Food and Agriculture Organization of the United Nations

SWALIM
Somali Water and Land Information Management

SOMALIA WEEKLY WEATHER FORECAST

Valid From 29 November 2024

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

Review of Past Rainfall and River Levels

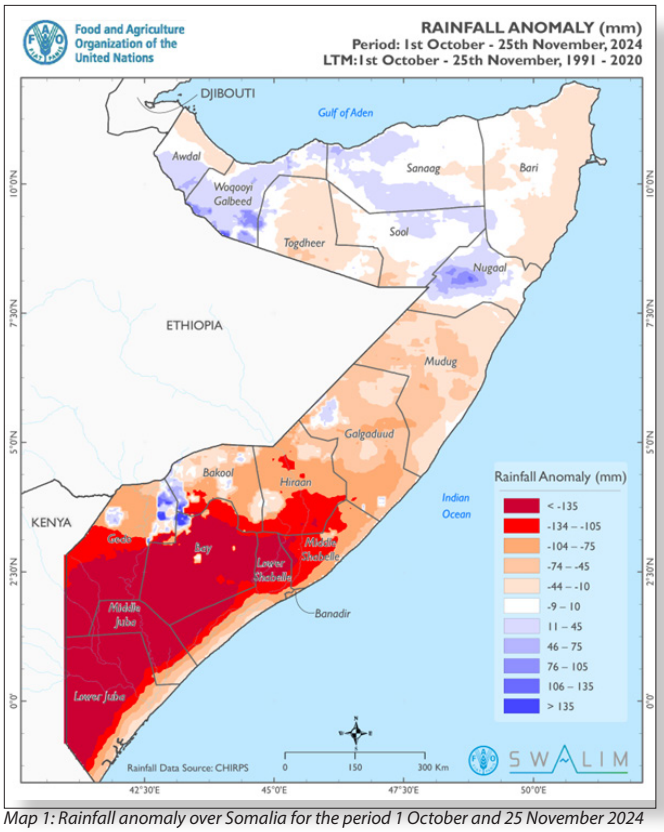
Rainfall: Satellite rainfall estimates show that light rainfall was observed over several areas in the southern and northern regions of Somalia with moderate cumulative rainfall of more than 50 mm confined to Lower Juba in the last dekad (18 to 27 November 2024).

Based on the existing observation network, moderate cumulative rainfall was recorded at Baardheere (64.0 mm) in Gedo region and Caluula (61.3 mm) in Bari region between 19 and 25 November 2024. Light rains of more than 30 mm were observed in the following individual stations: Bargaal (44.0 mm), Qardho (42.0 mm) and Murcaayo (40.0 mm) in Bari region, Geedeble (41.0 mm) and Allaybaday (34.5 mm) in Woqooyi Galbeed region, Xudun (34.0 mm) in Sool region, and Burtine (34.0 mm) in Nugaal region.

The positive impact of the November rains can be detected on FAO's Agricultural Stress Index (ASI) for dekad 2 November 2024, with some improvements in vegetation health particularly in the southern region. This suggests improved water availability for crops and pasture with most croplands in Somaliland being under less agricultural stress. This favourable soil moisture conditions are clearly attributed to the normal to surplus rainfall received over Somaliland from 1 October and 25 November 2024 (Map 1). Localized areas of severe agricultural stress persist particularly in Lower Shabelle and Middle Shabelle regions. Indeed, very severe deficits (more than 100 mm) are evident in the southern regions including Lower Juba, Middle Juba and Bay regions, Bardheere district in Gedo region, and Wanla Weyne district in Lower Shabelle region (Map 1). The delayed and poorly distributed Deyr rains implies that the November rains may have only offered temporary relief, highlighting the need for continued monitoring and potential intervention in the drought prone areas in these regions.

River Levels: A fourth peculiar sub-seasonal high of 7.85 m was observed on 23 November 2024 along the Shabelle River at Belet Weyne. While no riverine flooding has been observed along the main channel in Somalia, these high river flows have reportedly led to overflows in the Ethiopian sections whose inflows outside the channel led to flooding of about 8,000 Ha of land on the eastern upstream of Belet Weyne town. According to a Joint Flood Impact Assessment Report, 2,383 households in 13 villages were affected. A sharp drop in water levels has been recorded with today's record (5.65 m) being 2.2 m below high flood risk level (7.30 m) and 1.35 m below moderate flood risk level. This rise-and-fall river level behaviour is driven by the alternate occurrence of wet and dry spells within its catchment in the Ethiopian highlands.

The Juba River levels at Dollow and Luuq have continually dropped from the seasonal high flows reported on 10 November 2024 to 3.58 m and 3.28, today (29 November 2024) which are 92 cm and 2.22 m below moderate flood risk levels, respectively. This drop has been occasioned by reduction of rains over its catchment in the Ethiopian highlands and within Somalia.



Map 1: Rainfall anomaly over Somalia for the period 1 October and 25 November 2024 with 30-year LTM for the same period from 1991 to 2020

Forecast for the Week Between 29 November and 5 December 2024

Rainfall: Light rainfall is expected over isolated areas in the southern and along the eastern coastal parts of the country with dry conditions likely to prevail elsewhere during the coming week, according to NOAA-NCEP GFS. While ICPAC's forecast anticipates moderate rainfall of more than 50 mm over the same areas, the rains in first week of December are likely to be light in intensity with reduced moisture influx because of the forecast forward propagation of the Madden Julian Oscillation (MJO) index. The temporal and spatial distribution of the forecast rainfall (Map 2) are as follows:

Light cumulative rainfall of less than 50 mm is forecast over isolated areas in Middle Juba region, Badhaadhe and Afamadow districts in Lower Juba region, Dinsoor and Baydhaba districts in Bay region, Dollow, Luuq and Belet Xaawo districts in Gedo region, Marka district in Lower Shabelle region, and in Xudur district in Bakool region. Rains of similar intensity are likely over the eastern coastal areas including Eyl district in Nugaal region, Bandarbeyla, Iskushuban and Caluula district in Bari region. The coastal cloudiness and rains may stretch all the way to Banadir

in the first half of the forecast week. The rains over isolated areas in Middle Shabelle region and Dollow district in Gedo region may intensify to moderate amounts (above 50 mm) by the end of the forecast period. It is important to note that some of the areas likely to receive pockets of light to moderate rainfall fall within the catchments of Juba River.

Dry conditions are likely to prevail over most areas in the following regions: Awdal, Woqooyi Galbeed, Togdheer, Sool, Sanaag, Mudug, Galgaduud, Hiraan and Middle Shabelle. Similar dry conditions are also likely to prevail over most inland parts of both Bari and Nugaal regions; and in some areas in Kismaayo district in Lower Juba; Saakow district in Middle Juba; Bardheere, Ceel Waaq and Garbahaarey districts in Gedo region; Sablaale, Baraawe, Kurtunwaarey, Qoryooley, Afgooye and Wanla Weyn districts in Lower Shabelle region; Qansadheere district in Bay region;and Waajid, Rab Dhuure, Ceel Barde and Tayeeglow districts in Bakool region.

Temperature Forecast for the Week Between 22 and 28 November 2024

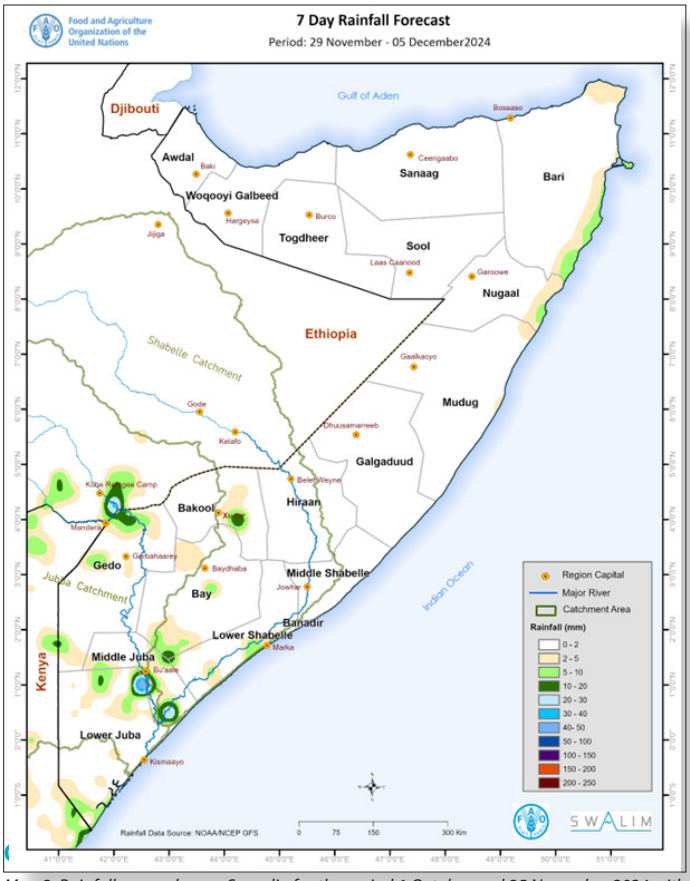
Temperature: Forecasted maximum and minimum temperatures indicate the persistence of varied thermal conditions across the country. The spatial variation of forecast temperature is as follows:

Based on daily minimum temperature, nighttime thermal conditions are likely to vary from between 20 °C and 25 °C in northern Somalia to between 25 °C and 30 °C across most southern and central regions. Nightime temperatures 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 might fall below 20 °C. Whereas in the south, areas in the coastal parts of Lower Juba might experience nighttime temperatures higher than 30 °C.

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 districts in Bay region, Bardheere, Garbahaarey, Luuq and Dollow districts in Gedo region, Jowhar district in Middle Shabelle region, Cabudwaaq and Cadaado districts in Galgaduud, and Galkacyo district and inland parts of Hobyo district in Mudug region.

Moderately high daily maximum temperatures ranging from 30 °C to 35 °C are expected in the narrow coastal parts of Lower Juba, Middle Juba and Lower Shabelle regions, and the rest of the areas in the following regions: Gedo, Bay, Middle Shabelle, Galgaduud and Mudug regions. Similar temperatures are expected in Bakool, Hiraan, and Nugaal regions; Qardho, Bandarbeyla and Iskushuban districts in Bari region; Laas Canood, Taleex and Xudun districts in Sool region; Buhoodle district and southern parts of both Burco and Owdweyne districts in Togdheer region; northern parts of Zeylac, Lughaye and Baki districts; Berbera district in Woqooyi Galbeed region, and southern parts of Ceerigaabo district in Sanaag region.

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 Gebiley, Hargeisa, Sheikh, Ceerigaabo and Qandala districts are likely to fall below as 25 °C.



Map 2: Rainfall anomaly over Somalia for the period 1 October and 25 November 2024 with 30-year LTM for the same period from 1991 to 2020

Past and Current River Levels

The levels along both Juba and Shabelle Rivers are currently above Long-Term Mean (LTM) but below the 2023 levels.

The Juba River level at Dollow has continually dropped from its seasonal high of 5.54 m reported on 10 November 2024 to 3.58 m today (29 November 2024). It is now 92 cm below moderate flood risk level (4.50 m). As is expected, river level at Luuq shows a similar behaviour, with today's level (3.28 m) being more than 2 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 reduction of rains over its catchment in the Ethiopian highlands and within Somalia.

A sharp drop (2.2 m) in water levels 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 5.65 m reported today (29 November 2024). The level is now 55 cm below high flood risk level (7.30 m) and 1.35 m below moderate flood risk level. While no riverine flooding has been observed along the main channel in Somalia, these high river flows have reportedly led to overflows in the Ethiopian sections whose inflows outside the channel have led to flooding on the eastern upstream of Belet Weyne town. A delayed peak has been observed at Bulo Burte with today's reading being 4 cm above moderate flood risk level (6.50 m). This rise-and-fall river level behaviour is driven by the alternate occurrence of wet and dry spells 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 50 cm below moderate flood risk level (5.00 m) and equivalent to what was reported last week.

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

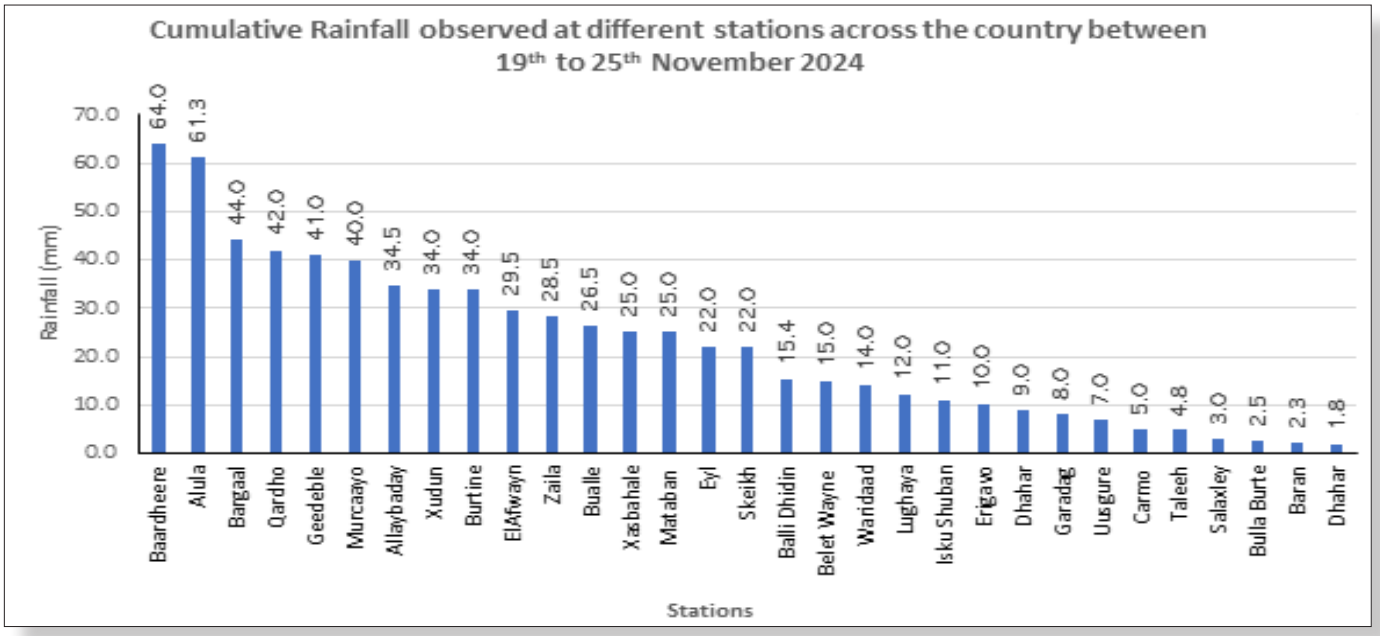
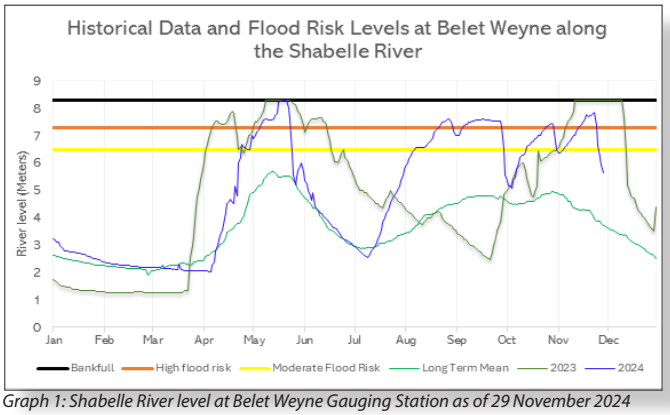
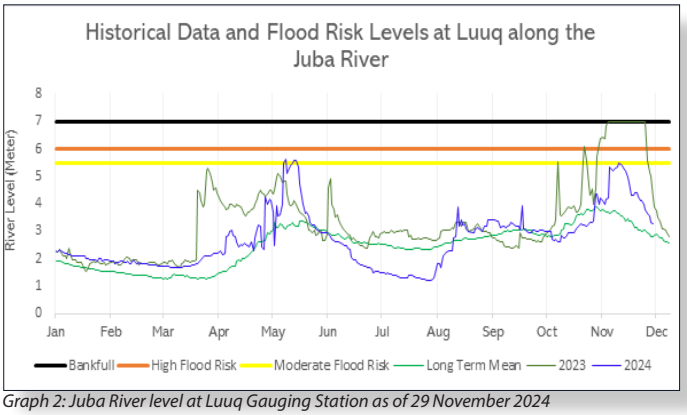


Figure 1: Cumulative Rainfall Observed at individual Stations across the Country between 19 to 25 November 2024



Graph 1: Shabelle River level at Belet Weyne Gauging Station as of 29 November 2024



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

Impacts Associated with the Weekly Weather Forecast

The light rainfall observed and forecast over some areas within the catchments of both the Juba and Shabelle River catchments implies that not much run off will be generated. The observed drop in the levels along Shabelle River will 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 subside in both volume and impact.

Harsh hot and dry air mass is likely to stagnate over Buur Hakaba districts in Bay region; Jowhar district in Middle Shabelle region; Cabudwaaq and Cadaado districts in Galgaduud; and Galkacyo district and inland parts of Hobyo district in Mudug region during the upcoming week. This is likely to lead to increased evaporation rates exacerbating water shortages in 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 forecast dry conditions, a favorable warm airmass is likely to prevail over Gebiley and Hargeisa districts in Woqooyi Galbeed, Sheikh district in Togdheer region, Ceerigaabo district in Sanaag region and Qandala district in Bari region.

The evolving La Niña and briefly negative Indian Ocean Dipole (IOD) conditions are expected to drive dry conditions in the last part of Deyr. This scenario may pave the way for harsh Jilaal conditions (December–February), potentially setting up widespread drought conditions in southern and central regions and Puntland that could persist until the Gu rains in March 2025. Therefore, taking early action by strengthening drought preparedness measures in regions prone to extended dry spells is recommended. In the south, where severe rainfall anomaly has been observed, agro-pastoralist communities are urged to take advantage of temporary pasture regeneration as a result of November rains.

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