



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

**KENYA METEOROLOGICAL DEPARTMENT**

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### **1.1. FORECAST FOR MARCH-APRIL-MAY 2024 (LONG RAINS) SEASON**

The March to May period is the major rainfall season (long rains) over most parts of Kenya and much of the equatorial Eastern Africa. The highest seasonal rainfall amounts (greater than 300mm) are normally experienced over the Lake Victoria Basin, the Highlands West of the Rift Valley, the Central and South Rift Valley, the Highlands East of the Rift Valley (including Nairobi County) and the Coastal Strip. **(Figure 1)**

The MAM 2024 forecast indicated that **above-average rainfall** is expected over the Lake Victoria Basin, Highlands West of the Rift Valley, Central, Northern and Southern Rift Valley, Highlands East of the Rift Valley (including Nairobi County), Northeastern, Southeastern Lowlands and Northwestern regions. Generally, near-average rainfall with a tendency to above average rainfall is expected over the Coastal region and parts of the Southeastern lowlands. Occasional storms are also likely during the season. **(Figure 2)**

During the season, it is likely that several areas will have a generally fair to good distribution of rainfall in both time and space, except over the northeast and northwestern regions where the distribution is expected to be poor to fair. The season is expected to experience an early to normal onset with occasional dry spells. Occasional storms are likely to be experienced in some parts of the country.

The peak of the rains is expected to be in April for most regions, except over the Coastal Strip where the peak is expected in May.

The temperature forecast indicates warmer than average temperatures are expected over the whole country with increased probabilities over the coastal and northern parts of the country **(Figure 3)**.

#### **1.1 Specific Outlook for March to May 2024 “Long-Rains” Season**

The specific outlook for March to May 2024 “Long-Rains” Season is as follows:

**1.1.1 The Highlands West of the Rift Valley, Lake Victoria Basin, Central and South Rift Valley: (Siaya, Kisumu, Homa Bay, Migori, Kisii, Nyamira, Baringo, Uasin Gishu, West Pokot, Elgeyo Marakwet, Nandi, Kericho, Bungoma, Kakamega, Busia, Trans Nzoia, Vihiga, Laikipia (Laikipia West), Nakuru and Narok)** In these counties, rainfall is expected to continue throughout the season. The expected rainfall is likely to be



above the long-term average amounts for the season (enhanced rainfall). The distribution of the rainfall is likely to be good in both time and space.

- 1.1.2 Northwestern Counties (Turkana and Samburu)** are likely to experience occasional rainfall during the season. The expected rainfall amount is likely to be above the long-term average for the season (enhanced rainfall). The distribution of the rainfall is likely to be poor to fair in both time and space.
- 1.1.3 The Highlands East of the Rift Valley (including Nairobi County)** -- (Nyandarua, Nyeri, Kirinyaga, Murang'a, Kiambu, Embu, Meru, Tharaka Nithi, Nairobi and eastern parts of Laikipia): Rainfall amounts are expected to be above the season's long-term average. The distribution of the rainfall is likely to be fair to good in both time and space.
- 1.1.4 The Southeastern Lowlands** (Kitui, Makueni, Machakos, Kajiado and Taita Taveta): The expected rainfall amount is likely to be above the long-term average for the season. However, Taita Taveta and the Southern parts of Kitui and Makueni Counties are likely to experience near average with a tendency to above average rainfall. The distribution of the rainfall is likely to be fair to good in both time and space.
- 1.1.5 The Northeastern Counties (Mandera, Marsabit, Wajir, Garissa, Isiolo and parts of Tana River):** The expected rainfall amount expected in these counties is likely to be above the long-term average for the season. The distribution of the rainfall is likely to be poor to fair in both time and space.
- 1.1.6 The Coastal Strip:** (Mombasa, Tana River, Kilifi, Lamu and Kwale counties): Rainfall amounts are likely to be near to above the long-term average amounts for the season. The distribution of the rainfall is likely to be fair to good in both time and space.

## 2 EXPECTED DISTRIBUTION OF THE MAM RAINFALL, ONSET AND CESSATION DATES

### 2.1 Distribution

The predicted onsets, cessations, and distribution of rainfall were derived from 5 Global Climate Model (GCMs) runs as well as statistical analyses of past years which showed similar characteristics to the current year and are as indicated in Table 1. The analogue (similar) years chosen are 1998, 2010 and 2016. The season is expected to have an early to normal onset, especially over the Western half of the country.

### 2.2 Onset and Cessation Dates

The expected onset and cessation dates for the various counties are as indicated in **Table 1, Figure 4 and 5.**

	<b>Region</b>	<b>Onset Dates</b>	<b>Cessation</b>	<b>Distribution</b>
1	Counties in Highlands West of the Rift Valley, Lake Victoria Basin, Central, and South Rift Valley: <i>(Bungoma, Trans Nzoia, Uasin Gishu, West Pokot, Elgeyo-Marakwet, Nandi, Kakamega, Vihiga, Bomet, Kericho, Kisii, Nyamira, Homa Bay, Migori, Kisumu and Busia, Baringo, Nakuru, Western Laikipia and Narok).</i>	Continues from February	Continues to June	Good



2	Highlands East of the Rift Valley including Nairobi County: ( <i>Nyeri, Kirinyaga, Murang'a, Embu, Meru, Kiambu, Nyandarua, Nairobi and eastern parts of Laikipia</i> )	Continues from February followed by dry spell till third to fourth week of March	Fourth week of May to first week of June	Fair to Good
3	Southeastern Lowlands ( <i>Kajiado, Kitui, Makeni, Machakos, Tana River and Taita Taveta</i> ),	Continues from February followed by dry spell till third to fourth week of March	Second to third week of May	Fair to good
4	North Coast region ( <i>Lamu, Malindi, Coastal parts of Tana River, and Kilifi</i> )	Rainfall is expected from the fourth week of March to the first week of April	Continues into June	Fair to Good
5	South Coast region ( <i>Mombasa, Kwale</i> )	Rainfall is expected from the third to fourth week of March	Continues into June	Fair to Good
6	The Northwest: ( <i>Turkana, Samburu</i> )	Rainfall is expected from the fourth week of March to the first week of April (occasional rainfall in the first week of March)	Second to third week of May	Poor to Fair
7	The Northeast ( <i>Wajir, Isiolo, Garissa, Mandera and Marsabit</i> )	Rainfall is expected from the fourth week of March to the first week of April	Second to third week of May	Poor to Fair

### 3. POTENTIAL IMPACTS OF THE MAM 2024 RAINS

The forecasted enhanced rainfall during the months of March to May long rains season is expected to have both negative and positive impacts across various sectors. The most likely impacts on various sectors will be highlighted by the sector leads.

***NB: All global models have a much lower skill in predicting the MAM season than the OND season. Additionally, there are other drivers of variability such as tropical cyclones and Madden Julian Oscillation (MJO) that are only predicable at shorter lead times. It is therefore imperative to keep up to date with subsequent forecasts.***

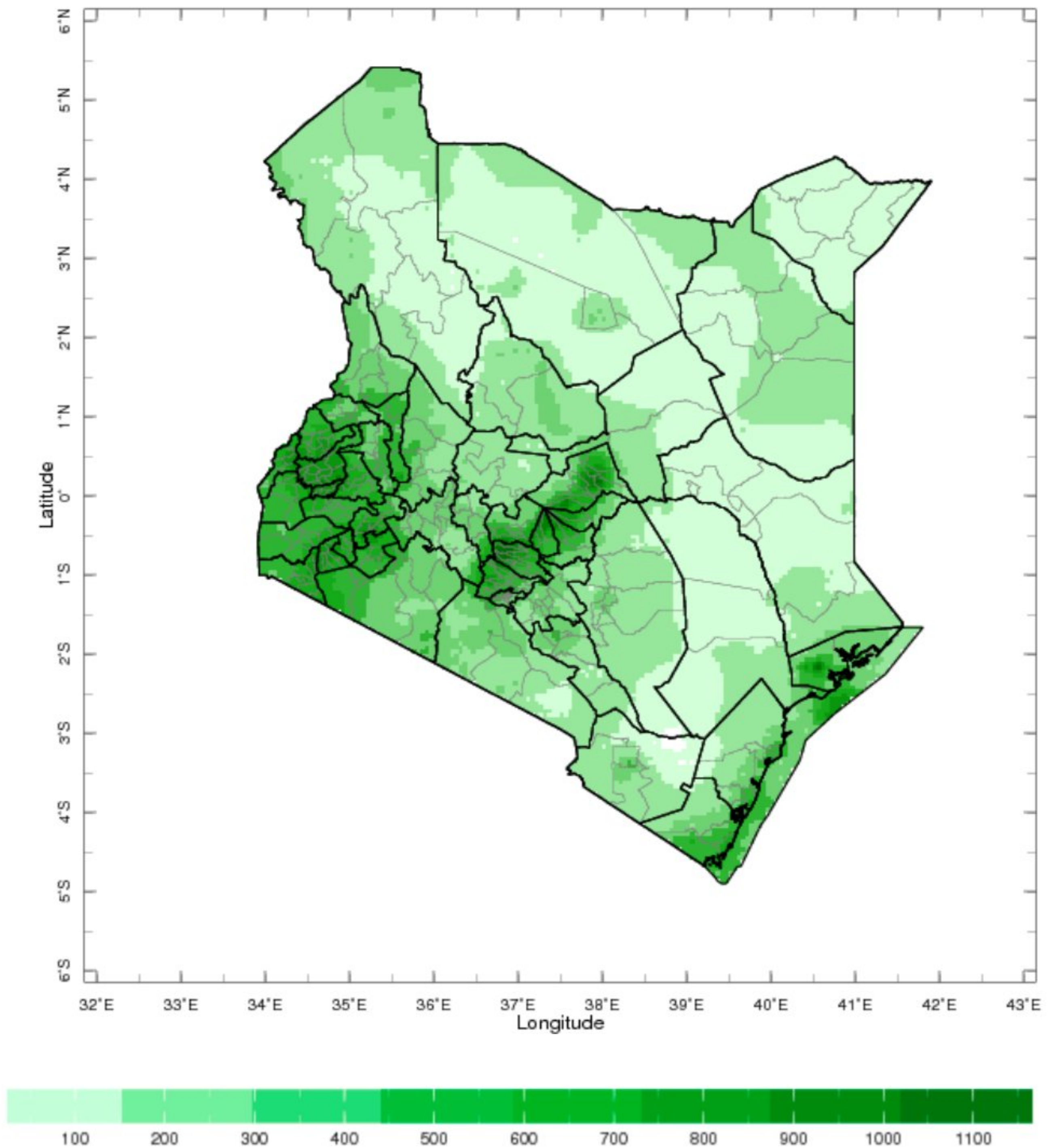
***This outlook should be used together with the 24-hour, 5-day, 7day, monthly, special forecasts and regular updates/advisories issued by this Department as well as Weekly and Monthly County forecasts developed and availed by County Meteorological Offices.***

Dr. David Gikungu

**DIRECTOR OF METEOROLOGICAL SERVICES**



Mean for (Mar - May)



**Figure 1: March-April-May (MAM) “Long-Rains” Season LTM/Climatology**



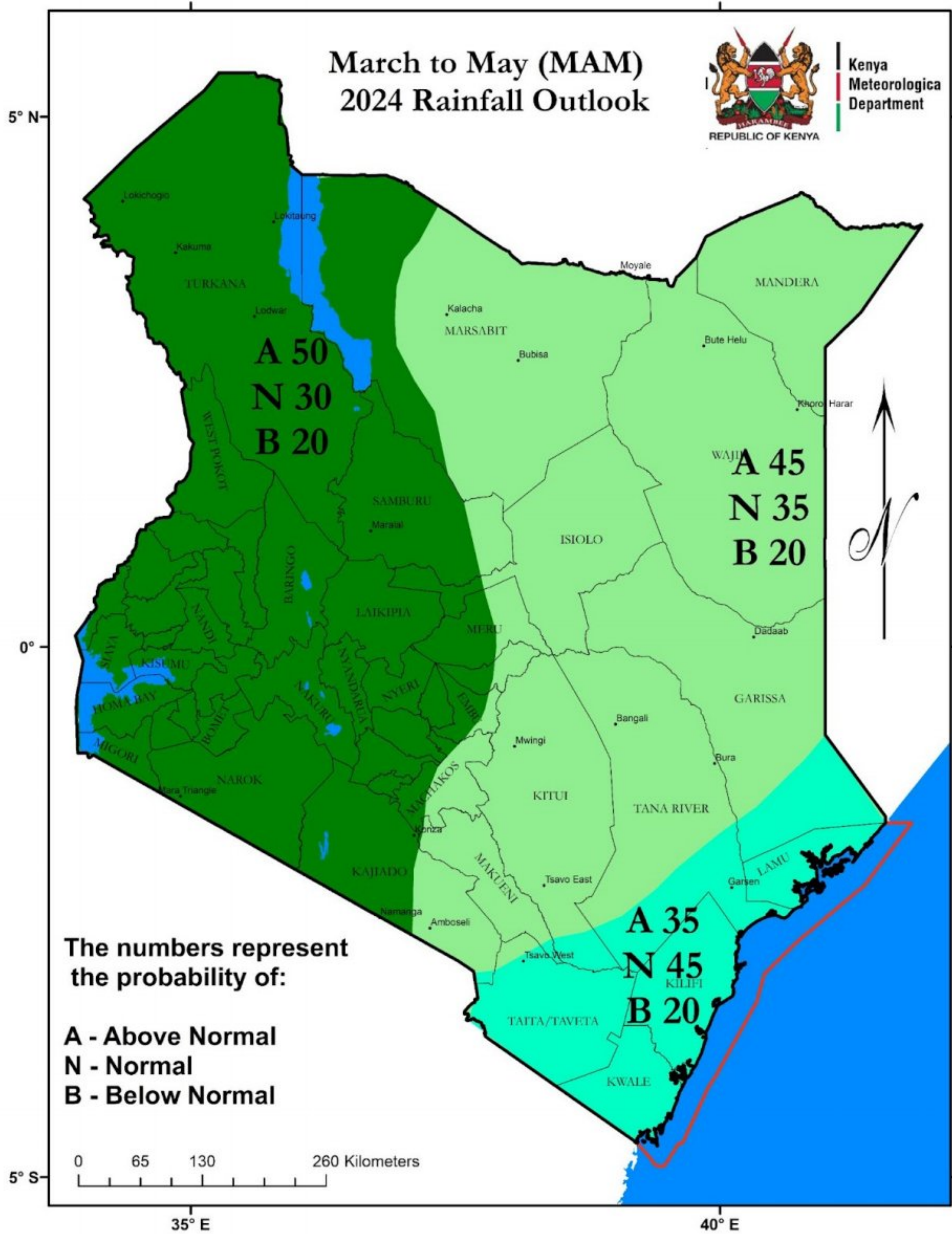
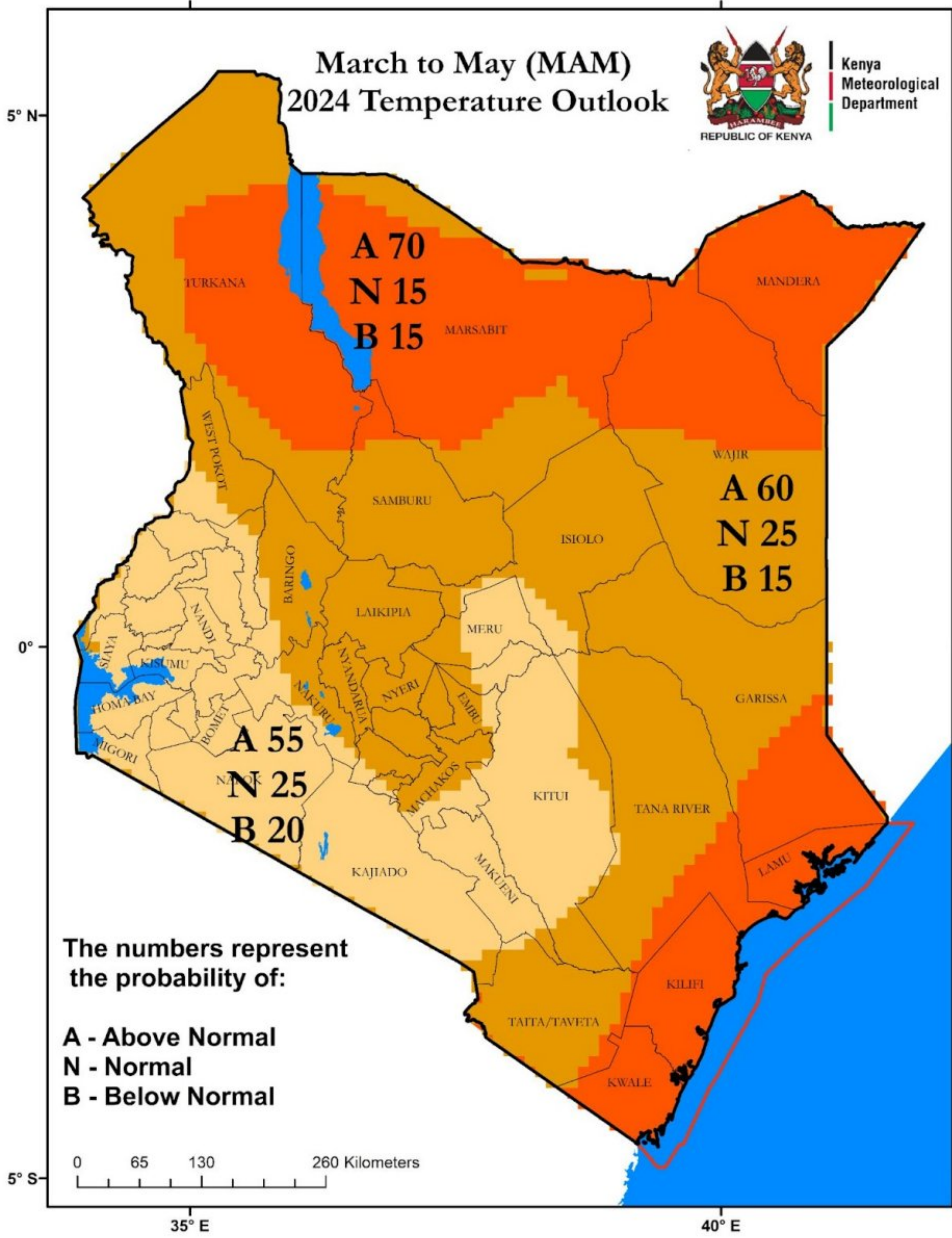


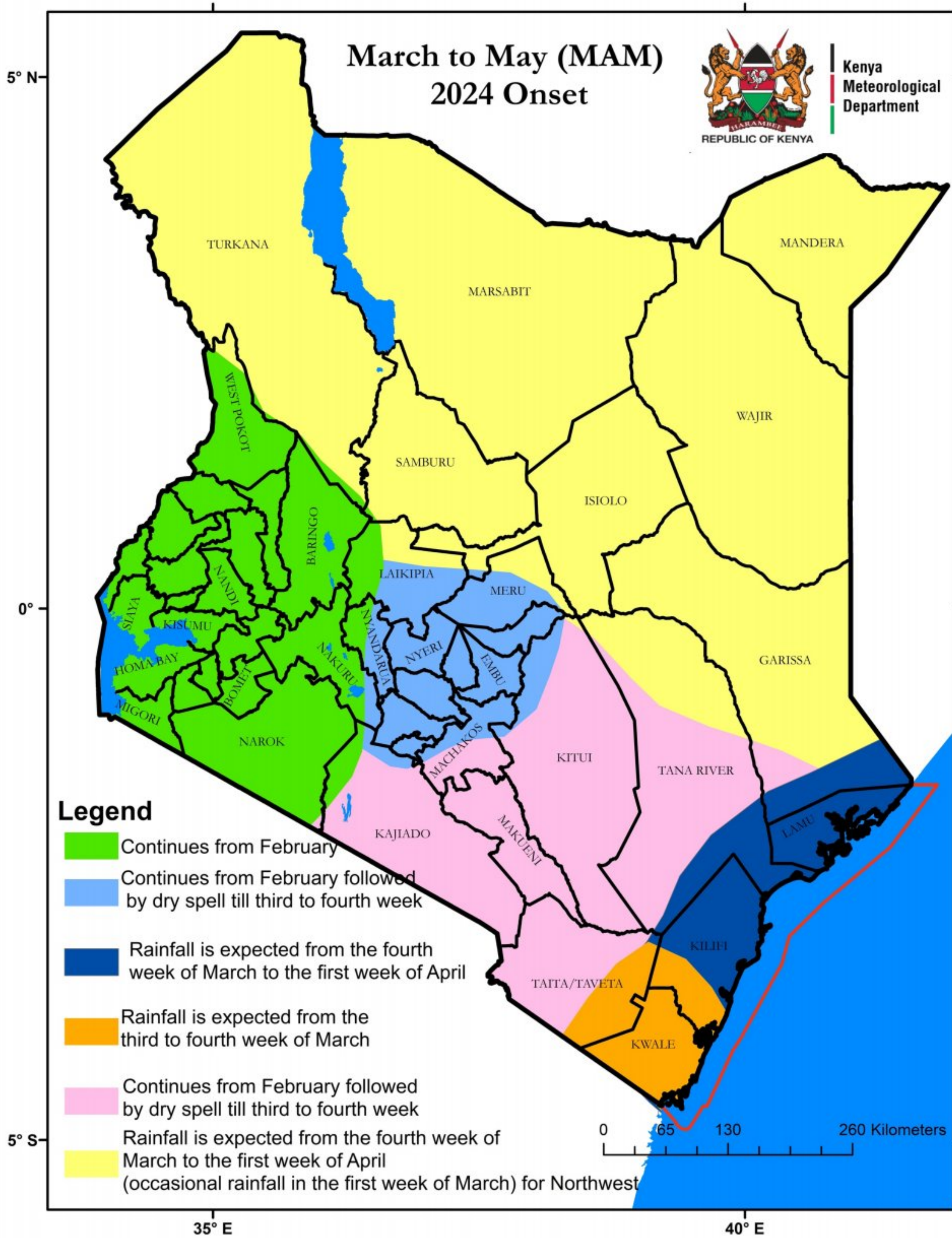
Figure 2: March-April-May (MAM) 2024 “Long-Rains” Season Outlook





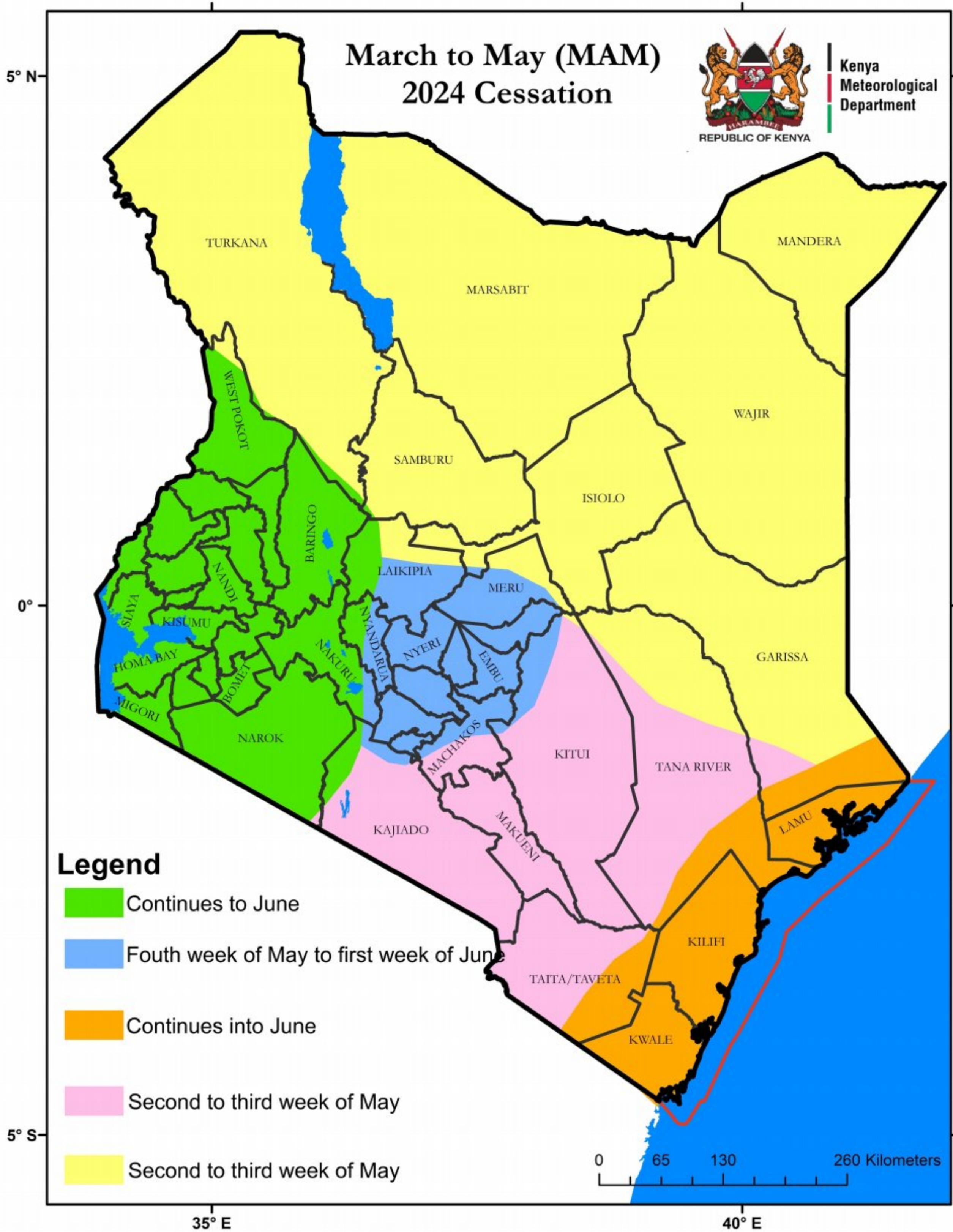
**Figure 3: MAM 2024 Temperature**





**Figure 4: MAM 2024 Rainfall Onset**





**Fig. 5: MAM 2024 Rainfall Cessation**