REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

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CLIMATE OUTLOOK FOR AUGUST 2025 AND REVIEW OF THE RAINFALL AND TEMPERATURE PERFORMANCE OF JULY 2025

1. HIGHLIGHTS

1.1. The Rainfall Outlook for August 2025

The forecast for August 2025 indicates that several parts of the country will experience generally dry and sunny conditions. However, the Highlands west of the Rift Valley, the Lake Victoria Basin, the Central and Southern Rift Valley, and parts of the Highlands east of the Rift Valley are likely to receive near-to-above-average rainfall.

The northwestern region is expected to remain generally dry, though a few areas—particularly those bordering Uganda and South Sudan—may receive occasional above-average rainfall. Along the Coastal Strip, conditions are likely to remain generally dry, with occasional rainfall expected to be near to below the August Long-Term Mean (LTM).

Intermittent cool and cloudy conditions, accompanied by occasional light rains, are expected in the Central Highlands, Nairobi area, and parts of the Southeastern lowlands, western Kenya, and the Central and South Rift Valley during the month.

Temperatures are anticipated to be warmer than normal across most of the country. However, the northwestern regions, some areas of western Kenya, and the Central Rift Valley may experience near-to-cooler-than-average temperatures.

2. CLIMATE OUTLOOK FOR AUGUST 2025

The August 2025 rainfall forecast has been developed through regression analysis of Sea Surface Temperatures (SSTs) and SST gradients, combined with projections of global SST evolution, upper-air circulation patterns over Western Kenya and the Coastal region, and consideration of climatological norms. Figure 1a presents the August rainfall climatology, which serves as the foundational reference for this seasonal outlook.

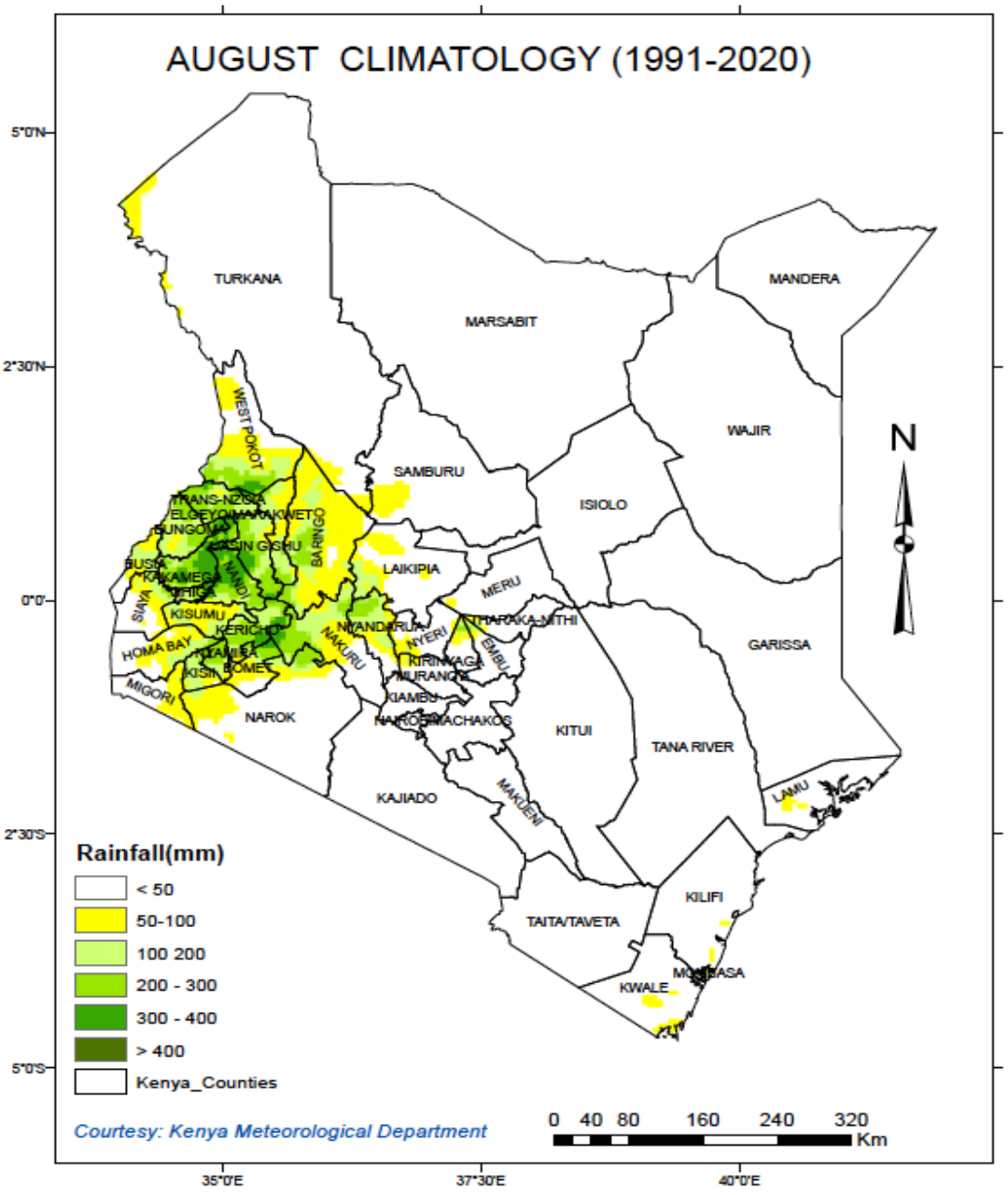

Figure 1: August Rainfall Climatology

2.1. Rainfall Forecast for August 2025

The forecast for August 2025 indicates that near-to-above-average (enhanced) rainfall is likely in the counties of the Lake Victoria Basin, Highlands West of the Rift Valley, Central and Southern Rift Valley, parts of the Northwestern region (with higher probabilities), and a few areas of the Highlands East of the Rift Valley.

In contrast, the Coastal region is expected to remain generally sunny and dry, with occasional rainfall anticipated to be near-to-below the August long-term average (LTM). The Northeastern region, most of the Southeastern lowlands, and part of the Northwestern regions are likely to stay generally sunny and dry throughout the month.

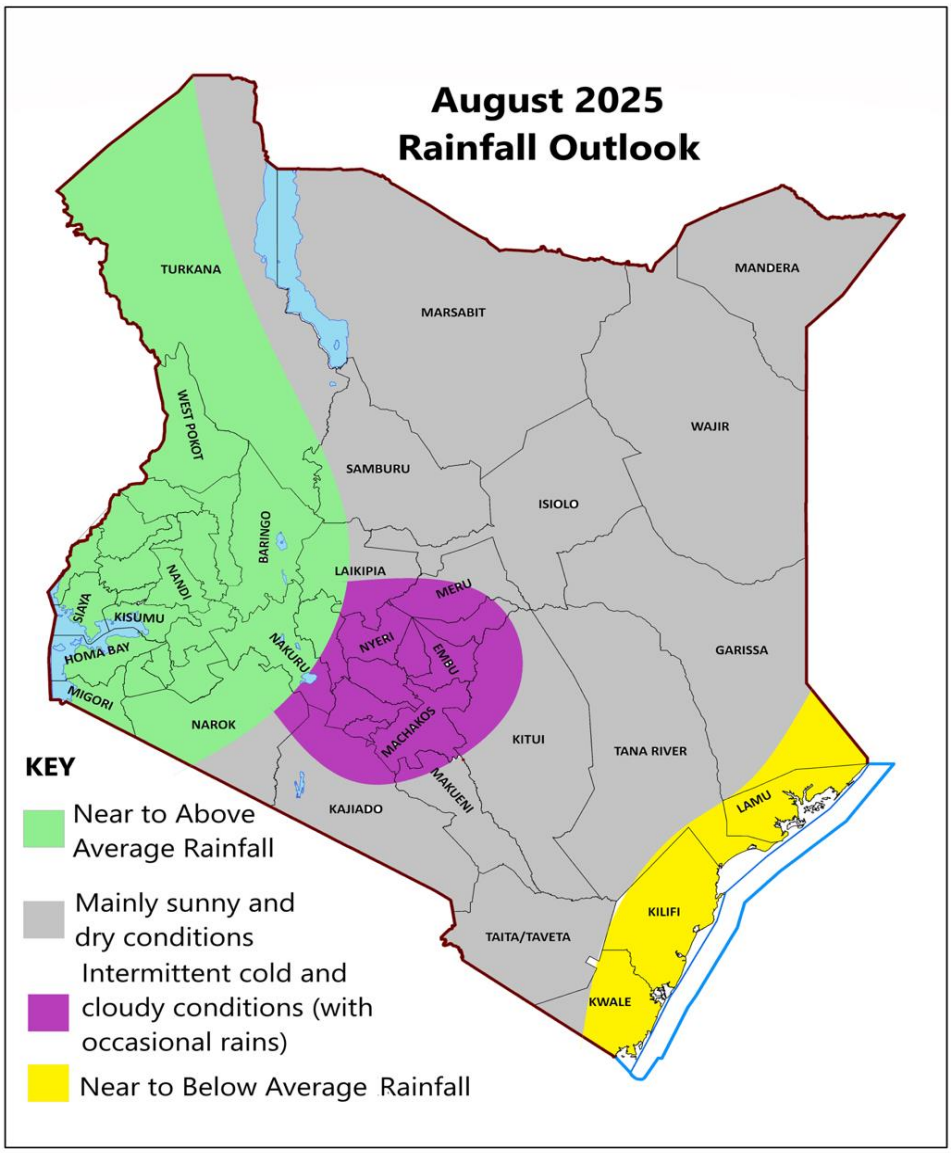

Figure 1b: August 2025 Rainfall Forecast

Meanwhile, intermittent cool and cloudy conditions, accompanied by occasional light morning rains and afternoon showers, are expected over the Highlands East of the Rift Valley (including Nairobi County), parts of the Southeastern lowlands bordering Nairobi County and Central Highlands, parts of the Highlands West of the Rift Valley, and the Central Rift Valley. This weather pattern marks the gradual end of the cold season in August.

Figure 1b illustrates the rainfall forecast for August 2025.

2.1.1. Specific Rainfall Outlook

2.1.1.1. The Lake Victoria Basin, Highlands West of the Rift Valley, Central and South Rift Valley (Siaya, Kisumu, Homa Bay, Migori, Busia, Kisii, Nyamira, West Pokot, Trans Nzoia, Uasin Gishu, Elgeyo Marakwet, Nandi, Baringo, Kakamega, Vihiga, Bungoma,Nakuru, Narok, Kericho, Bomet, Western Laikipia, and parts of the Highlands East of the Rift Valley (parts of Nyandarua): are expected to receive intermittent rainfall throughout August 2025. Cumulative precipitation in these areas is forecast to be near-to-above the long-term monthly average. Additionally, localized hailstorms may occur in some parts of Nyandarua and Laikipia counties during this period. This weather pattern reflects typical transitional conditions as the region moves toward the end of the cold season.

2.1.1.2. Northwestern (Turkana, Samburu):

Most areas will experience predominantly dry conditions throughout the month. However, occasional rainfall is expected in some locations, particularly in areas bordering Uganda and South Sudan, as well as western parts of Samburu County. The total rainfall in these regions is likely to be above the long-term August average. Additionally, strong southeasterly to easterly winds are forecast, with speeds exceeding 25 knots (12.5 m/s) during the month. These winds may result in blowing dust and sand in affected areas, potentially reducing visibility at times.

2.1.1.3. The Coastal Strip (Mombasa, Kilifi, Lamu, Kwale and the Coastal parts of Tana River): The mentioned counties are expected to experience generally dry conditions with occasional showers throughout the month. The total rainfall amount is likely to be near to below the August long-term average (LTM). Additionally, strong southerly winds exceeding 25 knots (12.5 m/s) are anticipated during the month.

2.1.1.4. The Highlands East of the Rift Valley including Nairobi County (Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, Tharaka Nithi, Nairobi, Eastern Laikipia and Southern parts of Nyandarua)

These counties are expected to experience intermittent cool and cloudy conditions (overcast skies) with occasional light rains in the morning. Occasional afternoon showers are likely to occur over a few places during the month. This rainfall is likely to be near to slightly above the August LTM.

2.1.1.5. Southeastern Lowlands (Machakos, Makueni, Kitui, Taita Taveta, Kajiado and Most of Tana River)

These areas are likely to remain generally sunny and dry. However, intermittent cool and cloudy conditions with occasional light rains are expected over some areas, particularly those bordering the Central Highlands and Nairobi County.

2.1.1.6. Northeastern Kenya (Mandera, Marsabit, Wajir, Garissa and Isiolo)

These areas are likely to remain generally sunny and dry. However, a few high-altitude areas in Marsabit County may experience cloudy and foggy conditions in the mornings as well as occasional rainfall in the western part of Marsabit County. Additionally, strong southerly winds exceeding 25 knots (12.5 m/s) are expected over some parts of the region during the month.

2.2. Temperature Forecast for August 2025

The month of August marks the gradual cessation of the cold season, particularly over the Highlands East of the Rift Valley, including Nairobi County. The temperature outlook for August 2025 indicates that most parts of the country are expected to experience warmer-than-average temperatures. However, the Northwestern region, parts of the Highlands West of the Rift Valley, and parts of Central Rift Valley (Baringo) are expected to have near to cooler than average temperatures. Higher probabilities for warmer than average temperatures are anticipated over the Central and Eastern regions.

The Highlands East of the Rift Valley, including Nairobi County, and some areas in the southeastern lowlands (Northern Kajiado and parts of Machakos) may experience a few chilly days, with daytime temperatures occasionally falling below 20°C. The northern and eastern sector of the country is likely to experience high temperatures exceeding 30°C.

2.3. Potential Impacts of Outlook in August 2025

The following are the likely impacts of the weather during the month of August:

2.3.1. Agriculture and Food Security Sector

The above-average rainfall expected over the Highlands West of the Rift Valley, Lake Victoria Basin, and the Central and South Rift Valley may create favorable conditions for agricultural activities. However, hailstorms

have been forecasted in parts of the Highlands East of the Rift Valley and the Central Rift Valley, particularly in Nyandarua and parts of Laikipia County. These hailstorms pose a potential risk of crop destruction, which could significantly impact agricultural yields and livelihoods in the affected regions. Farmers and agricultural stakeholders should remain vigilant and take necessary precautions to protect their crops and minimize potential damage from these severe weather events.

2.3.2. Disaster Management Sector

Lightning strikes remain a significant risk over the Lake Victoria Basin and the Highlands West of the Rift Valley, particularly in Kisii, Kisumu, Nandi, Bungoma (Mt. Elgon areas), and Kakamega Counties. The public is strongly advised to avoid seeking shelter near metallic structures or under trees to reduce the risk of injury or loss of life. Taking these precautions can help prevent accidents and ensure safety during thunderstorms.

2.3.3. Transport and Public Safety

Fog formation in the Highlands East of the Rift Valley, including Nairobi County, can significantly reduce visibility, posing a danger to motorists. This reduced visibility increases the risk of accidents, particularly along key routes such as the Kikuyu-Kinungi stretch of the Nairobi-Naivasha Highway. Drivers traversing these areas are strongly advised to exercise heightened caution, ensuring they drive at reduced speeds and maintain safe distances between vehicles to mitigate the risks associated with fog.

In addition to its impact on road safety, fog may also cause disruptions at major transportation hubs. Specifically, operations at Wilson and Jomo Kenyatta Airports could experience interruptions due to reduced visibility, which might affect flight schedules and overall airport operations.

2.3.4. Water Resources Management and the Energy Sectors

Water availability in the ASAL (Arid and Semi-Arid Lands) areas may decline due to the anticipated dry weather conditions. Residents are advised to use the available water sparingly and adopt water conservation practices to ensure their water needs are met throughout the month. Rainwater harvesting is also encouraged in areas expected to receive rainfall.

Conversely, the water catchment areas in the Highlands West of the Rift Valley are expected to receive above-average rainfall. As a result, the water levels in the dams and rivers within these catchment areas are likely to be maintained, ensuring a stable water supply for various uses, including agriculture, domestic consumption, and hydropower generation.

2.3.5 Environment and Forestry

The expected above-average rainfall over the Highlands West of the Rift Valley, the Lake Victoria Basin, and the Central and Southern Rift Valley is set to significantly enhance soil moisture, creating optimal conditions for tree and vegetation growth. This is a key opportunity to support the National Tree Growing and Restoration Campaign, which aims to grow 15 billion trees by 2032 and increase the tree cover from the current 12% to 30% by 2032. The increased soil moisture will improve the survival rates of newly planted trees and promote the expansion of forested areas.

By capitalizing on these favorable conditions, the public can play a crucial role in this campaign. Engaging in tree planting initiatives not only contributes to achieving the national tree cover target but also has a substantial environmental impact. Increased tree cover will enhance air quality, boost biodiversity, prevent soil erosion, and aid in carbon sequestration, thus mitigating climate change. Moreover, the enhanced forest cover will support ecosystem services, safeguard water resources, and contribute to a more resilient environment for future generations.

2.3.6 Health Sector

The anticipated cool and chilly conditions are likely to lead to an increase in respiratory diseases such as asthma, pneumonia, flu, and the common cold, particularly in areas including Nairobi, the Highlands East of the Rift Valley, parts of the Central and South Rift Valley, and parts of the Highlands West of the Rift Valley. To reduce the risk of contracting these illnesses, the general public is advised to dress warmly and adhere to guidelines provided by Health Authorities. Additionally, it is crucial to avoid using charcoal jikos in poorly ventilated homes, as they emit carbon monoxide gas, which can be harmful and potentially fatal if inhaled. Ensuring proper ventilation and following health recommendations can help prevent respiratory issues and protect overall health during these colder conditions.

3. REVIEW OF THE CLIMATE DURING JULY 2025

Several parts of the country remained generally dry in July 2025. However, significant rainfall was recorded in the Highlands West of the Rift Valley, parts of the Lake Victoria Basin, sections of the Central and South Rift Valley, the Coastal Strip, and isolated areas in the Highlands East of the Rift Valley.

The rest of the country stayed predominantly dry, though cool and cloudy conditions—accompanied by occasional light rains—were observed in the Central Highlands (including Nairobi County), some parts of the Southeastern lowlands, sections of western Kenya, and high-altitude areas of Marsabit County.

Temperatures were warmer than average across most regions for both maximum and minimum readings. The only exceptions were Kisumu and Kericho, where maximum temperatures were cooler than average.

3.1. Rainfall Review in July 2025

Several parts of the country remained generally dry in July 2025. However, significant amounts of rainfall were recorded in the Highlands West of the Rift Valley, parts of the Lake Victoria Basin, parts of the Central and South Rift Valley, the Coastal Strip, and isolated areas over the Highlands East of the Rift Valley.

An analysis up to 27th July shows that rainfall was near to above average over the Highlands West of the Rift Valley and Central Rift Valley and below average over the Lake Victoria (Kisumu) region and South Rift Valley (Narok). Most stations over the Coastal region recorded below average rainfall except Malindi which recorded above average rainfall.

Cool and cloudy conditions with occasional light rainfall dominated the central highlands including Nairobi County, parts of the Southeastern lowlands especially those bordering Nairobi and central highlands and the high-altitude areas in Marsabit county. The Northeast, Northwest and Southeastern lowlands remained generally dry though a few areas in Turkana and Samburu counties experienced occasional rainfall.

The highest monthly rainfall (383.2 mm) was recorded at Eldoret Meteorological station followed by Iranda rainfall station and Kakamega Meteorological station both in Kakamega county with 291.2mm and 299.9 mm respectively. Other stations that recorded above 200 mm include Kilibwoni health center in Nandi (233.7mm), Kitale Meteorological station (229.6mm), WRA Kapenguria in West Pokot (213.4mm), Tegla Lorupe Academy also in West Pokot (209.8mm) and Eldoret Airport (200 mm).

The rest of the stations recorded less than 200 mm of rainfall with most stations over Northeast, Northwest and Southeastern lowlands recording no rainfall at all throughout the month. A few counties over the western sector of the country such as Trans Nzoia, Kakamega, Bungoma and Busia occasionally recorded heavy rainfall of more than 50 mm in twenty-four hours.

Figure 2a shows the rainfall recorded in July 2025 (blue bars), compared to July LTMs (red bars). Figures 2b depict the July 2025 rainfall totals.

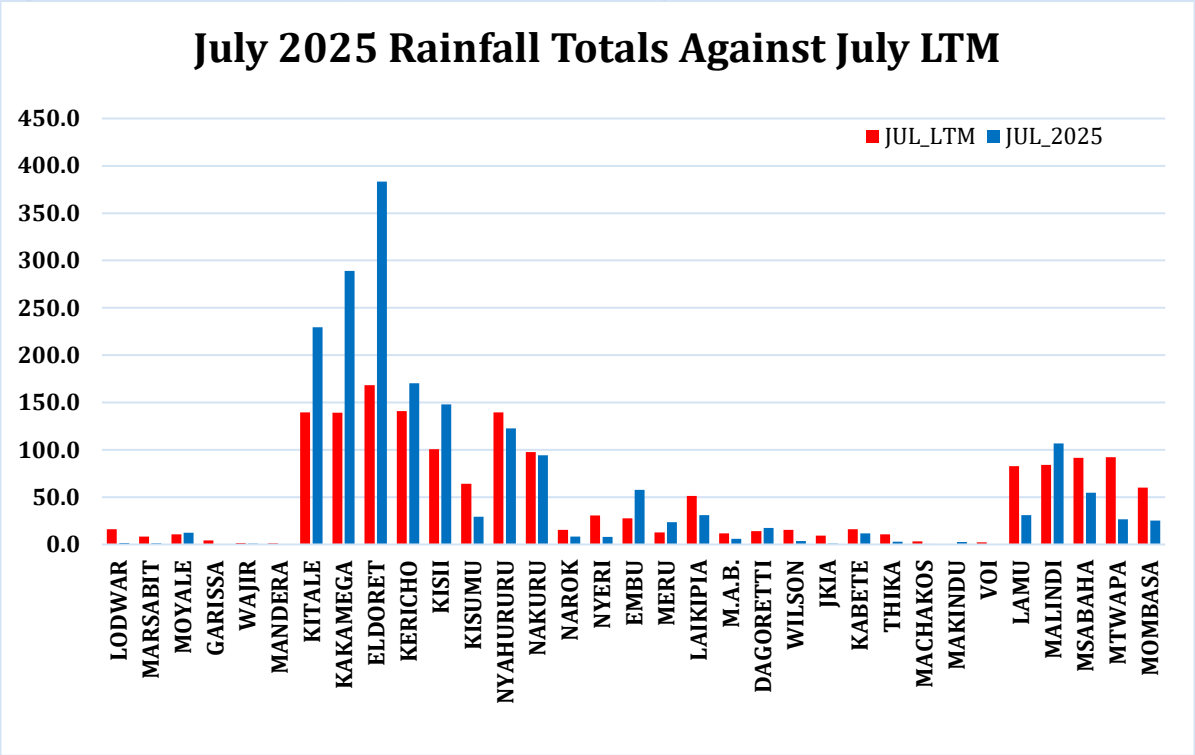

Figure 2a: Rainfall recorded in July 2025 (Blue bars) compared to July LTMs (Red bars).

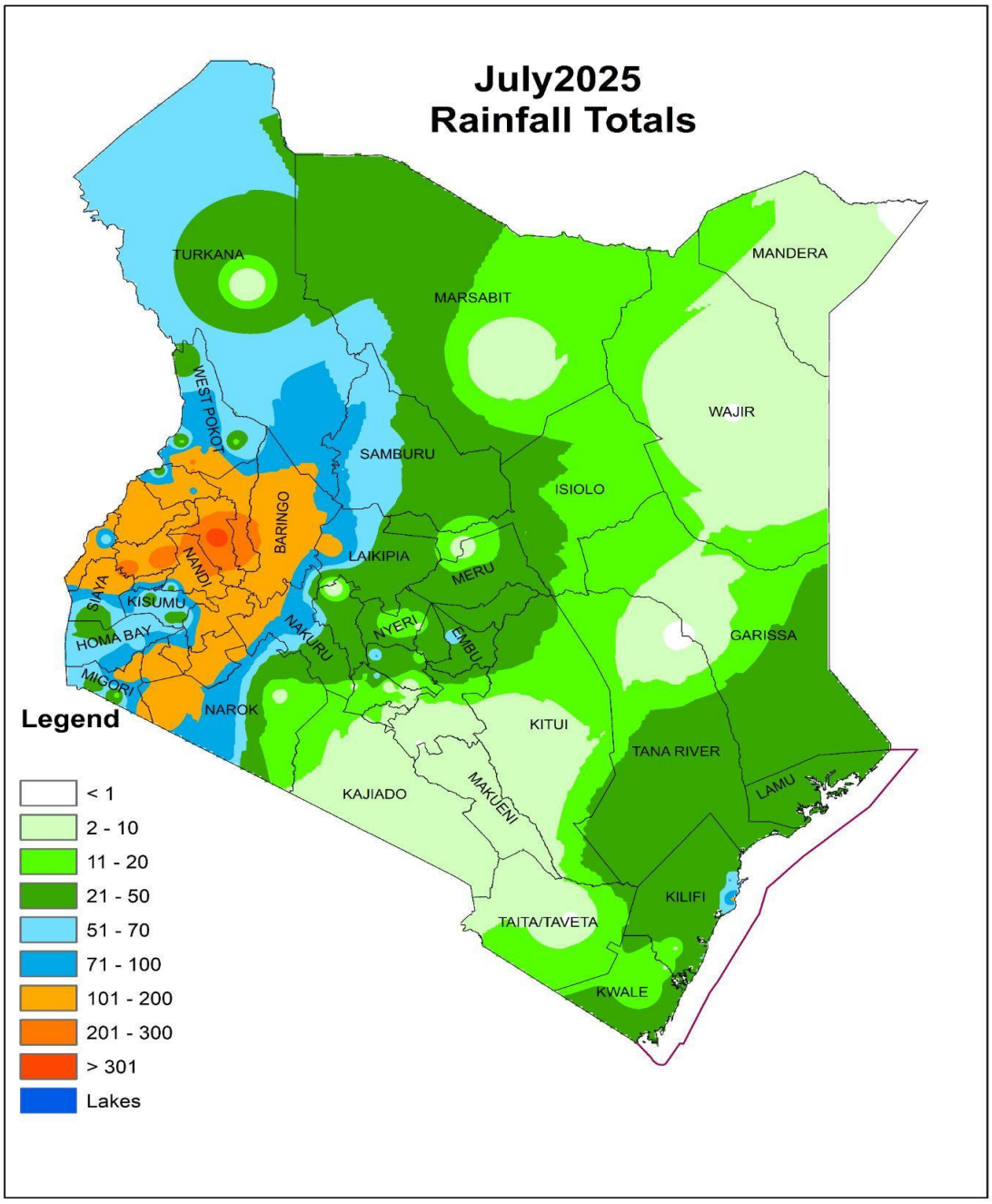

Figure 2b: July 2025 Rainfall Totals

3.2. Temperature Review in July 2025

The month of July marked the peak of the cold season over most parts of the country, especially over the Central highlands including Nairobi county, parts of the Southeastern lowlands, and parts of the Highlands West of the Rift Valley, and the Central and South Rift Valley.

An analysis of temperatures up to July 27 indicates that both daytime (maximum) and nighttime (minimum) temperatures were warmer than the July long-term mean (LTM) over most parts of the country, except for Kisumu and Kericho, where maximum temperatures were slightly cooler than the July LTM.

A few stations in the Highlands East of the Rift Valley, including Nairobi County, the Southeastern lowlands (Kajiado), South Rift Valley (Narok) and Highlands West of the Rift Valley (Trans Nzoia) recorded daytime (maximum) temperatures below 20°C. For instance, Narok Station recorded a maximum temperature of 16.6°C on 9 July while Kangema recorded 17.2°C on the same day, 17.7°C on 22nd, 17.9°C on 23rd and 18.0°C on 20th. Other stations that recorded lower temperatures include: Eldoret, 17.6°C on 10th, Nyahururu 18.4°C and 18.3°C on 11th and 12th July respectively, Nyeri 18.4°C, 18.0°C and 18.6°C on 5th, 9th and 20th July respectively, Meru 19.0°C and 18.3°C on 5th and 18th, Dagoretti 18.5°C on 23rd July and Machakos 19.1°C on 22nd July. The lowest monthly maximum temperature of 20.9°C was recorded at Kangema Station.

Few stations in the Highlands East of the Rift Valley, including Nairobi County, Central and South Rift Valley as well as Southeastern lowlands occasionally recorded minimum temperatures below 10°C. For instance, Kabete recorded 8.8°C on July 27 while JKIA recorded 9.1°C on 21st. Narok recorded 8.3°C on 24th while Laikipia Air Base recorded 8.8°C on 24th and 25th and 8.0°C on 27th. Machakos recorded 9.0°C on the 21st, 9.4°C on the 24th and 26th and 8.6°C on 27th. Nyahururu recorded less than 10°C for most of the days, thus recording the lowest monthly minimum temperature of 9.4°C. See Figures 3a and 3b.

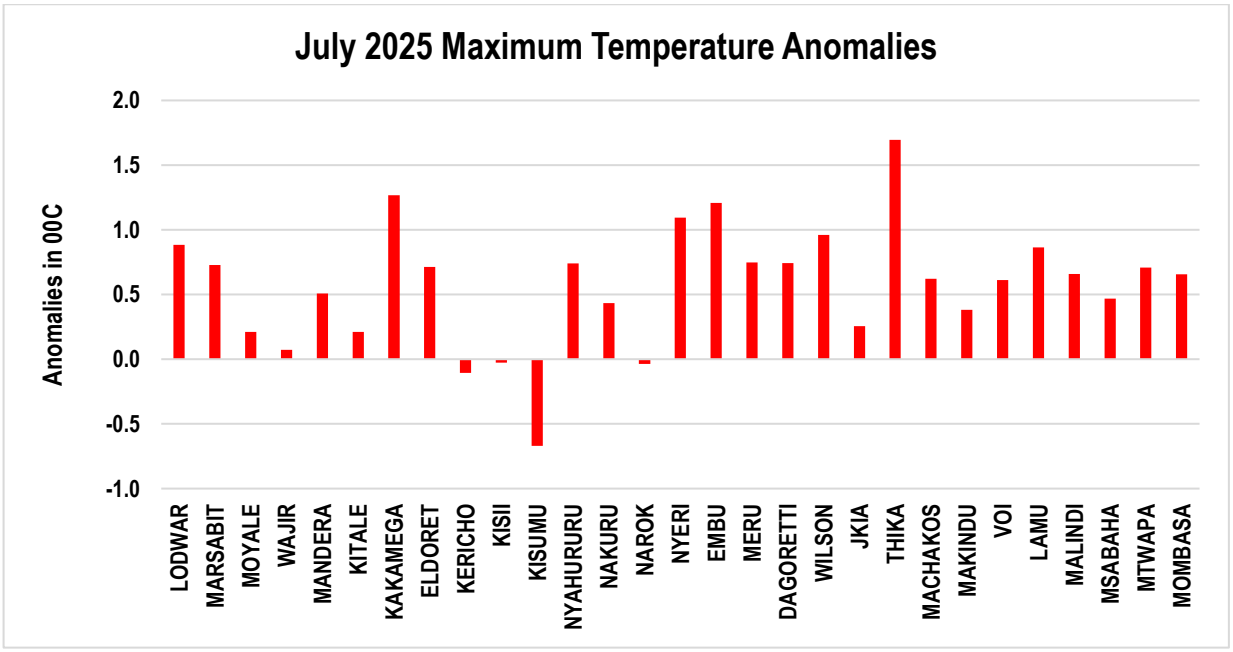

Figure 3a.: Maximum Temperature Anomalies for July 2025

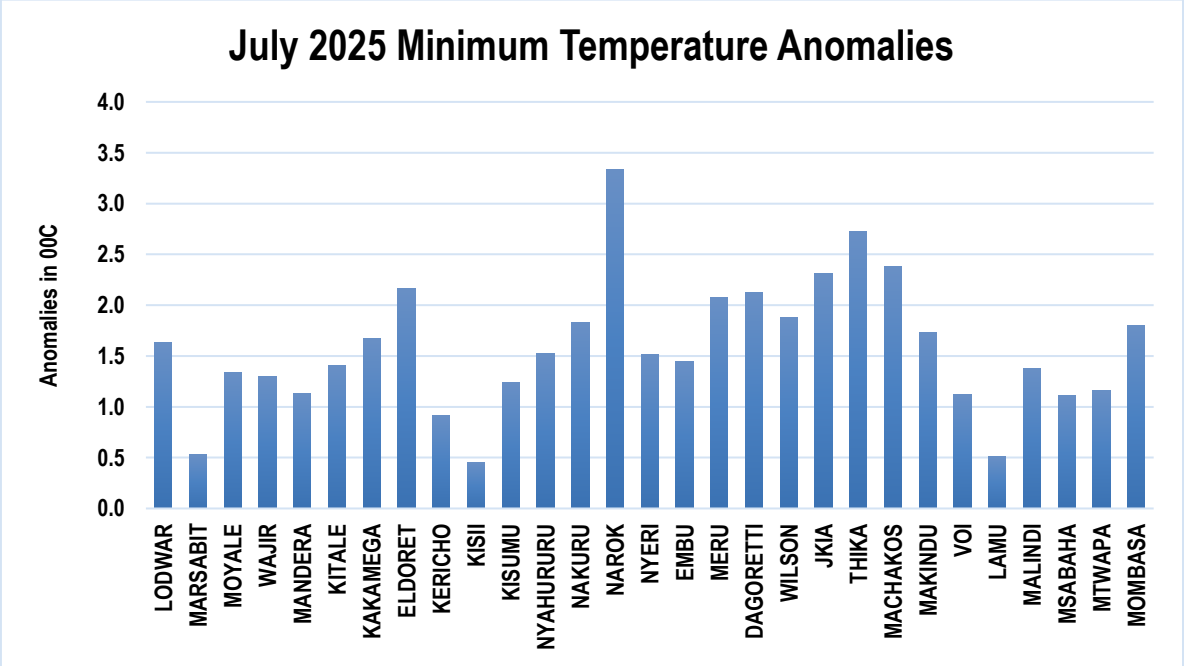

Figure 3b: Minimum Temperatures Anomalies for July 2025

Temperature Anomalies refer to the deviations from the long-term average or normal temperatures recorded for a specific time period, in this case the month of July. Positive anomalies indicate that the temperature for that period was higher than the long-term average, while negative anomalies signify that the temperature was lower than the long-term average.

NB: This outlook should be used in conjunction with the Department's 24-hour, 5-day, 7-day, special forecasts, and regular updates, as well as Weekly County forecasts developed and made available by County Meteorological Offices.

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