



MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

STATE DEPARTMENT FOR ENVIRONMENT AND CLIMATE CHANGE

KENYA METEOROLOGICAL DEPARTMENT

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## CLIMATE OUTLOOK FOR APRIL AND REVIEW OF MARCH 2025

### 1 HIGHLIGHTS

#### 1.1 The forecast for April 2025

April is the peak month of the "Long Rains" season. The outlook for the month indicates that near-to-above-average rainfall is expected across most parts of the country. The Lake Victoria Basin, Highlands West of the Rift Valley, the Rift Valley, Highlands East of the Rift Valley and Nairobi, South-Eastern Lowlands, Northwestern and parts of Northeastern Kenya are likely to receive enhanced rainfall. The Coastal region and the remaining part of Northeastern Kenya, however, are expected to experience near-average rainfall. Isolated episodes of heavy rainfall are likely to occur in various parts of the country during the month. Warmer-than-average temperatures are also anticipated over the whole country.

### 2 CLIMATE OUTLOOK FOR APRIL 2025

#### 2.1 The Rainfall Forecast for April 2025

The April 2025 rainfall forecast is derived from regression analysis of Sea Surface Temperature Anomalies (SSTAs) and Sea Surface Temperature (SST) gradient.

The outlook for the month indicates that the Lake Victoria Basin, Highlands West of the Rift Valley, the Rift Valley, Highlands East of the Rift Valley and Nairobi, South-Eastern Lowlands, Northwestern Kenya, and some areas over the Northeast are expected to receive near-to-above-average rainfall, as shown in Figure 1. The Coastal region and the remaining part of Northeastern Kenya are expected to receive near-average rainfall.

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*All correspondence should be addressed to the Director of Meteorological Services*

Dagoretti Corner, Ngong Road, P. O. Box 30259, 00100 GPO, Nairobi, Kenya

Telephone: 254 (0) 20 3867880-7, 0724 255 153/4

E-mail: [director@meteo.go.ke](mailto:director@meteo.go.ke), [info@meteo.go.ke](mailto:info@meteo.go.ke)

Website: <http://www.meteo.go.ke>

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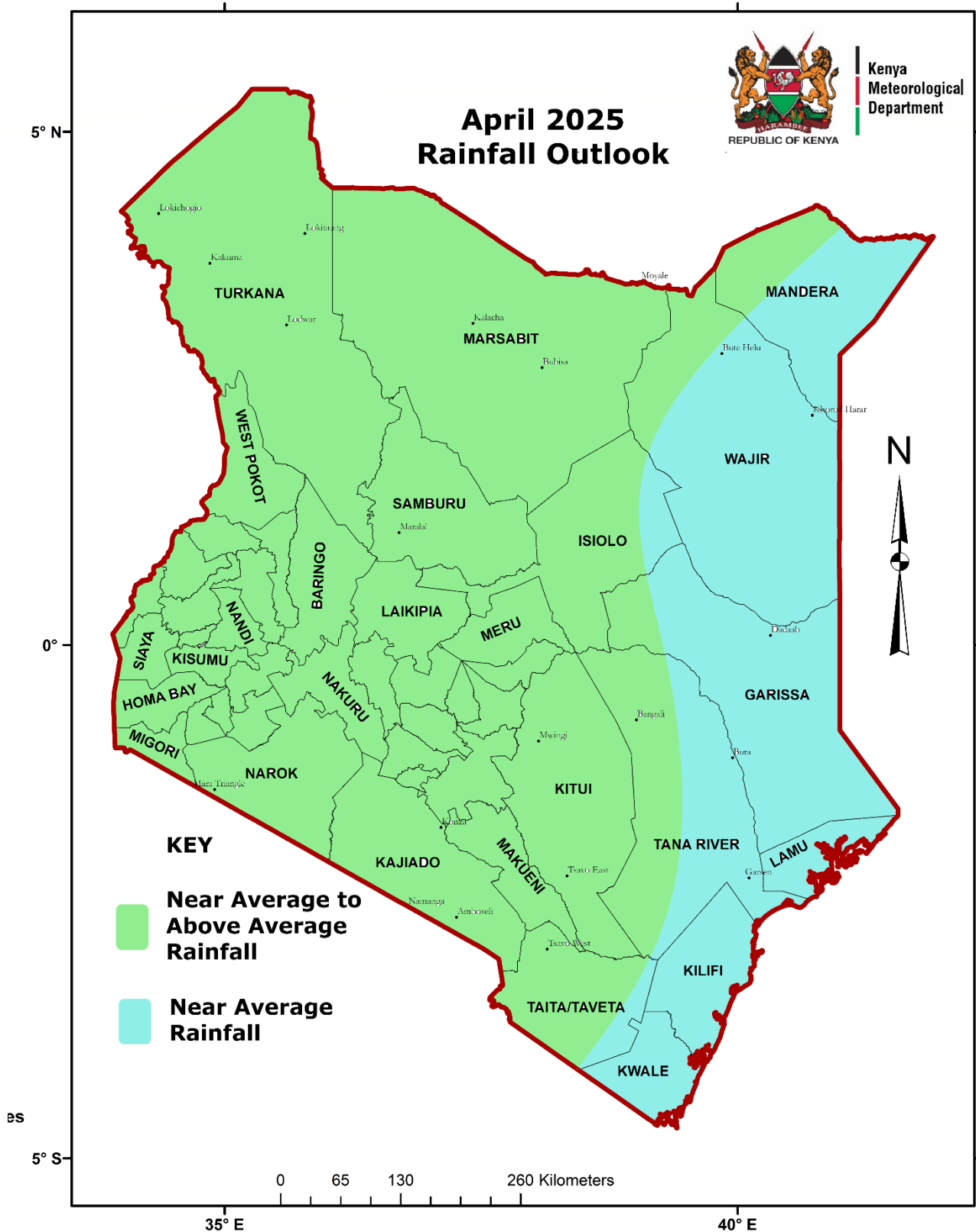


Figure 1: Rainfall outlook for April 2025

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## 2.1 Specific Outlook for individual areas

- 2.1.1 The Lake Victoria Basin, Highlands West of the Rift Valley, the Rift Valley (Siaya, Kisumu, Homa Bay, Migori, Busia, Kisii, Nyamira, Kericho, Bomet, Kakamega, Nandi, Bungoma, Vihiga, West Pokot, Trans Nzoia, Uasin Gishu, Elgeyo Marakwet, Nakuru, Baringo, Laikipia and Narok counties):** The total amounts of rainfall expected in April are likely to be near to above the long-term average for the month. Occasional storms are also likely..
- 2.1.2 The Northwest (Turkana and Samburu counties):** Occasional rainfall is expected during the month. The total amounts of rainfall are likely to be near to above the long-term average for April. Occasional storms are also likely to be experienced.
- 2.1.3 The Highlands East of the Rift Valley (Nyandarua, Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, Tharaka Nithi and Nairobi counties):** Rainfall is expected during much of the forecast period. The total amounts are likely to be near to above the long-term average for April. Occasional storms are also likely to be experienced.
- 2.1.4 The Northeast (Marsabit, Isiolo, Garissa, Wajir and Mandera counties):** Occasional rainfall is expected during the month, with amounts likely to be near the long-term average for April across most of the region, though some areas may receive near-to-above-average rainfall.
- 2.1.5 The South-eastern lowlands (Kajiado, Kitui, Makueni, Machakos, and Taita Taveta counties):** Occasional rainfall is expected during the month. The expected rainfall amounts are likely to be near to above the long-term average for the April though the eastern half of Tana River may experience near average rainfall.
- 2.1.6 The Coastal region (Mombasa, Kilifi, Lamu, Kwale and Coastal Tana River):** These counties are likely to experience occasional rainfall during the month. The expected rainfall amounts are likely to be near the long-term average for April.

## 2.2 Potential impacts

The following are the likely impacts during the month of April 2025 based on the rainfall forecast.

### 2.2.1 Agriculture and Food Security

The near to above average rainfall expected over the high agricultural potential areas of the Highlands West and East of the Rift Valley, the Lake Victoria Basin, Central and South Rift Valley, and the Southeastern lowlands are conducive for agriculture. Farmers are encouraged to continue liaising with the relevant agricultural authorities for best practices.

Pasture may rejuvenate over the ASAL areas of northern Kenya owing to the rainfall received towards the end of March and the occasional rainfall expected in April.

There may be isolated cases of land degradation and soil erosion in areas that are expected to receive near to above average rainfall.

### **2.2.2 Disaster Management**

There is a possibility of isolated storms occurring, which could result in flash and riverine floods in poorly drained urban centers, along rivers over the Highlands East of the Rift Valley, Nairobi County, the Lake Victoria Basin, South Rift, the Southeastern lowlands, and the low-lying areas of northern Kenya. The public are advised not to walk, drive, or cycle in moving waters to avoid risks that could lead to loss of life.

There may be cases of landslides in the high-risk areas over the Highlands East and West of the Rift Valley.

There is also the possibility of lightning strikes over the Lake Victoria Basin, western parts of the country, and parts of the South Rift Valley, notably in areas such as Kisii, Kisumu, Nandi, Kakamega, Narok, and Bungoma. The public are cautioned against seeking shelter from the rain under trees or near metallic structures.

### **2.2.3 Water Resources Management and Energy**

The near-to-above-average rainfall is expected to enhance water availability for both domestic and livestock use. To meet their water requirements, the public are encouraged to adopt rainwater harvesting and storage practices.

Furthermore, the increased inflow into hydropower reservoirs is expected to boost hydropower generation and contribute to groundwater recharge for geothermal power production.

### **2.2.4 Environment**

The increased rainfall is expected to provide ample soil moisture, creating favorable conditions for tree growth. The public are encouraged to plant trees to help expand the forest cover across the country, supporting Kenya's national "15 Billion Trees Campaign (Jaza Miti)" initiative which aims to plant 15 billion trees by 2032 in order to restore degraded landscapes, increase forest cover to 30%, and combat climate change. However, it is important to note that excessive rainfall may lead to environmental degradation, particularly through soil erosion. In this regard, it is advisable to adopt proper agricultural practices, such as implementing soil conservation measures, to help protect and preserve the environment while participating in this critical national effort.

### **2.2.5 Health**

There may be an increase in water and vector-borne diseases in areas that are expected to receive near to above average rainfall, especially over the Lake Victoria Basin, as stagnant water coupled with warmer than average temperatures are likely to provide breeding grounds for mosquitoes and other pathogens. The public are encouraged to use insect-treated nets and embrace Water and Sanitation Hygiene (WASH) practices to minimize their exposure to diseases.

### **2.2.6 Transport and Public Safety**

The rainfall expected during the month may lead to slippery roads and poor visibility, especially on days with heavy rainfall. Motorists are therefore advised to be careful on the roads to minimize accidents.

### 3 REVIEW OF THE CLIMATE DURING MARCH 2025

#### 3.1 Climate Review for March 2025

The onset of the March-April-May (MAM) "Long Rains" season in the country occurred during the second week over the Lake Victoria Basin, Highlands west of the Rift Valley, the Rift Valley, Nairobi, and parts of the Southeastern lowlands. The rest of the country experienced their onset during the third and fourth weeks of March, except Mandera, where onset has not been observed. Near-to-above-average rainfall was recorded over most parts, except Nyahururu, Mandera, Nyeri, and Voi, where below-average rainfall was reported.

Maximum temperatures were warmer than average over several parts, except for a few stations in the northwest, northeast, Nairobi, the Rift Valley, the Lake Basin, and Highlands west of the Rift Valley, where temperatures were cooler than average. Minimum temperatures were warmer than average over the whole country.

#### 3.2 Review of the Rainfall Performance in March 2025

Rainfall was recorded over most parts of the country during the month of March, with the Highlands West of the Rift Valley, the Lake Victoria Basin, the Rift Valley, Nairobi, and parts of the Southeastern lowlands receiving rainfall from the second week. Other parts of the country received rainfall during the third and fourth weeks of March. The rainfall was near to above the March Long Term Mean (LTM) except in Nyahururu, Mandera, Nyeri, and Voi where below average rainfall was recorded. Analysis up to 30th March showed Kitui County's Kiguru station recorded the highest rainfall amount (440.6 mm), followed by other stations exceeding 250 mm: Mururu (396.1 mm), Kirie (387.7 mm), Mayori (367.8 mm), Kitui (357.5 mm), Kasafari (356.2 mm), Migori environment (297.1 mm), Gitii Ngura (289.9 mm), Koromangucha (273.2 mm), Miyare (258.0 mm), Nyaroya (257.4 mm), and Kitobo seed farm (256.5 mm). The month was characterized by severe storms over the Southeastern lowlands, Highlands East of the Rift Valley (including Nairobi county), parts of Northeastern Kenya, the Lake Victoria Basin, the Highlands West of the Rift Valley, and the Coastal region, where rainfall exceeding 50 mm in twenty hours was recorded (see Table 1 for stations recording >70 mm in twenty hours).

**Table 1:** Stations that recorded more than 70 mm of rainfall in twenty hours.

S/NO	STATION	COUNTY	AMOUNT IN MM	DATE
1	Ikisaya rainfall station	Kitui	115.6	25-3-2025
2	Kitobo seed farm rainfall station	Taita Taveta	110.0	25-3-2025
3	Kabete Meteorological station	Nairobi	98.0	9-3-2025
4	Nalepo rainfall station	Kajiado	97.6	28-3-2025
5	Mururu rainfall station	Taita Taveta	92.5	29-3-2025
6	Mutha Chiefs camp rainfall station	Kitui	91.5	25-3-2025
7	Kalambani rainfall station	Kitui	90.0	25-3-2025
8	Ngong Meteorological station	Kajiado	89.2	9-3-2025
9	NEMA Isiolo rainfall station	Isiolo	88.7	25-3-2025
10	Kibauni rainfall station	Machakos	88.5	28-3-2025
11	Wundanyi rainfall station	Taita Taveta	88.5	27-3-2025
12	Mbooni rainfall station	Makueni	88.0	25-3-2025
13	Mururu rainfall station	Taita Taveta	87.5	27-3-2025
14	Kasafari rainfall station	Embu	86.5	24-3-2025
15	Kirie rainfall station	Embu	85.5	9-3-2025
16	Makayaa Meteorological station	Kitui	84.4	25-3-2025
17	Kitui Meteorological station	Kitui	84.3	25-3-2025
18	Garissa Meteorological station	Garissa	82.9	27-3-2027
19	Mbooni rainfall station	Makueni	83.4	27-3-2025
20	Kako Waia rainfall station	Makueni	82.6	28-7-2025
21	Mayori rainfall station	Embu	81.2	27-3-2027
22	Kyuso Agricultural rainfall station	Kitui	80.2	25-3-2025
23	Gitii Ngura rainfall station	Embu	79.6	27-3-2025
24	Kakungula rainfall station	Kitui	79.6	17-3-2025
25	Kinna rainfall station	Isiolo	78.4	27-3-2024
26	Kasafari rainfall station	Embu	78.1	27-3-2025
27	Mlughu rainfall station	Taita Taveta	77.1	30-3-2025
28	Nguu Masumba rainfall station	Makueni	76.4	17-3-2025
29	Oldonyiro Town Centre rainfall station	Isiolo	76.0	25-3-2025
30	Oldonyiro Health Centre rainfall station	Isiolo	75.1	25-3-2025
31	Kirie rainfall station	Embu	74.5	27-3-2025
32	Mtakuja rainfall station	Taita Taveta	73.0	9-3-2025
33	JKIA Meteorological station	Nairobi	72.4	9-3-2025
34	Kalungu rainfall station	Kitui	72.0	25-3-2025
35	Mayori rainfall station	Embu	70.9	21-3-2025
36	Kitobo seed farm rainfall station	Taita Taveta	70.5	17-3-2025

Figure 2 shows the total amount of rainfall recorded in March 2025, (the blue bars) as compared to the LTMs (the red bars), while Figures 2b and 2c depict the spatial distribution.

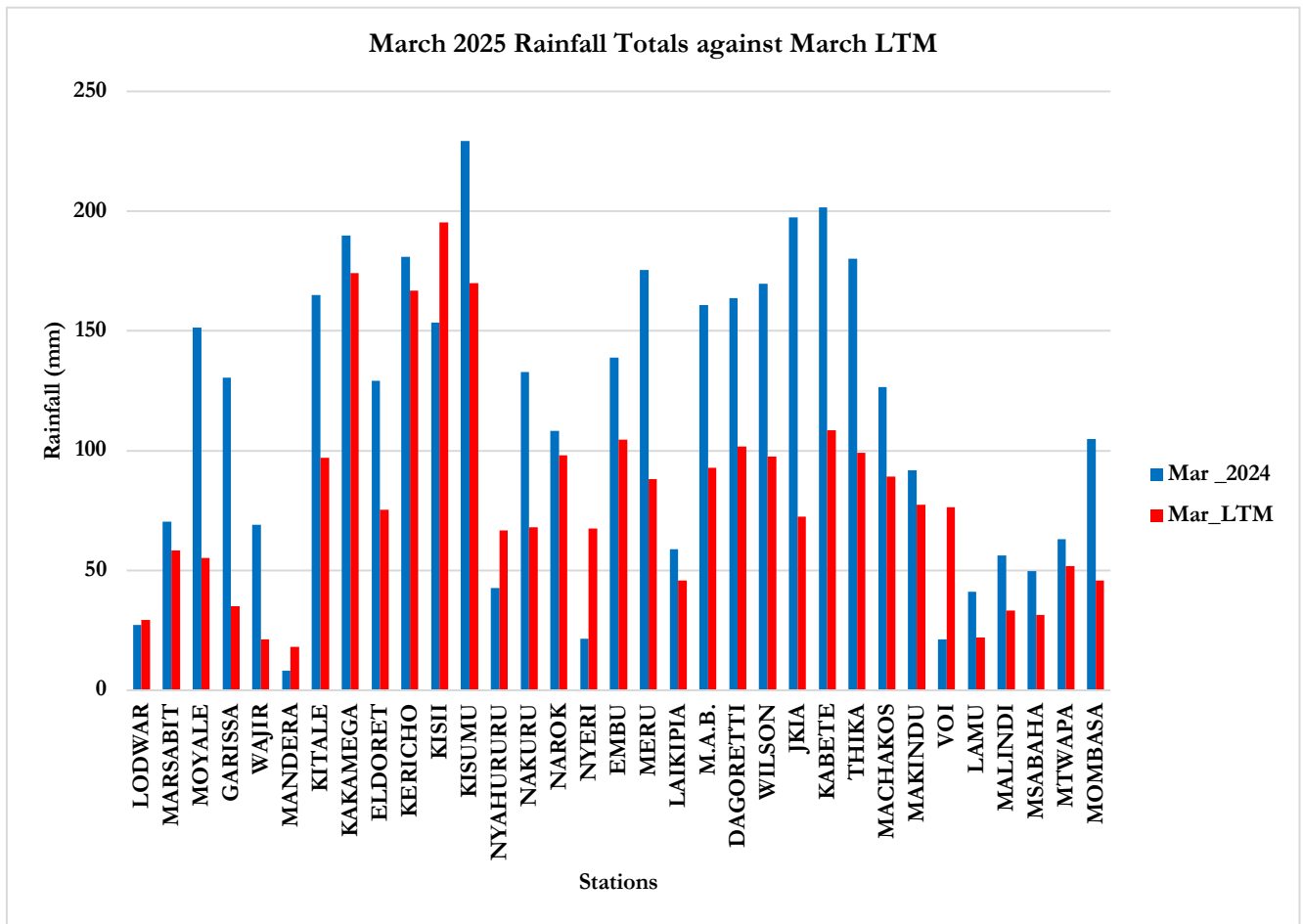
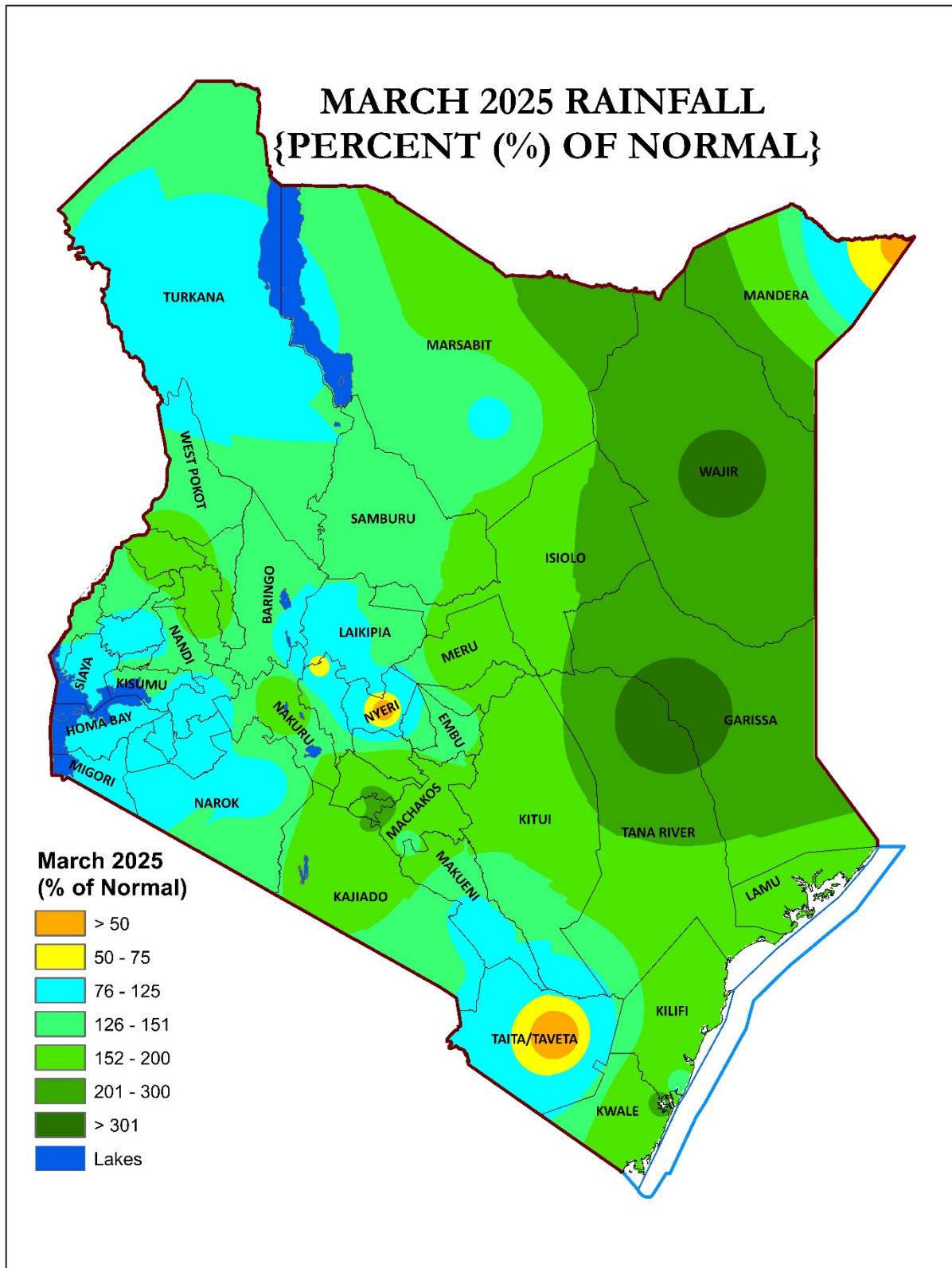


Fig. 2a: March 2025 Rainfall Totals against March LTM





**Fig. 2b: March 2025 Rainfall Performance as a percentage of LTM**

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Dagoretti Corner, Ngong Road, P. O. Box 30259, 00100 GPO, Nairobi, Kenya

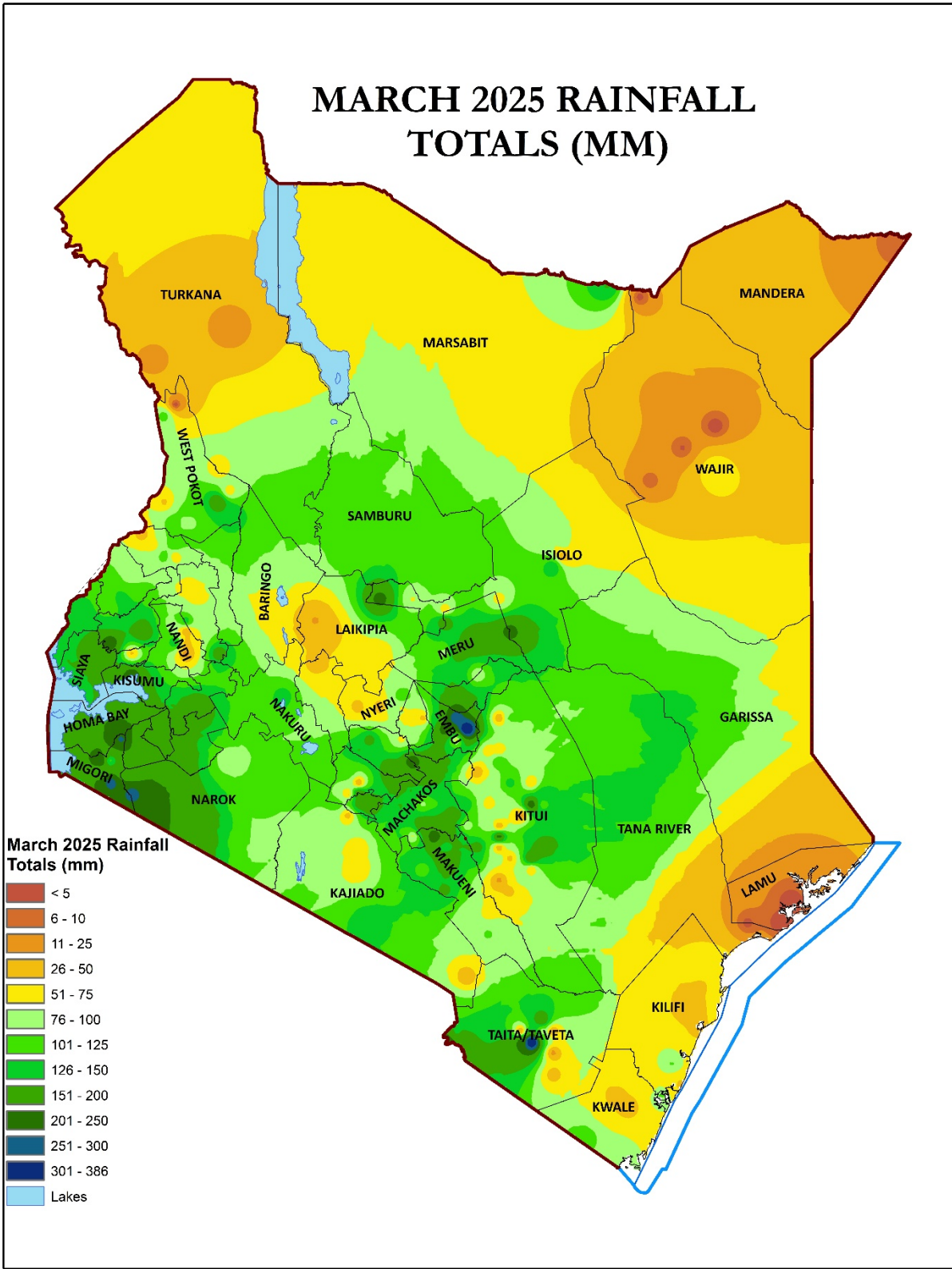
Telephone: 254 (0) 20 3867880-7, 0724 255 153/4

E-mail: [director@meteo.go.ke](mailto:director@meteo.go.ke), [info@meteo.go.ke](mailto:info@meteo.go.ke)

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**Fig. 2c: March 2025 Rainfall Totals**

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 Dagoretti Corner, Ngong Road, P. O. Box 30259, 00100 GPO, Nairobi, Kenya  
 Telephone: 254 (0) 20 3867880-7, 0724 255 153/4  
 E-mail: [director@meteo.go.ke](mailto:director@meteo.go.ke), [info@meteo.go.ke](mailto:info@meteo.go.ke)  
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### 3.3 Temperature Review

Most parts of the country recorded higher-than-average daytime (maximum) temperatures during the month, except Lodwar, Moyale, Wajir, Eldoret, Kericho, Kisumu, Nakuru, Narok, Wilson, and Jomo Kenyatta International Airport (JKIA) where temperatures were lower than average. Exceptionally high daytime maximum temperatures were occasionally observed over the Northern region, with Lodwar recording 40.0°C on 15th March, while Mandera recorded 40.0°C on 1st, 40.5°C on 14th and 23rd, and 40.6°C on 15th March. Mandera recorded the highest monthly average temperature (38.6°C).

Minimum (night time) temperatures were higher than average nationwide, though some stations in the Highlands East of the Rift Valley and South Rift Valley occasionally recorded minimum temperatures below 10.0°C. Notable observations included Laikipia Air Base recording 8.2°C on 1st and 8.0°C on 14th, Narok recording 8.8°C on 2nd and 3rd, and Nyahururu recording below 10.0°C for most of the month along with the lowest monthly average minimum temperature (8.8°C).

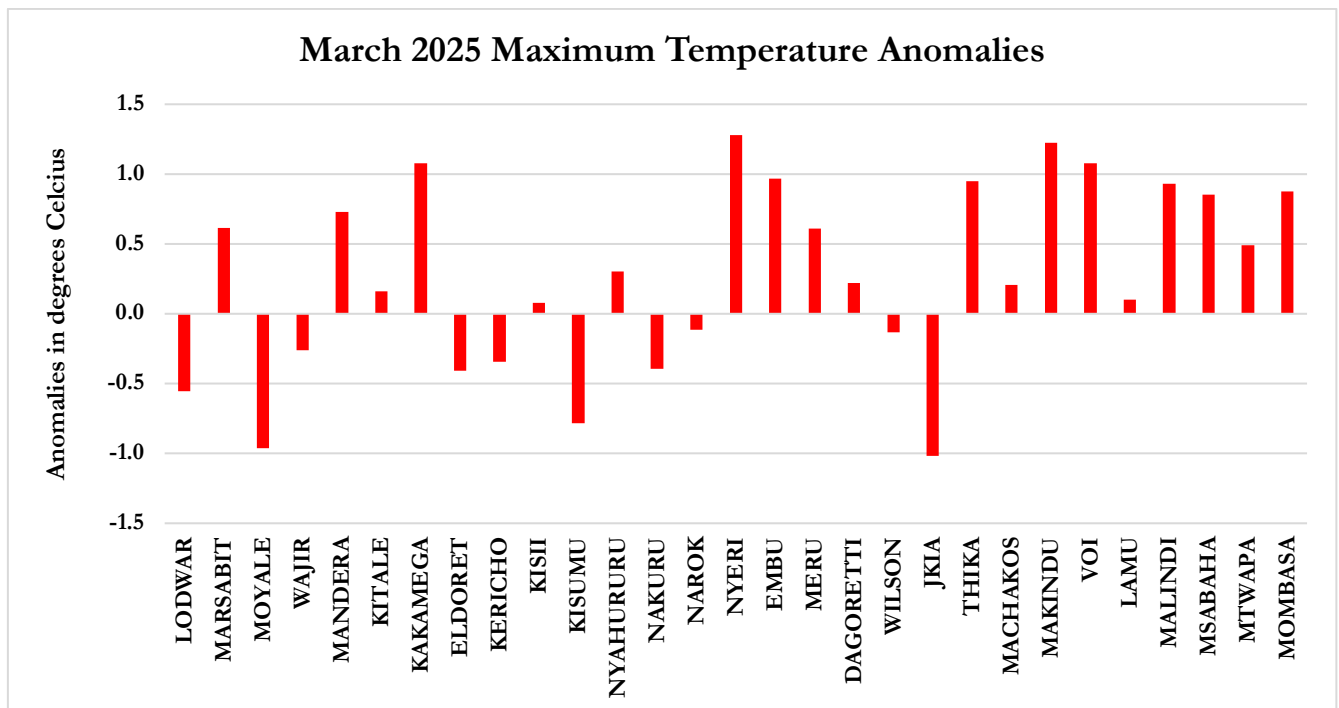


Fig 3a: March 2025 Maximum Temperature Anomalies

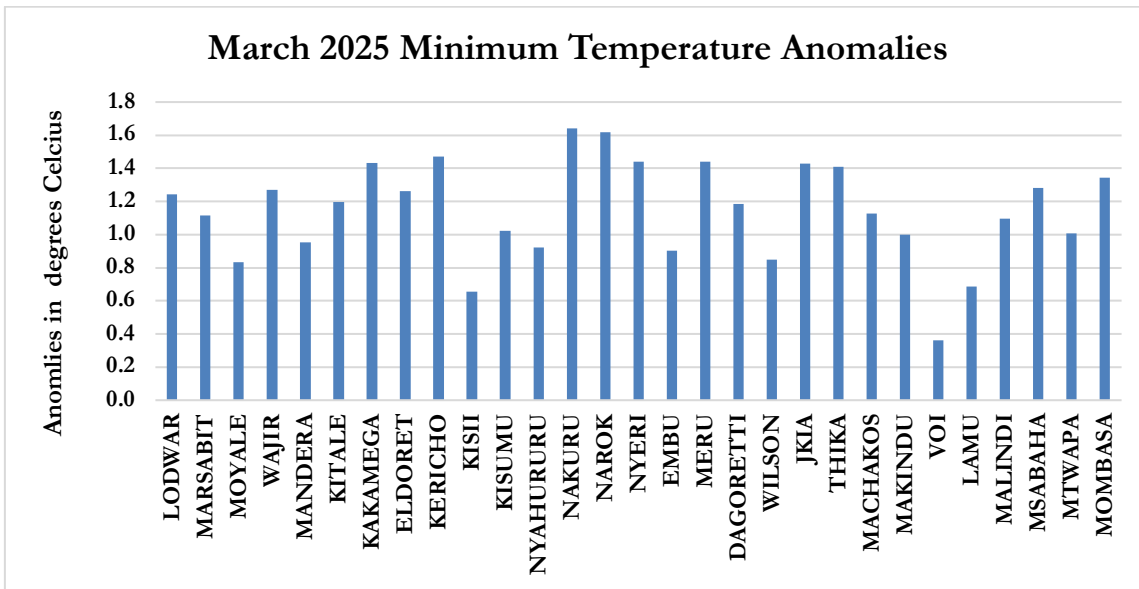


Fig 3b: March 2025 Minimum Temperature Anomalies

*NB: This outlook should be used with 24-hour, 5-day and 7-day regular updates issued by this Department. Weekly County forecasts are available from County Meteorological Offices.*

Dr. David Gikungu  
**DIRECTOR OF METEOROLOGICAL SERVICES**