MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY
STATE DEPARTMENT FOR ENVIRONMENT AND CLIMATE CHANGE
KENYA METEOROLOGICAL DEPARTMENT
REPUBLIC OF KENYA

Ref. No. KMD/FCST/5-2025/SO/02 **Date: 30 May 2025**

CLIMATE OUTLOOK FOR THE JUNE-JULY-AUGUST 2025 SEASON AND REVIEW OF THE MARCH-APRIL-MAY 2025 "LONG RAINS" SEASON

1. Highlights

1.1. The Outlook for June-July-August 2025 Rainfall Season

The outlook for the June-July-August (JJA) 2025 rainfall season indicates a likelihood of near to above-average rainfall in the Highlands west of the Rift Valley, the Lake Victoria Basin region, the Rift Valley, parts of the Highlands east of the Rift Valley, and the northwestern region. The coastal strip is expected to receive near-average rainfall, with a tendency toward below-average amounts, while the rest of the country will generally remain dry.

In the Central Highlands and Nairobi areas, as well as parts of the Southeastern lowlands and isolated highland areas of Marsabit County, cool and cloudy conditions with occasional light to moderate rainfall are anticipated. Overall, temperatures across most parts of the country are expected to be warmer than average for the season. However, a few areas—including Turkana, West Pokot, and parts of Samburu, Marsabit, Elgeyo Marakwet, Laikipia, and Baringo counties—are expected to experience cooler than average temperatures.

1.2. Rainfall Review during the March-April-May 2025 Season

The March-April-May (MAM) 2025 "Long Rains" season in Kenya began earlier than expected in several regions, with onset occurring in mid-March across most parts of the country, though Mandera experienced a delayed onset in April. Near to above-average rainfall was recorded in most areas, with the highest totals in the western highlands and central regions. However, Nyeri recorded below-average rainfall, and prolonged dry conditions were observed in the Coastal region and Mandera. Rainfall distribution was generally good, though the season was marked with severe storms across several parts of the country, particularly in March, April, and early May. The northern and eastern arid and semi-arid lands recorded significantly lower rainfall totals, with Lodwar and Mandera having the lowest. Compared to long-term averages, 15 stations recorded above-normal rainfall, 17 were near-normal, and only one was below-normal. Temperatures were generally warmer than average across most of the country, except in Kisumu and Lodwar, where mean temperatures were cooler than normal. By the end of May, rainfall had ceased in the northeast and southeast, while central, western, and coastal regions are expected to continue receiving rainfall into the June–August season.

2. Forecast for June-July-August 2025

2.1. Rainfall Forecast for June-July-August 2025

The forecast for the June-July-August (JJA) rainfall period suggests that the Highlands west of the Rift Valley, the Lake Victoria Basin, the Rift Valley, parts of the Highlands east of the Rift Valley, and the northwestern regions are likely to receive near to above-average rainfall. The Coastal Strip is expected to experience near-average rainfall with a tendency toward below-average amounts. Additionally, the Highlands east of the Rift Valley—including Nairobi County—along with parts of the Southeastern lowlands and isolated areas in Marsabit County, are expected to experience cool and cloudy conditions with occasional light rains. The rest of the country is expected to remain generally dry, as shown in Figure 1a.

Climatologically, rainfall during the June-July-August season is typically concentrated over the Lake Victoria Basin, the Highlands west of the Rift Valley, the Rift Valley, parts of the Highlands east of the Rift Valley, isolated areas of the northwestern region, and the Coastal Strip. The remainder of the country is generally

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dry during this period, as illustrated in Figure 1b.

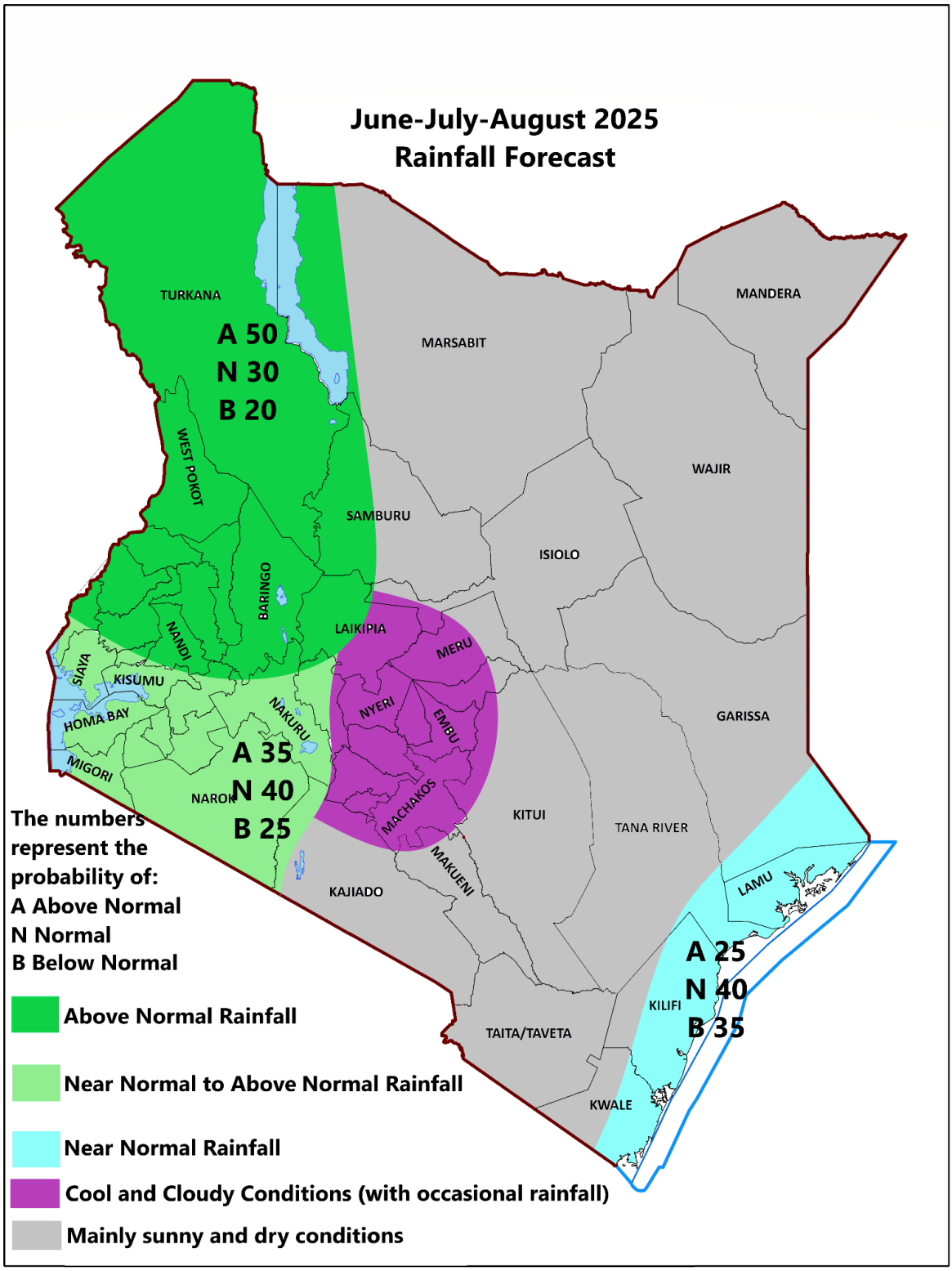

Figure 1a: June-July-August 2025 Rainfall Forecast

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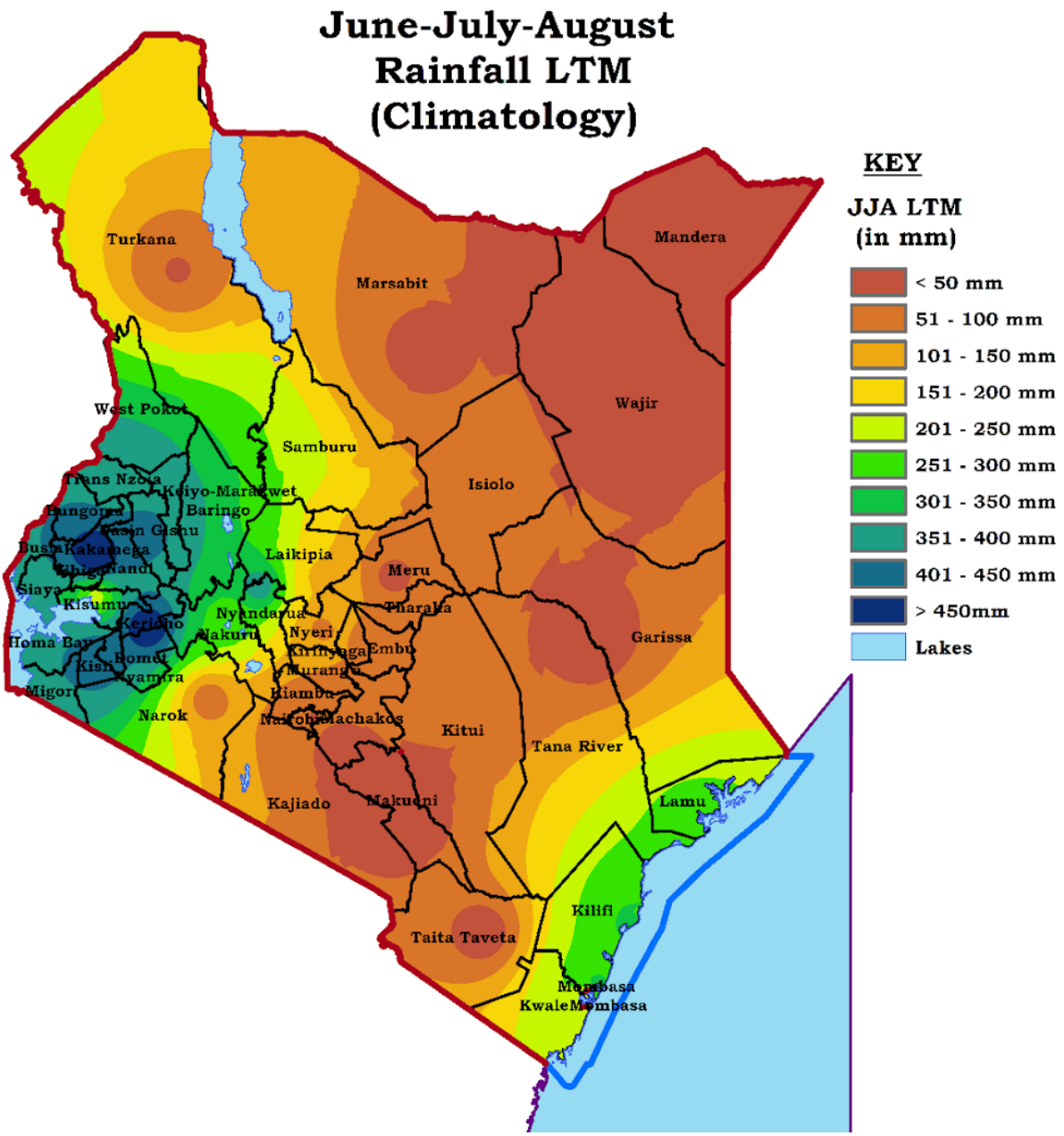

Figure 1b: June-July-August Climatology

The outlook for specific areas is as follows:

2.1.1. Parts of the Highlands West of the Rift Valley and Central Rift Valley: (Bungoma, Kakamega, Vihiga, Nandi, Trans Nzoia, Uasin Gishu, Elgeyo Marakwet, West Pokot and Baringo Counties and the Western part of Laikipia County): Rainfall with occasional breaks is expected to continue throughout the season. The expected total rainfall amounts are likely to be above the long-term average amounts for the season.

The temperatures in this region are expected to be warmer than the average for the season. However, West Pokot and parts of Elgeyo Marakwet, Trans Nzoia and Baringo counties as well as the western parts of Laikipia county are likely to experience cooler than average temperatures.

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2.1.2. The Lake Victoria Basin, the South Rift Valley, parts of the Highlands West of the Rift Valley, parts of the Central Rift Valley (Siaya, Kisumu, Homa Bay, Migori, Busia, Narok, Kisii, Nyamira, Kericho, Bomet, Nakuru counties and the parts of Nyandarua county): Rainfall with occasional breaks is expected to continue throughout the season. The expected total rainfall amounts are likely to be near to above the long-term average amounts for the season.

The temperatures in this region are expected to be warmer than the average for the season.

2.1.3. Northwestern regions (Turkana and Samburu counties) are expected to remain generally sunny and dry. However, a few areas are likely to receive occasional showers and thunderstorms. The expected total rainfall amounts are likely to be higher than the long-term average amounts for the season. Strong south easterly winds of more than 25 knots are likely during the season.

The temperatures in this region are expected to be lower than the average for the season except for the eastern parts of Samburu where temperatures are expected to be higher than average.

2.1.4. Highlands East of the Rift Valley (including Nairobi area): *(Nyandarua South, Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, Tharaka Nithi, Nairobi counties and the eastern parts of Laikipia County):* These counties are likely to experience cool, cloudy and foggy conditions with occasional light rains. Occasional afternoon and night showers are also likely, especially during the month of June. The total rainfall amounts during the period are expected to be close to the long-term average for the season.

These areas are expected to experience cool conditions with daytime (Maximum temperatures) occasionally falling below 18^{o}C.

2.1.5. The North-Eastern region (Mandera, Marsabit, Wajir, Garissa, Isiolo counties) is expected to be generally sunny and dry throughout the forecast period. However, a few high-ground areas in Marsabit County may occasionally experience cloudy and foggy conditions with light morning rains. Strong southerlies to southeasterly winds of more than 25 knots are likely during the season.

The temperatures in this region are expected to be higher than the average for the season except the western parts of Marsabit county bordering Lake Turkana where temperatures are expected to be lower than average.

2.1.6. South-eastern Lowlands (Kitui, Makueni, Machakos, Tana River, Taita Taveta, and Kajiado counties) are expected to be generally sunny and dry throughout the forecast period. However, a few areas bordering the Central Highlands and Nairobi (parts of Machakos, Kajiado, Kitui counties) and the high ground areas in Makueni and Taita Taveta counties (Chyulu & Taita hills) are likely to experience occasional cool and cloudy conditions with light rains.

The temperatures in this region are expected to be higher than the average for the season. However, a few areas bordering Nairobi and Central Highlands as well as around Taita hills may occasionally experience cool daytime (Maximum) temperatures.

2.1.7. The Coastal region *(Mombasa, Kilifi, Lamu, Kwale counties and* coastal parts of Tana River County) is expected to receive occasional rainfall during the season. The region is likely to receive near average rainfall with a tendency to below average rainfall.

The temperatures in this region are expected to be higher than the average for the season.

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2.2 JJA 2025 TEMPERATURE FORECAST

Overall, temperatures across most parts of the country are expected to be warmer than average during the June-July-August (JJA) 2025 season. However, a few counties—such as Turkana, West Pokot, and parts of Samburu, Marsabit, Elgeyo Marakwet, Laikipia, and Baringo—are expected to experience cooler than average temperatures temperatures, as illustrated in Figure 2.

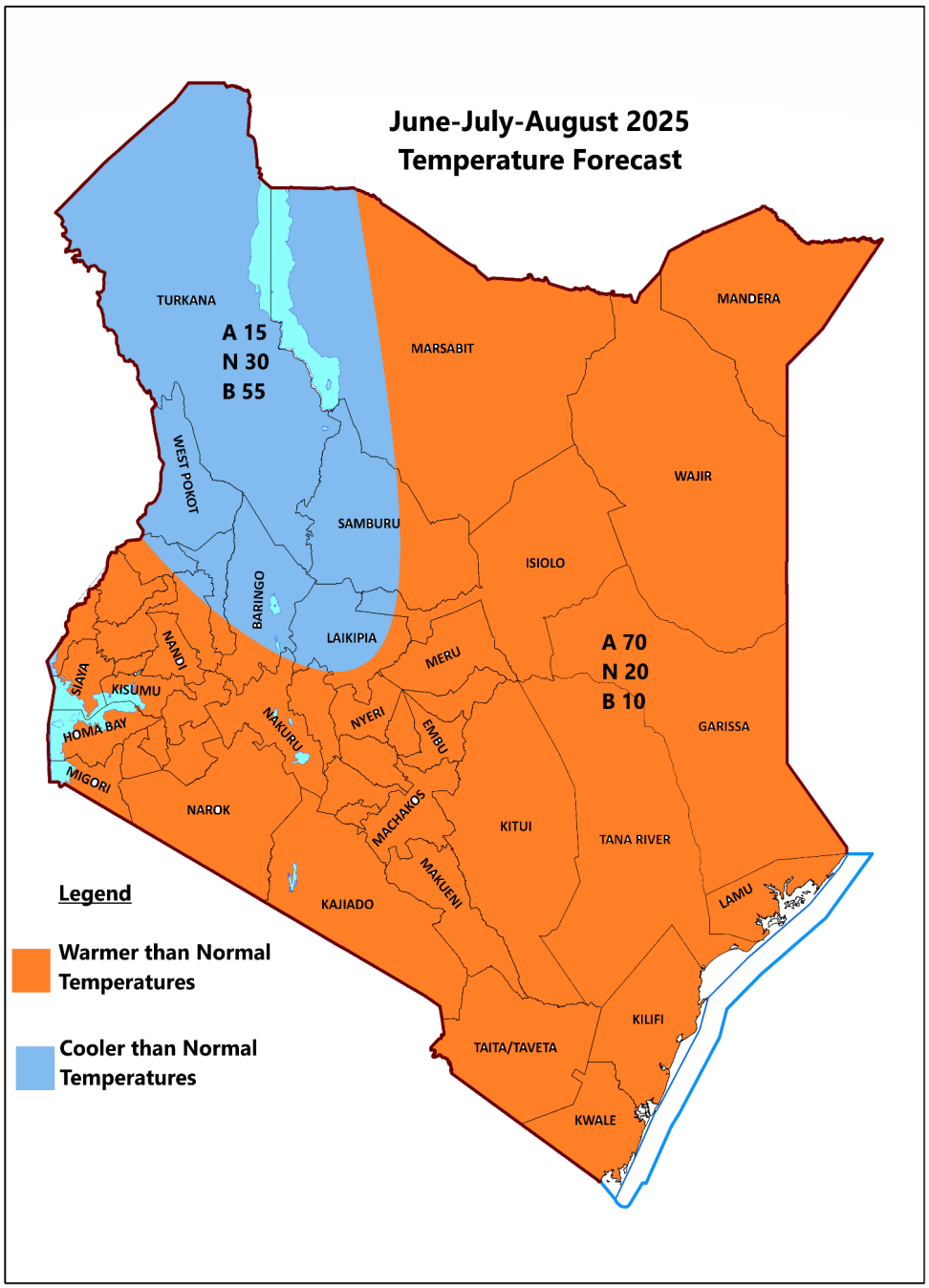

Fig. 2: JJA 2025 Temperature Forecast

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3. EXPECTED POTENTIAL IMPACTS

The following are the likely impacts during the June-July- August season:

3.1 Disaster Management

Cases of isolated flooding are likely over the low-lying areas and flood plains especially over the Lake Victoria Basin. Relevant authorities are advised to put in place measures to avert possible negative impacts that could arise. Residents in these areas are advised not to walk or drive through flooded rivers or moving water.

Cases of lightning strikes are likely over the Lake Victoria Basin and Highlands West of the Rift Valley. The public is advised not to shelter near metallic structures or under trees.

Landslides may be experienced over Elgeyo Marakwet and West Pokot counties owing to the above average rainfall expected during the season.

3.2 Agriculture and Food Security Sector

The rainfall expected over the Highlands West of the Rift Valley, Lake Victoria Basin, Central, and South Rift Valley may be conducive for crop production. Relevant authorities are advised to carry out pests and disease surveillance, control and preventive measures.

3.3 Health Sector

Respiratory diseases like asthma, pneumonia, flu, and the common cold are likely to increase over Nairobi County and the Highlands East of the Rift Valley due to the expected cold conditions. The public in these areas are advised to dress warmly and follow advice from the Ministry of Health. They are also advised to avoid using charcoal *jikos* in poorly ventilated houses as they may produce carbon monoxide gas that is lethal when inhaled.

Malaria transmission is expected to be normal over the Lake Victoria Basin, the Highlands West of the Rift Valley, Northwestern regions, though there may be an increase over the Coastal region due to the predicted warmer-than-average temperatures during the season. Respiratory diseases and eye infections are likely to occur over the Northeastern region due to dust storms as a result of the windy and dry conditions expected. Health authorities are therefore advised to preposition and redistribute medical supplies and insect-treated nets in the affected areas.

3.4 Transport and Public Safety Sectors

Fog formation in the areas that are expected to experience cold and cloudy conditions may pose danger for motorists due to low visibility. Care should be taken while driving in these areas, especially along the Nairobi-Nakuru Highway and particularly on the Kikuyu-Kinungi stretch in Kiambu County.

Light rains and drizzles may also cause roads to be slippery. Road users are advised to take utmost care to minimize accidents that may result from such weather conditions. Foggy weather is also likely to occasionally cause operational disruption at the Wilson and Jomo Kenyatta International Airports.

3.5 Water Resources Management and the Energy Sectors

Water availability is expected to be good in most parts of the country owing to the good rains experienced during the MAM season. However, residents in areas expected to remain dry are advised to conserve and use the available water efficiently to ensure their water needs are met throughout the dry season. Residents in areas expected to receive rainfall are encouraged to practice rainwater

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harvesting to boost their water reserves. Water levels in the hydropower-generating dams across the country are expected to remain at normal levels.

3.6 Environment

The above-average rainfall expected over the Lake Victoria Basin, Highlands West of the Rift Valley, Rift Valley, and parts of the Highland East of the Rift Valley are likely to maintain conducive soil moisture for the growing of trees. Therefore, the public is encouraged to take advantage of this and plant trees to increase forest cover.

4 REVIEW OF MARCH-MAY (LONG-RAINS) 2025 SEASON

4.2 Rainfall Review

Onset and Temporal Distribution

The March–April–May (MAM) "Long Rains" season commenced during the second week of March across several key regions, including the Lake Victoria Basin, the Highlands west of the Rift Valley, the Rift Valley, Nairobi, and parts of the Southeastern lowlands. For the remainder of the country, the seasonal onset occurred during the third and fourth weeks of March, with the exception of Mandera, where no significant rainfall onset was observed until the third week of April.

Rainfall distribution exhibited generally favorable temporal and spatial patterns across most regions. However, the Coastal region and Mandera experienced prolonged dry spells throughout March and April. Several areas, particularly in the Central and Eastern sectors including parts of the Northeast, as well as some western areas including the Lake Basin, were affected by severe storms during the season, with the most intense activity occurring in March, April, and early May.

Spatial Variability in Rainfall Accumulation

Marked spatial disparities were evident in rainfall distribution across the country. The western highlands and central regions recorded notably high totals, with Kakamega leading at 911.3 mm, followed by Kisii (779.8 mm) and Kericho (766.0 mm)—all consistent with the climatological norms of these rain-abundant highland areas. Elevated precipitation also extended into Nairobi's periphery, where Kabete registered 747.3 mm, and into parts of the coastal strip, with Mtwapa recording 718.9 mm.

In contrast, synoptic stations located in the arid and semi-arid lands (ASALs) of northern and eastern Kenya recorded the lowest rainfall accumulations nationwide. Lodwar (122.9 mm), Mandera (128.8 mm), Wajir (210.1 mm), and Garissa (238.1 mm) registered markedly suppressed rainfall totals.

Comparative Rainfall Performance

Analysis of rainfall performance relative to long-term averages revealed substantial regional variations. Garissa station recorded the most exceptional performance with 193.9% of its long-term mean, indicating nearly double the typical rainfall. Makindu followed closely with 179.7%, while Meru registered 154.3% of its normal rainfall. Other stations showing markedly above-normal conditions include Wajir (151.7%), Nyahururu (149.1%), Voi (144.5%), and Kabete (144.1%). In total, fifteen stations recorded above-normal rainfall, defined as ≥125% of the long-term mean.

The majority of stations, seventeen in number, fell within the near-normal range of 75-125% of long-term averages. This category included major agricultural zones such as Kericho (115.2%) and Kisii (109.7%), suggesting generally expected rainfall patterns across these critical areas. Nyeri station was the sole outlier recording below-normal rainfall at 72.0% of its long-term mean, representing an isolated dry anomaly amidst otherwise normal to above-normal conditions across most of the country.

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Seasonal Cessation

Features of cessation of the MAM 2025 seasonal rains are evident across the Northeastern and most Southeastern parts of the country. However, the Central regions such as Nairobi may continue to experience occasional rainfall, particularly during the first half of June. Meanwhile, the Western sector encompassing the Lake Basin and Northwestern regions, along with the Coastal area, are expected to maintain rainfall activity into the June to August season.

Figure 3a shows the amounts of rainfall recorded during the MAM 2025 season **(Bluebars)** as compared to the MAM seasonal LTMs **(Redbars). Figure 3b** shows the MAM 2025 seasonal rainfall performance as a percentage of the LTMs. **Figure 3c** illustrates the MAM 2025 rainfall totals.

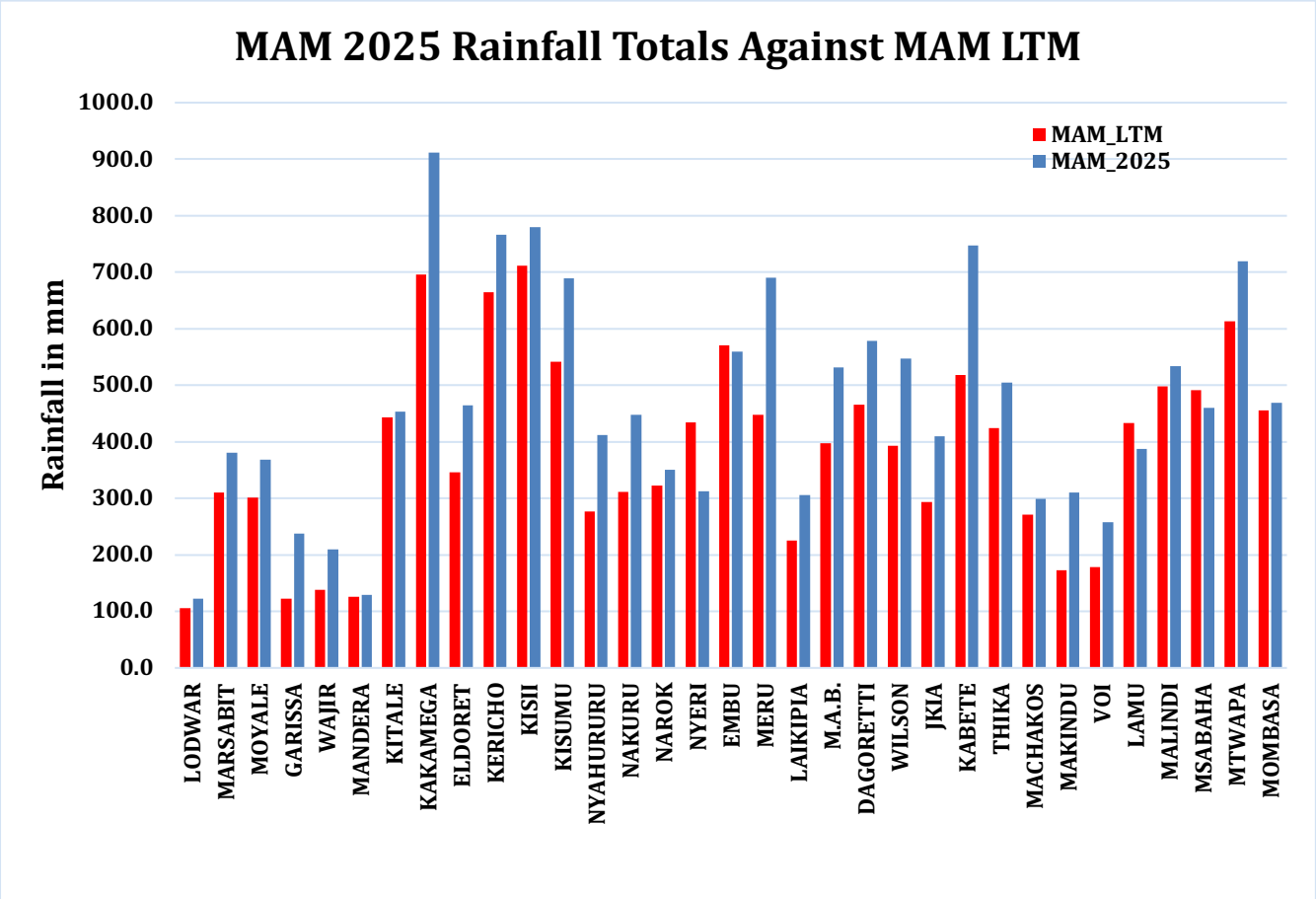

Figure 3a: MAM 2025 Rainfall Totals Compared to MAM Seasonal LTM.

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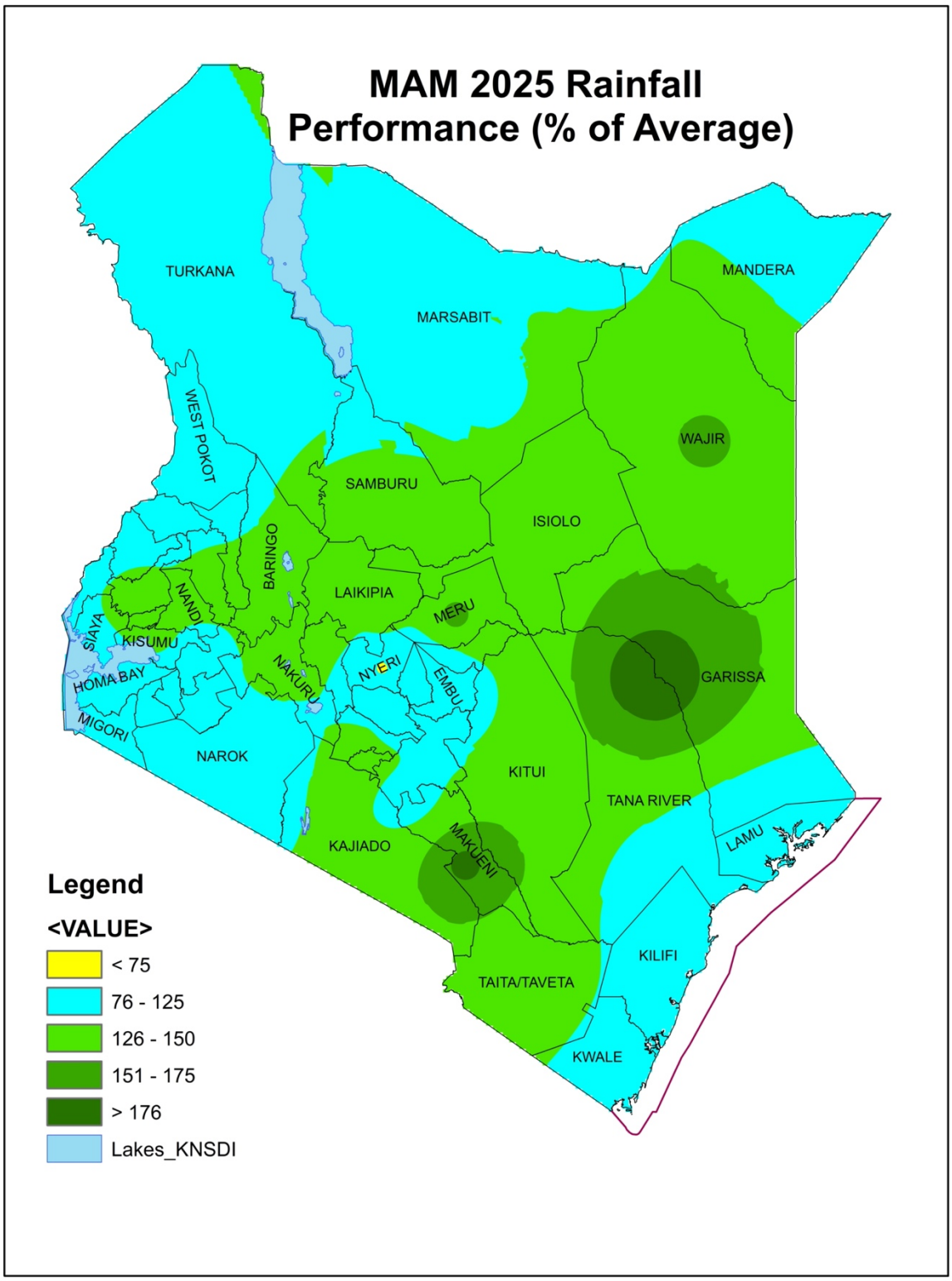

Figure 3b: MAM 2025 Rainfall Performance as a Percentage (%) of MAM LTM

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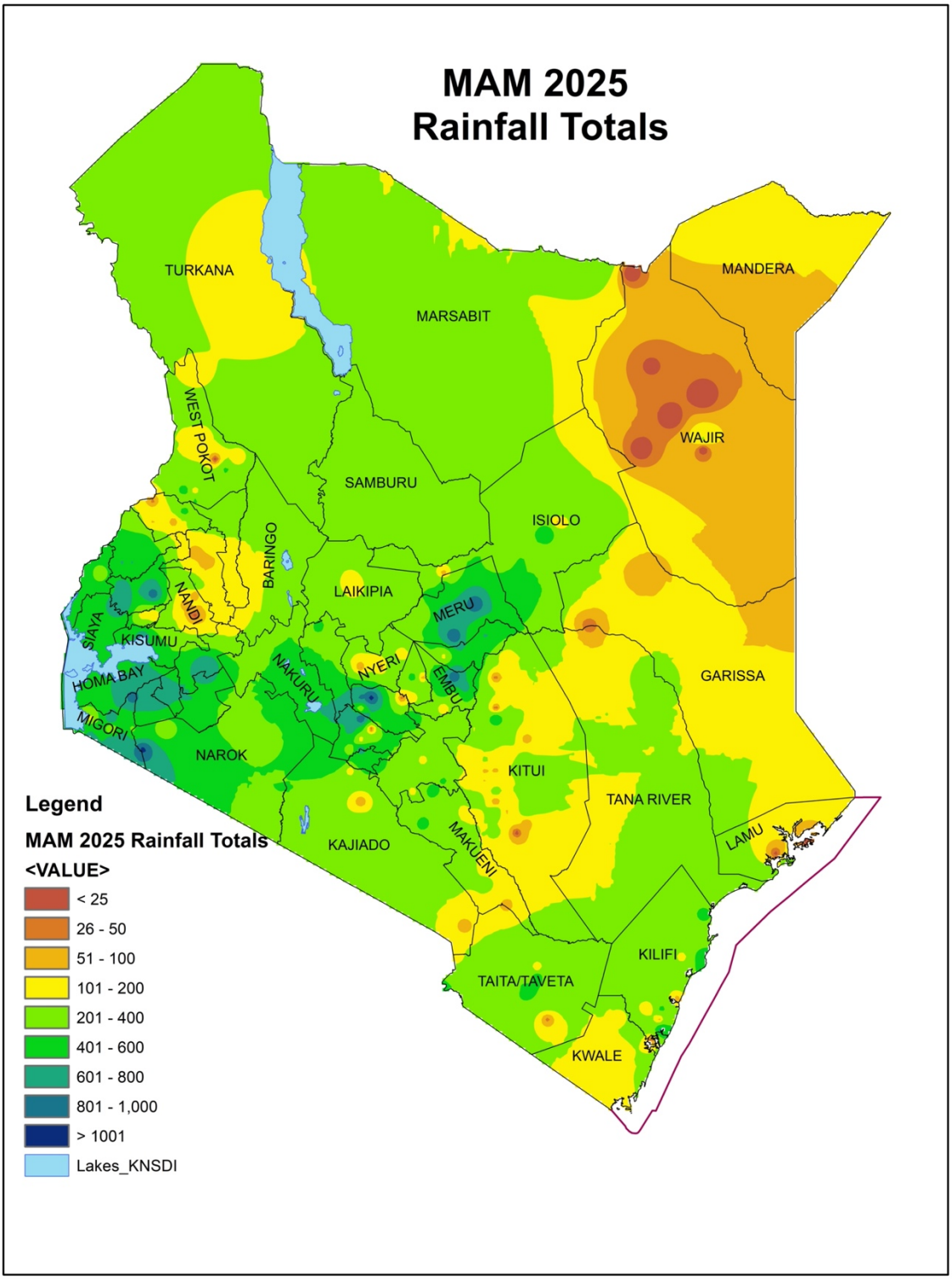

Figure 3c: MAM 2025 Rainfall Performance as a Percentage (%) of its LTM

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Rainfall performance categories	
Range	***Category***
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*

4.2 JJA 2025 TEMPERATURE REVIEW

Maximum Temperatures

Maximum temperatures were predominantly higher than average across the eastern sector of the country, encompassing the Coastal region, Southeastern lowlands, and the Highlands East of the Rift Valley, including Nairobi County. Elevated maximum temperatures were also recorded in Kakamega and Mandera. In contrast, the rest of the country, including Jomo Kenyatta International Airport (JKIA) in Nairobi, experienced cooler-than-average maximum temperatures (Figure 4a).

Minimum Temperatures

Minimum temperatures were generally higher than average over most parts of the country. The only exception was Mandera, where cooler-than-average minimum temperatures were observed (Figure 4b).

Mean Temperatures

Mean temperatures followed a similar pattern, remaining warmer than average across most regions. However, Lodwar and Kisumu recorded cooler-than-average mean temperatures (Figure 4c).

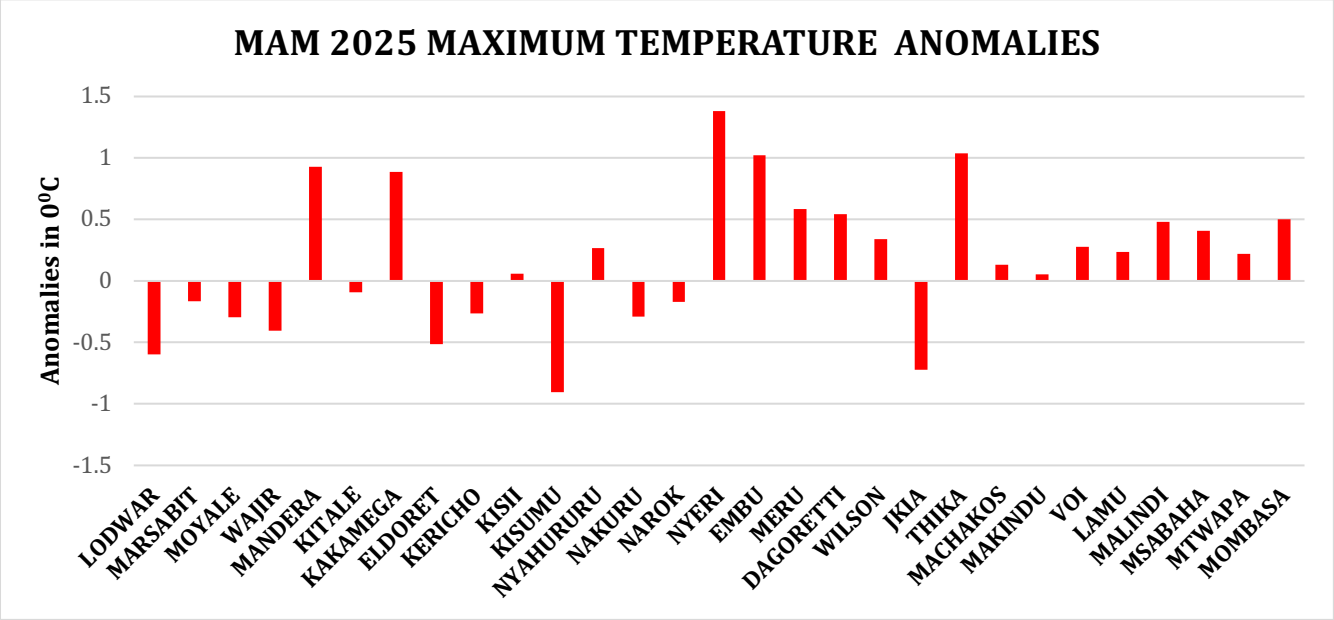

Fig. 4a: MAM 2025 Maximum Temperature Anomalies

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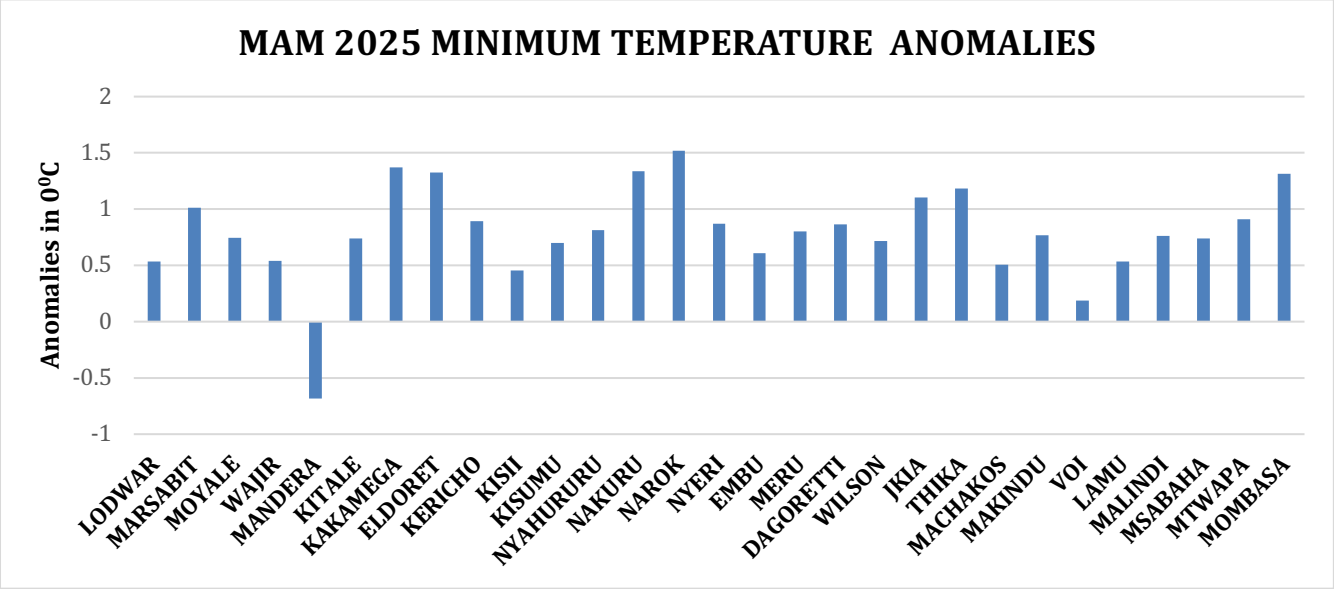

Fig. 4b: MAM 2025 Minimum Temperature Anomalies

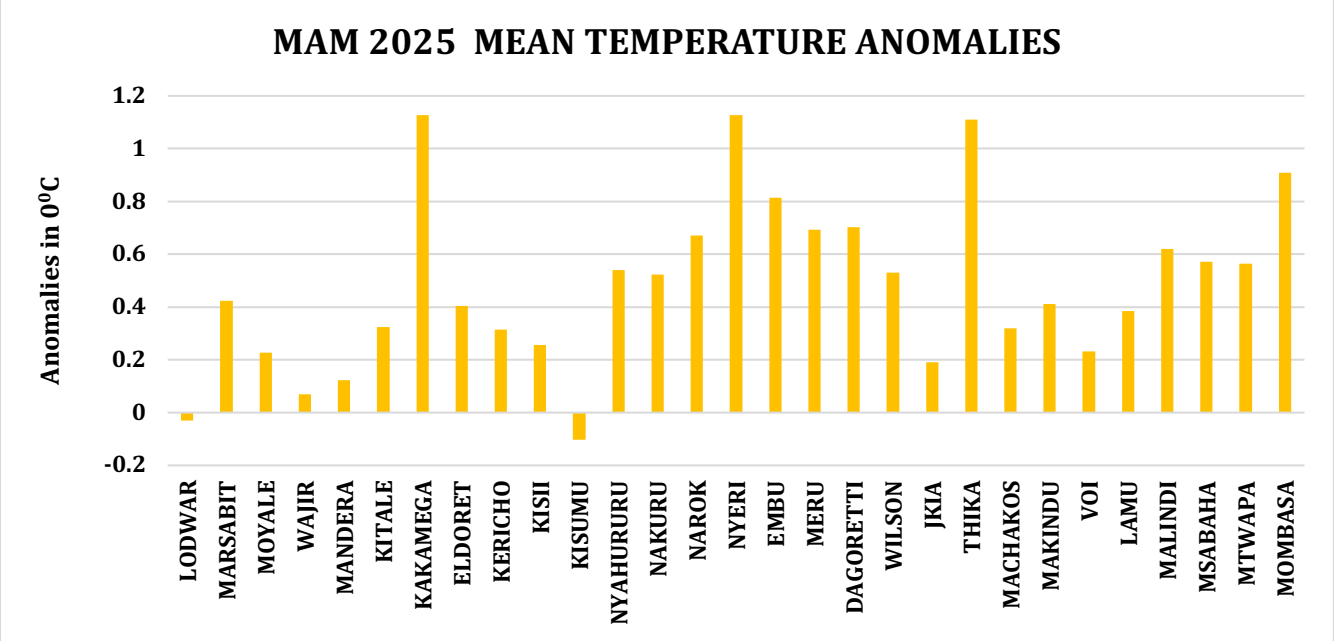

Fig. 4c: MAM 2025 Mean Temperature Anomalies

NB: This outlook should be used together with the 24-hour, 5-day, 7-day, monthly forecasts, special forecasts, regular updates as well as advisories issued by this Department. Weekly County forecasts are available from County Meteorological Offices.

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