REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

STATE DEPARTMENT FOR ENVIRONMENT AND CLIMATE CHANGE

KENYA METEOROLOGICAL DEPARTMENT

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CLIMATE OUTLOOK FOR DECEMBER AND CLIMATE REVIEW FOR NOVEMBER 2025

1.0 SUMMARY

1.1. The Rainfall Forecast for December 2025

December typically marks the end of the October–November–December (OND) "short rains" season in Kenya. The forecast for December indicates that most parts of the country are likely to experience near-average to below-average (generally depressed) rainfall, while parts of the northeastern region are likely to receive below-average (highly depressed) rainfall. This situation is likely to exacerbate the ongoing dry conditions especially over the arid regions, driven by the markedly depressed rainfall observed in November. The rainfall distribution, both in time and space, is expected to be generally poor with prolonged dry spells. However, episodes of heavy rainfall are still likely to occur in some parts of the country during this period. The southeastern lowlands, for instance, are likely to receive significant rainfall at the beginning of the month. The OND 2025 seasonal rainfall is expected to cease between the first and fourth weeks of December across several regions of the country. Temperatures are expected to be warmer than average over the whole country, with prolonged periods of heat likely to intensify daytime temperatures, elevate nighttime minimums, and contribute to generally hotter-than-usual conditions throughout the month.

1.2 The Outlook for December 2025 to February 2026

The outlook for the next three months indicates that most parts of the country will be generally sunny and dry in January and February, with occasional rainfall expected primarily in December, especially in the southern part of the country. However, some areas, particularly the Lake Victoria Basin, Highlands West and East of the Rift Valley (including Nairobi), the South Rift Valley, southeastern lowlands, and the coastal region, may experience a few rainy days in January and February. The northern half of the country is likely to receive occasional rainfall at the beginning of December, followed by generally dry conditions for the remainder of December, January, and February. Temperatures are expected to be warmer than average across the entire country.

1.3 Rainfall Review for November 2025

November 2025, typically the peak of the OND short rains, was unusually dry across much of Kenya. With the exception of Garissa and Makindu, which registered near-normal rainfall totals, all other observation stations reported deficits ranging from below-average to severely depressed levels, highlighting the pronounced rainfall suppression across the country. Moderately depressed conditions occurred in Kisii, Kericho, Kitui, and Kakamega, with rainfall decreasing further across Nakuru, Kitale, Laikipia, Moyale, and Kangema. Much lower percentages were observed in Meru, Nyeri, Eldoret, and several central, coastal, and eastern stations. The most severe deficits occurred at Marsabit, Wilson Airport, JKIA, Mtwapa, Msabaha, and especially Lamu, Lodwar, and Mandera, which received no rainfall at all. Although a few highland stations such as Kabaru Forest, Gatare Forest, and Nyaroya recorded relatively high amounts, most of the country experienced moderate to extremely dry conditions throughout the month.

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2.0 DETAILED FORECAST FOR DECEMBER 2025

2.1 State of The Global Climate Drivers

This climate outlook for December 2025 is mainly based on the prevailing and expected Sea Surface Temperature Anomalies (SSTAs) over the Pacific, Indian Ocean and Atlantic Ocean. La Niña is currently underway, with cooler-than-normal ocean temperatures across the central and east-central Pacific and matching atmospheric patterns over the tropical Pacific. These conditions are expected to continue through December 2025 to February 2026. A transition back to ENSO-neutral conditions is most likely between January and March 2026, with a 61% chance of occurring during this period. La Niña typically brings drier-than-normal conditions to parts of East Africa, though its impact can vary. The negative Indian Ocean Dipole (IOD) is still active, but it has been getting weaker over the past three weeks. For the week ending 23 November, the IOD index was −0.60 °C. Climate models indicate that the IOD is likely to return to neutral conditions in December.

2.2 Rainfall Forecast for December 2025

The forecast indicates that most parts of the country are likely to experience near-average to below-average (generally depressed) rainfall, while parts of the northeastern region are likely to receive below-average (highly depressed) rainfall, as depicted by Figure 1.

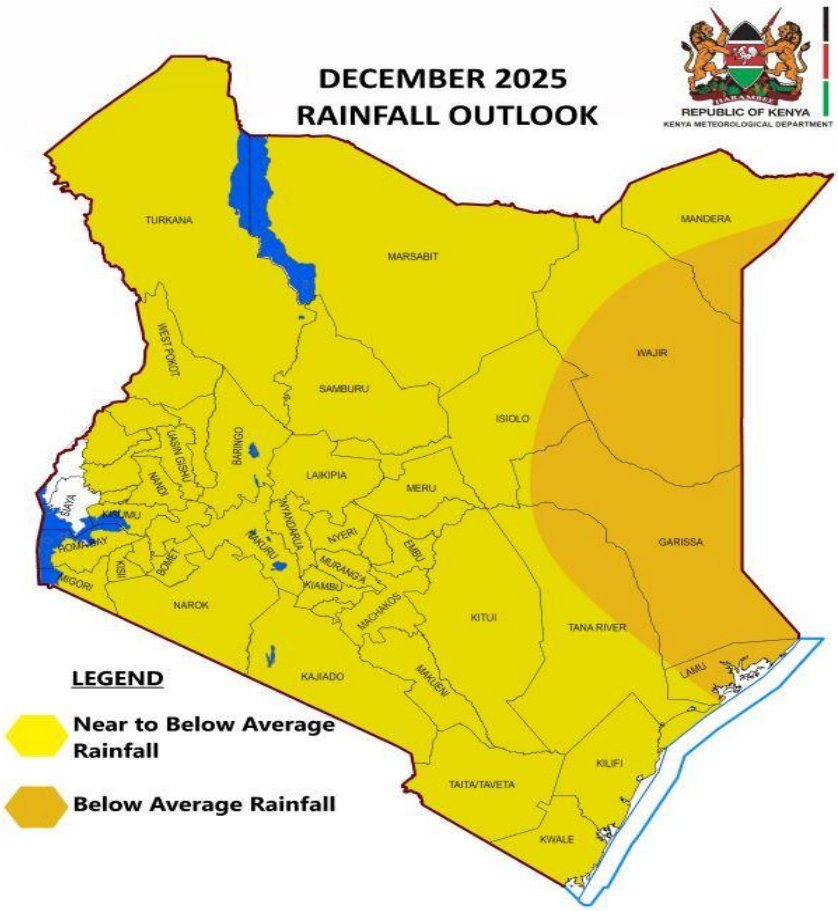

Figure 1: December 2025 Forecast

2.3 Outlook for Specific Areas

The rainfall distribution, both in time and space, is expected to be generally poor over most parts of the country. The specific outlook for individual areas is as follows:

2.3.1 The Lake Victoria Basin, Highlands West of the Rift Valley and Central and South Rift Valley (Siaya, Kisumu, Homa Bay, Migori, Kisii, Nyamira, West Pokot, Trans Nzoia, Baringo, Uasin Gishu, Elgeyo-Marakwet, Nandi, Laikipia, Nakuru, Narok, Kericho, Bomet, Kakamega, Vihiga, Bungoma and Busia counties): Intermittent rainfall with some breaks is expected during the month. The rainfall is likely to be near to below the long-term average amounts (depressed) for December.

2.3.2 North-western Region (Turkana, and Samburu counties): Mainly sunny and dry conditions are likely to prevail during the month. However, occasional rainfall may be experienced in a few areas. The expected rainfall amounts are likely to be near to below the long-term average (depressed) for December.

2.3.3 Highlands East of the Rift Valley and Central Kenya (Nairobi, Nyandarua, Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, and Tharaka Nithi counties): Intermittent rainfall with some breaks is expected during the month. The total rainfall amounts are likely to be near to below the long-term average (depressed) for December.

2.3.4 North-eastern Region (Marsabit, Mandera, Wajir, Garissa and Isiolo counties): Mainly sunny and dry conditions are likely to prevail during the month. However, occasional rainfall may be experienced in a few places. The expected rainfall amounts are likely to be below the long-term average (highly depressed) for December.

2.3.5 South-eastern Lowlands (Kajiado, Kitui, Makueni, Machakos, Taita Taveta and Tana River counties): Intermittent rainfall with some breaks is expected during the month. The expected rainfall amounts are likely to be near to below the long-term average (depressed) for December.

2.3.6 The Coastal Strip (Mombasa, Kilifi, Lamu, Kwale counties and Coastal part of Tana River County): Intermittent rainfall with some breaks is expected during the month. The expected rainfall amounts are likely to be below the long-term average for December over the South Coast and parts of the North Coast (Kilifi), while below-average rainfall is expected over Lamu and coastal part of Tana River County.

2.3 Potential Impacts and Advisories

The following are the likely impacts during the month of December 2025:

2.3.1 Agriculture and Food Security

The anticipated near- to below-average rainfall in the ASALs is likely to reduce soil moisture, affecting crop growth and pasture availability. The near- to below-normal rainfall, coupled with poor spatial and temporal distribution, may negatively affect crop production, over most parts especially over parts of the Central and Eastern sectors of the country, including the Coastal region. In the ASAL areas of the Northeast and parts of the Southeast, the limited rainfall may hinder pasture regeneration, potentially leading to reduced livestock production.

Farmers are advised to implement water conservation practices such as mulching, and monitor soil moisture closely. Livestock producers should prepare for potential water and fodder shortages by storing feed and ensuring water points are well-maintained.

2.3.2 Disaster Management

Despite generally dry conditions, isolated heavy rainfall may occur, causing localized flooding, especially in poorly drained urban centers and along rivers. The public is advised not to drive or walk through flooded areas to avoid loss of life. Lightning strikes may occur in the Highlands west of the Rift Valley—particularly in Kisii, Kisumu, Nandi, Kakamega, and Narok Counties—as well as on Mt. Elgon and its surrounding areas. Authorities should maintain early warning systems and advise communities in flood- and lightning-prone areas to remain vigilant.

2.3.3 Water Resources Management and Energy

Reduced rainfall may lead to lower water levels in rivers, dams, and reservoirs nationwide, particularly in ASAL regions of the eastern and northern parts of the country. Communities and water managers are advised to implement water-saving measures, prioritize domestic water supply, and monitor water storage facilities closely. In areas expected to receive rainfall, communities are encouraged to practice water harvesting to supplement their water needs. However, a few areas in the eastern sector—particularly the Northeast and Coastal regions—may experience water shortages due to the depressed rainfall. Communities in these areas are urged to use the available water efficiently.

2.3.4 Environment and Forestry

December marks the end of Kenya's Short Rains season. Although rainfall is expected to be below average across most parts of the country, occasional showers over some areas may provide limited soil moisture. The public is encouraged to take advantage of these conditions to conserve moisture through mulching to support existing tree growth especially over the western sector where substantial amounts of rainfall were received at the beginning of the season. Depressed rainfall, particularly in the eastern sector of the country, may increase the risk of human-wildlife conflicts as animals migrate in search of pasture and water. Meanwhile, areas such as the Highlands west of the Rift Valley, the Lake Victoria Basin, and parts of the Central Rift Valley may retain sufficient soil moisture to support tree growth. Communities in these regions are advised to take advantage of the favorable conditions to plant trees and adopt environmental conservation measures. This recommendation aligns with Kenya's Mission 15B (JazaMiti) — a presidential campaign to plant 15 billion trees and restore degraded landscapes by 2032. The initiative encourages tree-planting efforts nationwide, particularly in areas with adequate moisture and soil conditions.

2.3.5 Health

Warmer-than-average temperatures combined with below-average rainfall and dry conditions may increase the risk of heat stress and vector-borne diseases across the country. Public health advisories should emphasize proper hydration, safe food handling, and vector control measures such as mosquito net use and environmental sanitation. In areas where occasional rainfall may lead to localized flooding, stagnant water may create favorable conditions for the spread of vector-borne diseases. Conversely, in regions experiencing extended dry and dusty spells—particularly in the northern parts of the country—there may be an increased risk of respiratory and diarrheal diseases due to compromised hygiene and water scarcity.

2.3.6 Transport and Public Safety Sector

Occasional rainfall may cause slippery roads in areas expected to receive near-normal rainfall, increasing the risk of accidents. Localized flash floods could create transport challenges, particularly during rush hours and in areas prone to impassable roads. The public is advised to exercise caution while traveling, avoid flooded roads, and stay informed about weather updates to ensure safety.

3.0 CLIMATE OUTLOOK FOR DECEMBER 2025 TO FEBRUARY 2026

The outlook for the next three months indicates that the Highlands West of the Rift Valley, Lake Victoria Basin, Central, and South Rift Valley are likely to experience intermittent rainfall with some breaks in December and remain generally dry in January and February. However, a few areas, particularly those around the southern parts of the Lake Victoria Basin (Migori and Homa counties), Kisii and Nyamira counties, and southern Rift Valley (Narok and Bomet counties), may experience occasional rainfall on a few days in January and February. This rainfall is expected to be near to below the December to February long-term mean (LTM).

The Highlands East of the Rift Valley, including Nairobi County and the Southeastern lowlands, are expected to receive intermittent rainfall with some breaks in December and remain generally dry in January and February, though a few days may be wet. This rainfall is expected to be near to below the December to February LTM. The Northwestern and Northeastern regions are expected to remain generally dry throughout the forecast period though a few areas may experience occasional rainfall which is expected to be below the December to February LTM. The coastal region is expected to receive intermittent rainfall with some breaks in December and remain generally dry in January and February. This rainfall is expected to be below the December to February LTM over the region. Temperatures are expected to be warmer than average across the entire country.

4.0 CLIMATE REVIEW FOR NOVEMBER 2025

4.1 Rainfall Review for November 2025

The month of November marks the peak of Kenya's October–December (OND) short rains season. November 2025, typically the peak of the OND short rains, was unusually dry across much of Kenya. With the exception of Garissa and Makindu, which registered near-normal rainfall totals, all other observation stations reported deficits ranging from below-average to severely depressed levels, highlighting the pronounced rainfall suppression across the country.

An analysis of rainfall performance up to 28 November 2025 showed that only Garissa (116.3% of LTM) and Makindu (77.4% of LTM) recorded near-average rainfall, while all other stations experienced below-average conditions. Moderately depressed totals were observed at Kisii (72.2%), Kericho (64.4%), Kitui (54.2%), and Kakamega (50.7%). Rainfall declined further across Nakuru, Kitale, Laikipia, Moyale, and Kangema, ranging between 47% and 34% of the LTM. Much lower percentages were recorded at Meru (28.7%), Nyeri (27.8%), Eldoret (22.3%), Malindi (20.4%), Voi (20.2%), Kabete (19.6%), and Embu (18.3%), along with several

other stations in the central, coastal, and eastern regions. The most severe deficits occurred at Marsabit (7.8%), Wilson Airport (7.1%), JKIA (5.8%), Mtwapa (5.7%), Msabaha (2.8%), and particularly at Lamu, Lodwar, and Mandera, which recorded 0.0% of the LTM, reflecting exceptionally dry conditions. Overall, November rainfall was largely below average across the country, with extreme dryness affecting several key areas. The driest conditions were observed in Marsabit, Wilson, JKIA, Mtwapa, Msabaha, and especially Lamu, Lodwar, and Mandera, which received no rainfall at all.

An analysis of rainfall amounts up to 28 November showed that the highest totals were recorded at Kabaru Forest Station in Nyeri County (289.1 mm), Gatare Forest in Murang'a County (220.8 mm), and Nyaroya in Migori County (217.0 mm). Other notably wet stations included Kisii (142.2 mm), Garissa (118.8 mm), Makindu (116.8 mm), Kitui (108.4 mm), Kericho (105.3 mm), Kangema (101.8 mm), Meru (99.7 mm), and Kakamega (77.2 mm). Most other stations recorded moderate to low amounts ranging from 45.5 mm to 2.6 mm, while Lamu, Lodwar, and Mandera reported no rainfall at all, indicating extremely dry conditions in these areas during the month.

Figure 2a presents the total rainfall amounts recorded in November (blue bars) alongside the corresponding November long-term means (LTMs) (red bars). Figure 2b shows the November 2025 rainfall performance expressed as a percentage of the November LTM. Figure 2c displays the spatial distribution of rainfall totals recorded in November 2025.

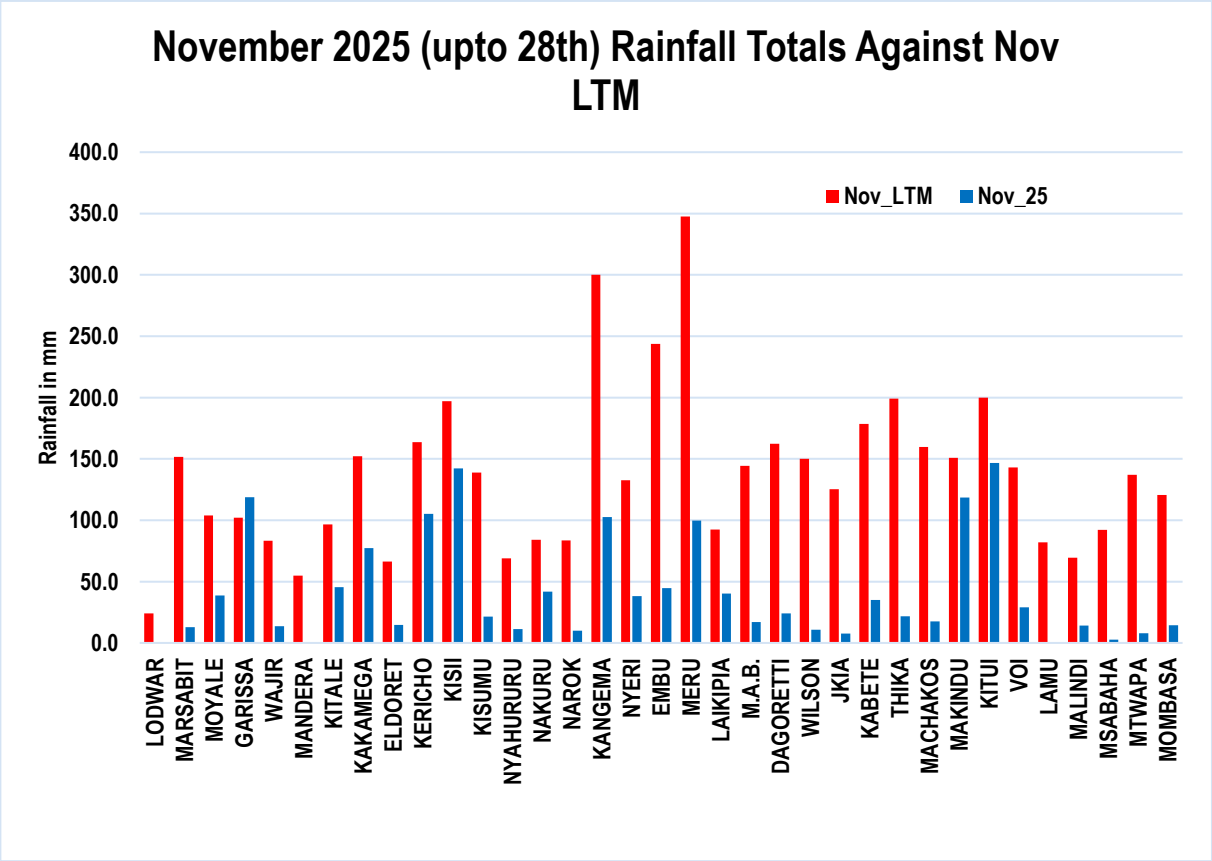

Figure 2a: November 2025 Rainfall Totals (mm) against November LTM

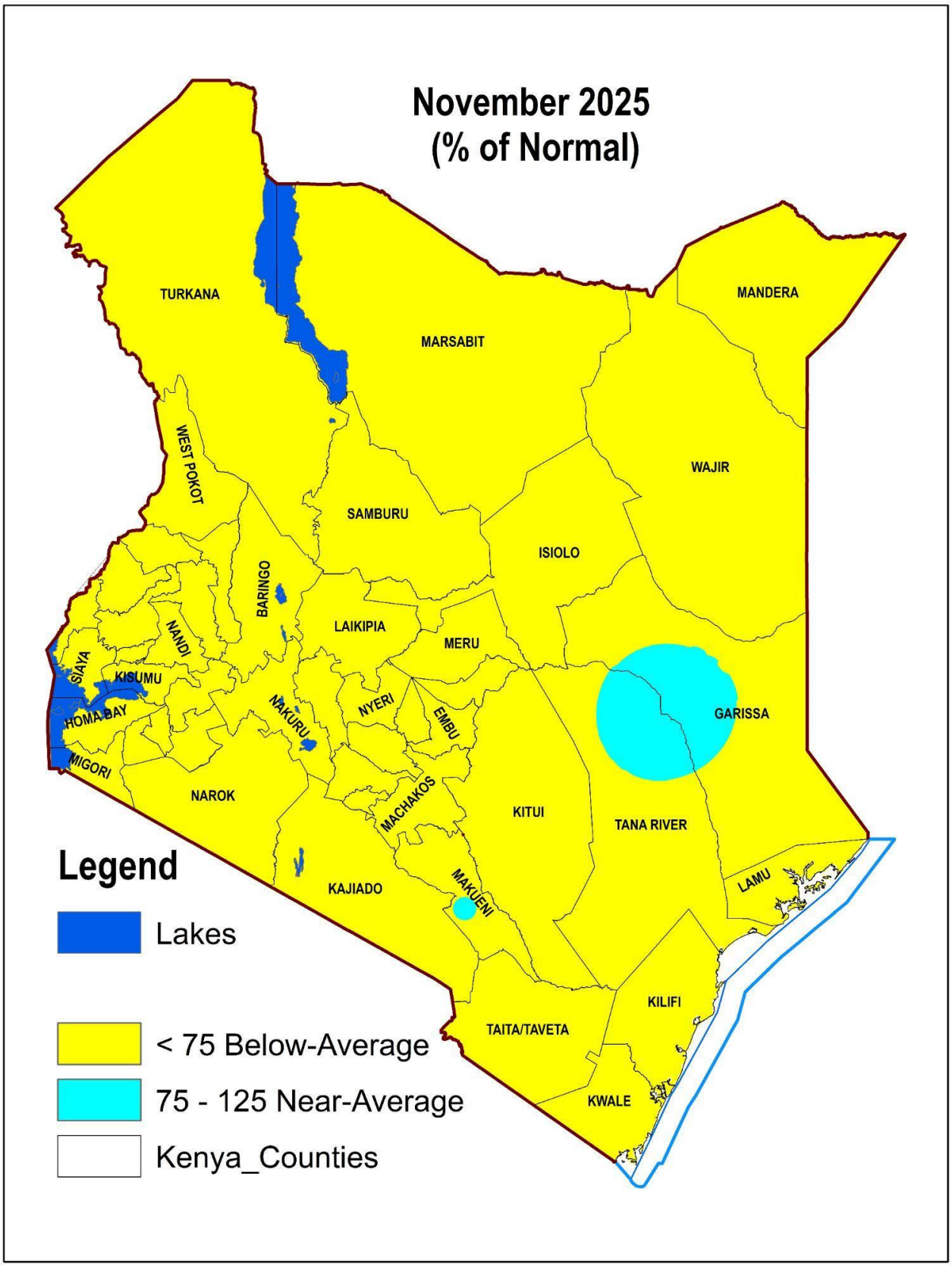

Figure 2b: November 2025 Rainfall (% of Rainfall)

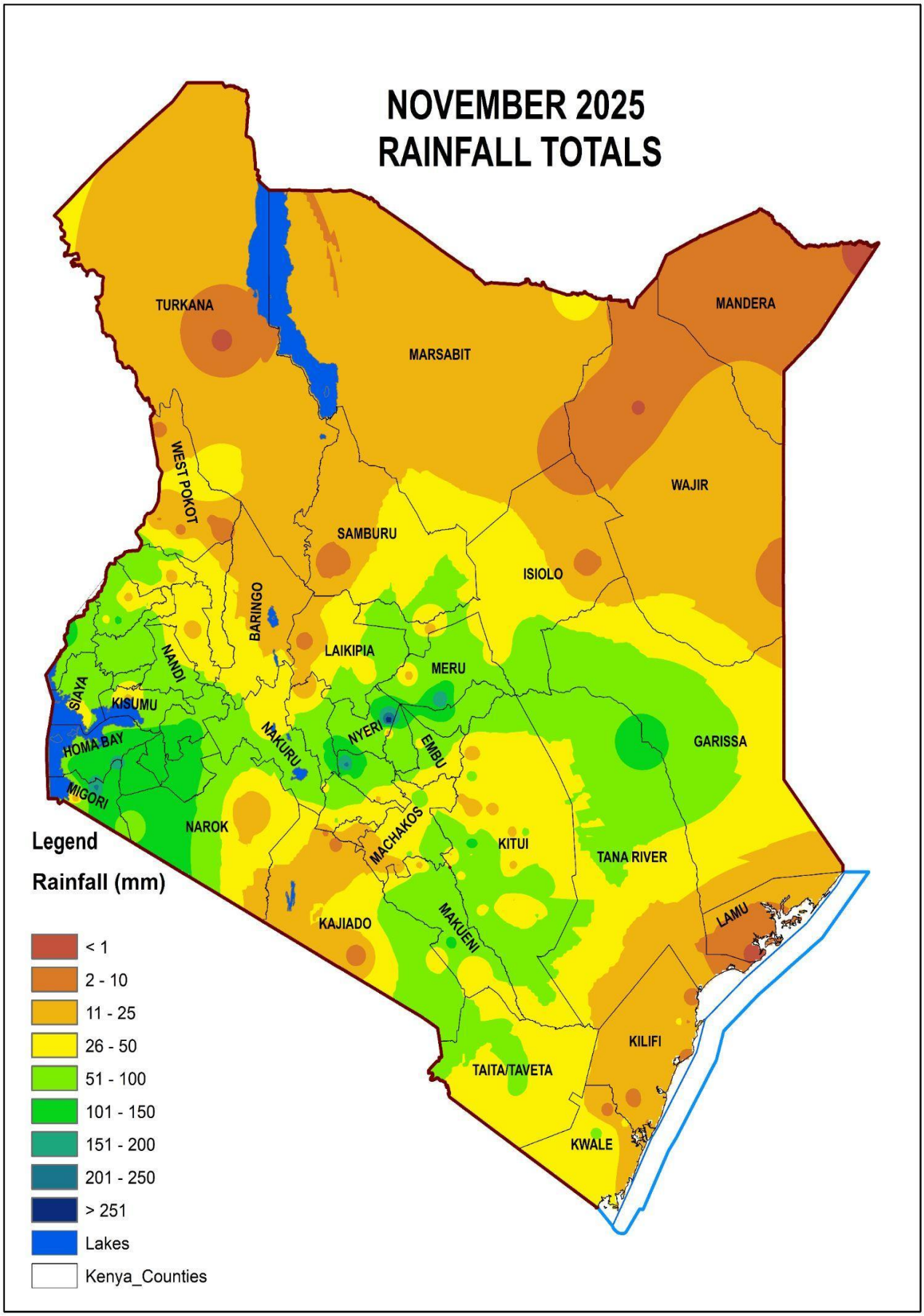

Figure 2c: November 2025 Rainfall Totals

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4.2 Temperature Review for November

Maximum temperatures were warmer than average over the entire country except in Eldoret where slightly cooler than average temperatures were recorded.The highest monthly maximum temperature (36.7 0^0C) was observed in Mandera which also recorded high day time temperatures of up to 38.0 0^0C especially at the beginning of the month (Figure 3a).
Minimum temperatures were also warmer than average over most parts of the country except in Kericho, Nyahururu and Nyeri where cooler than average temperatures were recorded. The lowest monthly maximum temperature (8. 0^0C) was observed in Nyahururu (Figure 3b).

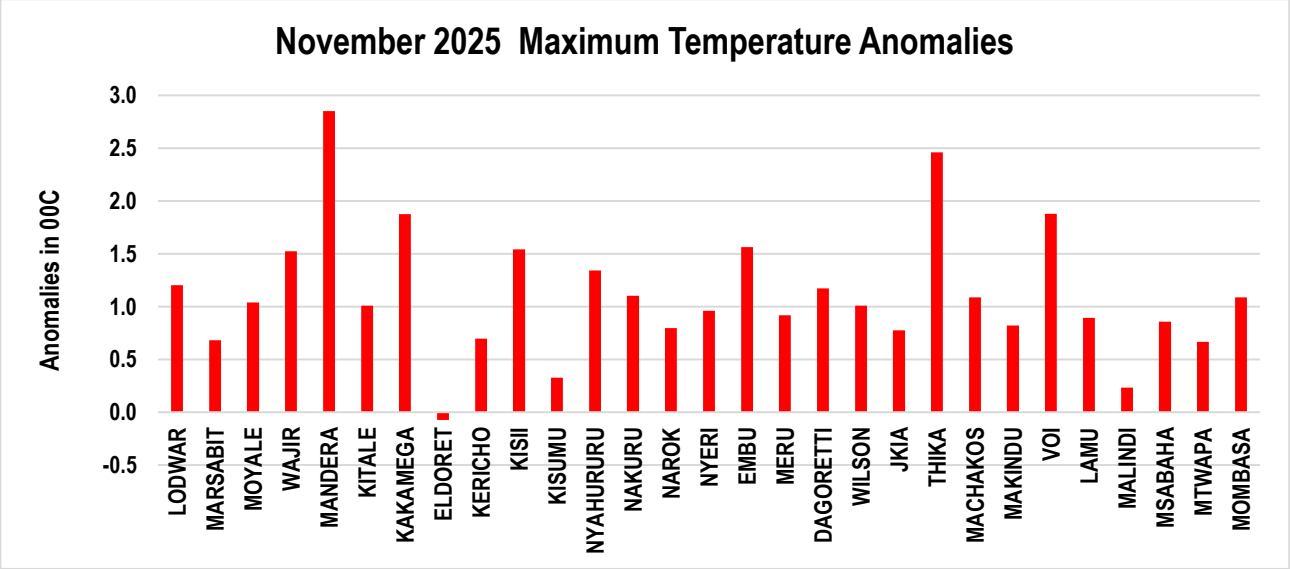

Figure 3a: November 2025 Maximum Temperature Anomalies

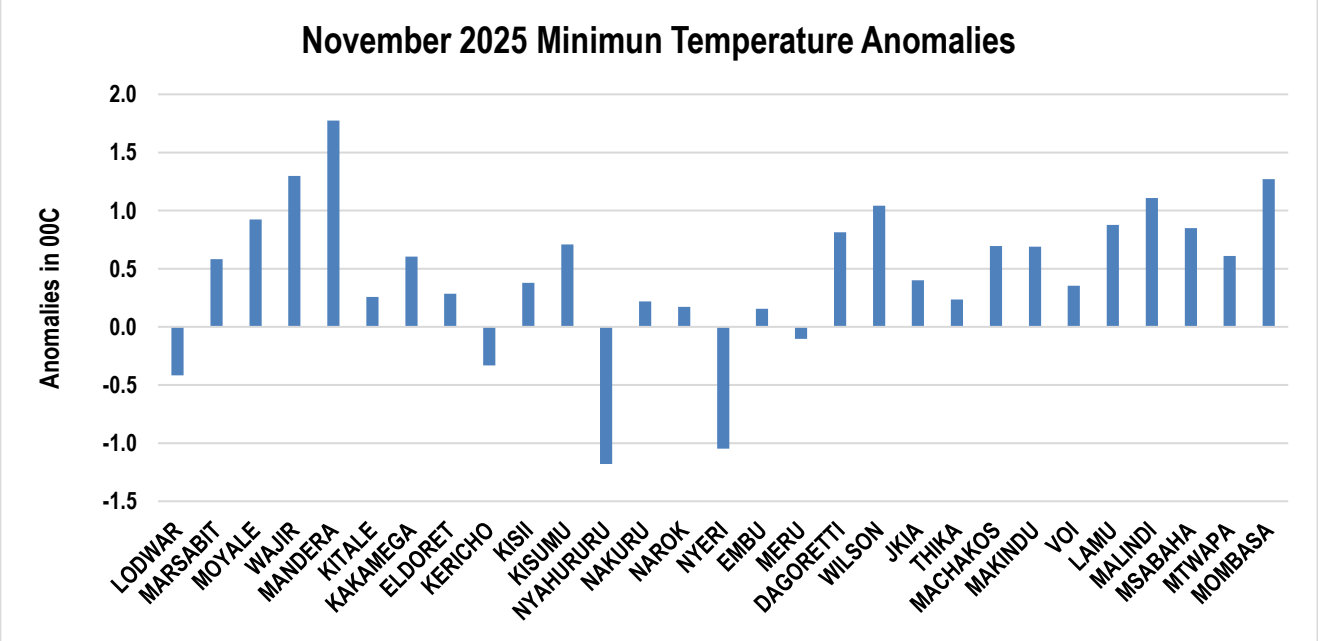

Figure 3b: November 2025 Minimum Temperature Anomalies

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