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FAMINE EARLY WARNING SYSTEMS NETWORK

EAST AFRICA Seasonal Monitor

April 23, 2018

Seasonal rainfall well above average across many areas of the Horn

KEY MESSAGES

- Since late March, rainfall has been above average over broad areas of Somalia, eastern and southern Ethiopia, Kenya, Rwanda, and Burundi. Initial satellite-derived estimates suggest rainfall since late March has been as much as 200 percent of average across many areas.

- Favorable seasonal performance over the past 30 days has contributed to a continuation of timely and well-distributed rains that had already resulted in seasonal rainfall surpluses across much of the region. Overall, seasonal rainfall totals in excess of 150 percent of average have been observed across much of the region, though poor performance has been observed in parts of northern Ethiopia.

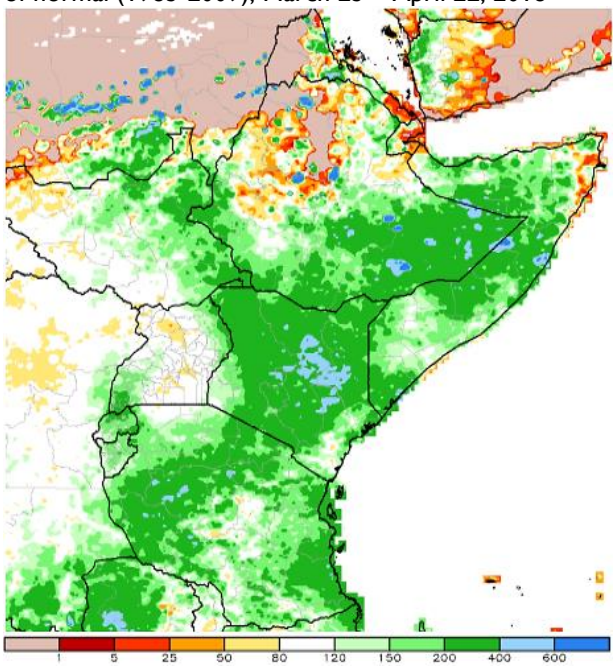
- Short-term forecasts suggest heavy rainfall is likely to continue over the next week in much of the region, which should further strengthen rainfall surpluses in many areas, and may reduce rainfall deficits in parts of northern Ethiopia. In early May, rainfall is expected to continue, but become relatively less widespread and will be concentrated over southwestern and eastern Ethiopia, Uganda, Rwanda, Burundi, coastal, central and western Kenya, and northern and coastal Tanzania.

SEASONAL PROGRESS

Since late March, rainfall performance has been broadly favorable over many areas of East Africa, including in pastoral and agro-pastoral areas of the Horn of Africa. Overall, rainfall has been above average over broad areas of Somalia, eastern and southern Ethiopia, nearly all of Kenya, as well as Rwanda and Burundi (Figure 1), according to ARC2 rainfall estimates. The strong performance of seasonal rains has contributed to a continuation of timely and well-distributed rains that had already resulted in seasonal rainfall surpluses across much of the region, based on independent CHIRPS rainfall datasets (Figure 2). However, seasonal rains have performed less favorably in a few notable, localized areas, including northern *Belg*-producing and pastoral areas of Ethiopia.

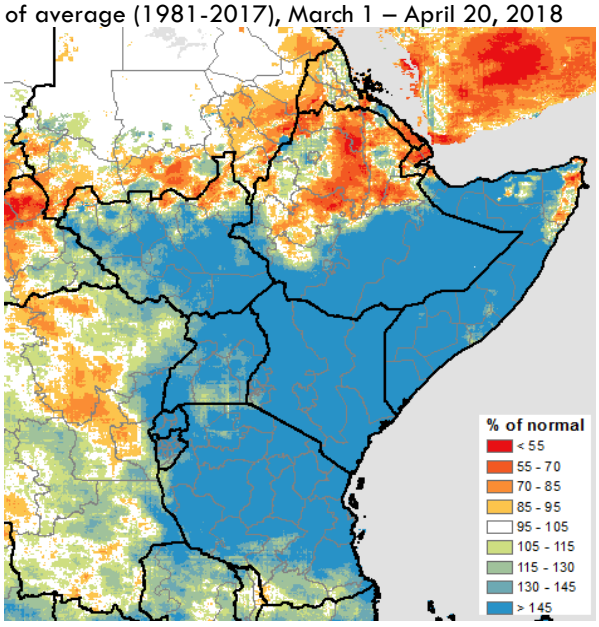
Additional remote sensing products corroborate indications of favorable seasonal performance observed in the rainfall products. For example, according to the Normalized Difference Vegetation

Figure 1. ARC2-estimated rainfall anomalies, percent of normal (1983-2009), March 23 – April 22, 2018



Source: NOAA/NWS/CPC

Figure 2. CHIRPS-estimated rainfall anomalies, percent of average (1981-2017), March 1 – April 20, 2018



Source: FEWS NET/USGS

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.

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Index (NDVI), vegetation conditions are above average across large areas of Kenya, Uganda, South Sudan, and southern and eastern Ethiopia (Figure 3) in response to ongoing seasonal rains.

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

- In **Somalia, southeastern Ethiopia,** and **northern and eastern Kenya,** seasonal rainfall began on time in many areas and was above average in terms of cumulative amount. According to CHIRPS rainfall estimates. During the past 30 days, this above average rainfall has continued, with rainfall totals between March 23 and April 23, 2018 at or above 200 percent of normal rainfall amounts.

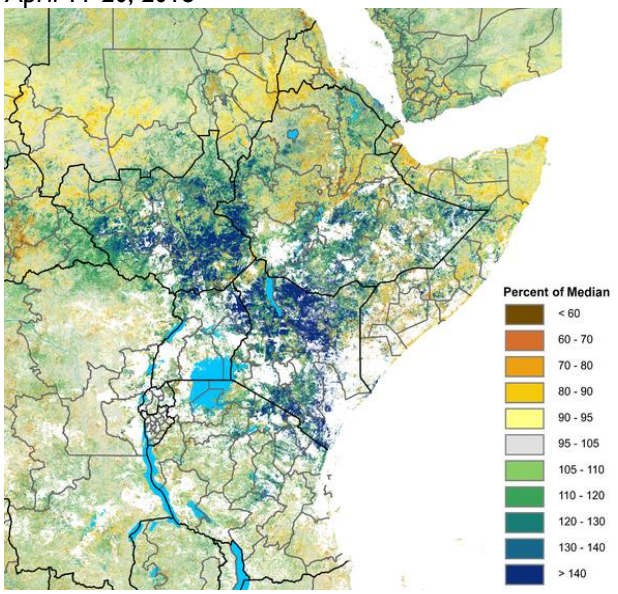
- Seasonal performance in ***Belg*-producing areas of Ethiopia,** has been mixed. In southwestern Ethiopia, *Belg* rains started early, have been generally well distributed across time, and have been above average in most areas. During the past 30 days, *Belg* rains continued this trend, with rainfall exceeding 150 percent of average. However, in northern *Belg*-producing and neighboring pastoral areas of northern Ethiopia, seasonal performance has been much less favorable, with cumulative rainfall totals at less than 70 percent of normal.

- **In western and central Kenya**, the onset of seasonal rainfall was on time, and seasonal rainfall between March 1 and April 20 was greater than 200 percent of average, according to CHIRPS. During the past 30 days, rainfall has continued to be above average with rainfall exceeding 200 percent of average in most areas, according to ARC2 rainfall estimates. These well above-average rainfall amounts have resulted in flooding, fatalities, and property damages in parts of Kenya.

- Despite below-average rainfall performance in February for much of **Burundi**, southern **Rwanda** and **eastern DRC**, seasonal rainfall has intensified and are well established in these countries. Seasonal rainfall totals into early April were slightly above average, and, over the past 30 days rainfall has continued to be above average.

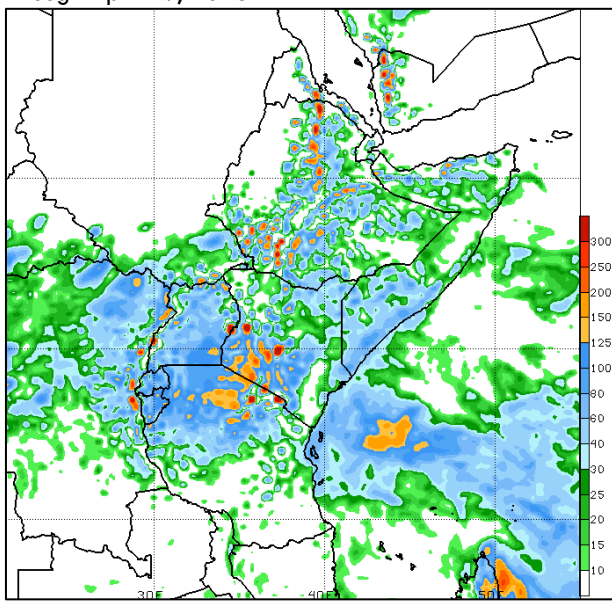
- In **Uganda,** following a timely onset of seasonal rainfall in bimodal areas in March, cumulative rainfall totals are above average. During the past 30 days, rainfall has been near average through much of the country. However, unimodal Karamoja has continued to receive above-average rainfall, continuing a trend observed since the beginning of the season.

Figure 3. eMODIS/NDVI anomalies (2007-2016) April 11-20, 2018



Source: *FEWS NET/USGS*

Figure 4. Week 1 GFS-Rainfall forecast (mm), valid through April 29, 2018



Source: *NOAA/CPC*

- **In South Sudan,** seasonal rainfall totals in bimodals areas are above average. During the past 30 days, rainfall totals have been closer to average, while eastern areas of the country have received above-average rainfall since late March.

- **In Yemen,** seasonal performance has been mixed, with most northern areas of western Yemen receiving above-average rainfall, while rainfall in southern areas of western Yemen has been closer to average.

FORECAST

During the next two weeks, widespread moderate to very heavy rains are expected to continue through much of the region, with associated risk of flooding in Kenya, eastern Uganda, rift valley regions of Ethiopia and southern Somalia. During the next seven days, heavy rainfall is forecast over much of Ethiopia, Kenya, Tanzania, Uganda, Rwanda, Burundi, and southern and central Somalia (Figure 4). In northern Ethiopia, this should contribute to some improvements in seasonal performance, although it may be insufficient to make up for the impact of below-average seasonal performance on crops in northern *Belg*-producing areas. During the second half of the forecast period, rainfall is expected to become less widespread and will be concentrated over southwestern and eastern Ethiopia, Uganda, Rwanda, Burundi, coastal Kenya, and northern and coastal Tanzania.