REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

STATE DEPARTMENT FOR ENVIRONMENT AND CLIMATE CHANGE

KENYA METEOROLOGICAL DEPARTMENT

Ref. No. KMD/FCST/4-2025/MO/02 **Date: 31st January 2025**

WEATHER FORECAST FOR FEBRUARY 2025 AND REVIEW OF JANUARY 2025

1. HIGHLIGHTS

1.1. The Forecast for February 2025

The forecast for February 2025 indicates that most parts of the country will experience generally sunny and dry conditions throughout the month. Occasional rainfall (few rain days) is however likely to occur over a few places in the Lake Victoria Basin, Highlands West of the Rift Valley, Southern Rift Valley, parts of the Highlands East of the Rift Valley including Nairobi, and parts of the South-eastern lowlands.

Temperatures are likely to be warmer than average over the whole country.

1.2. January 2025 Rainfall Review

Sunny and dry weather conditions prevailed over most parts of the country during the month of January. However, rainfall was received over several areas in the Southern half of the country excluding the Coastal region during the fourth week of the month. This rainfall was near to below the January Long Term Mean (LTM) except over a few stations in Nairobi, central highlands and western Kenya that recorded above average rainfall.

2. The Forecast for February 2025

The rainfall outlook for February 2025 is mainly based on empirical statistical models developed from the expected evolution of global Sea Surface Temperature (SST) anomalies and the Southern Oscillation Index (SOI). Currently, the Indian Ocean Dipole (IOD) is neutral and weak La Niña conditions are still present.

2.1. The Rainfall Forecast for February 2025

The forecast indicates that most parts of the country will experience generally sunny and dry conditions throughout the month. A few areas in the Highlands West of the Rift Valley, the Lake Victoria basin, Southern Rift Valley, the Highlands East of the Rift Valley including Nairobi county and the South-eastern lowlands are, however, likely to experience occasional rainfall ***(few rain days)***. **Figure 1** portrays the expected rainfall pattern during February 2025. Temperatures are also likely to be above average over the entire country.

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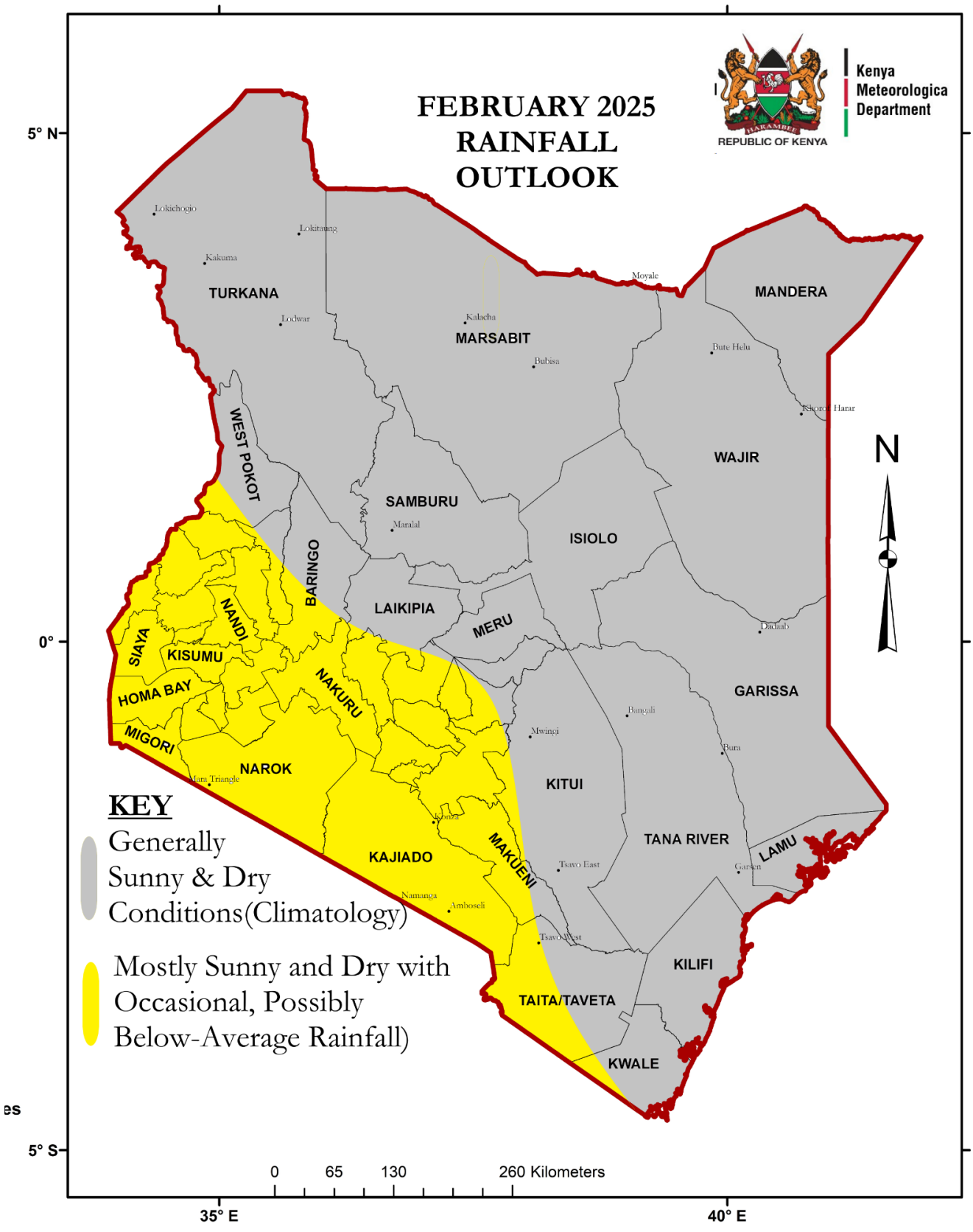

Figure 1: February 2025 Rainfall Forecast

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2.2. Specific outlook for individual areas

2.2.1. The Lake Victoria Basin, Highlands West of the Rift Valley and Central and South Rift Valley (Siaya, Kisumu, Homa Bay, Migori, Kisii, Nyamira, Trans Nzoia, Baringo, Uasin Gishu, Elgeyo-Marakwet, Nandi, Laikipia, Nakuru, Narok, Kericho, Bomet, Kakamega, Vihiga, Bungoma and Busia):

These counties are likely to have generally sunny and dry conditions for most of the month. However, occasional rainfall ***(few rain days)*** is expected during the month especially in the Lake Victoria basin and Southern Rift Valley.

Maximum temperatures are expected to range from 24°C to 35°C, while minimum temperatures will read from 6°C to 20°C.

2.2.2. North-western Region (Turkana, West Pokot, and Samburu counties):

Sunny and dry conditions are expected to prevail in these areas throughout the month.

Maximum temperatures are expected to range from 30°C - 40°C, with minimum temperatures ranging from 20°C to 26°C.

2.2.3. Highlands East of the Rift Valley and Central Kenya (Nairobi, Nyandarua, Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, and Tharaka Nithi):

These counties are likely to experience generally sunny and dry conditions for most of the month. However, a few areas might experience occasional rainfall ***(few rain days)*** during the month.

Maximum temperatures are expected to range from 22°C 31°C, while minimum temperatures will range from 5°C to 17°C.

2.2.4. North-eastern region (Wajir, Garissa and Isiolo, Mandera and Marsabit):

These areas are likely to experience sunny and dry conditions. throughout the month.

Maximum temperatures are expected to range from 27°C to 39°C, and minimum temperatures from 14°C to 26°C.

2.2.5. South-eastern Lowlands (Kajiado, Kitui, Makueni, Machakos, and Taita Taveta):

These counties are likely to experience generally dry conditions for most of the month. However, occasional rainfall ***(few rain days)*** is expected to occur over a few places during the month.

Maximum temperatures are expected to range from 24°C to 36°C, and minimum temperatures from 12°C to 20°C.

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2.2.6. **The Coastal Strip (Mombasa, Tana River, Kilifi, Lamu, and Kwale**): These counties are likely to experience generally dry conditions throughout the month.

Maximum temperatures are expected to range from 31°C to 35°C, while minimum temperatures will range from 22°C to 27°C.

2.3. Potential impacts

The following are the likely impacts as a result of the expected weather in February 2025:

2.3.1. Agriculture and Food Security

The dry weather conditions expected during the month are conducive for harvesting and preparation of land ahead of the anticipated March to May rainfall season.

2.3.2. Disaster Management

The expected dry conditions are likely to negatively affect counties that are currently in the drought alert phase. Close monitoring of the situation is necessary to avert any adverse impacts that may arise.

2.3.3. Water Resources Management

Water availability for both human and livestock is expected to decline further especially in the ASAL areas. Communities are encouraged to use the available water sparingly.

The expected sunny and dry conditions are conducive for solar power generation. The public is encouraged to take advantage of the prolonged sunny periods and utilize solar energy for their domestic use.

The dry weather conditions expected during the month may negatively affect the major river catchment areas for the country's hydroelectric power generating dams. Careful reservoir management and continuous monitoring of water level is therefore recommended to ensure stable power supply

2.3.4. Environment

Cases of human-wildlife conflicts may escalate as wildlife migrate in search of water and pasture. Relevant authorities are advised to closely monitor the situation to minimize human-wildlife conflicts.

The expected dry conditions may result in dry land and poor vegetation cover. The public is advised to take caution and avoid activities which are likely to lead to the occurrence of wildfires in forests, parks, and game reserves.

2.3.5. Health

The expected high temperatures during the month in most parts of the country may lead to heat stress and heat-related discomforts. The public is therefore advised to hydrate appropriately and minimize outdoor activities especially in the afternoons. Dusty conditions likely during the month may also provide favorable conditions for outbreaks of respiratory tract infections.

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3. CLIMATE REVIEW FOR JANUARY 2025

3.1. Rainfall Review

Sunny and dry weather conditions prevailed over most parts of the country during the month. However, rainfall was received over several areas in the Southern half of the country excluding the Coastal region during the fourth week of the month. This rainfall was near to below the January LTM over most areas except Dagoretti, Wilson Airport, Thika, Nyahururu, Laikipia Air Base and Kisii where near average rainfall was received.

An analysis of rainfall up to 30th January shows that the highest monthly total rainfall (191.4mm) was recorded in Dagoretti Corner Meteorological station, followed by Kisii Meteorological station with 170.1mm. Other stations that recorded more than 100 mm are Castle forest with (137.1mm), Kuna (131.7mm), Koromangucha (126.1mm), WilsonAirport (119.3), Masii (115.1mm), Ngong (112.6), Kibauni (106.5mm), Butere (101.2mm) and Kericho (101mm). The rest of the stations recorded less than 100 mm of rainfall, with most stations over the Coast and Northern sectors of the country recording no rainfall at all throughout the month. A few stations recorded heavy rainfall in 24 hours, as shown in Table 1.

Table 1: Examples of Stations that recorded heavy rainfall in twenty hours

S/No	Station	County	Amount in mm	Date
1	Kuna rainfall station	Migori	127.8	22-1-2025
2	Katangi rainfall station	Machakos	81.0	26-1-2025
3	Dagoretti Meteorological station	Nairobi	64.3	28-1-2025
4	Masii rainfall station	Machakos	60.0	26-1-2025
5	Kibauni rainfall station	Machakos	59.8	29-1-2025
6	Castle forest rainfall station	Kirinyaga	57.6	28-1-2025
7	Dagoretti Meteorological station	Nairobi	55.9	26-1-2025
8	Kisii Meteorological station	Nairobi	56.6	24-1-2025
9	Kitobo seed rainfall station	Taita Taveta	55.7	22-1-2025
10	Nyaroya rainfall station	Migori	53.1	22-1-2025
11	Sony Sugar rainfall station	Migori	52.5	22-1-2025

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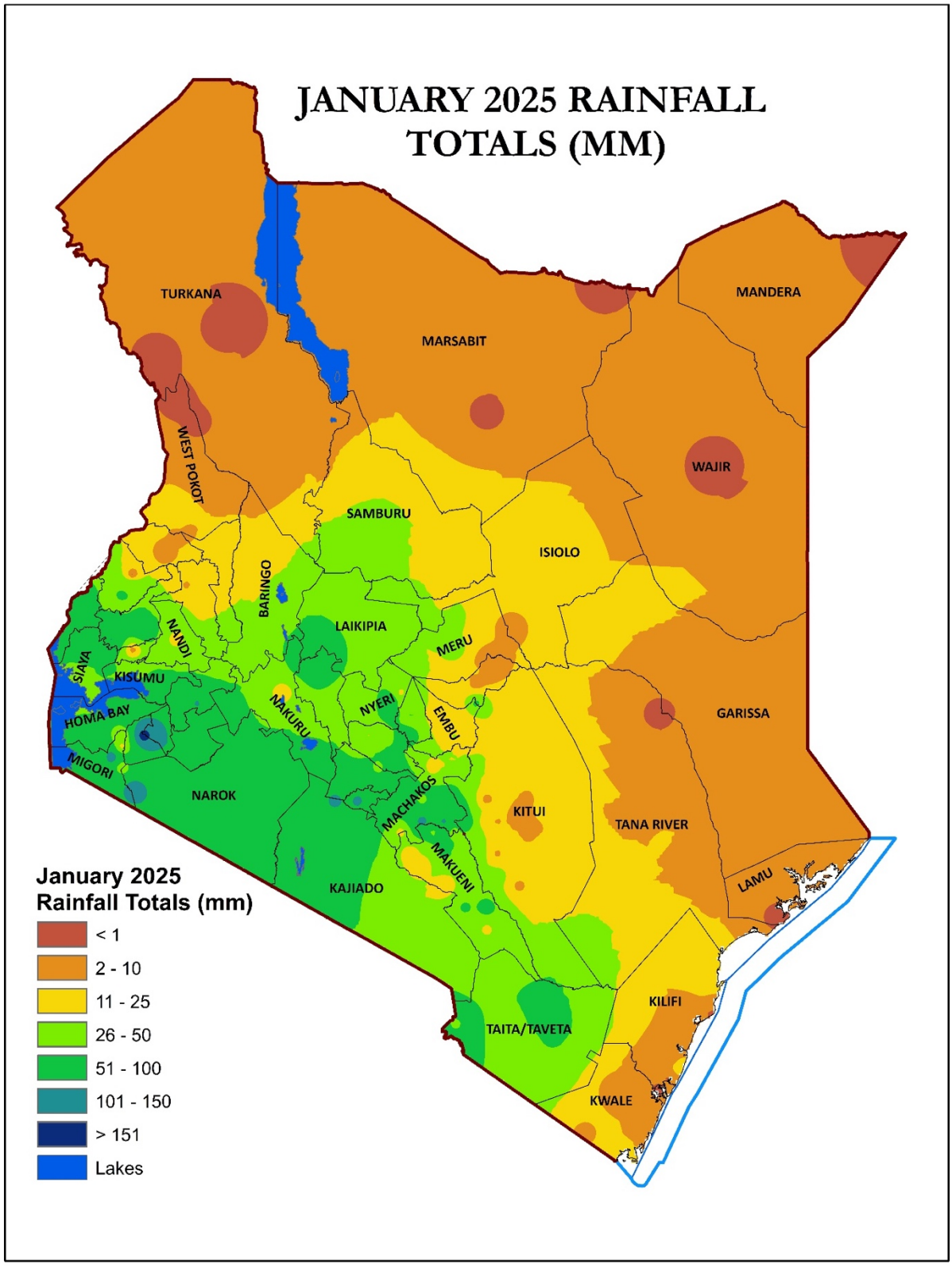

Figure 2A: January 2025 Rainfall Totals

Figure 2A shows the total amount of rainfall recorded in the month**. Figure 2B** shows the total rainfall amount recorded in January (Blue bars) in comparison with the January LTMs (Red bars).

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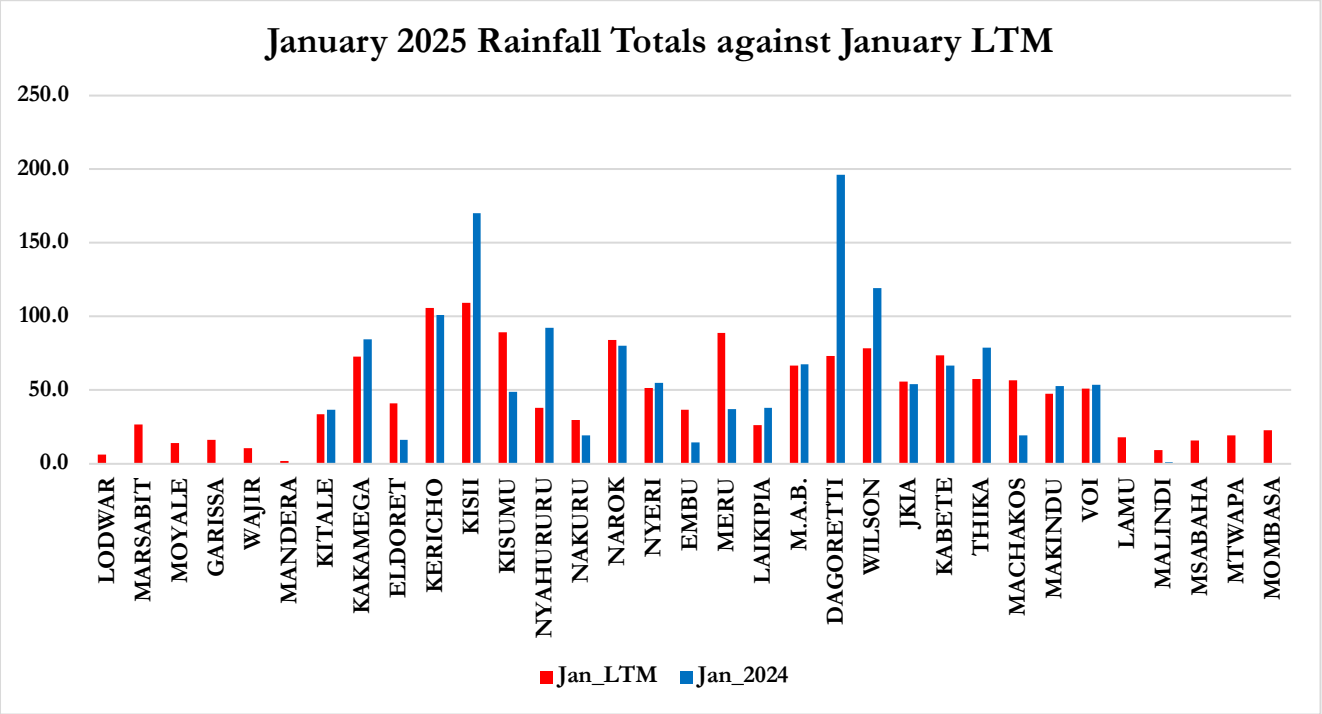

Figure 2B: January 2025 Rainfall Totals against January LTM

4.2 Temperature Review

Most parts of the country recorded warmer than average maximum temperatures except Eldoret, Kericho, Kisumu and Narok where cooler than average temperature was experienced. High positive anomalies of more than 1 were observed over the Central highlands and isolated areas over Southeastern lowlands and Western part of the country, as shown in Figure 3a. Lodwar recorded the highest monthly average temperature (37.3^{0}C). The highest daily maximum temperature (39.8 ^{0}C) was also recorded in Lodwar on 28th January while the lowest temperature (7.0 ^{0}C) was recorded in Nyahururu on the same day**.**

The minimum temperature was also warmer than average over most parts of the country except over Lodwar, Mandera and Nyahururu where temperatures were cooler than normal, as shown in Figure 3b. The highest monthly minimum temperature (25.0°C) was recorded in Malindi, while Nyahururu recorded the lowest monthly minimum temperature (7.0°C). The lowest daily minimum temperature (3.8 ^{0}C) was recorded in Nyahururu on 7th January.

Note: Anomalies refer to the deviation from the mean. Positive anomalies indicate that the temperature was higher than normal, while negative anomalies indicate that the temperature was lower than normal.

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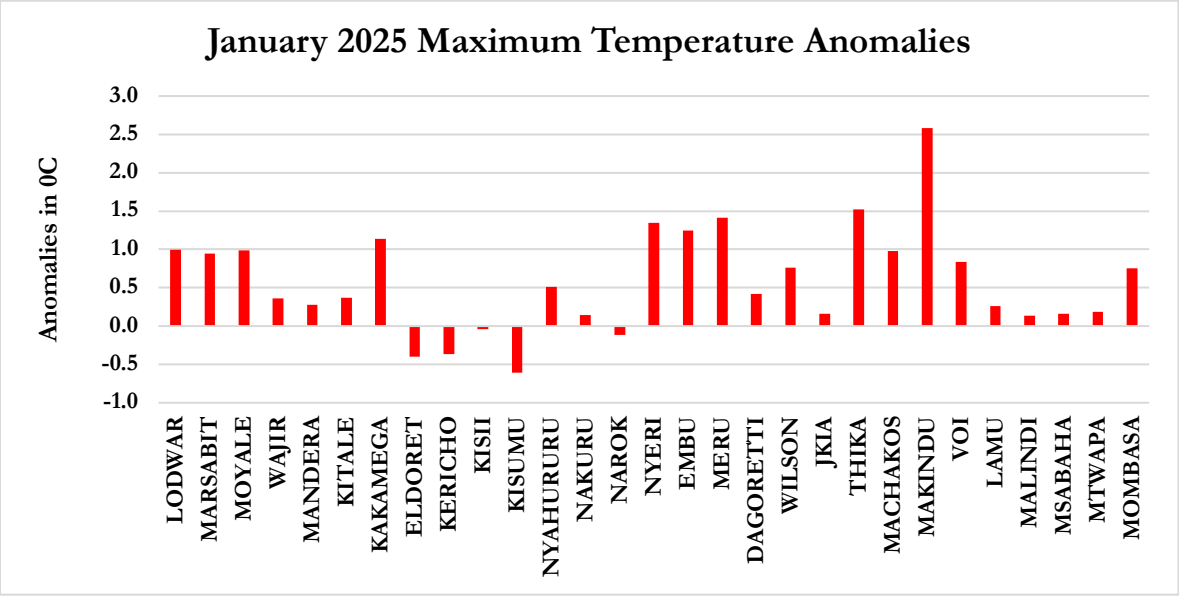

Figure 3a: Maximum Temperature Anomalies

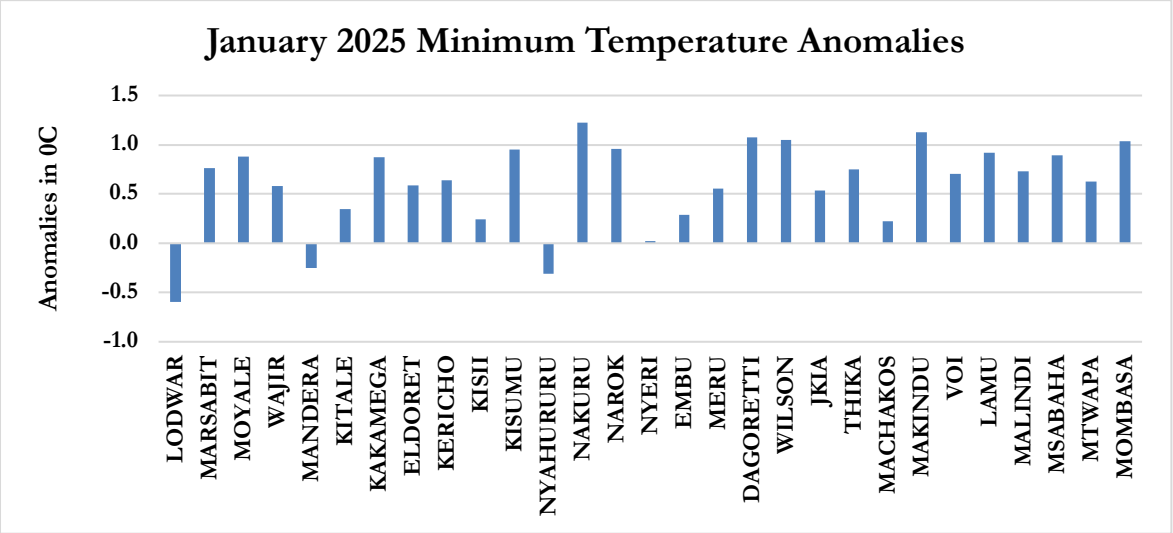

Figure 3a: Minimum Temperature Anomalies

NB: This outlook should be used together with the 24-hour, 5-day, 7-day; special forecasts and regular updates/advisories issued by this Department as well as Weekly and Monthly County forecasts developed and availed by County Meteorological Offices.

KEY OF SCIENTIFIC WORDS USED

Rainfall performance is generally categorized as follows:

- Below 75% of the LTM – Below Normal (Depressed) rainfall
- Between 75% and 125% of the LTM - Near normal rainfall
- Above 125% of the LTM – Above Normal (Enhanced) rainfall

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