SEPTEMBER 2025

CLIMATE BULLETIN

DEKAD 2, SEP (11-20)

GMET/CLIMATE/109 25 FORM337

9/11/2025

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SUMMARY

- **Rainfall:**
  - Most areas in the north received rainfall above 50mm.
  - Mim received the highest rainfall of 228.5 mm.
  - Kete Krachi recorded the highest rainy days of 9 days
- **Rainfall Anomalies:**
  - Surplus rainfall in most areas.
- **Relative Humidity:**
  - Maximum value of 87% was recorded over Saltpond
  - Minimum value of 70% was recorded over Sefwi Bekwai.
- **Temperatures:**
  - **Maximum:**
    - Above normal temperatures experienced in most of the stations.
    - The maximum of the Maximum temperature of 31.7°C was recorded in Navrongo and Tamale.
    - Relatively cooler temperatures along the coast and in selected forested areas.
  - **Minimum:**
    - Warmer temperatures in the Northern zones.
    - Relatively above normal temperatures across the country
    - The minimum of the Minimum temperature was recorded in Abetifi, reaching 20.4°C.

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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

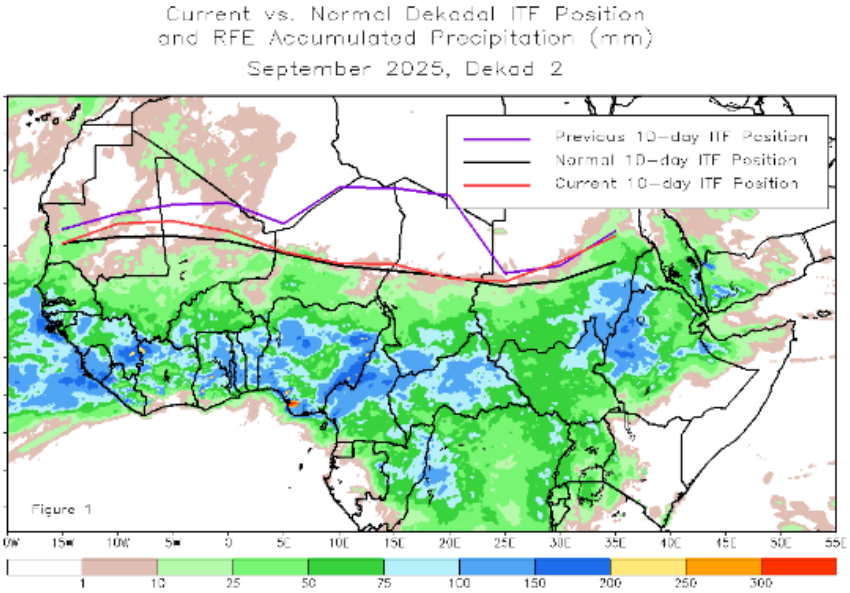

Figure 1Current ITF Position September 2nd Dekad, 2025

Figure 1 describes the position of the ITF during the 2nd dekad of September and its previous position during the 1st dekad of September. The current Inter-Tropical Front (ITF) moved up as compared to its previous location which occurred between September 1 and 10. Specifically, the current ITF is located at approximately 11.1N in the northern sector of the country which is north of its previous position at 11.5N. 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

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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
May 1	13.9	13.7	12.7
May 2	14.1	13.9	13.8
May 3	14.5	14.7	14.2
June 1	14.4	15.9	16.5
June 2	15.8	15.9	18.1
June 3	16.5	16.4	17.5
July 1	18.1	18.4	17.6
July 2	20.4	20.5	18.5
July 3	20.5	20.9	19.8
August 1	20.1	21.1	18.8
August 2	21	21.1	21.8
August 3	18.5	19.4	21.1
September 1	21.3	21.4	19.8
September 2	20	19.2	17.5

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.

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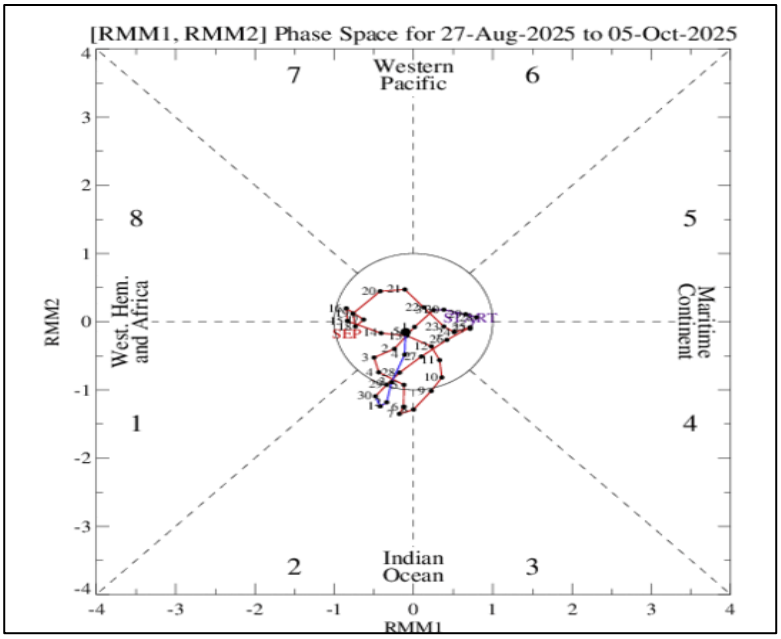

Figure 2 Current MJO position as of September 2nd Dekad, 2025

As depicted in Figure 2, the Madden-Julian Oscillation (MJO) was observed between Phases 5 and 6, corresponding to the Maritime Continent and Western Pacific regions. However, its position in the centre of the phase-space diagram indicates an inactive MJO.,

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2.0 RAINFALL, TEMPERATURE AND RELATIVE DISTRIBUTION

2.1 RAINFALL

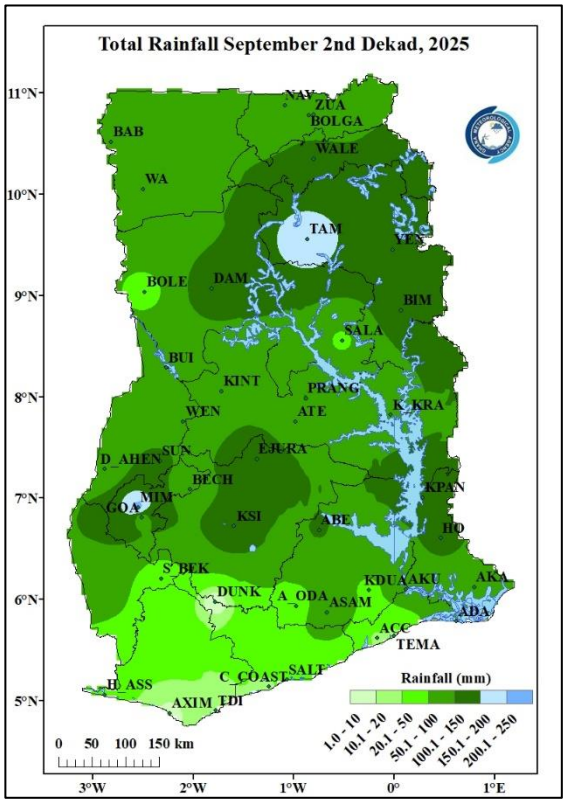

Figure 3a Total Rainfall September 2nd Dekad, 2025

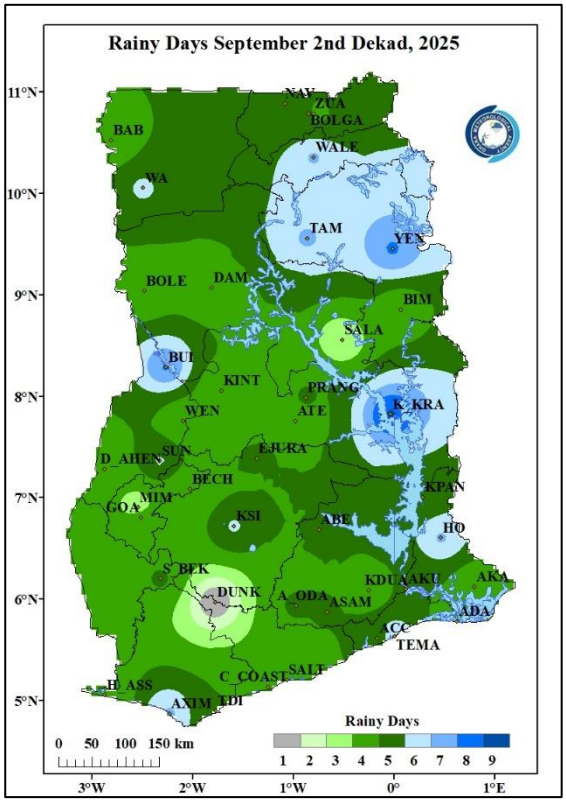

Figure 3b Rainy Days September 2nd Dekad, 2025

Figure 3a describes rainfall distribution across Ghana during the second ten-day period (dekad) of September. During this period, Mim recorded the highest total rainfall, amounting to 228.5 mm. On the other hand, several locations recorded rainfall more than 50mm with the exception of south western portion receiving less than 50 mm.

Figure 3b illustrates the frequency of rainy days within the same period. Most stations recording more than 4 rainy days. Kete Krachi recorded the highest rainy days of 9 days in this dekad.

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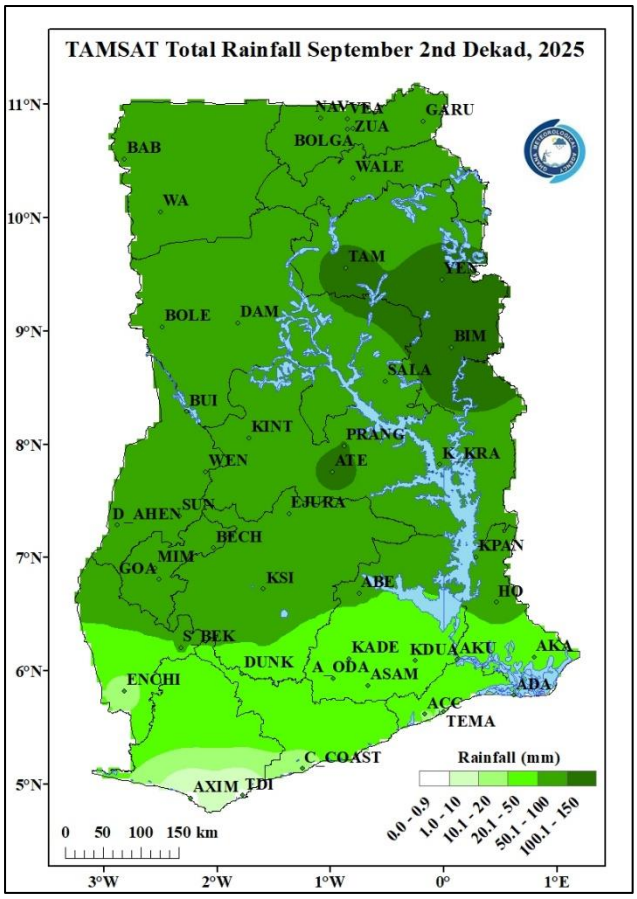

Figure 4. TAMSAT Total Rainfall September 2nd Dekad, 2025

Figure 4 represents total rainfall for the duration, as calculated from the TAMSAT rainfall estimates**.** The satellite-based data is helpful in terms of nationwide rainfall distribution, but in this dekad, there were variations when compared with ground-based observations. It was overestimated in comparison to the observed ground data.

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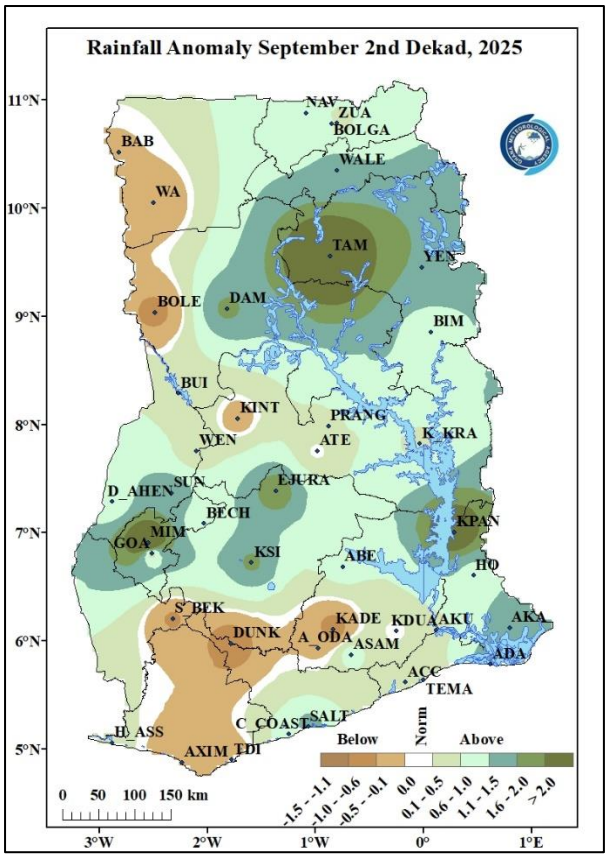

Figure 5 Rainfall Anomaly for September 2nd Dekad, 2025

Figure 5 describes areas across the country that experienced deviations from normal rainfall during the period. Notably, most stations across the country from the Northern to the southwestern portions experienced surplus rainfall. On the other hand, the Upper East coastal areas, as well as a few stations in the forest, namely Wa, Bole, Axim, Takoradi, Dunkwa Offin, Akim Oda, and Kade, experienced deficit rainfall.

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2.2 TEMPERATURE

Figure 6a displays the distribution of average Maximum temperatures nationwide. During the reporting period, the northern areas recorded the highest temperatures, ranging from 30.0°C to 32.0°C. The highest temperature of 31.7°C was observed in Navrongo, while the lowest, 27.1°C,

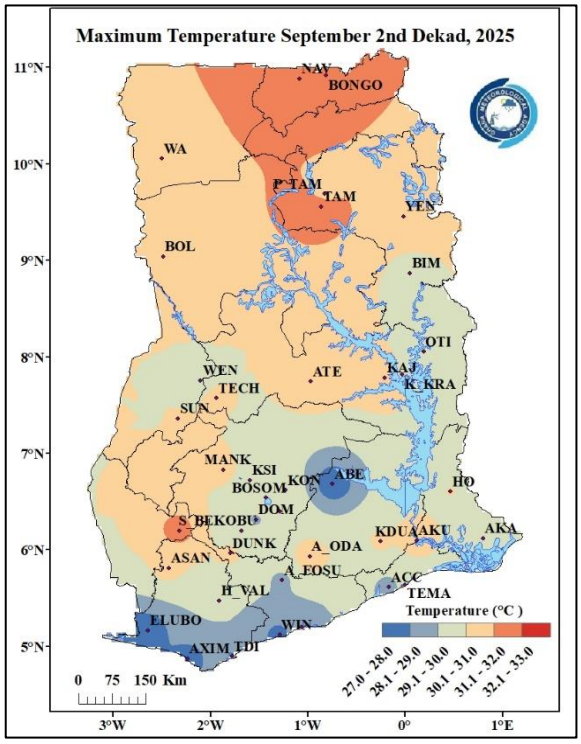

Figure 6a Maximum Temperature September 2nd Dekad, 2025

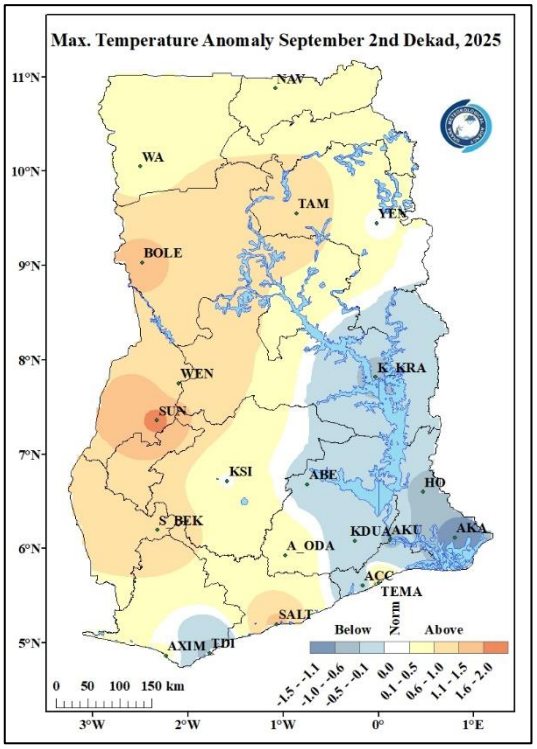

Figure 6b Maximum Temperature Anomaly September 2nd Dekad, 2025

and was recorded in Abetifi. In the transition zone, temperatures ranged between 29.0°C and 30.0°C, whereas the southern sector, including locations such as Abetifi, Accra, Winneba, Takoradi, Axim, Elubo, Half-Assini experienced relatively cooler conditions, with temperatures ranging from 27.0°C to 29.0°C.

Figure 6b illustrates the Maximum Temperature Anomalies. In this dekad, most of the stations across the country experienced above-normal temperatures except for areas along the east-coast and parts of the forest namely, Accra, Akatsi, Akuse, Koforidua, Akim-oda and Abetifi exhibiting near-normal to below-normal temperatures.

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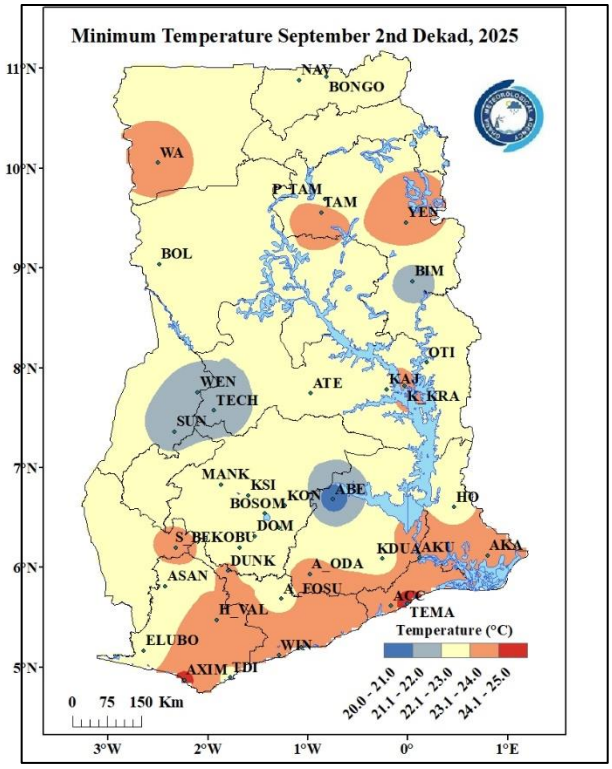

Figure 7a. Minimum Temperature September 2nd Dekad, 2025

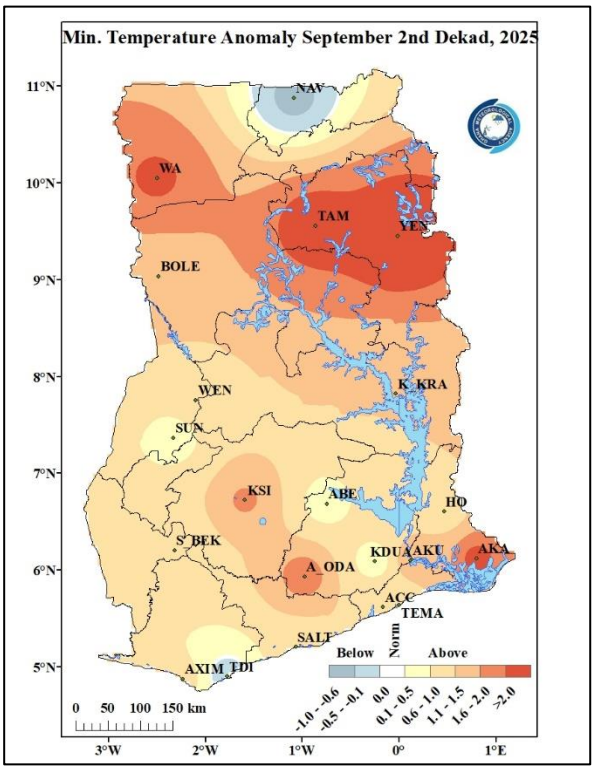

Figure 7b. Minimum Temperature Anomaly September 2nd Dekad, 2025

In *Figure 7a*, the average minimum temperatures varied across different sectors. The Southern sector and areas along the coast of the country Axim, Accra, Akuse, Assin Fosu to mention a few experienced relatively warmer temperatures, with average values ranging from 23.0°C to 25.0°C. Conversely, areas such as Sunyani, Wenchi, Bimbila, Abetifi, to mention a few experienced relatively cooler average night-time temperatures ranging from 20.0°C to 22.0°C. The lowest average night-time temperature was recorded in Abetifi located in the forest sector, reaching 20.4°C.

In *figure 7b*, we see the Minimum Temperature Anomaly for this period. Most parts of the country experienced above normal temperatures indicating increased night-time temperatures.

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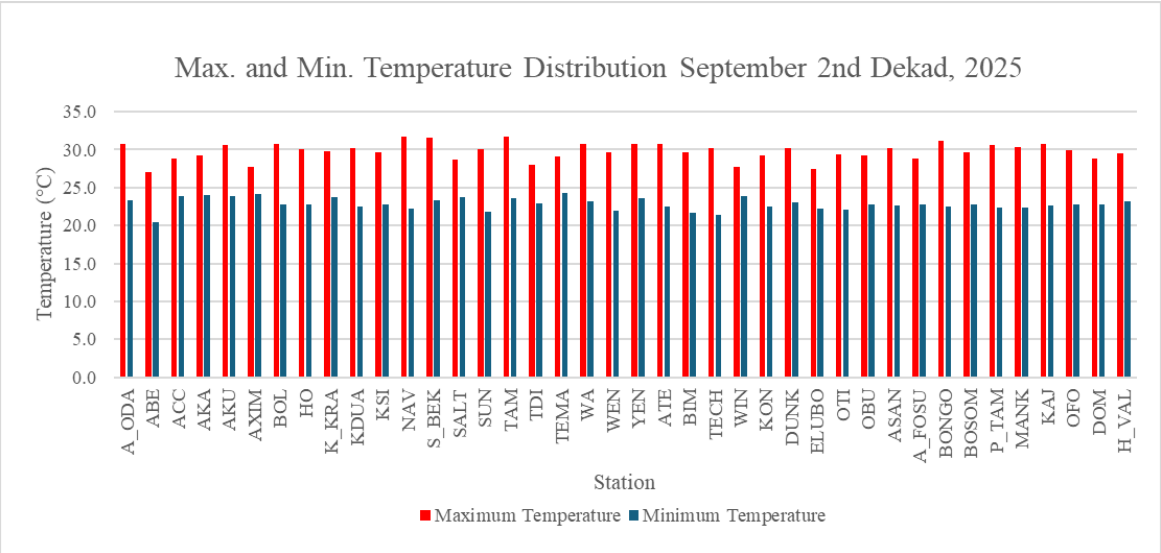

Figure 8 Max and Min Temperature Distribution for September 2nd Dekad, 2025

2.3 RELATIVE HUMIDITY

Observed Relative Humidity (RH) over the ten (10) day period is presented in *figure 9a* below. Most areas across the country experienced RH of 60 to 80%. Areas around Axim, Takoradi.Abetifi,Akuse recorded relative between 80 to 90%. The minimum value of 70% was recorded over Sefwi Bekwai while a maximum value of 87% was recorded over Saltpond.

Average RH Anomaly is also presented in *figure 9b.* A below normal RH is observed over the southern parts of the country. However, the northern areas such as Tamale, Yendi, Wa and Navrongo experienced an above normal RH.

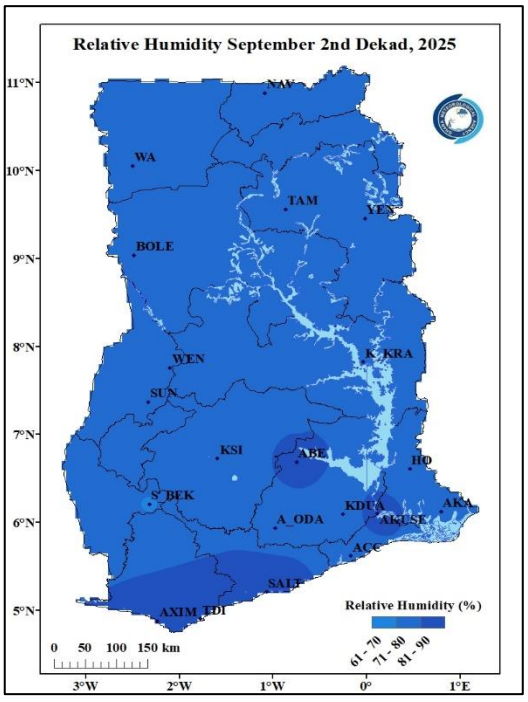

Figure 9a. Average Relative Humidity September 2nd Dekad, 2025

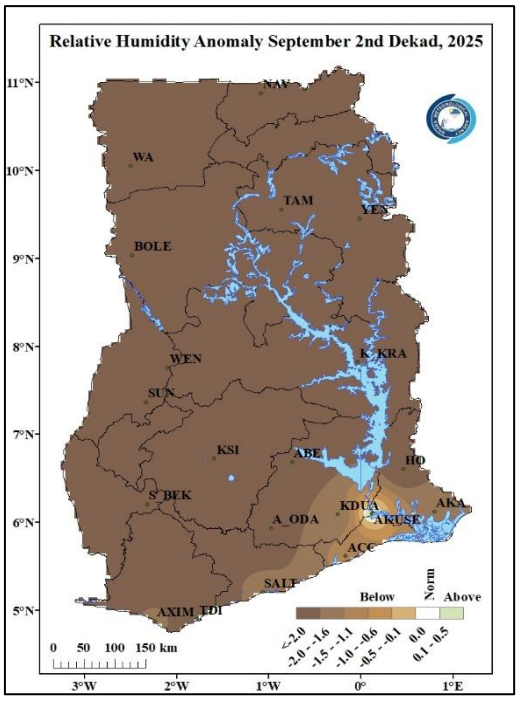

Figure 9b. Average Relative Humidity Anomaly September 2nd Dekad, 2025

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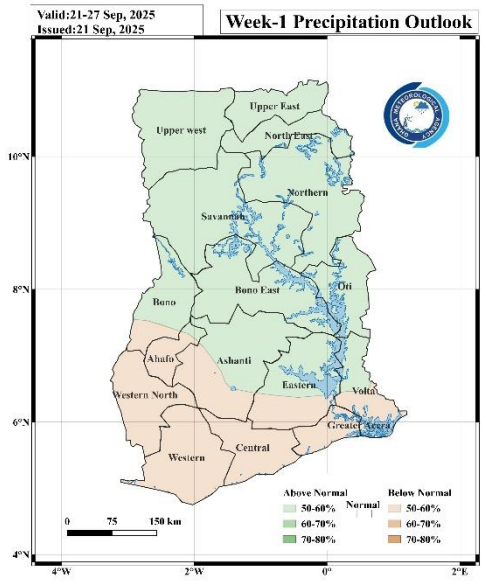
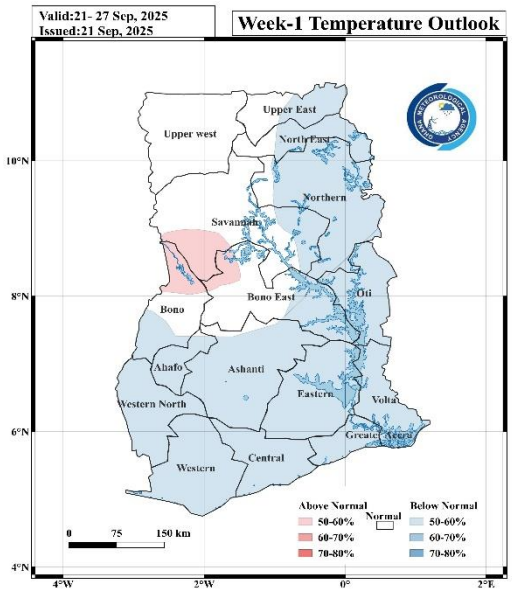
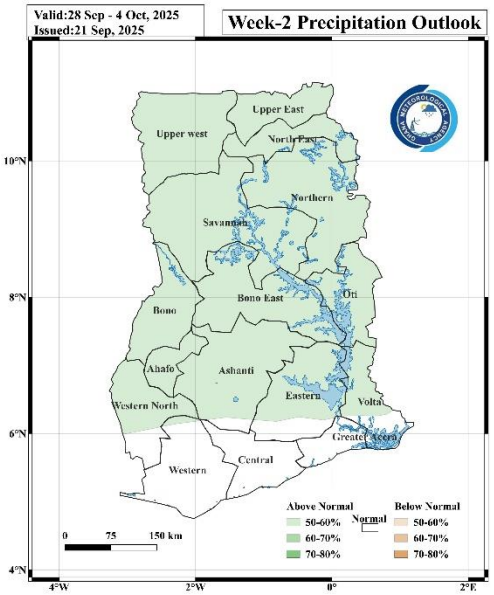
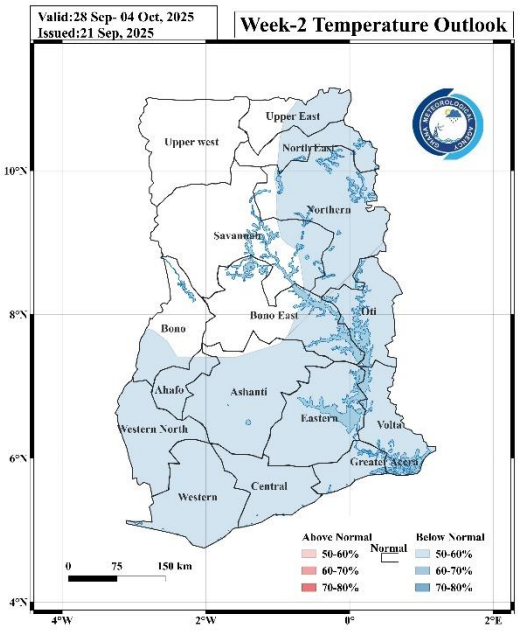
3.0 RAINFALL AND TEMPERATURE OUTLOOK 21ST SEPTEMBER - 4TH OCTOBER 2025

Week 1 is expected to bring below-normal rainfall to the southern regions and above normal rainfall for the remaining portions, accompanied by below normal temperatures across the country. In Week 2, rainfall is projected to be above normal in the Northen and Transition areas, while temperatures will remain below normal in most part of the country.









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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.

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5.0 APPENDIX

5.1 TABLE OF STATIONS

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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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