

SOMALIA WEEKLY WEATHER FORECAST

Valid From 13 to 19 December 2024

Mostly dry conditions will prevail over most parts of Somalia this week, with limited rainfall expected over very narrow northern coastal areas. Temperatures will remain high in southern Somalia, with significantly cooler conditions in the central and northern regions during nighttime.

Review of Past Rainfall and River Levels

Rainfall: Observational data for the week ending 11 December 2024 shows no significant rainfall observed across Somalia. Recent satellite rainfall estimates confirm the continued below-average rainfall across Somalia during the first ten days of December 2024. The severity and extent of rainfall deficits is increasing in the central and southern regions, especially in Bay, Lower Shabelle and Hiraan regions (*Map 1*). Cumulative rainfall anomalies exceed 100 mm below the long-term mean in Baydhaba, Buur Hakaba and Qansax Dheere districts in Bay region, Wanla Weyne district in Lower Shabelle region, Jowhar district in Middle Shabelle region and Jalalaqsi district in Hiraan region (*Map 1*).

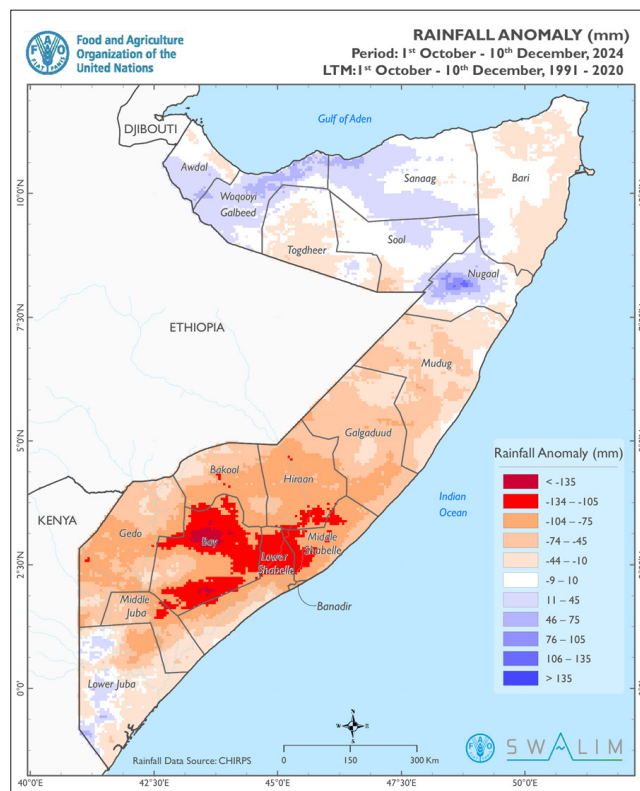
While La Niña typically suppresses rainfall, the observed ENSO-neutral state implies that other factors, such as the Madden-Julian Oscillation (MJO) which is likely to have limited the moisture fetch from the Indian Ocean, have contributed to the delayed and below-normal Deyr rains. With only two weeks left, the Deyr season has already failed, leaving most regions with significant rainfall deficits.

The lack of rainfall further exacerbates agricultural stress in drought-prone regions. Vegetation stress remains critical, as highlighted in the latest FAO's Agricultural Stress Index (ASI). The 10-days dry spell is likely to offset the November rainfall-driven improvements in vegetation health particularly in some areas in the southern region with equally serious implications on water availability for crops and pasture. This highlights the need for continued monitoring and potential intervention in the drought prone areas in these regions.

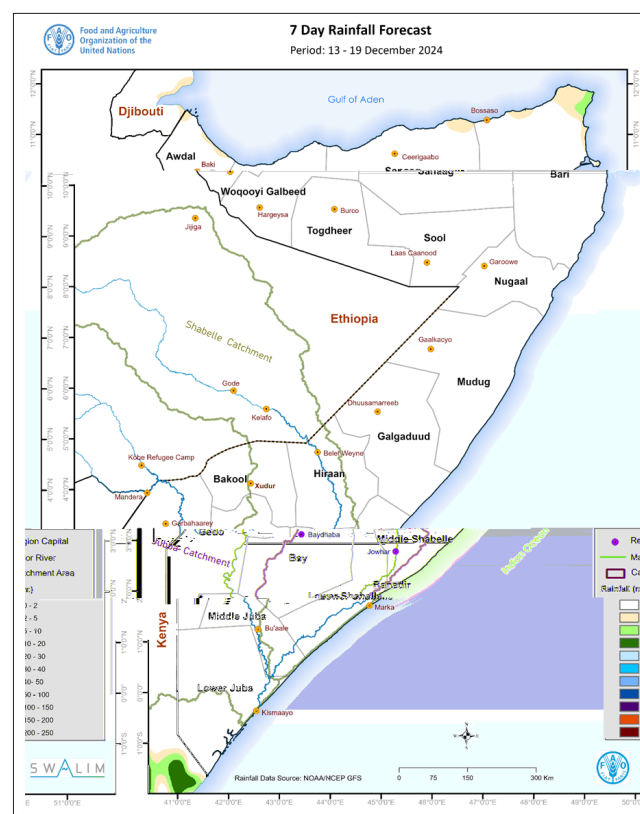
River Levels: A continued drop in the water levels along the Shabelle and Juba Rivers has been observed. River level at Belet Weyne is 2.7 m below the flood risk threshold, with the latest (13 November 2024) reading at 3.84 m (*Graph 1*). This marks a gradual decline from the seasonal peak observed in late November. Levels at Jowhar and Bulo Burte continue to stabilize below moderate flood risk thresholds, driven by prevailing dry conditions over the entire catchment. River levels at both Dollow and Luuq remain well below moderate flood risk levels, reflecting the continued lack of significant rainfall in catchment areas. The level recorded at Luuq (*Graph 2*) as of 13 December 2024 (2.56 m) is about 3 m below moderate flood risk level (5.50 m)

Forecast for the Week Between 13 and 19 December 2024

Rainfall: According to NOAA-NCEP GFS forecasts, only very light rains (<10 mm) are expected over extremely narrow northern coastal parts of Somalia during the coming week (*Map 2*). Dry conditions will dominate the rest of the country as Somalia remains under a La Niña Watch phase.



Map 1: Rainfall anomaly over Somalia for the period 1 October and 10 December 2024 with 30-year LTM for the same period from 1991 to 2020



Map 2: Cumulative rainfall forecast over Somalia from 13 to 19 December 2024

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 northern 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 two (2) weeks.

Temperature: Forecasted maximum (*map 3*) 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 over vast inland areas in northern Somalia. It is likely to drop further down to below 20 °C in some areas in Borama district in Awdal region, Gebiley and Hargeisa district in Woqooyi Galbeed region, Sheikh and 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.

Elevated daily maximum temperatures exceeding 35 °C are likely to persist over southern regions, including inland parts of Lower Juba, Gedo, Middle Juba and Lower Shabelle regions; Dinsoor, and Buur Hakaba, and Qansax Dheere districts in Bay region; Rab Dhuure district in Bakool region; Jowhar district in Middle Shabelle region; and Jalalaqsi district in Hiraan region. Temperatures in some inland parts of Kismaayo district in Lower Juba region and Jilib district in Middle Juba region may exceed 40 °C.

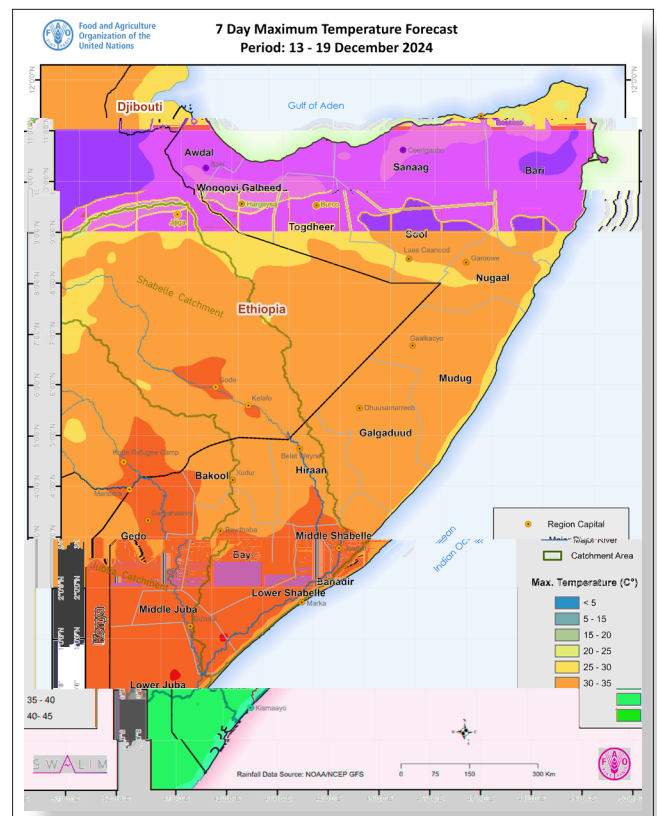
Moderately high daily maximum temperatures ranging from 30 °C to 35 °C are expected over Galgaduud region; inland parts of both Mudug and Nugaal regions; Laas Canood and Xudun districts in Sool region; Buhoodle district in Togdheer region;

Indian Ocean Disturbances

Recent analysis indicates no direct threat to Somalia from the Indian Ocean disturbances during this period. While Tropical Cyclone Chido has developed in the southwestern Indian Ocean, it is forecast to impact northern Madagascar and Mozambique, with no anticipated influence on Somalia. The Madden-Julian Oscillation (MJO) is currently active over the Maritime Continent, which is not expected to enhance cyclonic activity in the western Indian Ocean. However, localized rough seas along Somalia's eastern coast may disrupt maritime activities and contribute to slight sea-level anomalies.

Past and Current River Levels

The current levels along Shabelle River are above Long-Term Mean (LTM) but below the 2023 levels. Specifically, level at Belet Weyne is 2.7 m below the moderate flood risk threshold (6.50 m), with the latest (13 November 2024) reading at 3.84 m (Graph 1). This marks a gradual decline from the seasonal peak observed in late November. Downstream, levels have been generally stable with



Map 3: Average 7 day maximum temperature forecast over Somalia from 13 to 19 December 2024

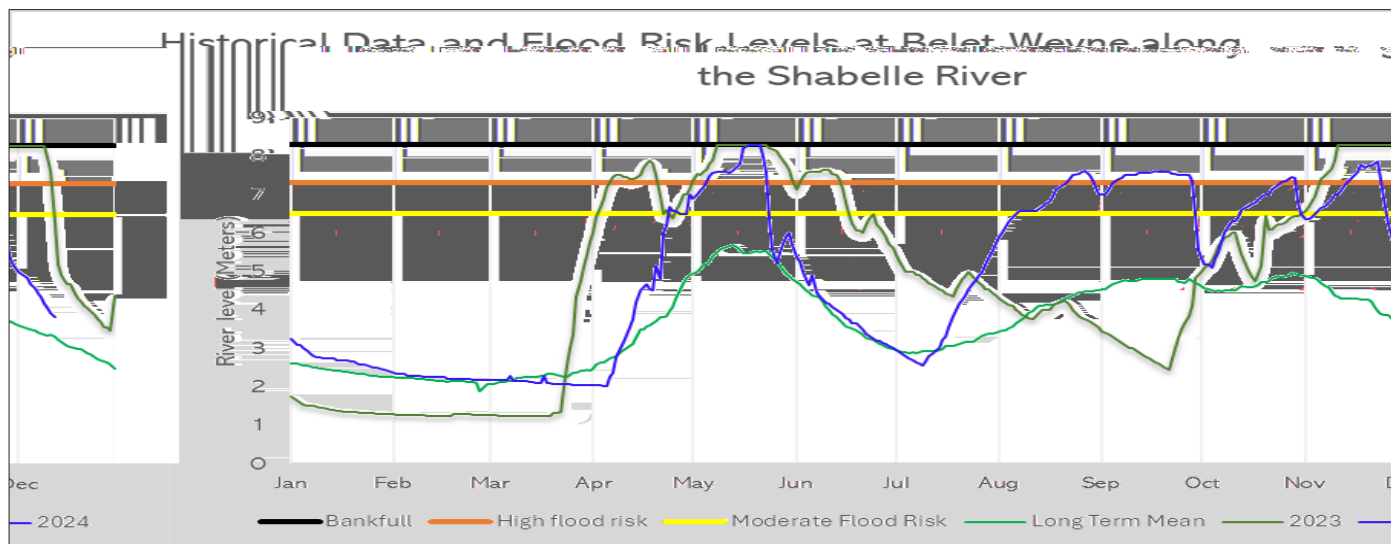
Baydhaba district in Bay region; Waajid, Xudur, Ceel Barde and Tayeeglow districts in Bakool region; Balcad, Cadale, and Adan Yabaal districts in Middle Shabelle region; Banadir region; and coastal areas in the following regions: Lower Juba, Middle Juba and Lower Shabelle.

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 Laasqoray district in Sanaag region; and Qandala district in Bari region are likely to fall below 25 °C.

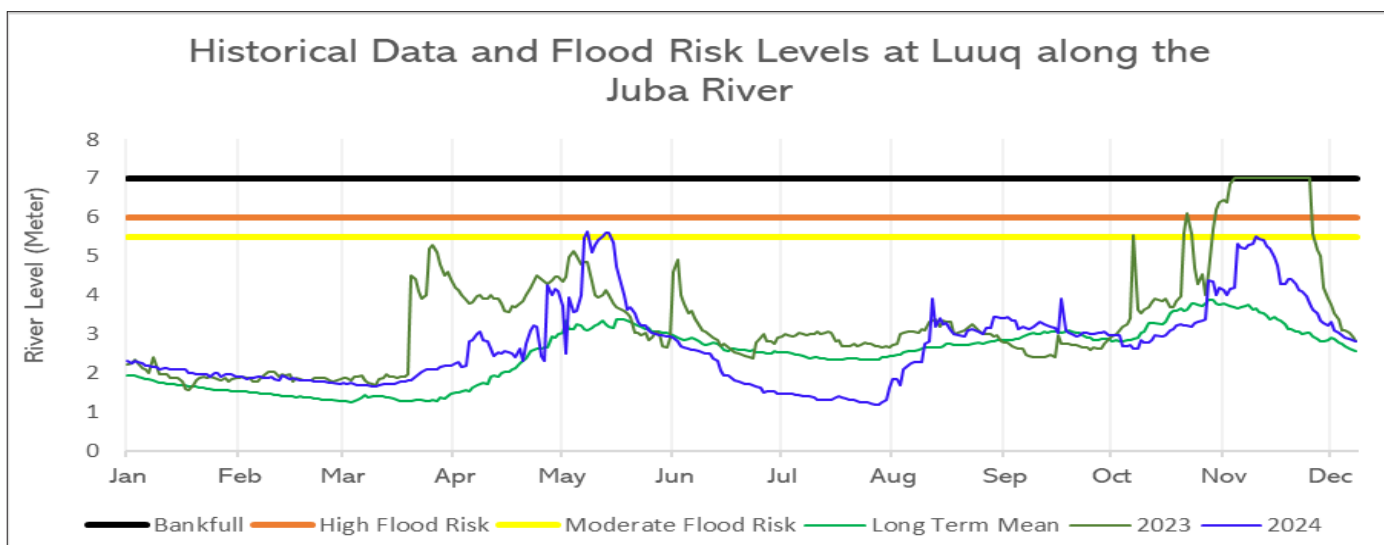
today's level at Bulu Burte (4.90 m) and Jowhar (4.00 m) are 1.60 m and 1.00 m below the respective moderate flood risk levels. (5.00 m). The drop in river has been occasioned by prevailing dry conditions over the entire Shabelle River catchment.

The current levels along Juba River are tending towards a convergence with the Long-Term Mean (LTM) and the 2023 levels. Specifically, levels at both Dollow and Luuq remain well below moderate flood risk levels, reflecting the continued lack of significant rainfall in catchment areas. The levels recorded at Dollow (2.72 m) and Luuq (2.56 m) as of 13 December 2024 is about 1.78 m and 3.00 m below the respective moderate flood risk levels. 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 Belat Weyne Gauging Station as of 13 December 2024



Graph 2: Juba River level at Luuq Gauging Station as of 13 December 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, declining river levels will reduce flooding risks.

Harsh hot and dry air mass is likely to stagnate over inland areas in southern regions, including Lower Juba, Gedo, Middle Juba, Lower Shabelle and Bay regions; Rab Dhuure district in Bakool region; Jowhar district in Middle Shabelle region; and Jalalaqsi district in Hiraaan 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. 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 latest (12 December 2024) Climate Prediction and Application Centre (CPC) forecast indicates that La Niña conditions are most likely to emerge in November 2024 - January 2025 (59% chance), with a transition to ENSO-neutral most likely by March-May 2025 (61% chance). This evolving La Niña and briefly negative Indian Ocean Dipole (IOD) conditions are expected to drive hot and dry Jilaal conditions. This implies that the number of areas under moderate drought conditions will increase with potential escalation of severity in some places 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 particularly targeted support to agro-pastoralist communities in drought hotspots is recommended.

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