REPUBLIC OF KENYA

Kenya Meteorological Department

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THE OUTLOOK FOR SEPTEMBER 2024 AND THE REVIEW OF AUGUST 2024

1 HIGHLIGHTS

1.1 The Outlook for September 2024

Several parts of the country will experience generally sunny and dry weather conditions during the month of September. However, the Lake Victoria Basin, the Highlands West of the Rift Valley, the Central and South Rift Valley and a few areas over the Highlands East of the Rift Valley are expected to experience rainfall (with some breaks) that is likely to be near to above the September Long Term Mean (LTM). Sunny and dry conditions are expected over the Northwest, though a few areas may experience occasional rainfall that is likely to be near to above the September LTM. Counties in the Highlands East of the Rift Valley and Nairobi are likely to experience occasional rainfall during the month as well as occasional cool and cloudy conditions with light rains in the morning, especially at the beginning of the month. Sunny and dry conditions are likely to prevail over the Northeastern, Southeastern and Coastal strip. However, a few areas over the coast may experience occasional light morning showers.

1.2 The Climate Outlook for September, October and November

The outlook for the next three months indicates that several parts of the country including the Coast, Northeast, Southeast and most of the Highlands East of the Rift Valley, including Nairobi County, are likely to experience dry weather conditions in September and receive rain during the second half of October and in November. A few areas over the Coast may also experience occasional light morning showers in September. The Highlands West of the Rift Valley, Lake Victoria Basin, Central and South Rift Valley are likely to experience rainfall with some breaks during the forecast period. This rainfall is expected to be above the September to November LTM.

The temperatures are expected to be warmer than average over several parts of the country except most parts of the Highlands West of the Rift Valley, Lake Victoria Basin and parts of the Central Rift Valley and parts of the Northwest where normal to cooler than average temperatures are expected during the forecast period.

1.3 The Review for August 2024

Mainly dry weather conditions prevailed over Nairobi, Southeastern, Northeastern and the Southern Rift Valley. Rainfall was experienced over the Highlands West of the Rift Valley, the Central Rift Valley, the Northwest and a few areas over the Coast, the Lake Basin and the Highlands East of the Rift Valley. The rainfall was near to above average over the western zone including Northwestern, except over Kisii, Kisumu, Kitale and Lodwar where below average rainfall was received. Over the Coast and Highlands East of the Rift Valley, the rainfall was near to below average, except over Nyahururu and Lamu, where above average rainfall was reported.

Maximum temperatures were warmer than average over several parts, though a few areas such as Nyahururu, Lodwar, Meru, JKIA and Marsabit recorded cooler than average temperatures. Minimum temperatures were warmer than average across the entire country.

2. The forecast for September 2024

The rainfall forecast for September 2024 is based on the observed patterns of the Global Sea Surface Temperatures (SSTs) especially over the Indian and Pacific Oceans. A number of features have been considered: These are the near average SSTs in the Western and Eastern Equatorial Indian Ocean which constitute a neutral Indian Ocean Dipole as well as the warmer than average SSTs over Western Equatorial Pacific Ocean. Added to these features are the near to cooler than average SSTs over the Central and Eastern Equatorial Pacific Ocean, which constitute ENSO neutral conditions. The rainfall climatology for September is shown in **Figure 1a.**

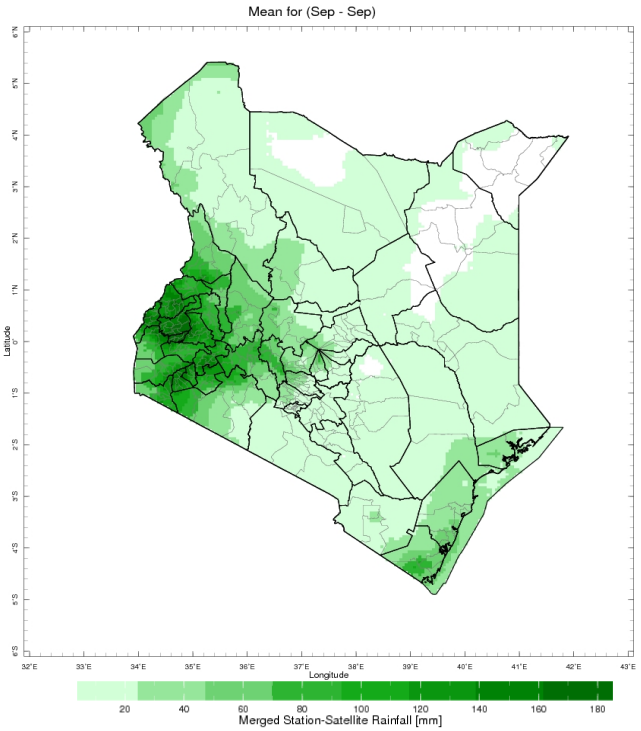

Figure 1a: September Rainfall Climatology

2.1. Rainfall Forecast for September 2024

Several parts of the country will experience generally sunny and dry weather conditions during the month of September. However, the Lake Victoria Basin, the Highlands West of

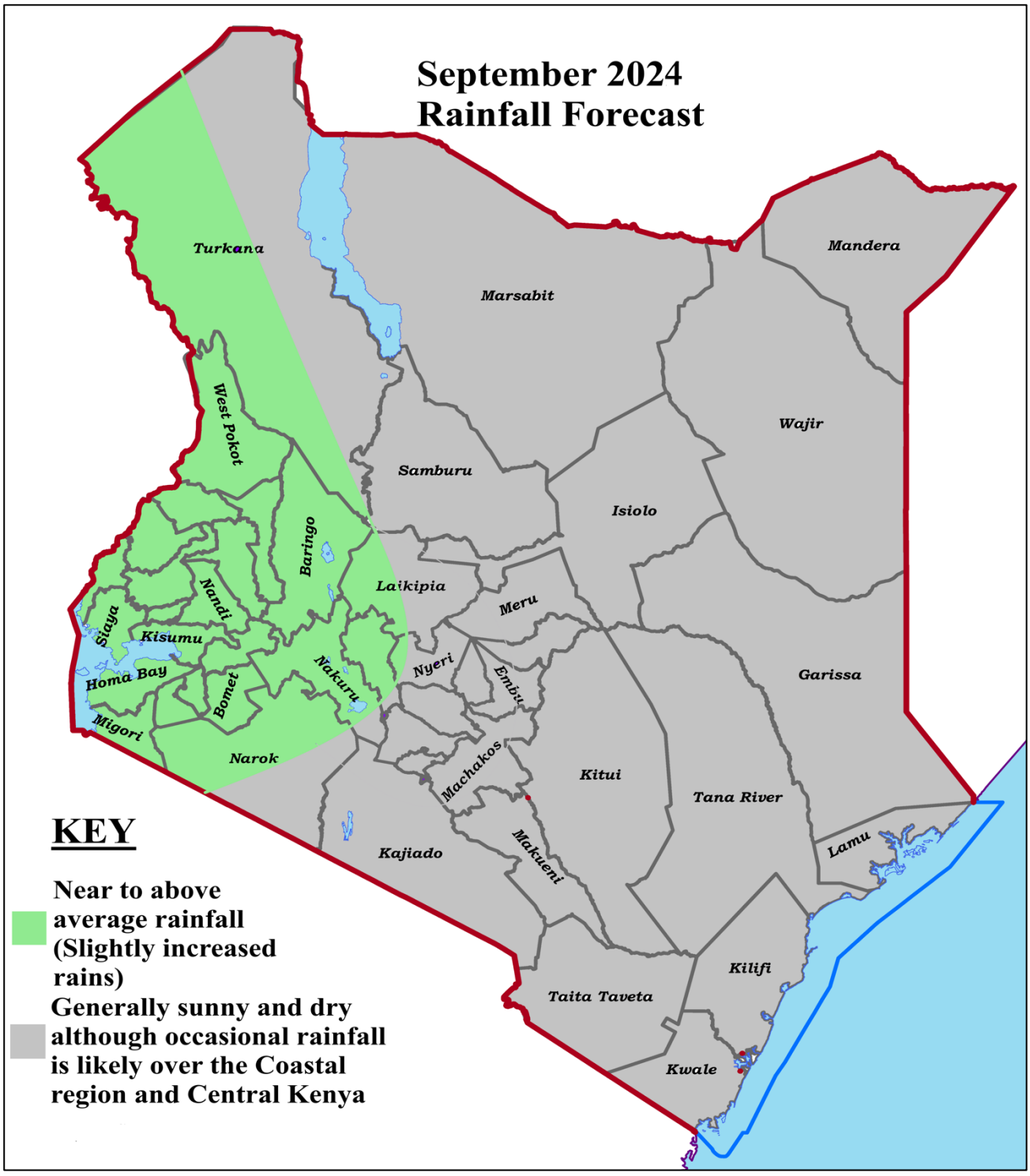

Figure 1b: September 2024 Rainfall Outlook

the Rift Valley, the Central and South Rift Valley, and a few areas over the Highlands East of the Rift Valley are expected to experience rainfall but with some breaks; the total amounts are likely to be near to or above the September Long-Term Mean (LTM). Sunny and dry conditions are expected over the Northwest, though a few areas may experience occasional rainfall that is also likely to be near to or above the September LTM. Counties in the Highlands East of the Rift Valley and Nairobi are likely to experience occasional rainfall during the month, as well as occasional cool and cloudy conditions with light rains in the morning, especially at the beginning of the month. Sunny and dry conditions are likely to prevail over the Northeastern, Southeastern, and Coastal regions. However, a few areas along the coast may experience occasional light morning showers. **Figure 1b** illustrates the September rainfall outlook.

2.2 Specific Outlook for particular areas

2.2.1 The Highlands West of the Rift Valley (Trans Nzoia, Nandi, Kericho, Bomet, Uasin Gishu, Elgeyo-Marakwet, West Pokot, Kakamega, Vihiga, Bungoma, Kisii and Nyamira counties); the **Lake Victoria Basin:** (Kisumu, Homa Bay, Migori, Siaya, Busia counties)**; the Central Rift Valley** (Nakuru, Baringo counties and Western part of Laikipia); **the Southern Rift Valley** (Narok county) and **parts of the Highlands East of the Rift Valley** (parts of Nyandarua county) are likely to experience rainfall with some breaks during the month. The expected total rainfall over these areas is likely to be near to above the long-term average for September**.**

2.2.2 Northwestern Kenya (Turkana and Samburu counties) are likely to experience mainly sunny and dry weather conditions throughout the month. However, a few areas may experience occasional rainfall. The expected total rainfall amount over these areas is likely to be near to above the long-term average for September**.**

2.2.3 The Highlands East of the Rift Valley (Nyeri, Murang'a, Kiambu, Kirinyaga, Embu, Meru, Tharaka-Nithi counties, Eastern Laikipia and parts of Nyandarua) and Nairobi County are likely to experience mainly sunny and dry weather conditions for most of the month. However, occasional afternoon and night showers may be experienced over a few areas. Occasional cool and cloudy conditions with light rains may be experienced in the morning over a few areas especially at the beginning of the month. The expected total rainfall amount is likely to be near the long-term average for September.

2.2.4 The Coast (Lamu, Kilifi, Mombasa and Kwale counties and Coastal Tana River) are likely to experience generally dry weather conditions, though a few areas may experience occasional light morning showers. The expected total rainfall amount is likely to be near to below the long-term average for September.

2.2.5 The Southeastern Lowlands (Machakos, Makueni, Kitui, Kajiado, Taita Taveta and Tana River counties) are likely to experience generally sunny and dry weather conditions throughout the month.

2.2.6 Northeastern Kenya (Marsabit, Isiolo, Wajir, Mandera, and Garissa counties) are likely to experience generally sunny and dry weather conditions throughout the month. Strong southerly to southeasterly winds of more than 25 knots are expected during the month.

2.3 POTENTIAL IMPACTS

The following are the likely impacts during the month of September:

2.3.1 Agriculture and Food Security

The near to above average rainfall expected over the Highlands West of the Rift Valley, Lake Basin and the Rift Valley may lead to post-harvest losses in areas where harvesting is in progress.

2.3.2 Disaster Management

Strong southerly to southeasterly winds above 25 knots (12.9 m/s) is expected over the northeastern parts of the country for much of the month. The areas that are likely to be affected include Garissa, Mandera, Marsabit and Wajir Counties. These winds are likely to raise dust, therefore residents in the affected areas are advised to take the necessary safety measures.

2.3.3 Water Resources Management and Energy

The near to above average rainfall expected over the western sector of the country is likely to maintain water levels in the Sondu and Turkwell hydro power generating dams, thus ensuring stable power generation. Water availability for both domestic and livestock use is also expected to be stable over these regions. However, water availability may be limited over the northeastern and parts of the southern lowlands. Residents in these areas are advised to use the available water sparingly.

2.3.4 Health

There may be an increase in respiratory diseases over the northeastern parts of the country during the month as a result of the strong winds and dry weather conditions that may lead to dust storms.

3. OUTLOOK FOR SEPTEMBER TO NOVEMBER

The outlook for the next three months indicates that the Highlands West of the Rift Valley, the Lake Victoria Basin, Central and South Rift Valley are likely to experience rainfall but with some breaks. This rainfall is expected to be above the September to November LTM. The Northwestern region is expected to be generally dry in September, though a few areas may

experience occasional rainfall which is likely to spread to several areas in October and November. This rainfall is expected to be above the September to November LTM.

The Highlands East of the Rift Valley, including Nairobi County, is likely to remain generally dry in September and to experience rainfall during the second half of October and in November. However, a few areas may experience occasional afternoon/night showers in September as well as occasional cool and cloudy conditions with light rains in the morning especially at the beginning of the month.

The Southeastern lowlands and Northeastern regions are expected to remain generally sunny and dry in September. Rainfall is expected during the second half of October and in November. This rainfall is likely to be near to below the September to November LTM. The Coastal region is expected to be generally dry in September though occasional light morning showers may be experienced over a few places. Rainfall is expected during the second half of October and in November. This rainfall is likely to be near to below the September to November LTM.

Temperatures are expected to be warmer than average over several parts of the country except over most parts of the Highlands West of the Rift Valley, the Lake Basin, parts of the Central Rift Valley and parts of Northwest where temperatures are expected to be near to cooler than average.

4 REVIEW OF THE WEATHER DURING AUGUST 2024

4.1 Rainfall Review in August 2024

Dry weather conditions prevailed over several parts of the country except over the Highlands West of the Rift Valley, the Central Rift Valley, the Northwest and a few areas over the Coast, the Lake Basin and the Highlands East of the Rift Valley, where rainfall was experienced. The rainfall amounts recorded over the western part of the country, including the Northwest were near to above the August LTMs for most of the stations except over Kisumu, Kisii, Kitale and Lodwar, where below average rainfall amounts were recorded. Near to below average rainfall was recorded over the Coastal region with the exception of Lamu where above average rainfall was received. Stations over the Highlands East of the Rift Valley recorded near to below average rainfall, except over Nyahururu where above average rainfall was recorded. The Southeastern lowlands, the Northeast and Nairobi remained generally dry.

The highest monthly rainfall total (292.3 mm) was received at Annex B Wareng rainfall station in Uasin Gishu county, followed by Eldoret Meteorological station with 287.7mm. Other stations that recorded significant amounts of rainfall include Nabkoi forest rainfall station (281.8mm), Moi University rainfall station (261.7mm), Kakamega Meteorological (259.7mm), Kericho Meteorological station (246.9mm), Kainuk Secondary rainfall station (222.8mm), Khalaba Ward rainfall station (214.8mm), Komool farm rainfall station (210.1mm), University of Eldoret rainfall station (207.5mm), Timboroa forest rainfall station 202.2mm) and Kapkatet rainfall station (201.6mm). The rest of the stations recorded less

than 200 mm of rainfall with those over the South Rift Valley recording no rainfall at all throughout the month. See **Figures 2a** and **Figure 2b**.

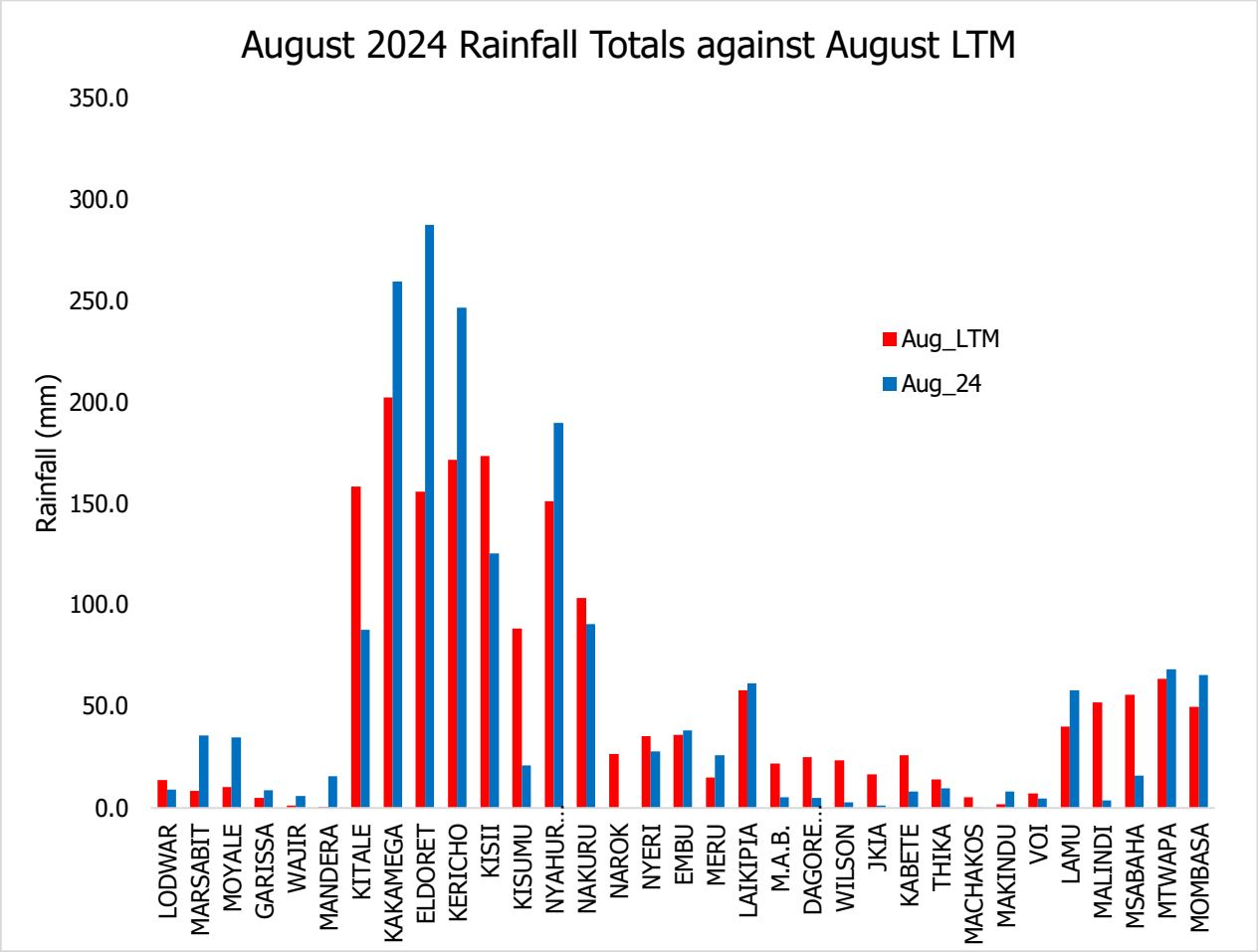

Figure 2a: August 2024 Rainfall Totals Against August LTM

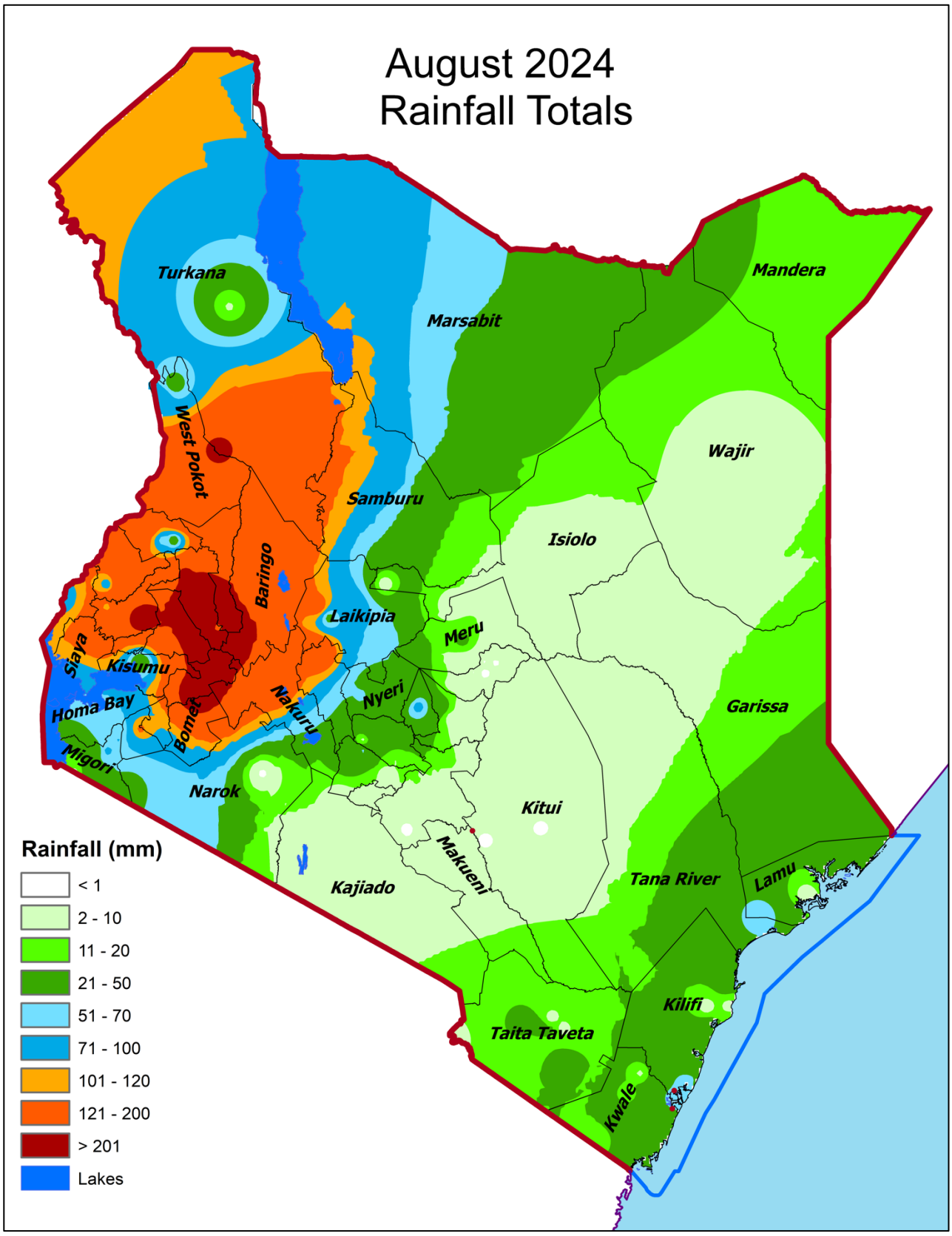

Figure 2b: August 2024 Rainfall Totals

The month was characterized by heavy rainfall (above 50mm in 24 hours) as shown in **Table 1**

Table 1: Stations that recorded more than 50mm in 24 hours

S/NO	STATION	COUNTY	AMOUNT	DATE
1	Kakamega Meteorological Station	Kakamega	82.1	8/8/2024
2	Moi University Rainfall Station	Uasin Gishu	71.5	24/8/2024
3	Kakamega Meteorological Station	Kakamega	68.1	17/8/2024
4	Castle Forest Rainfall Station	Kirinyaga	66.6	26/8/2024
5	Komool Farm Rainfall Station	Uasin Gishu	62.3	14/8/2024
6	Brookside Dairies Rainfall Station	Uasin Gishu	61.8	24/8/2024
7	Kericho Meteorological Station	Kericho	59.9	25/8/2024
8	Kainuk Secondary Rainfall Station	Turkana	58.3	4/8/2024
			57.8	18/8/2024
9	Matungu Meteorological Station	Kakamega	55.3	9/8/2024
10	Sigor Agricultural Office Rainfall Station	West Pokot	54.6	21/8/2024
11	Annex B Wareng Rainfall Station	Uasin Gishu	54.8	24/8/2024
			51.7	2/8/2024

4.2 Temperature Review in August 2024

The month of August marks the end of the cold season. An analysis of temperature up to 29th August indicates that several parts of the country recorded maximum temperatures that were warmer than average for August. The exceptions were Lodwar, Marsabit, Nyahururu, Meru and JKIA which recorded cooler than average temperatures. The readings for Nakuru and Machakos were near the August LTM temperatures. However, a few stations over the Central Highlands occasionally recorded daytime (maximum) temperatures that were below 18°C. For instance, Nyahururu recorded 16.7°C on 20th August, Kangema 17.0°C on 24th August while Nyeri had 17.7°C on 23rd August. The lowest monthly average daytime temperature (19.8°C) was recorded at Kangema station.

Minimum temperatures were warmer than average across the entire country. However, a few stations over the Highlands East of the Rift Valley, South Rift Valley and Southeastern lowlands occasionally recorded night time (minimum) temperatures below 10°C. For instance, Narok recorded 7.7°C on 19th and 8.2°C on 5th. Machakos recorded 8.4°C on 5th August and 8.6°C on 1st, Laikipia Air Base recorded 8.5°C on 1st, 2nd and 5th August, while Nyahururu recorded less than 10°C for most of the month. The lowest monthly night time temperature (8.7°C) was recorded at Nyahururu station.

Mean temperatures were warmer than average over most stations, except in Lodwar where the temperature was near the August LTM, as shown in **Figures 3a, 3b and 3c.**

Note: Anomalies refer to deviations from the mean or average temperatures. Positive anomalies imply that temperatures were warmer than average while negative anomalies imply that temperatures were cooler than average.

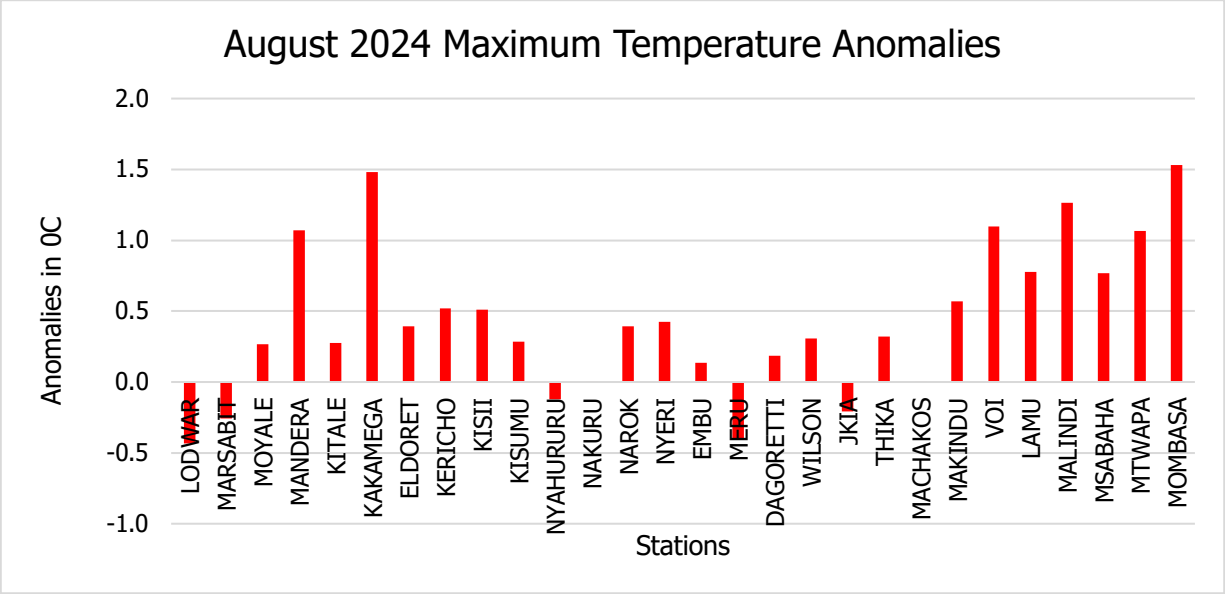

Figure 3a: August 2024 Maximum Temperatures Anomalies

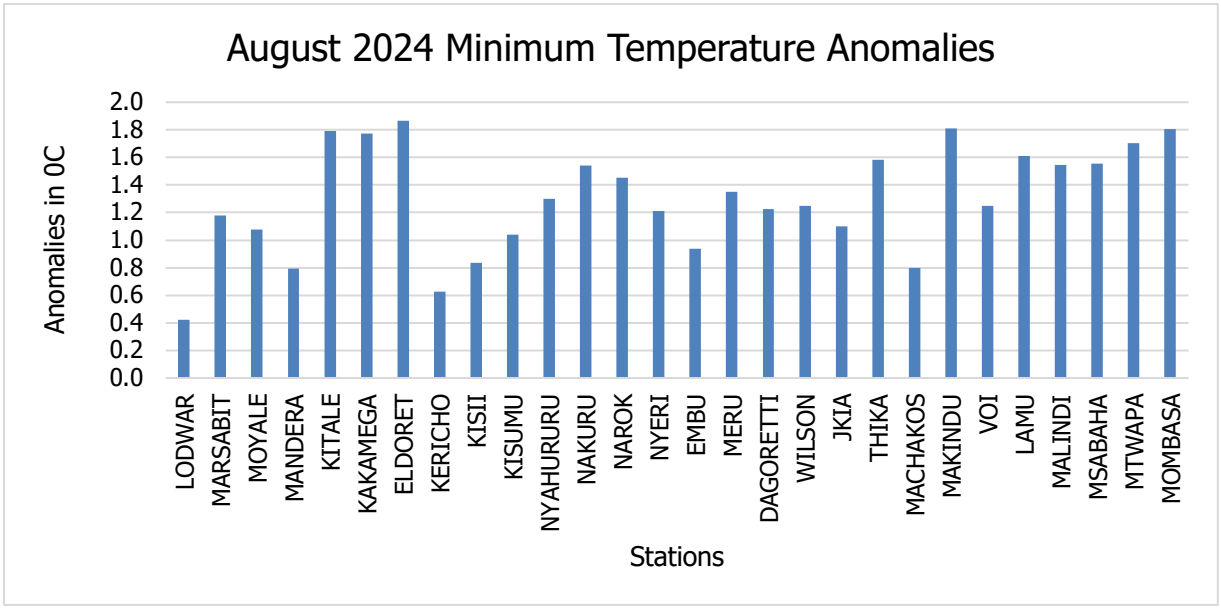

Figure 3b: August 2024 Minimum Temperatures Anomalies

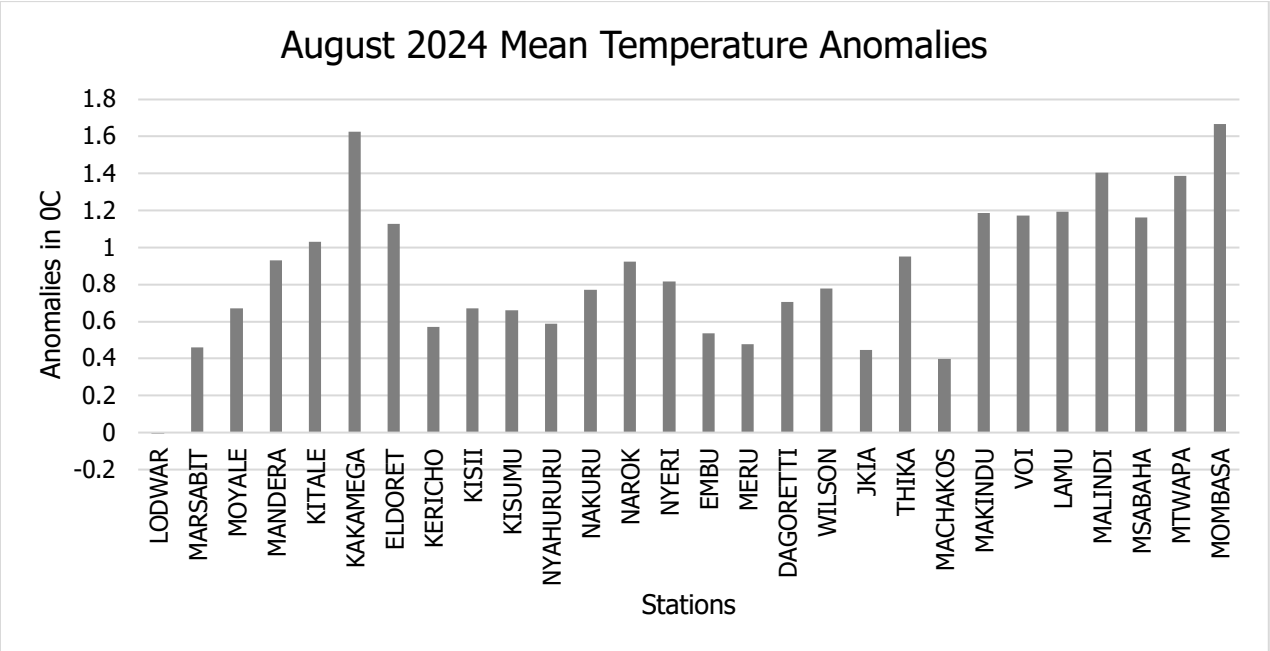

Figure 3c: August 2024 Mean Temperatures Anomalies

4.3 Experienced Impacts

4.3.1 Agriculture and Food Security

Livestock was killed and farm produce destroyed after landslides affected Kapkombe and Kasisit villages of Baringo county after the heavy rains of 6th to 7th August. Crops were destroyed in Gatimu ward of Nyandarua County and Ngobisi village of Elgeyo Marakwet after heavy rains caused flooding and mudflow (Elgeyo Marakwet) on 16th and 15 August respectively.

4.3.2 Reported incidents (from the Press)

Five people were killed, several households displaced and property destroyed after a landslide affected Kapkombe and Kasisit villages of Baringo county after the heavy rains experienced from 6th to 7th August.

Learning in Ngobisi Primary school of Soy South ward in Elgeyo Marakwet was interrupted and businesses in Ngobisi village destroyed, following heavy rains that were experienced in the area on 15th August.

A man was swept away by floods as he attempted to cross the swollen River Seyia along the Kisima-Wamba road in Samburu county on 19th August.

Strong winds experienced over the coastal region caused rough seas in the Indian Ocean which led to the death of two people who drowned in Magarini ward of Kilifi county and Mashundwani of Lamu county on 14th and 20th August respectively. Three other fishermen were injured after their boat capsized at Kinyaule Gongoni, Kilifi county on 21st August.

4.3.3 Transport and Public Safety

Transport was temporarily disrupted in different parts of Elgeyo Marakwet after a mudslide blocked the Kibigos road on 23rd August and a mudflow blocked roads leading to Ngobisi village on 15th August.

On July 29th, a landslide struck the Kabasis area of Baringo Central on Sunday night, following heavy downpours that affected a section of the tarmac along the Kabarnet-Tenges Road. The landslide blocked this crucial route, disrupting travel and transportation in the region.

Fog occurrence was reported along the Nairobi-Nakuru highway and over a few areas in the Highlands East of the Rift Valley and Northeastern Kenya during the month. For instance, Meru Meteorological Station reported six consecutive hours of fog on 15th and 16th August, 5 consecutive hours on 2nd and 4 consecutive hours on 8th and 12th August. Nyeri recorded 5 consecutive hours of fog on 10th and 11th August and four hours on 25th August. Marsabit reported six consecutive hours of fog on 14th August and four consecutive hours on 9th and 30th August. Wilson and Moyale stations reported three consecutive hours of fog on 9th and 14th August respectively while JKIA reported two hours on 4th. However, the fog did not significantly affect transport or public safety.

4.3.4 Environment

The landslides/mudslides experienced in Baringo and Elgeyo Marakwet counties destroyed trees and other vegetation, leading to land degradation.

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

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