

Floods follow delayed start of rains in eastern Sudan and parts of northwestern Ethiopia

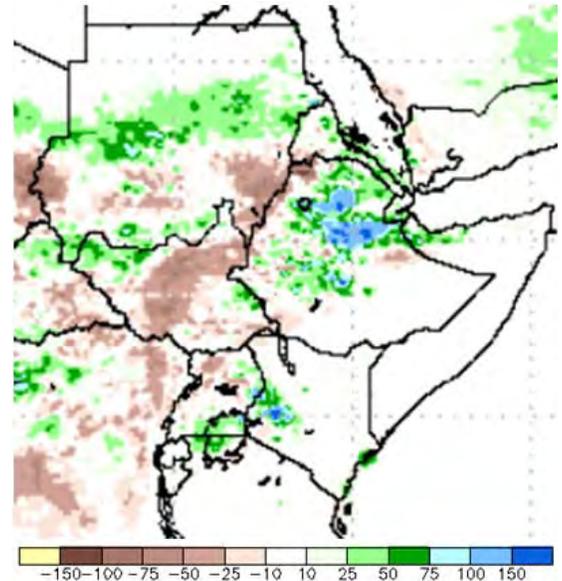
KEY MESSAGES

- The June to September seasonal rains intensified over the past month and helped ease cumulative rainfall deficits in eastern, central, and western Sudan, northwestern Ethiopia, and southwestern Eritrea (Figure 1). The affected areas are expected to experience reduced agricultural production owing to the significantly delayed onset of the rains and planting delayed by more than a month, especially in eastern Sudan.
- Recent rains have largely improved pastoral conditions and water resources in most pastoral and agropastoral areas which rely on the June to September rains, including in Sudan, South Sudan, Ethiopia, parts of northeastern Uganda, and western Kenya (Figure 2).
- The above-normal rains experienced over the past two weeks in Sudan, Ethiopia, South Sudan, and in localized areas of Kenya and Uganda have resulted in floods, with the worst-affected areas being in Sudan, including in Khartoum, River Nile, El Gazeira, West Kordofan, North Darfur, Blue Nile, Northern, Red Sea, and South Darfur States.

SEASONAL PROGRESS

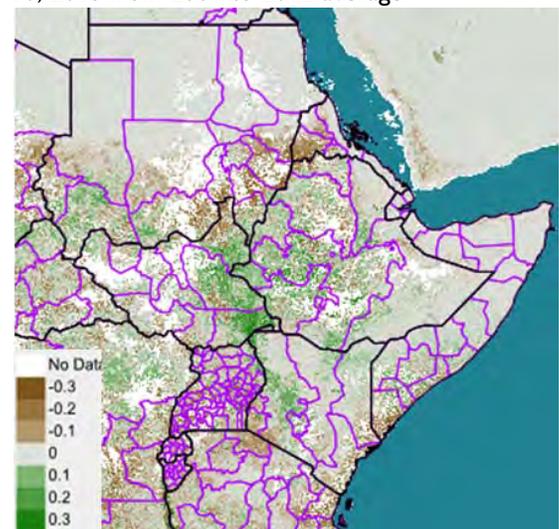
- Late July into August are typically the peak periods for the **June to September rainfall season in the northern sector**. In the past month, these rains have become more established and intense in Eritrea, Ethiopia, and Sudan in the areas where a delayed and erratic onset resulted in unusually drier-than-normal conditions. The delayed rains affected eastern and western Darfur in Sudan, southwestern Eritrea, and neighboring region of extreme northwestern Ethiopia. Planting was delayed, but has mostly been completed in Ethiopia. It has started in the affected areas of eastern Sudan, but it is not yet complete. For more on the likely impacts of the late start of season in this area, please, see the [East Africa Food Security Alert from August 22](#).
- **Cropping conditions** are gradually improving in planted areas following the recent widespread rains in Ethiopia, South Sudan, and parts of Sudan. However, heavy rains have led to waterlogging in some areas. Also, the late start of these rains by up to a month has reduced the likely length of the rainy season, particularly in parts of Darfur, central and eastern Sudan, western Eritrea, and northwestern Ethiopia. In South Sudan, field

Figure 1. July 19 to August 17, 2013 rainfall anomalies (RFE2 estimates), deviation in millimeters (mm) from 1983-2012 mean (ARC2)



Source: [National Oceanic and Atmospheric Administration \(NOAA\)/National Weather Service \(NWS\)/Climate Prediction Center \(CPC\)](#)

Figure 2. eMODIS Normalized Difference Vegetation Index (NDVI) anomaly for August 1 to 10, 2013 from 2001 to 2012 average



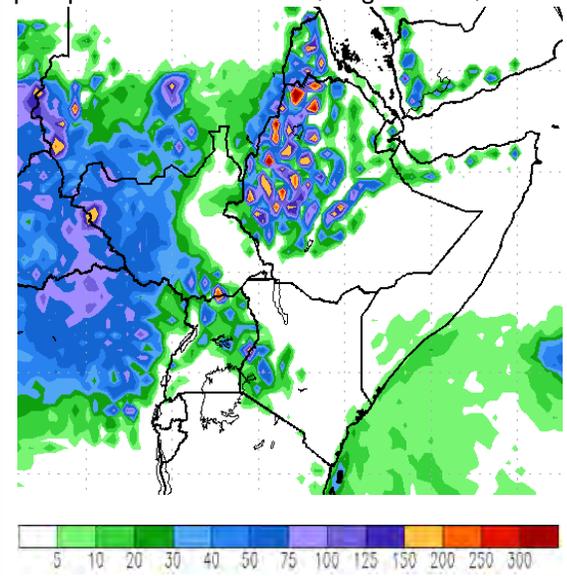
Source: [U.S. Geological Survey \(USGS\)/FEWS NET](#)

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.

reports indicate continued crop growth, despite the erratic nature rains at the start of the season. Conditions are similar in, northern, unimodal areas of Uganda, and the crops there have not developed as well, likely reducing yields.

- **Rangeland resources**, such as water, browse, and pasture availability, are also gradually improving in response to recent rains in most of the pastoral and agropastoral areas that receive these rains (Figure 3 in the [July 19 East Africa Seasonal Monitor](#)). Notably, vegetation conditions are better-than-normal across the central rift valley, running across central and western parts of Kenya, eastern Uganda, South Sudan, and along the border between western Ethiopia and southern Sudan (Figure 2).
- With heavy rains starting in early August, **flooding** has affected many areas, primarily in **Sudan**. Since the beginning of August, people in 14 states of Sudan have been affected, mainly in Khartoum, River Nile, El Gazeira, West Kordofan, North Darfur, Blue Nile, Northern, Red Sea, and South Darfur States. Waterlogging has further delayed planting in some areas.
- There are also reports of **flooding** in Amhara Regions in Ethiopia with associated fatalities and displacements. Flooding has also occurred near Mount Elgon in areas along the Kenya-Uganda border.

Figure 3. Global Forecast System (GFS) precipitation forecast in mm, August 21-28, 2013



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

FORECAST

The short-term **rainfall forecast** for August 25 to 31 depicts an increased for heavy rains over areas already affected by floods and in the Blue Nile basin (Figure 4). This increases the [risk of further flooding](#) in Sudan, Ethiopia, South Sudan, eastern Uganda, and western Kenya. Northern Tanzania the southern Kenyan coastal strip are also forecast to receive some light to moderate rains over the coming week.