas are primarily located in southern Somalia (Belet Weyne district of Hiiraan and lower Shabelle and Juba river basins); northeastern and eastern pastoral areas of Kenya; southeastern Ethiopia (Afar, Oromia, SNNPR and Somali regions); and eastern South Sudan (Greater Upper Nile and Great Equatoria regions). Other affected areas include parts of eastern Uganda and Tanga region of eastern Tanzania.

More than 700,000 people are reportedly affected by the recent floods across Ethiopia, Somalia, and Kenya, according to recent UNOCHA reports. 48 deaths were reported in Kenya with 144,000 affected by

Figure 1. CHIRPS preliminary rainfall accumulation anomaly in mm compared to the 1981-2010 mean, October 1 - 31, 2019

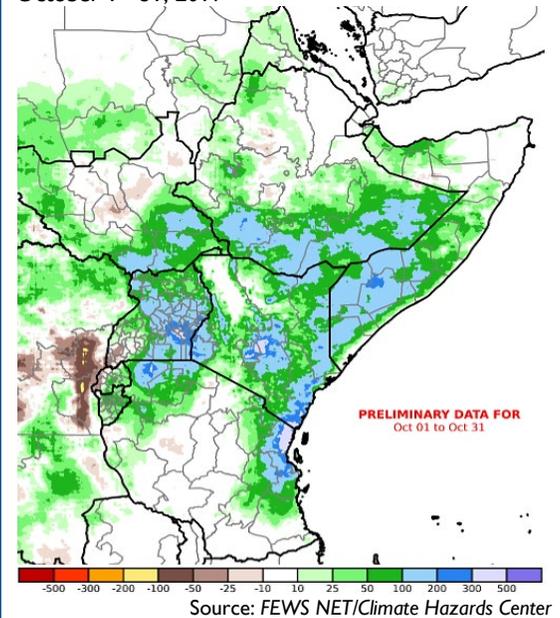
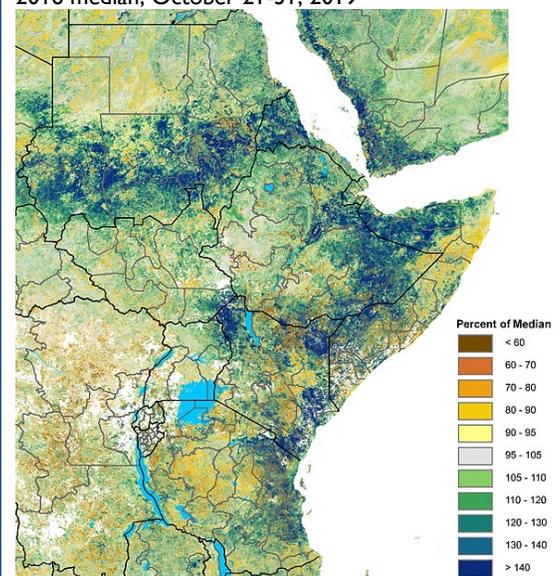


Figure 2. eMODIS/NDVI as a percent of the 2007-2016 median, October 21-31, 2019



floods, especially in Wajir and Marsabit counties. In Somalia, more than 370,000 have been displaced, primarily in Belet Weyne of Hiraan region. In South Sudan, more than 900,000 people have been affected by flooding since July, particularly in Maban of Upper Nile and Pibor of Jonglei. Humanitarian response is ongoing in most affected areas, which was facilitated by a brief dry spell in late October and early November in Somalia and Kenya that relatively improved road access.

Despite some livestock loss in Kenya and the interruption of planting activities in riverine areas of Somalia, the above-average rainfall has been largely beneficial for rangeland and cropping conditions. The rains are facilitating regeneration of pasture and water resources and supporting crop development in areas that suffered drought and crop failure in late 2018 and early 2019 in the eastern Horn. Based on the eMODIS Normalized Difference Vegetation Index, vegetation conditions have significantly improved compared to September. Greener-than-normal vegetation conditions are observed in Sudan, eastern and southern Ethiopia, southern Somalia, northern and parts of eastern Kenya, northeastern Uganda together with much of eastern coastal regions of Tanzania. In northeastern Somalia, localized areas of eastern Kenya, and central Tanzania, however, conditions have remained dry and negative vegetation anomalies persist. In Rwanda, Burundi, and southwestern Uganda, vegetation conditions are generally obscured from satellite view by persistent cloudiness, which is indicative of on-going seasonal rains.

Early season field reports across the eastern Horn are indicative of favorable cropping conditions at early vegetative stages in agropastoral regions of eastern Kenya, southern Somalia, and northeastern Tanzania. However, there are some confirmed reports of presence of FAW in some of these areas following the dry spell experienced in late October into early November, especially over parts of southeastern Kenya. According to FAO, a desert locust infestation is ongoing in Ethiopia, despite ground and aerial control operations. The mature swarms are devouring crop and pasture fields in Tigray, Amhara, Oromia, Afar and Somali regions.

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

- **In Somalia**, flooding of the Shabelle river has inundated 85 percent of Belet Weyne town as well as other areas in the Shabelle and Juba river basin. The UN reports more than 370,000 people have been displaced by recent floods. About 10 percent of cropped areas in Lower Shabelle region have been affected by flooding and cropping has been suspended in riverine areas. There is an increased likelihood of additional flooding at the peak of the *Deyr* rainfall season from early to late November. To date, rainfall performance in southern Somalia is similar to or above that of 2006. In six out of seven *Deyr* flood years, total agricultural production was above average, due to above-average recessionary cultivation after flood waters recede. However, there is an increased risk of higher-than-normal Rift Valley Fever (RVF) incidence, which could impact livestock production and trade in southern Somalia. In northern Somalia, a forecast of localized heavy rainfall in the next one to two weeks may elevate flood risk in the Nugaal and Dharar valleys. In northeastern Somalia, the rains have not yet been established. Previous forecasts anticipated landfall of Cyclone Kyarr in northeastern coastal areas of Somalia this week, but the storm significantly weakened and its effects are now most likely to enhance rainfall in central and southern Somalia.
- **In Ethiopia**, seasonal *Kiremt* rains have gradually subsided over western and central highlands of Ethiopia, allowing for on-going *Meher* harvest. Meanwhile, areas of Oromia, SNNPR, and Somali regions continued to experience above-average *Deyr/Hagaya* rainfall in October. However, recurrent flooding in areas Afar, Oromia, SNNP and Somali regions has been reported. According to UNOCHA as of late-October, indicate more than 20,000 hectares of crops (maize and sorghum) and 10,000 livestock were lost in Somali Region. More than 200,000 people are estimated to have been displaced in Oromia, SNNP, and Somali regions, with over half of the displaced people in Somali region. More than 20 people lost their lives in a landslide that occurred in Konta district of SNNPR in mid-October. The risk of flooding remains high due to a forecast of heavy rainfall over eastern Somali region and southern Ethiopia. Flooding is expected to lead to localized crop and livestock losses as well as temporary displacement of households.
- **In Kenya**, flash floods were reported to have adversely affected about 25 counties, especially Marsabit, Wajir, Garissa, Turkana and Kitui. The recent floods caused human and livestock fatalities and damage to infrastructure. Over 48 people lost their lives and 144,000 are estimated to have been displaced. However, the on-going short-rains performance has been largely beneficial for rangeland and cropping conditions across the most vulnerable pastoral and marginal agropastoral communities. There is an increased likelihood for the above-average crop yield prospects, if the rainfall forecast for enhanced rains continue into December. On the other hand, there are concerns for pre-and post-harvest losses in the Western and North-Rift counties of Kenya due to on-going rains in the harvesting and drying period. There is also an elevated risk of further flooding at the peak of rainfall season in November, which is associated with increased incidence of malaria, water-borne diseases, and RVF.
- **In Sudan**, cropping and vegetation conditions remain favorable across much of the country. The seasonal rains have generally subsided due to southward progression of the tropical rainfall system, marking the timely onset of dry and

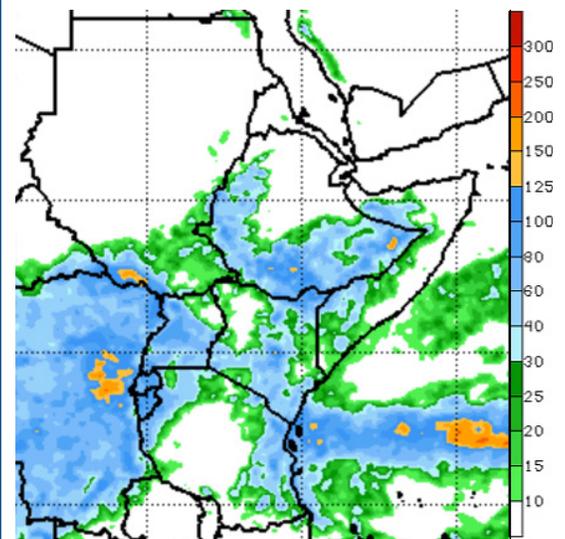
sunny conditions in Sudan. Little to no rains are forecast in the coming weeks, providing good conditions for crop harvesting and drying. Average to above average crop yields are likely in key agricultural areas of Sudan, following an excellent rainfall season.

- **In South Sudan**, October was one of the wettest months on record in the southeast. Since July, heavy flooding has affected an estimated 908,000 people across Upper Nile, Jonglei, Eastern Equatoria states, as well as parts of Unity, Warrap, Northern Bahr el Ghazal, and Lakes. Nearly half of those affected have been at least temporarily displaced. The number of people affected is highest in Maban of Upper Nile and Pibor of Jonglei. In addition to causing displacement and damaging homes and public infrastructure, the floods have caused crop and livestock losses, disrupted trade flows and food assistance delivery, and contaminated water sources.
- **In Uganda**, the eastern regions of the country continued to experience well-above average rainfall amounts, resulting in flash floods and mudslides around the Mt. Elgon region, with adverse impacts to roads and disruption to trade flows and livelihood activities. Crop performance for most crops are currently favourable, but lowland crops run the risk of being water logged. Beans and groundnuts are at risk of destruction for the second consecutive season, especially in Karamoja region, as it continues to experience atypically heavy rains at a time when the rainfall season normally subsides. Given the ongoing harvest in Karamoja, there is an increased likelihood for pre-harvest and post-harvest losses due to the heavy rain.
- **In Rwanda and Burundi**, season A rains started earlier-than-normal, apart from some western regions of Rwanda. Currently, the crops are in very good condition in mostly in early vegetative stages. Moderate to heavy seasonal rains are forecast to continue in the November, with increased likelihood for flash-floods in flood prone low-lying regions of both Rwanda and Burundi.
- **In Tanzania**, the eastern coastal regions received well above-average rainfall in October. Tanga region of northeastern Tanzania experienced extreme rainfall amounts (>300 percent of normal), with reported floods. More rains are forecast in the coming weeks, which is likely to benefit vegetation and cropping conditions.
- **In Yemen**, vegetation conditions remained significantly better-than-normal over western and coastal regions of the country and near-average across the rest of the country. Little or no rains are forecast in coming weeks, though southern and western coastal regions may receive some rain due to the influence of a tropical cyclone.

FORECAST

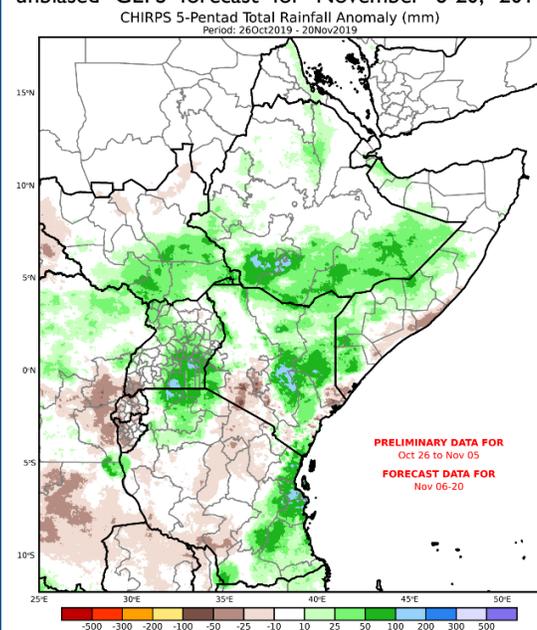
The two-week rainfall outlook through November 20th indicates an increased likelihood for seasonal rains to intensify and be wetter than average in much of the region, including in western and southern Ethiopia, western parts of southern Somalia, much of Kenya, Uganda, Rwanda, Burundi, DRC, and in western and eastern Tanzania. Figure 3 shows the rainfall forecast for week 1, valid up to 13 November. In the following week the moderate to very heavy rains are expected to subside in the region with above average amounts most likely near Lake Victoria, eastern Kenya, and central-east DRC. According to the two-week outlook and recent estimates (Figure 4), there is heightened risk of widespread floods at the peak of the seasonal rains this month, which calls for close monitoring on daily to weekly basis. Refer to https://www.cpc.ncep.noaa.gov/products/international/cpci/data/12/fcsts_eafrica.shtml for more information.

Figure 3. Week 1 GFS rainfall forecast in mm, valid through November 13, 2019



Source: NOAA/CPC

Figure 4. CHC Early Estimate for October 26 to November 20, 2019, expressed as the difference from the 1981-2018 average in mm. Based on CHIRPS preliminary data for October 26 – November 5 and the unbiased GEFS forecast for November 6-20, 2019.



Source: FEWS NET/Climate Hazards Center