SOMALIA Seasonal Monitor

January 5, 2023

FEWS NET publishes a Seasonal Monitor for Somalia every 10 days (dekad) through the end of the current October to December deyr rainy season. The purpose of this document is to provide updated information on the progress of the deyr season to facilitate contingency and response planning. This Somalia Seasonal Monitor is valid through January 10, 2023, and is produced in collaboration with U.S. Geological Survey (USGS), the Food Security and Nutrition Analysis Unit (FSNAU) Somalia, the Somali Water and Land Information System (SWALIM), a number of other agencies, and several Somali non-governmental organizations (NGOs).

2022 deyr season ends, marking fifth consecutive poor rainfall season in Somalia

The October to December 2022 *deyr* rainfall season has ended in Somalia. This was a historic fifth consecutive poor rainfall season and third failed *deyr* season, extending the longest drought on record (1981-2022) in Somalia. The poor seasonal rainfall was marked by long delays in the onset of rains, erratic rainfall distribution, and significant rainfall deficits. According to CHIRPS December, cumulative rainfall for most of southern Somalia ranged from 50-150 milimeters (mm) (Figure 1), which is only 30 to 75 percent of the long-term average precipitation in the southern regions (see CHIRPS map). Similarly, while much of central and northwestern Somalia received roughly 25-75 mm of rainfall between October and December, the precipitation was generally 60 to 90 percent of the average. Meanwhile, most of northeastern Somalia received an estimated 10-50 mm of total rainfall, and while CHIRPS data estimated *deyr* rainfall totals were average to above-average in some northern regions, field reports indicated cumulative rainfall across the north was below average to only slightly above average. The 2022 *deyr* seasonal rainfall deficits were greatest – generally 25-100 mm below the long-term average (1981-2020) – across much of southern, central, and northwestern Somalia (Figure 2). The five consecutive seasons of drought in Somalia have placed stress on crop production activities, rangeland resources, water availability, and livestock productivity. According to FAO SWALIM river station gauge data, water levels along the Shabelle and Juba Rivers remain below the long-term average.

In the northwest, the October-December *deyr* rainfall was late and poorly distributed across most pastoral and agropastoral livelihood zones of Awdal, Woqooyi Galbeed, Togdheer, Sanaag, and Sool regions. According to CHIRPS data, most northwestern regions received 25-75 mm of rainfall, which is 10-50 mm below the local long-term average for *deyr* seasonal rainfall. However, *Hawd Pastoral* livelihood zone of southern Togdheer and Sool regions received above-average cumulative rainfall between October and December, with CHIRPS reporting about 75-200 mm of rainfall. However, local field reports indicate rainfall was closer to average to only slightly above average in these areas. The erratic and short length of the rainfall season negatively impacted the availability of water, pasture, and browse, triggering significant internal and external livestock migration to areas that received heavier rainfall. Additionally, atypical light to moderate rains in late December in coastal and adjacent areas of Sanaag, Woqooyi Galbeed, and Awdal regions will provide some relief to the area. However, the below-average *deyr* seasonal rainfall across the northwest is expected to trigger an atypically harsh January-March dry *jilaal* season when livestock body conditions and saleability seasonally decline, reducing critical food and income sources.

In the northeast, *deyr* rainfall was delayed and generally had mixed performance across most pastoral livelihood zones of Bari, Nugaal, and northern Mudug from October to December. According to CHIRPS estimates, Bari received 10-25 mm of cumulative rainfall, while coastal and adjacent pastoral areas received 25-50 mm, which are roughly 60 to 90 percent of the long-term average rainfall performance in the northeast. In contrast, rainfall totals in Jerriban of northern Mudug and most of Nugaal were 25-100 mm and 50-150 mm, respectively, 110 to 150 percent of the average. However, local ground-truthing indicates rainfall totals were closer to average or only slightly above average in these regions. In late December, near-average to above-average rainfall was reported in northern parts of *Hawd* and localized areas of *Addun Pastoral* and atypically moderate-to-heavy rainfall in coastal livelihood zones, most regions of the northeast experienced below-average *deyr* seasonal rainfall. As a result, drought conditions prevail in most northeastern areas, especially *Northern Inland* and *Addun Pastoral* areas where rangeland and water resources remain below average and atypical livestock movements are increasing.

In the central regions, *deyr* rainfall was significantly below average in pastoral and agropastoral livelihood zones of Galgaduud and southern Mudug regions between October and December, where cumulative rainfall ranged from 10 to 50 mm below the long-term average. Most pastoral areas of Galgaduud region received 50-75 mm of cumulative rainfall, while livelihood zones in southern Mudug region received 50 mm or less. The below-average rainfall was insufficient to break the ongoing drought, and most pastoral areas continue to suffer from insufficient rangeland and acute water shortages. As a result, atypical livestock outmigration from *Hawd* and *Addun Pastoral* areas of Dhusamareb, Adado, and Galkayo districts to pastoral areas in the northwest (Sool) and northeast (Mudug) was reported. Meanwhile, in *Cowpea Agropastoral* and *Coastal Deeh Pastoral* areas of Ceeldheer, Xarardhere, and Ceelbuur, *deyr* rainfall had a positive impact on cowpea crop production and rangelands from October to December.

In the south, *deyr* rainfall was delayed and performed very poorly between October and December. Most areas received little to no rainfall until late October or early November and rains ended earlier than expected. The coastal Shabelles and parts of Bay and Gedo regions had relatively low total rainfall for the south, ranging from 50-150 mm, which is 25-100 mm below the long-term average. While Baidoa and Qansaxdhere of Bay, most districts of Bakool, Middle and Lower Juba, and localized agropastoral and pastoral areas of Lower Shabelle and southern Gedo had relatively higher total precipitation, overall rainfall performance was still largely 50-200 mm below-average. The only exception is *Southern Rainfed Agropastoral* livelihood zone, which received 10-25 mm more rainfall than average. Poor *deyr* rainfall in Somalia and the upper river catchments in the Ethiopian highlands decreased river water levels in the Juba and Shabelle Rivers, reducing water availability for irrigation, especially in downstream areas.

FEWS NET Somalia

somalia@fews.net

www.fews.net/somalia

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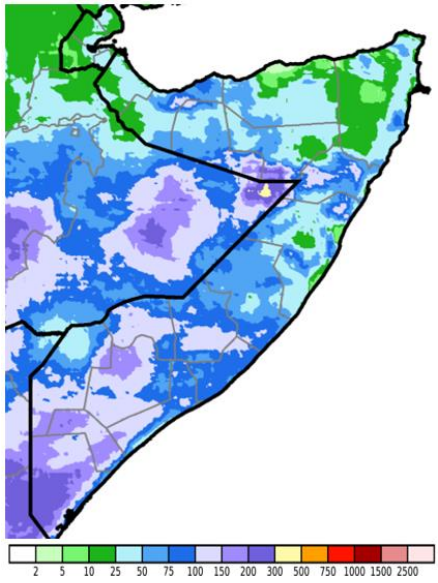
According to the satellite-derived **eVIIRS Normalized Difference Vegetation Index (NDVI)** for December 21-31, vegetation conditions remain significantly below normal across most of Somalia, with some positive anomalies in localized pastoral and riverine areas of southern Somalia (Figure 3). Poor vegetation reflects the impact of meteorological drought and significant livestock migration on pasture and water availability in the areas that received rainfall. Widespread vegetation deficits continue in all livelihood zones of Gedo, and most livelihood zones in coastal, central, and northeastern Somalia. However, rainfall late in December in coastal and adjacent areas in the northern regions is likely to alleviate some of the atypical water and pasture deficits. The seven-day weather forecast from the NOAA Climate Prediction Center for the week ending January 10th shows dry conditions across all areas of the country, typical at this time of year, confirming the end of the *deyr* season.

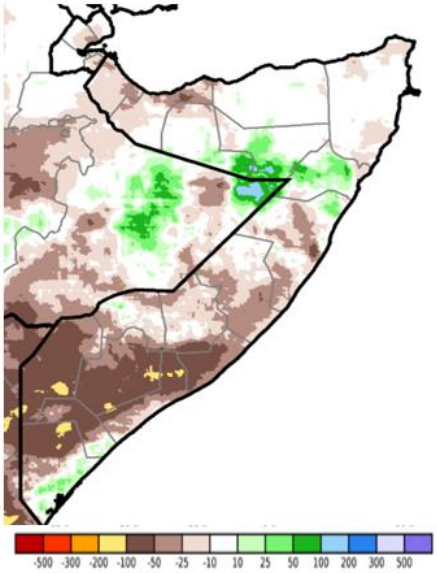
For more rain gauge data, please contact So-Hydro@fao.org or visit www.faoswalim.org.

Figure 1. Estimated rainfall (CHIRPS Preliminary) in mm, October 1- December 31, 2022



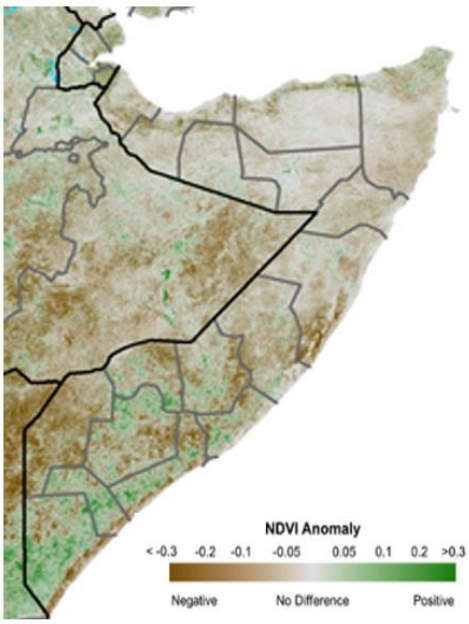
Source: *UC Santa Barbara Climate Hazards Center*

Figure 2. Estimated rainfall anomaly (CHIRPS Preliminary) in mm compared to the 1981-2020 average, October 1- December 31, 2022



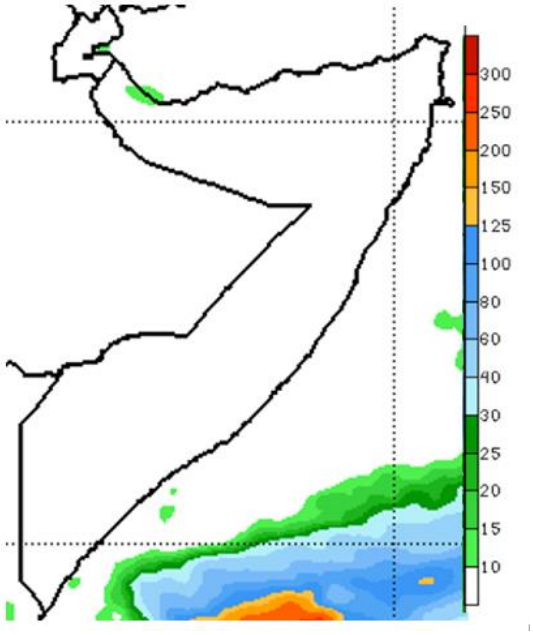
Source: *UC Santa Barbara Climate Hazards Center*

Figure 3. eVIIRS Normalized Difference Vegetation Index (NDVI) anomaly from 2012-2021 average, December 21- 31, 2022



Source: *FEWS NET*

Figure 4. Global Forecast System (GFS) rainfall forecast in mm for January 4-10, 2023



Source: *NOAA/CPC*