

SOMALIA WEEKLY WEATHER FORECAST

Valid From 5 - 11 December 2024

Light rainfall expected over isolated areas in Lower Juba, Bay and along the eastern coastal parts of the country with dry conditions likely to prevail elsewhere.

Review of Past Rainfall and River Levels

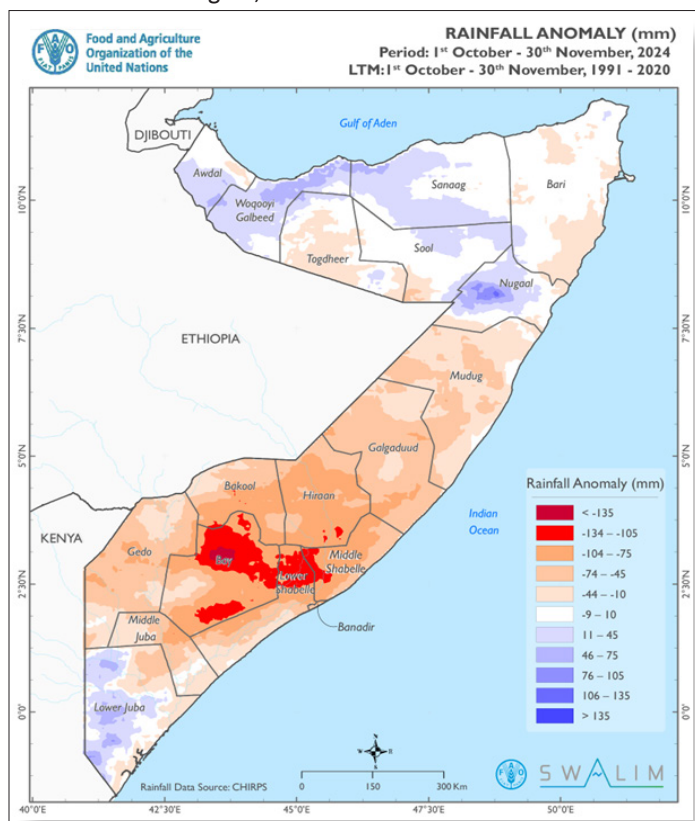
Rainfall: Satellite rainfall estimates show that light rainfall was generally observed in the southern regions of Somalia in the last dekad (25 November to 4 December 2024) with moderate cumulative rainfall having been recorded only at Aw Dheegle (55.4 mm) in Lower Shabelle region during the week ending on 25 of November (*Figure 1*). Only sixteen (16) stations reported rainfall above 1.0 mm between 19 and 25 November 2024 with light rains above 30 mm only recorded in Afgoye (40.2 mm) in Lower Shabelle, Bu'aale (37.0 mm) in Middle Juba region and Kismaayo (35.0 mm) in Lower Juba region.

Compared to anomalies reported last week, the rains received in the last week of November in the southern regions translated into normal to above normal conditions in Lower Juba region for the period 1 October to 30 November 2024 (*Map 1*). The positive impact of these November rains can be clearly seen on FAO's Agricultural Stress Index (ASI) for dekad 3 November 2024, with some further improvements in vegetation health particularly in the southern region. This suggests improved water availability for crops and pasture. However, localized areas of severe agricultural stress still persist particularly in Lower Shabelle and Middle Shabelle regions. Indeed, very severe deficits (more than 100 mm) are still evident in Baydhaba and Buur Hakaba districts in Bay regions, Wanla Weyne district in Lower Shabelle region, and Jowhar district in Middle Shabelle

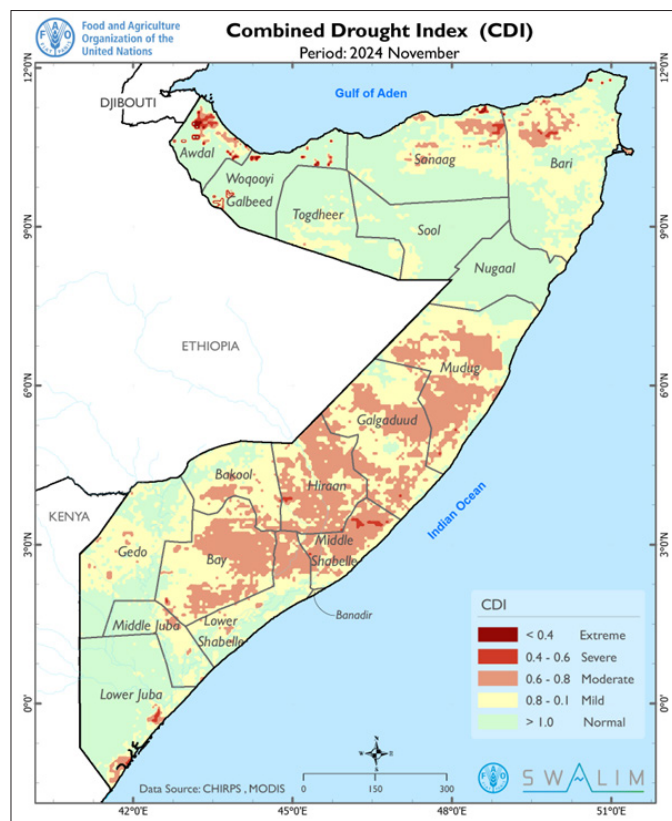
region (*Map 1*). The delayed and poorly distributed Deyr rains implies that the November rains may have only offered temporary relief, as is demonstrated by the latest (November) combined drought index, CDI (*Map 2*). According to CDI, moderate drought conditions are prevalent over most areas in Southwest, Hirshabelle and Galmudug States and over isolated areas in coastal parts of Lower Juba and northern parts of the country. This highlights the need for continued monitoring and potential intervention in the drought prone areas in these regions.

River Levels: A further drop in water level along the Shabelle River has been observed with the level today at Belet Weyne (4.70 m) being 1.85 m below moderate flood risk level (6.50 m) (*Graph 1*). The extent of flooding on the eastern upstream of Belet Weyne town occasioned by inflows from Ethiopian sections of the river had been reduced to about 1370 Ha as of 29 November 2024. This reduction in the Shabelle river level is driven by the prevailing dry conditions within its catchment in the Ethiopian highlands.

The current levels along Juba River are well below flood risk levels and are tending towards a convergence with the Long-Term Mean (LTM) and the 2023 levels (*Graph 2*).



Map 1: Rainfall anomaly over Somalia for the period 1 October and 30 November 2024 with 30-year LTM for the same period from 1991 to 2020



Map 2: Drought conditions over Somalia as of 30 November 2024 based on Combined Drought Index (CDI)

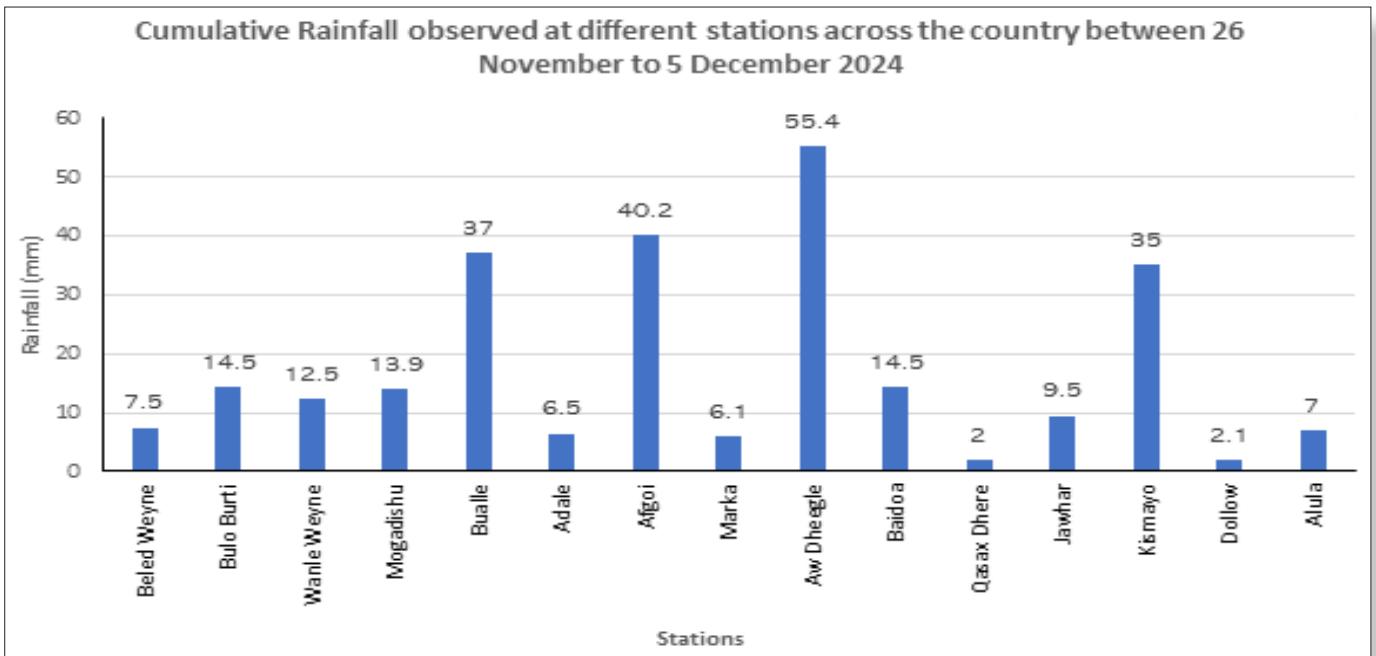


Figure 1: Cumulative Rainfall Observed at individual Stations across the Country between 26 November and 5 December 2024

Forecast for the Week Between 5 and 11 December 2024

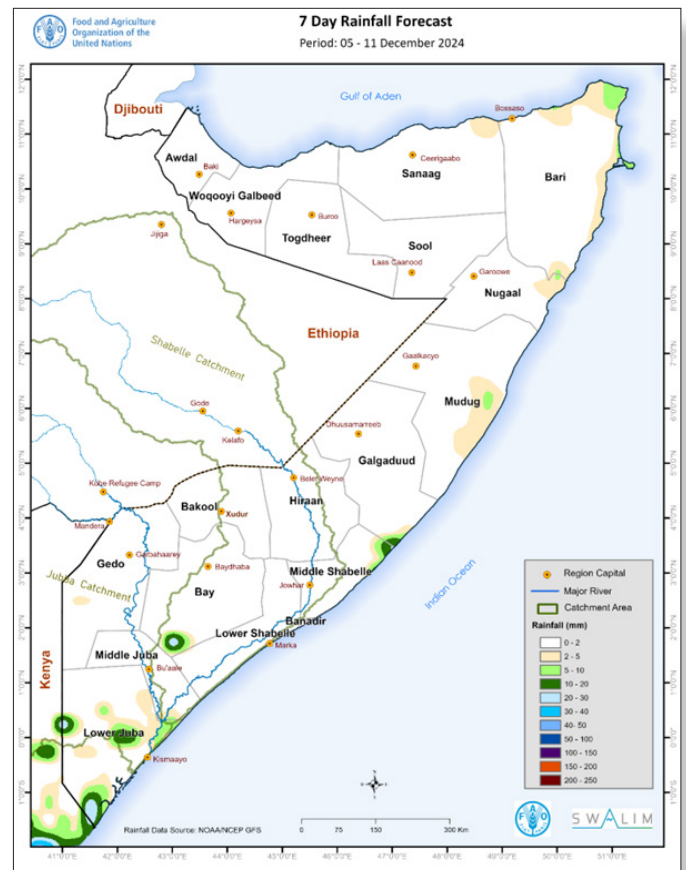
Rainfall: According to NOAA-NCEP GFS, light rainfall is expected over isolated areas in Lower Juba and Bay and along the eastern coastal parts of the country with dry conditions likely to prevail elsewhere during the coming week (Map 3). As the Inter Tropical Convergence Zone (ITCZ) moves further south, the Northeast monsoon will develop further with strengthened wind conditions particularly at Eyl district in Nugaal region and Bandarbeyla district in Bari region. The light rains along the narrow upper eastern coastal areas are therefore likely to be favoured by the moisture influx associated with these winds. However, the present and forecast forward propagation of the Madden Julian Oscillation (MJO) index is likely to suppress moisture availability with very low chance of significant rainfall in the next 2 weeks.

The temporal and spatial distribution of the forecast rainfall (Map 3) are as follows:

Light cumulative rainfall of less than 50 mm is forecast over isolated areas in Lower Juba region and in Dinsoor district in Bay region. Similar rains are likely over a narrow strip along the eastern coastal parts of the country particularly at the following areas: Adan Yabaal district in Middle Shabelle region, Ceel Dheer district in Galgaduud region, Hobyo district in Mudug region, Eyl district in Nugaal region, and Bandarbeyle and Caluula district in Bari region.

Dry conditions are likely to prevail over the rest of the country particularly Gedo, Bakool, Lower Shabelle, Hiraan, Sool, Sanaag, Togdheer, Woqooyi Galbeed and Awdal regions and inland areas of the following regions: Middle Shabelle, Galgaduud, Mudug, Nugaal and Bari.

Temperature: Forecasted maximum and minimum temperatures indicate the persistence of varied thermal conditions across the country. The spatial variation of forecast temperature is as follows:



Map 3: Cumulative rainfall forecast over Somalia from 5 to 11 December 2024

Based on **daily minimum temperature**, nighttime thermal conditions are likely to vary from between 20 °C and 25 °C over inland areas in northern Somalia and even lower than 20 °C in Borama district in Awdal region, Hargeisa district in Woqooyi Galbeed region, Burco district in Togdheer region, Ceerigaabo and Laasqoray districts in Sanaag region, and Qandala district in Bari region. Nighttime conditions are comparatively warmer across most southern and central regions with minimum temperatures ranging from 25 °C to 30 °C and even higher along the coastal parts of Lower Juba.

Elevated daily maximum temperatures exceeding 35 °C are likely to persist over southern regions, including inland parts of Lower Juba, Middle Juba and Lower Shabelle regions; Dinsoor, and Buur Hakaba, and Qansax Dheere districts in Bay region; Bardheere, Garbahaarey, Luuq and Dollow districts in Gedo region; Rab Dhuure district in Bakool region; Jowhar district in Middle Shabelle region; Jalalaqsi district and central parts of both Bulo Burte and Belet Weyne districts in Hiraaan in region.

Moderately high daily maximum temperatures ranging from 30 °C to 35 °C are expected over Galgaduud region; inland parts of both Mudug and Nugaal regions; inland parts of both Bandarbeyla and Iskushuban districts in Bari region; Laas Canood and Xudun districts in Sool region; Buhoodle district in Togdheer region; and inland parts of northern Zeylac district

Past and Current River Levels

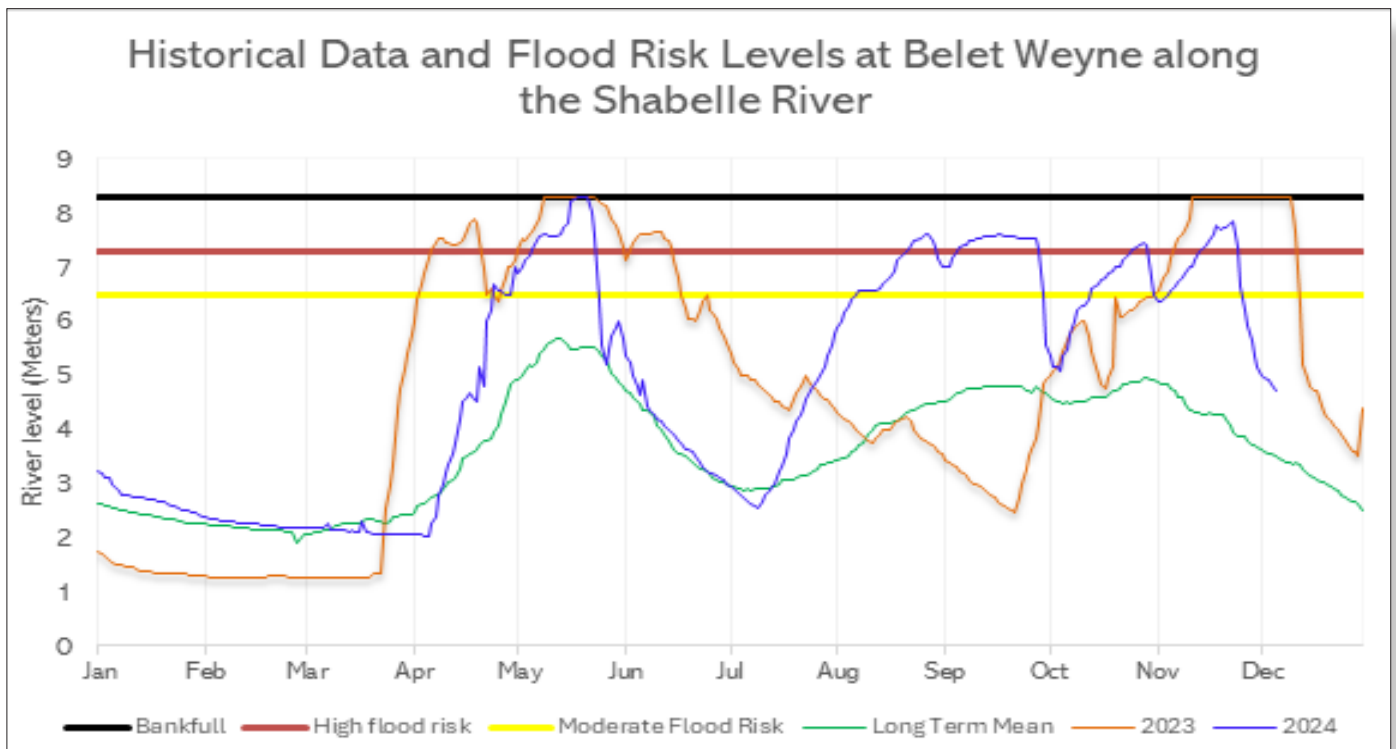
The current levels along Shabelle River are above Long-Term Mean (LTM) but below the 2023 levels. Specifically, a more than 3 m drop in water level has been recorded along the Shabelle River at Belet Weyne from the fourth peculiar sub-seasonal high of 7.85 m observed on 23 November to 4.70 m reported today (6 December 2024). The level is now 2.6 m below high flood risk level (7.30 m) and 1.85 m below moderate flood risk level (6.50 m). The extent of flooding on the eastern upstream of Belet Weyne town occasioned by inflows from Ethiopian sections of the river has reduced to about 1370 Ha as of 29 November 2024. A drop from the delayed and small peak has also been observed at Bulo Burte with today's reading being 85 cm below moderate flood risk level (6.50 m). This reduction in the Shabelle river level is driven by the prevailing dry conditions within its catchment in the Ethiopian highlands. The levels at Jowhar have been generally and peculiarly stable since 31 July with today's level (4.50 m) being 73 cm below moderate flood risk level (5.00 m).

in Awdal region; Belet Xaawo and Ceel Waaq districts in Gedo region; Baydhaba district in Bay region; Waajid, Xudur, Ceel Barde and Tayeeglow districts in Bakool region; Balcad, Cadale, and Adan Yabaal districts in Middle Shabelle region; Banadir region; and coastal areas in the following regions: Lower Juba, Middle Juba and Lower Shabelle.

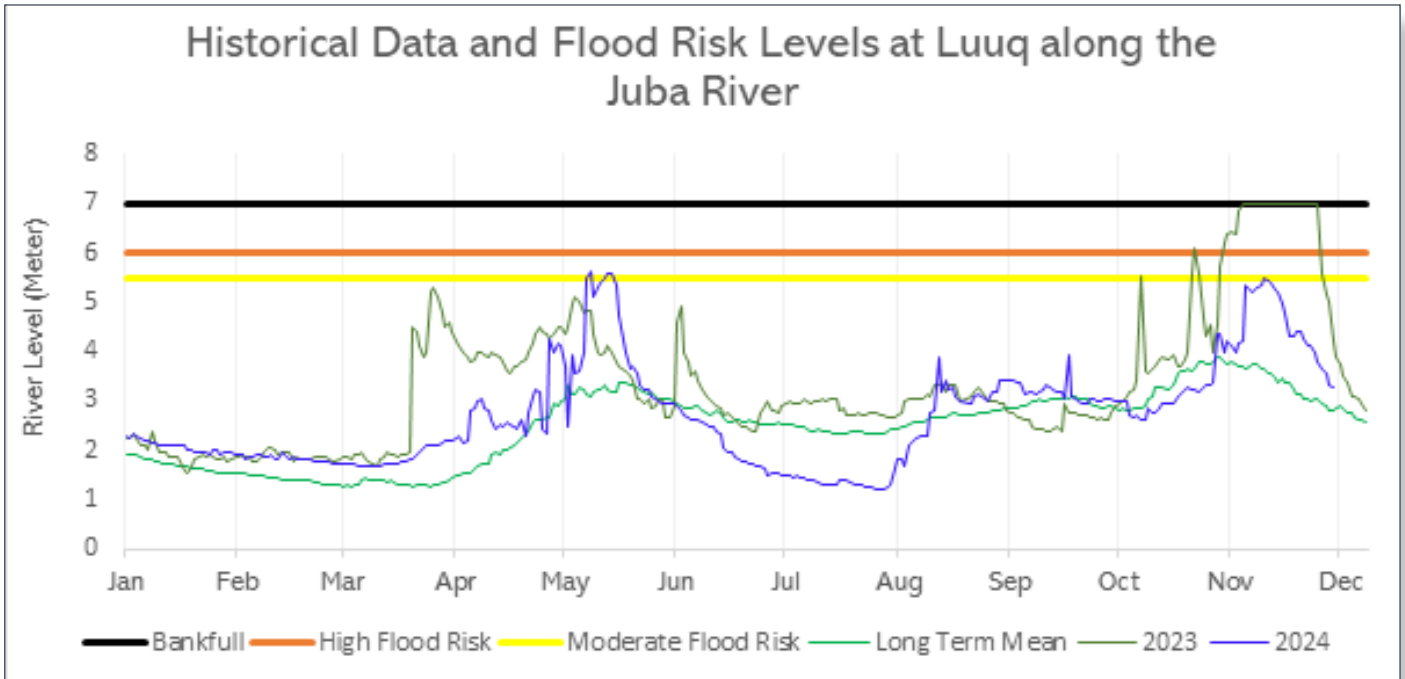
Moderate daily maximum temperatures ranging from 25 °C to 30 °C are forecast over the rest of the areas in the following regions: Awdal, Woqooyi Galbeed, Sanaag, Togdheer and Bari. The temperatures over some areas in Borama district in Awdal region; Gebiley and Hargeisa districts in Woqooyi Galbeed region; Sheikh district in Togdheer region; Ceerigaabo district and northern Lasqoray district in Sanaag region; and Qandala district in Bari region are likely to fall below 25 °C.

The current levels along Juba River are tending towards a convergence with the Long-Term Mean (LTM) and the 2023 levels. Specifically, the Juba River level at Dollow has continually dropped from its seasonal high of 5.54 m reported on 10 November 2024 to 3.08 m (5 December 2024) which is 1.42 m below moderate flood risk level (4.50 m). As expected, river level at Luuq shows a similar behaviour, with today's level (2.88 m) being more than 2.62 m below moderate flood risk level (5.50 m) marking a significant drop from a seasonal high of 5.50 m reported on 10 November 2024. This drop has been occasioned by the prevailing dry conditions over its catchment in the Ethiopian highlands and within Somalia.

Graphs 1 and 2 show the current river levels against the Short Term Mean and 2023 levels for Belet Weyne and Luuq stations respectively.



Graph 1: Shabelle River level at Belet Weyne Gauging Station as of 6 December 2024



Graph 2: Juba River level at Luuq Gauging Station as of 29 November 2024

Impacts Associated with the Weekly Weather Forecast

Given the observed and forecast general dry conditions over most areas within the catchments of both the Juba and Shabelle River catchments, the observed drop in the levels will most likely be sustained with an implied reduction in the risk of flooding at Belet Weyne. The observed water overflows spread on the eastern upstreams of Belet Weyne town are also likely to reduce in extent and impact.

Harsh hot and dry air mass is likely to stagnate over Lower Shabelle region; Buur Hakaba, and Qansax Dheere district in Bay region; Bardheere, Garbahaarey, Luuq and Dollow districts in Gedo region; Rab Dhuure district in Bakool region; Jowhar district in Middle Shabelle region; Jalalaqsi district and central parts of both Bulo Burte and Belet Weyne districts in Hiraa in region during the upcoming week. This is likely to lead to increased evaporation rates exacerbating water shortages in the already drought-stricken areas, livestock and crop stress due to heat stress and reduced soil moisture levels, and

risks of heat stress and dehydration, especially for vulnerable populations in pastoralist communities. Even with the chances of light coastal rains, the strong winds are likely to lead to increased atmospheric dust concentration at Eyl district in Nugaal region and Bandarbeyla district in Bari region.

The evolving La Niña and briefly negative Indian Ocean Dipole (IOD) conditions are expected to drive dry conditions in the month of December. By the end of the forecast hot and dry December conditions, areas under moderate drought conditions will increase with potential escalation to severe state over some areas in Southwest, Hirshabelle and Galmudug States and over very isolated areas in coastal parts of Lower Juba and northern parts of the country. Therefore, taking early action by strengthening drought preparedness measures in regions prone to extended dry spells is recommended. In the south, where November rains were observed, agro-pastoralist communities are urged to preserve water and pasture.

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