APRIL 2025

CLIMATE BULLETIN

DEKAD 3, APRIL (21-30)

GMET/CLIMATE/030425

FORM337

4/1/2025

Contents

LIST OF FIGURES

SUMMARY

- **Rainfall:**
  - Most areas received rainfall above 50mm
  - Asamankese received the highest rainfall of 166.5 mm.
  - Cape coast and Enchi recorded the highest rainy days of 7 days
- **Rainfall Anomalies:**
  - Below normal rainfall in most areas.
  - Surplus rainfall in the coastline, forest, and transitional areas.
- **Relative Humidity:**
  - Maximum value of 79% was recorded over Saltpond
  - Minimum value of 35% was recorded over Navrongo.
- **Temperatures:**
  - **Maximum:**

    Above normal temperatures were experienced in the Northern parts of the country.
    - The maximum of the Maximum temperature of 39.7°C was recorded in Navrongo
    - Minimum temperature of 29.4°C was recorded in Abetifi.
  - **Minimum:**
    - Warmer temperatures in the Northern, Transitional and East coast of the country.
    - Relatively above normal temperatures across the country
    - The minimum of the Minimum temperature was recorded in Abetifi, reaching 21.9°C.

1. OBSERVED CLIMATE DRIVERS

1.1 INTERTROPICAL FRONT

Also known as the Intertropical Convergence Zone (ITCZ) is a critical meteorological feature that significantly influences weather patterns in West Africa, including Ghana. The ITF is a boundary zone where the warm, moist air from the Atlantic Ocean (southwesterly monsoon winds) meets the hot, dry air from the Sahara Desert (northeasterly harmattan winds). This convergence leads to the formation of clouds and precipitation, making it a key driver of the rainy season in West Africa. The northward movement of the ITF during March-July brings the rainy season to Ghana.

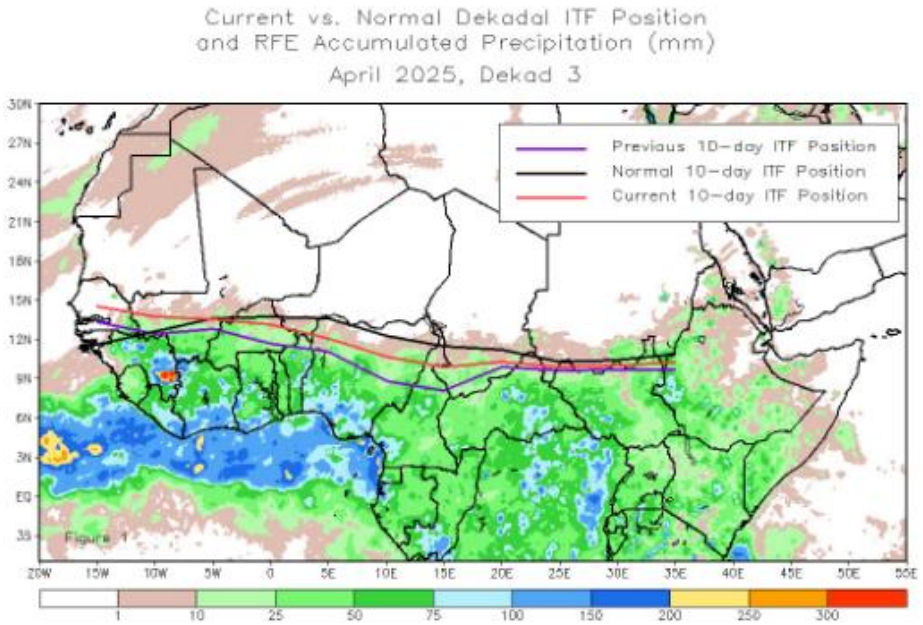


Figure 1 Current ITF position for April 3rd Dekad, 2025

Figure 1 describes the position of the ITF during the 3rd dekad of April. The current Inter-Tropical Front (ITF) is positioned at approximately 12.9N, reflecting a northward displacement compared to its previous position at 11.8N. Similarly, *Table 1* below also shows the evolving ITF's position of Ghana, located between 5W and 5E.

DEKAD	5W	0	5E
January 1	7.2	7.6	7.8
January 2	7.3	7.8	7.5
January 3	7.9	8.2	8.5
February 1	6.6	8.1	8.3
February 2	9.6	9.0	8.8
February 3	8.2	9.2	8.9
March 1	11.0	10.5	10.1
March 2	10.0	9.8	9.6
March 3	11.6	11.6	11.2
April 1	11.1	11.3	11.1
April 2	12.8	11.7	11.1
April 3	13.5	13.1	12.1

Table 1. Dekadal evolution of the ITF position over Ghana 2025.

1.2 MADDEN-JULIAN OSCILLATION (MJO)

MJO is a tropical disturbance that moves eastward around the globe, influencing weather patterns, including rainfall and temperature, in various regions. The MJO has phases (1-8), with each phase corresponding to its location over the tropics. Its position and strength can have significant implications for weather in Ghana, particularly during the West African monsoon season.

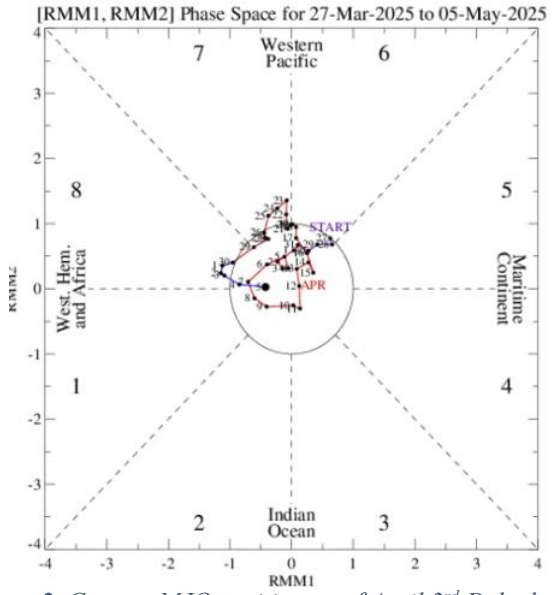


Figure 2. Current MJO position as of April 3rd Dekad, 2025

As depicted in Figure 2, the Madden-Julian Oscillation (MJO) was observed between Phases 7 and 8, corresponding to the Western Pacific and West Hem. And Africa regions. However, its position near the center of the phase-space diagram indicates a weak amplitude, signifying a less active MJO signal during this period.

Given its current phase and weak intensity, the MJO was unlikely to significantly enhance convective activity over West Africa. This may have contributed to the suppression of rainfall over Ghana in the short term, as the influence of the MJO during weak phases tends to be minimal across the region.

2.0 RAINFALL, TEMPERATURE AND RELATIVE DISTRIBUTION

2.1 RAINFALL

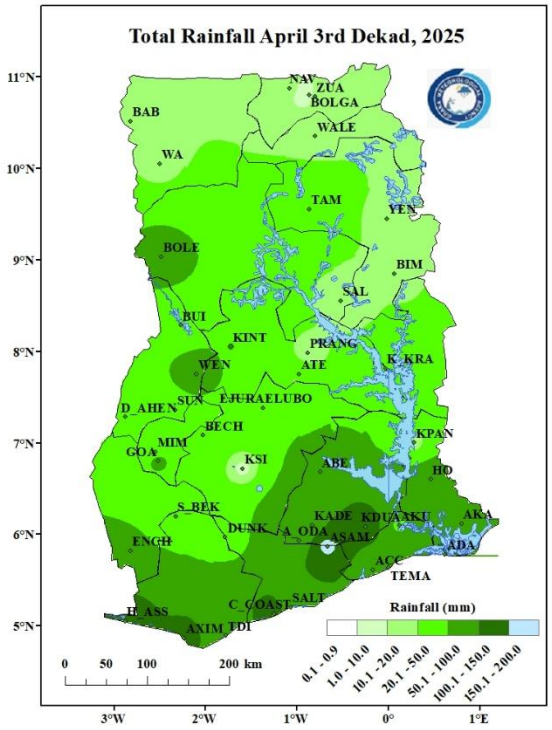


Figure 3a Total Rainfall April 3rd Dekad

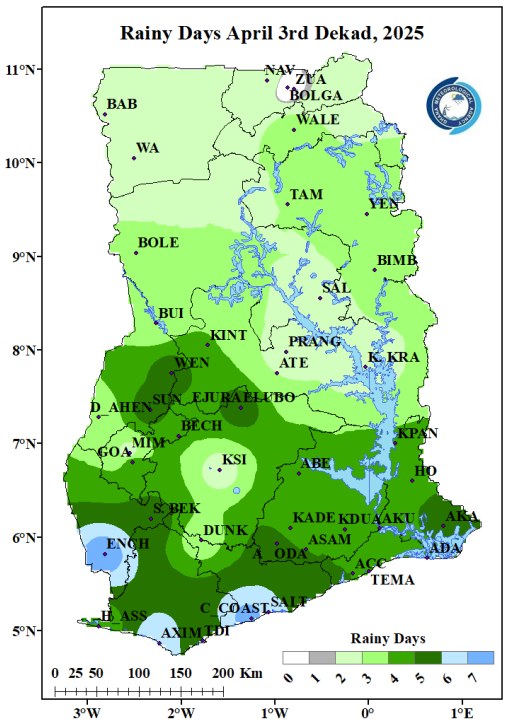


Figure 3b Rainy Days April 3rd Dekad

Figure 3a represents the spatial distribution of rainfall across Ghana during the third ten-day (dekad) of April. Rainfall was widespread throughout the country. During this period, Asamankese recorded the highest total rainfall, amounting to 166.5mm. Alternatively, Bolga recorded no rainfall.

Figure 3b describes the frequency of rainy days within the same period. Stations found in the Northern and Transition parts of the country recorded rainy days between two (2) to three (3). While the southern sector recorded rainy days from four (4) to seven (7). Enchi and Cape coast recorded the highest rainy days. However, locations including Zuarungu and Bolgatanga recorded no rainfall.

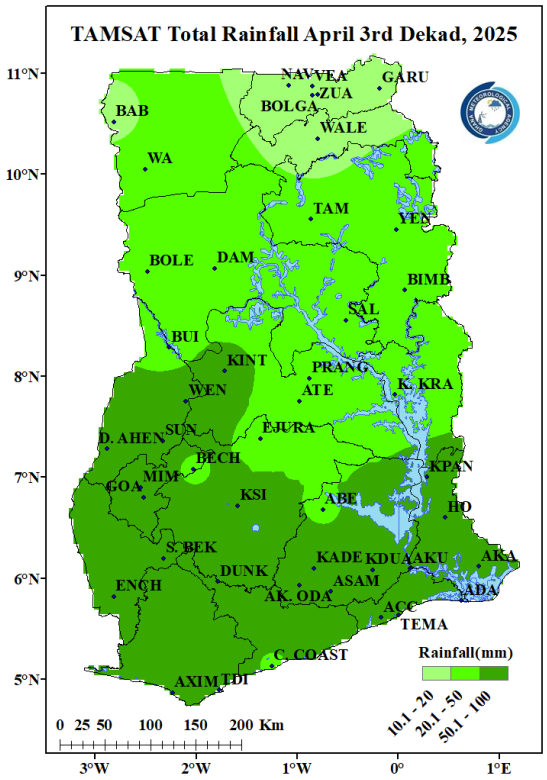


Figure 4 Tamsat Total Rainfall April 3rd Dekad, 2025

Figure 4 represents total rainfall for the duration, as calculated from the TAMSAT rainfall estimates. In this dekad, there were differences when compared with the ground-based observations. There were both underestimation as well as overestimation in some sectors of the country. This points out the constraints of satellite derived information.

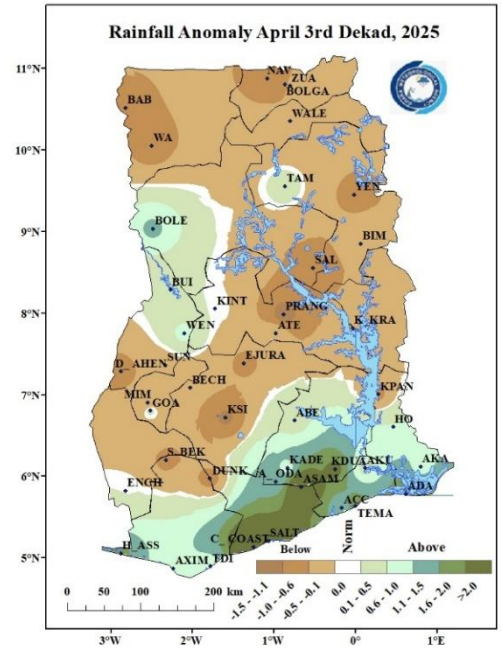


Figure 5 Rainfall Anomaly for April 3rd Dekad, 2025

Figure 5 highlights regions in Ghana that showed variance in rainfall patterns during the specified timeframe. Stations located in the coastline, the forest, as well as transitional areas particularly Bole, Bui and Tamale in the Northern, received surplus rainfall. On the other hand, areas from the North to the Transitional zone experienced a rainfall deficit

2.2 TEMPERATURE

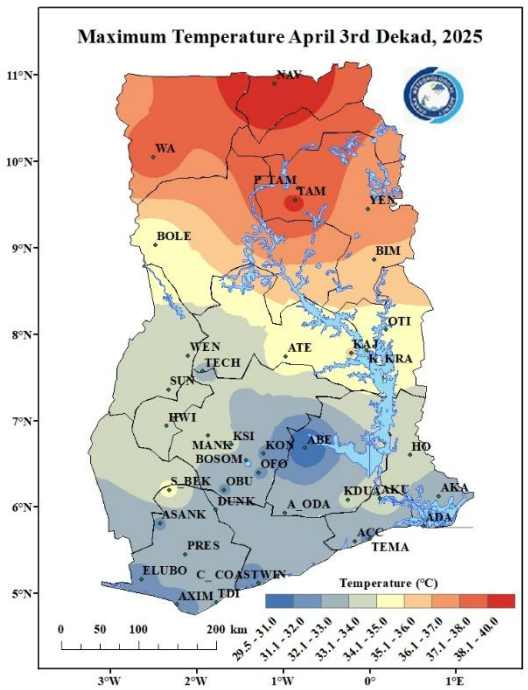


Figure 6a Maximum Temperature April 3rd Dekad, 2025

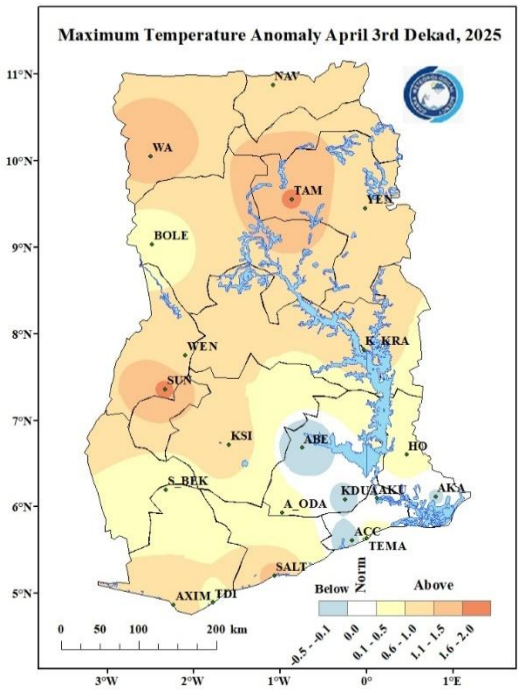


Figure 6b Maximum Temperature Anomaly April 3rd Dekad,2025

Figure 6a displays the distribution of average Maximum temperatures nationwide. In this dekad, the northern areas recorded the highest temperatures, ranging from 36.0°C to 40.0°C. Temperatures in the transition sector ranged between 33.0°C and 35.0°C. Whereas the southern sector experienced relatively cooler conditions, with temperatures recorded ranging between 29.0°C to 33.0°C. The highest temperature, 39.71°C, was recorded in Navrongo, while the lowest, 29.49°C was recorded in Abetifi.

Figure 6b displays Maximum Temperature Anomalies in this dekad. Majority of stations across the country, Northern, Transition and South-western sectors, experienced above-normal temperatures indicating increasing nighttime temperatures. Except for Abetifi, Koforidua and Accra experiencing below normal temperatures.

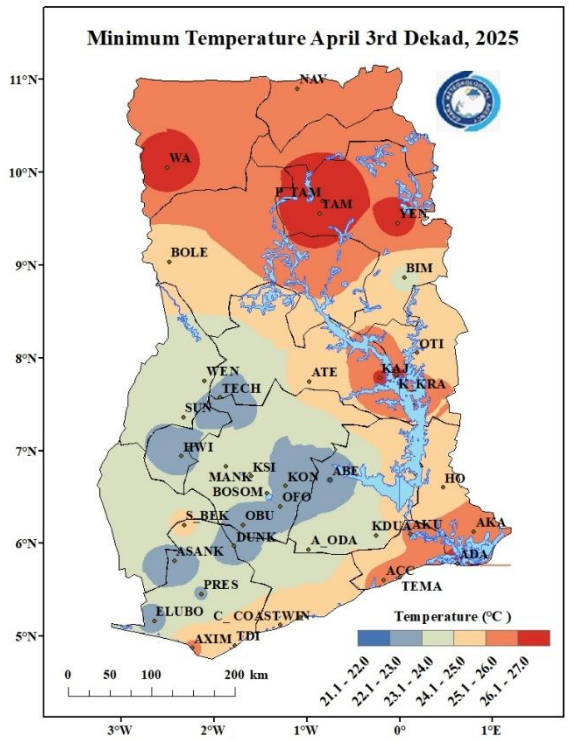


Figure 7a Minimum Temperature April 3rd Dekad, 2025

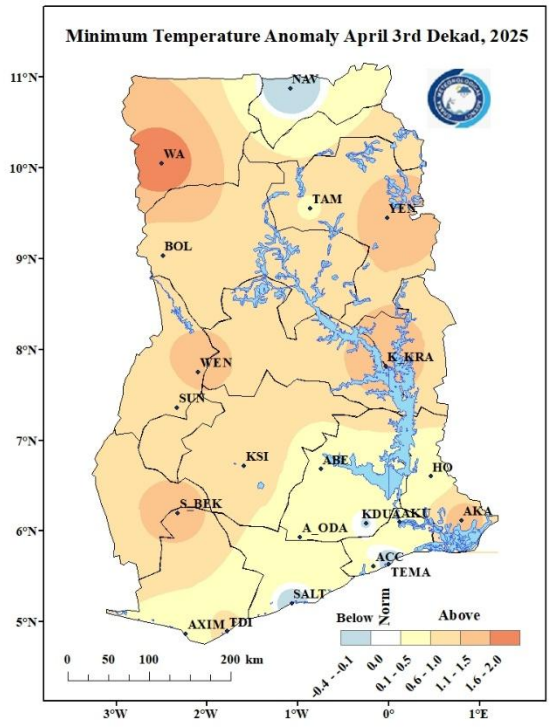


Figure 7b Minimum Temperature Anomaly April 3rd, 2025

In *Figure 7a*, the average minimum temperatures varied across different sectors. The Northern sector, the east-coast and the transitional sector precisely; Kete Krachi experienced warmer conditions with average values ranging from 25°C to 27.0°C. In contrast, temperatures in the forest and transition zones were relatively cooler, ranging from 22.0°C to 24.0°C. Tamale stood out with the highest average nighttime temperatures reaching 26.5°C. The lowest average night-time temperature was recorded in Abetifi, recording approximately 21.9°C.

In *figure 7b*, we see the Minimum Temperature Anomaly for this period. In this dekad, temperatures were higher than average across most parts of the country indicating increased night-time temperatures. Navrongo and Saltpond experienced temperatures below normal.

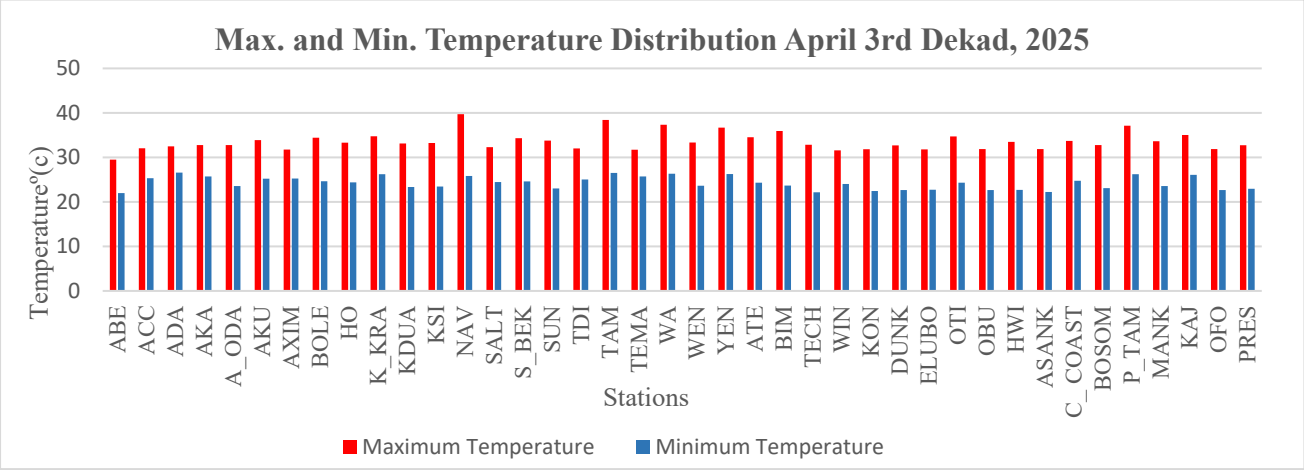


Figure 8 Max and Min Temperature Distribution April 3rd Dekad, 2025

2.3 RELATIVE HUMIDITY

Observed Relative Humidity (RH) over the ten (10) day period is presented in *figure 9a* below. The forest and coastal areas had a relative humidity between 60% and 80%. Meanwhile, relative humidity in the transition and Northern areas varied from 30% to 50 %. The minimum value, 35%, was recorded over Navrongo while the maximum value of, 79% was recorded over Saltpond.

Average RH Anomaly is also presented in *figure 9b.* Generally, a below normal RH is observed over the entire country.

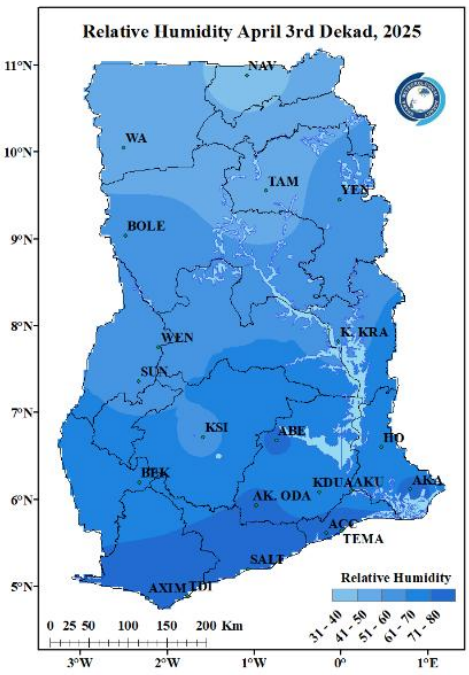


Figure 9a Average Relative Humidity April 3rd Dekad, 2025

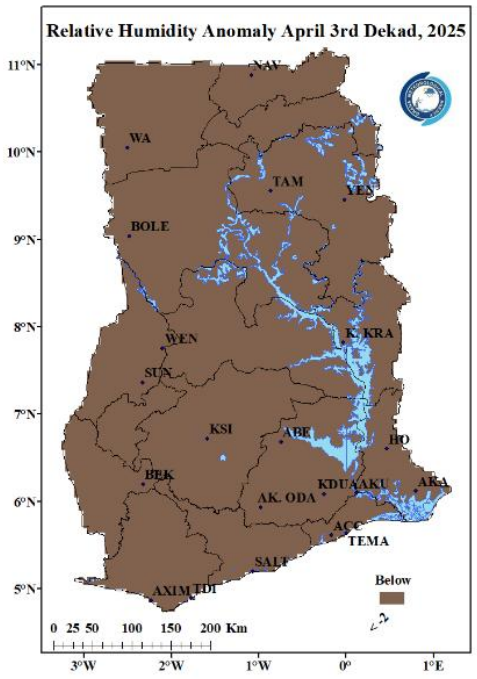
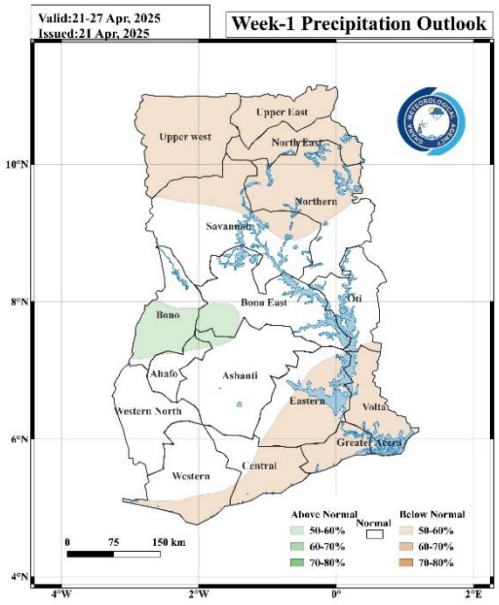
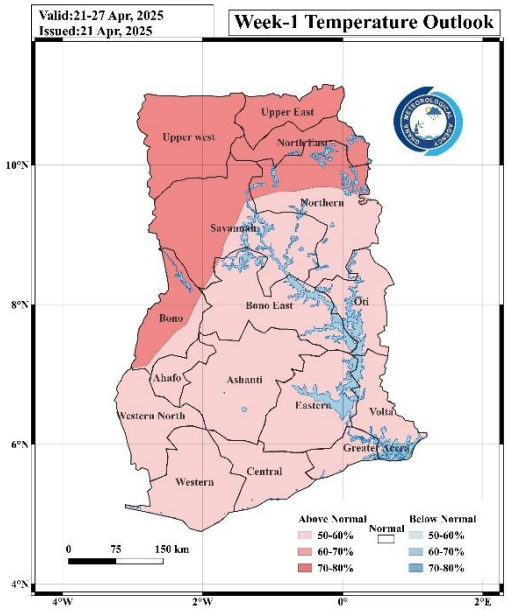


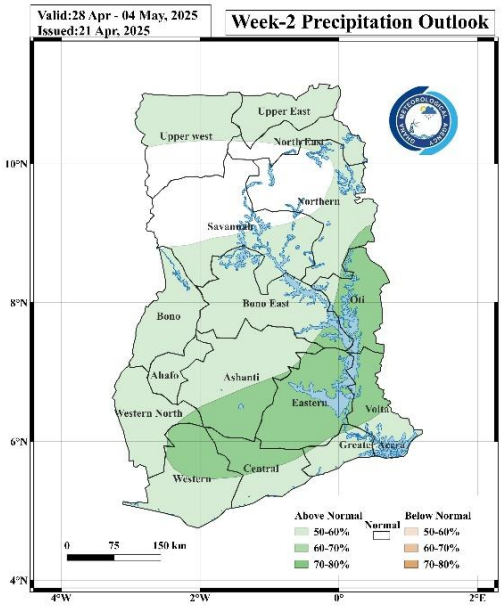
Figure 9b. Average Relative Humidity Anomaly April 3rd Dekad, 2025

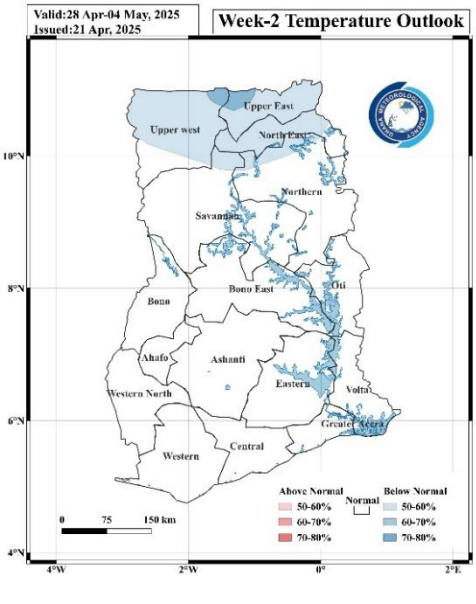
3.0 RAINFALL AND TEMPERATURE OUTLOOK 21st APRIL - 4TH MAY 2025

During week 1, the Northern, Forest and Coastal sectors of the country are expected to receive below-normal rainfall. Transitional area, particularly; Bono area is expected to receive above-normal rainfall. Accompanied by above-normal temperatures across the country. In Week 2, rainfall is projected to be generally above normal in the Southern and Northern parts of the country. Temperature is also projected to drop to below-normal in the Northern sector of the country.









4.0 ADVISORIES

1. **Health Sector**

    - Increased temperatures may lead to dehydration and heat stress.
    - Be cautious of heat-related illnesses, especially for vulnerable groups (elderly, children, and those with chronic illnesses) due to high daytime temperatures particularly in the Northern belt.

2. **Water Resources Management Sector**
    - Conserve water and use it efficiently, especially in regions with less rainfall (Northern sector).
    -

3. **General Public**

    - Above-Normal Temperatures (Nationwide). The general public should limit outdoor activities during peak heat hours (11 am to 4 pm).
    - The use of fans or air conditioning where available to stay cool
    - Stay hydrated, avoid prolonged sun exposure, and wear light clothing.
    - Stay updated on weather forecasts from the Ghana Meteorological Agency.

5.0 APPENDIX

5.1 TABLE OF STATIONS

STATIONS	Abrevation	STATIONS	Abrevation	STATIONS	Abrevation
Abetifi	ABE	Bui	BUI	Salaga	SALA
Accra	ACC	Cape Coast	C. COAST	Saltpond	SALT
Ada	ADA	Damongo	DAM	Sefwi Bekwai	S. BEK
Agona Kwanyako	AG. KWA	Dorma Ahenkro	D. AHEN	Sefwi Wiawso	S. WIAW
Agona Swedro	AG. SWE	Duayaw Nkwanta	D. NKWA	Sunyani	SUNY
Akatsi	AKA	Dunkwa	DUNK	Techiman	TECH
Akim Oda	AK. ODA	Goaso	GOA	Tafo	TAFO
Akropong Akwapim	A. Akwap	Ho	HO	Takoradi	TADI
Akuse	AKU	Kade	KADE	Tamale	TAMA
Asamankese	ASAM	Kete Krachi	K. KRA	Tarkwa	TARK
Asankragwa	ASANK	Kintampo	KINT	Tema	TEMA
Atebubu	ATE	Koforidua	KOF	Twifo Praso	T. PRA
Atieku	ATIEKU	Kpando	KPAN	Vea Dam	VEA
Axim	AXIM	Kumasi	KSI	Wa	WA
Babile	BABILE	Manga Bawku	M. BAWKU	Walewale	WALE
Bechem	BECH	Mim	MIM	Wamfie	WAMF
Bibiani	BIB	Navrongo	NAV	Wassaw Akropong	W. AKR
Bimbila	BIMB	Nsoatre	NSOA	Wenchi	WEN
Bole	BOLE	Obuasi	OBUASI	Winneba	WINN
Bolgatanga	BOLGA	Pong Tamale	P. TAM	Yendi	YEN
Bompata	BOMPA	Prang	PRANG	Zuarungu	ZUA
Breman Asikuma	B. ASIK				

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