SEPTEMBER 2025

CLIMATE BULLETIN

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DEKAD 3, SEPTEMBER (21-30)

GMET/CLIMATE/030925 FORM337

9/3/2025

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SUMMARY

- **Rainfall:**
  - Most areas in the country received rainfall above 50mm.
  - Wenchi received the highest rainfall of 200 mm.
  - Abetifi, Asamankese, Bole, Bui and Sefwi Bekwai recorded the highest rainy days of 8 days.
- **Rainfall Anomalies:**
  - Surplus rainfall was recorded in most areas.
- **Relative Humidity:**
  - Maximum value of 85% was recorded over Saltpond
  - Minimum value of 69% was recorded over Akuse.
- **Temperatures:**
  - **Maximum:**
    - Above normal temperatures experienced in most parts of the country.
    - The maximum of the Maximum temperature of 32.2°C was recorded in Tamale.
    - The minimum of the maximum temperature of 27.0°C was recorded in Abetifi.
    - Relatively cooler temperatures along the coast and places in the forested areas.
  - **Minimum:**
    - Above normal temperatures recorded across the entire country
    - Warmer temperatures in the Northern and East Coastal sector
    - The maximum of the Minimum temperature was recorded in Ada, reaching 25.74°C
    - The minimum of the Minimum temperature was recorded in Abetifi, reaching 20.65°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 (south westerly 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

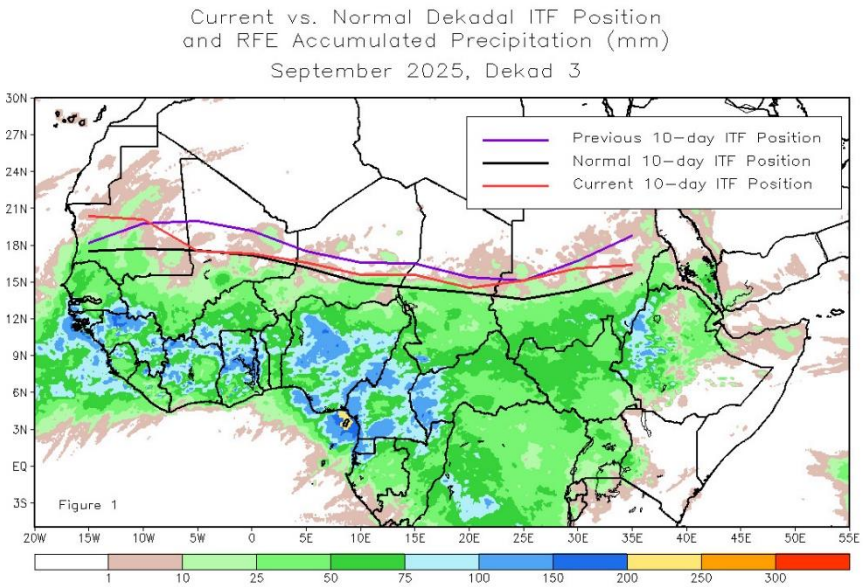


Figure 1: Current ITF position for September 3rd Dekad, 2025

Figure 1 describes the position of the ITF during the 3rd dekad of September and its previous position during the 2nd dekad of September. The current Inter-Tropical Front (ITF) moved down as compared to its previous location which occurred between September 11 and 20. Specifically, the current ITF is located at approximately 17.8N north of the country, which is south of its previous position at approximately 20.0N. 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
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
September 3	17.5	17.3	16.6

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.

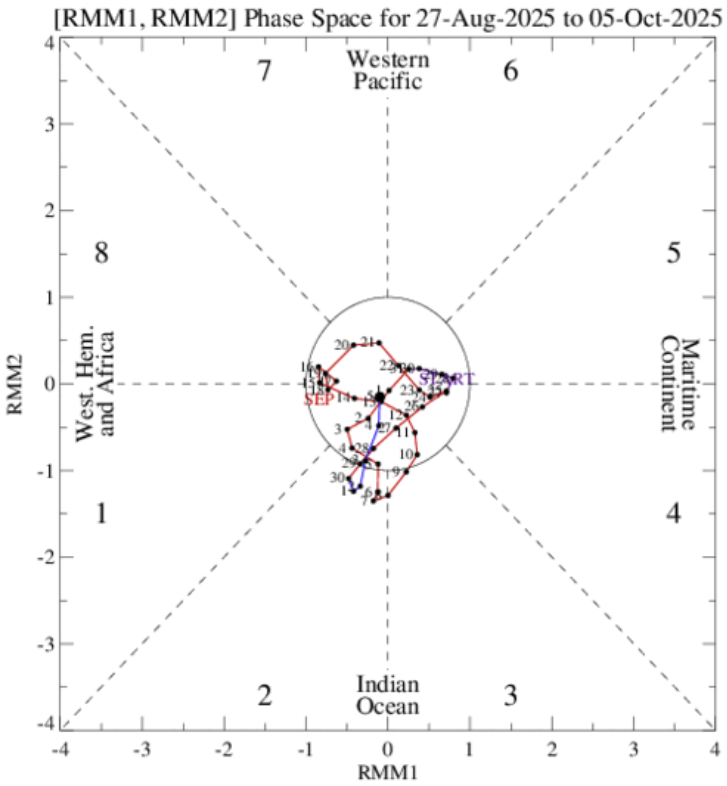


Figure 2: Current MJO position as at September 3rd Dekad, 2025

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 near the centre 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

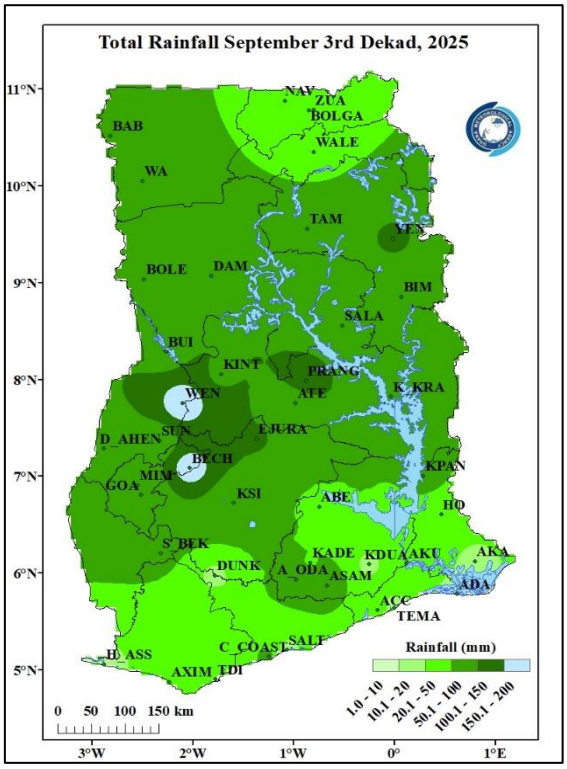


Figure 3a: Total Rainfall September 3rd Dekad, 2025

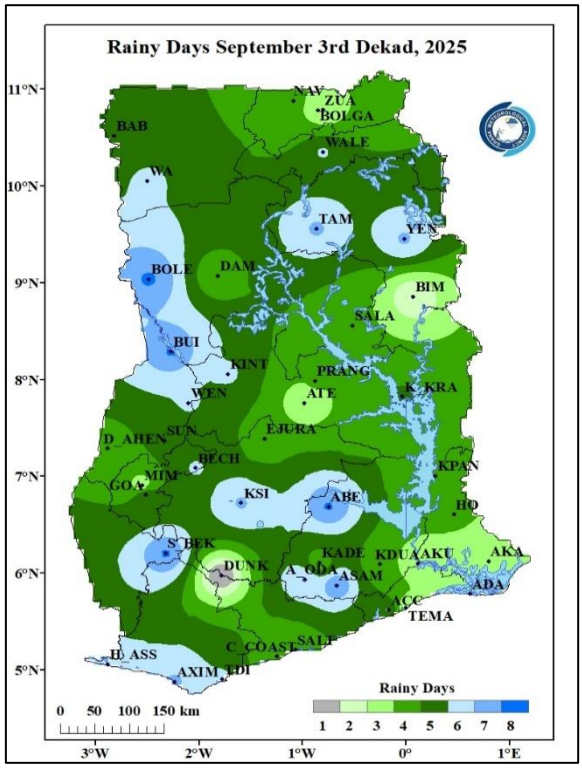


Figure 3 b: Rainy Days September 3rd Dekad, 2025

Figure 3a describes rainfall distribution across Ghana during the third ten-day period (dekad) of September. During this period, Wenchi recorded the highest total rainfall of 200mm. However, stations such as Navrongo, Zuarungu, Bolgatanga and Walewale in the Northeastern portions of the country and some stations in the southern parts, including Half Assini, Dunkwa, Takoradi, Saltpond, Accra, Tema, Koforidua, Akatsi and Ho recorded rainfall amounts less than 50mm. The least amount of rainfall of 8.6mm was recorded in Ada during the dekad.

Figure 3b shows the frequency of rainy days within the same period. Most stations across Ghana, spanning from the North to the coastal areas, recorded between four (4) and eight (8) rainy days. Whereas Abetifi, Asamankese, Bole, Bui and Sefwi Bekwai recorded the highest rainy days of 8 days, Dunkwa recorded one (1) rainy day which is the least during the dekad.

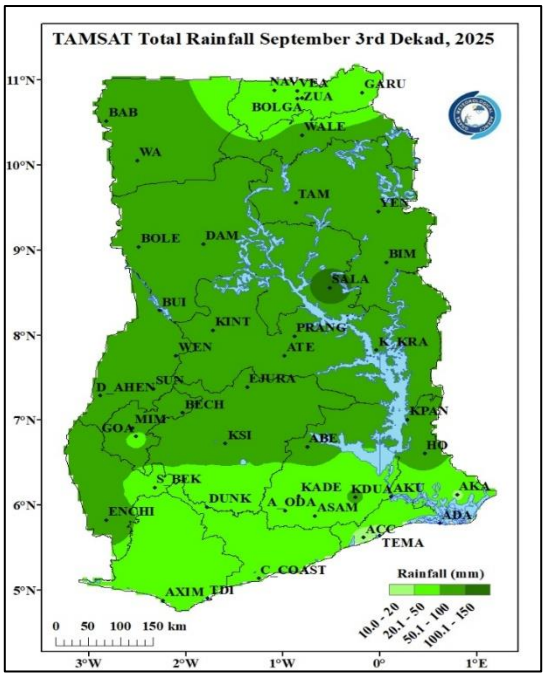


Figure 4: TAMSAT Total Rainfall September 3rd Dekad, 2025

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. It can be seen from the image that the TAMSAT generally reproduced the ground-based observations wherein most stations across the country recorded rainfall values between 50 and 100mm with some stations at the northern and southern portions recording rainfall amounts less than 50mm.

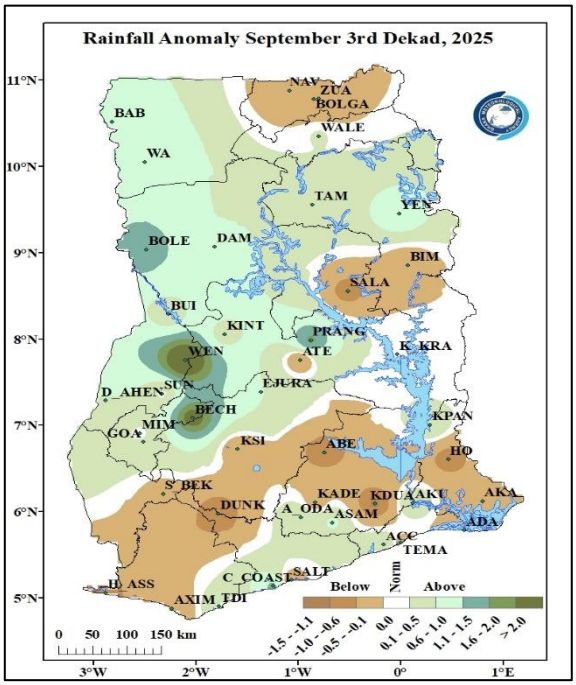


Figure 5: Rainfall Anomaly for September 3rd Dekad, 2025

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 portions through to the southern portions experienced surplus rainfall. These stations include Babile, Walewale, Damongo, Kintampo, Kpando, Takoradi and Accra. On the other hand, places like Navrongo, Bolgatanga, Salaga, Atebubu, Half Assini, Dunkwa, Kade, Abetifi, Tema, Akatsi and Ho experienced deficit rainfall. Kete Krachi, experienced normal rainfall conditions during the period.

2.2 TEMPERATURE

Maximum Temperature

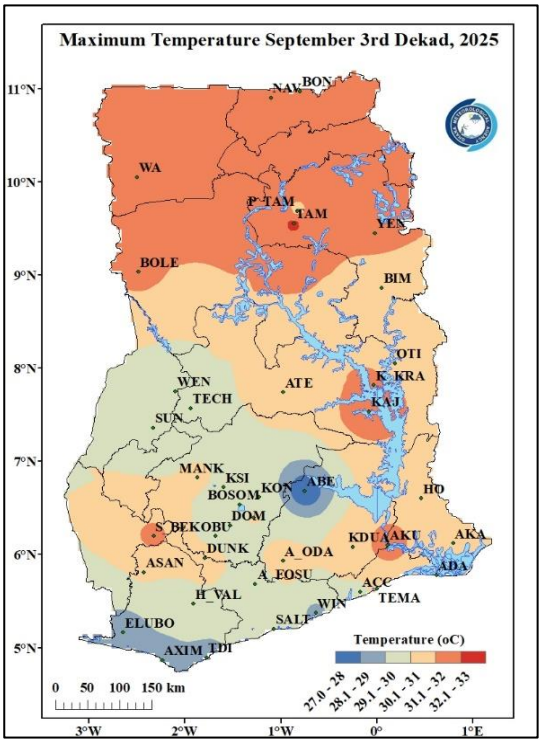


Figure 6a: Maximum Temperature September 3rd Dekad, 2025

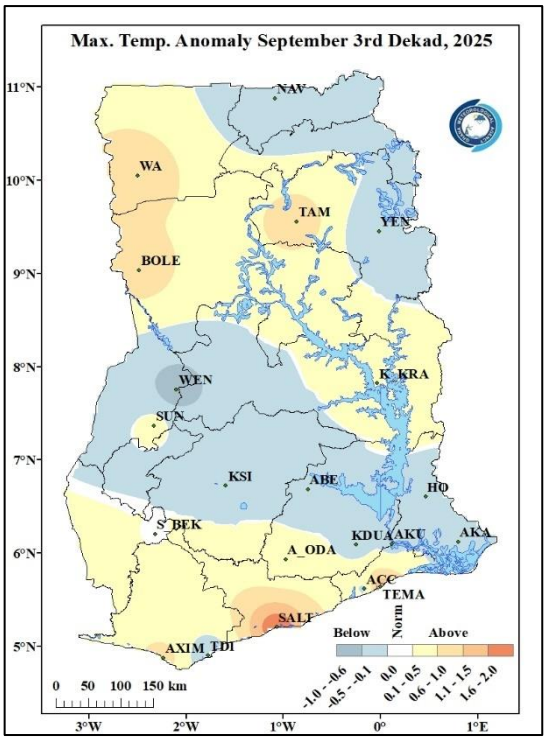


Figure 6b: Maximum Temperature Anomaly September 3rd Dekad, 2025

Figure 6a displays the distribution of average Maximum temperatures nationwide. During the reporting period, the northern areas recorded the highest temperatures, ranging from 31.1°C to 33.0°C. The highest temperature of 32.2°C, was observed in Tamale, while the lowest, 27.0°C, was recorded in Abetifi. In the transition zone, temperatures ranged between 29.0°C and 32.0°C at places such as Wenchi, Atebubu and Kete Krachi. The southern sector, including locations such as Abetifi, Accra, Winneba, Takoradi, Elubo, Half-Assini experienced relatively cooler conditions, with temperatures ranging from 27.0°C to 32.0°C.

Figure 6b illustrates the Maximum Temperature Anomalies. In this dekad, places such as Navrongo, Yendi, Wenchi, Kumasi, Abetifi, Koforidua, Akuse, Ho, Akatsi and Takoradi experienced below normal temperature. Normal temperature conditions were experienced in Sefwi Bekwai whereas the remaining parts of the country experienced above normal temperature.

Minimum Temperature

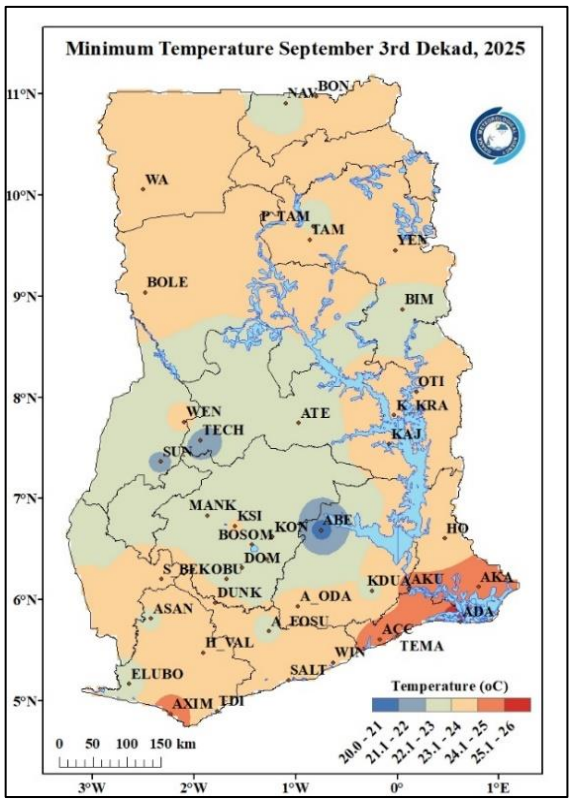


Figure 7a: Minimum Temperature September 3rd Dekad, 2025

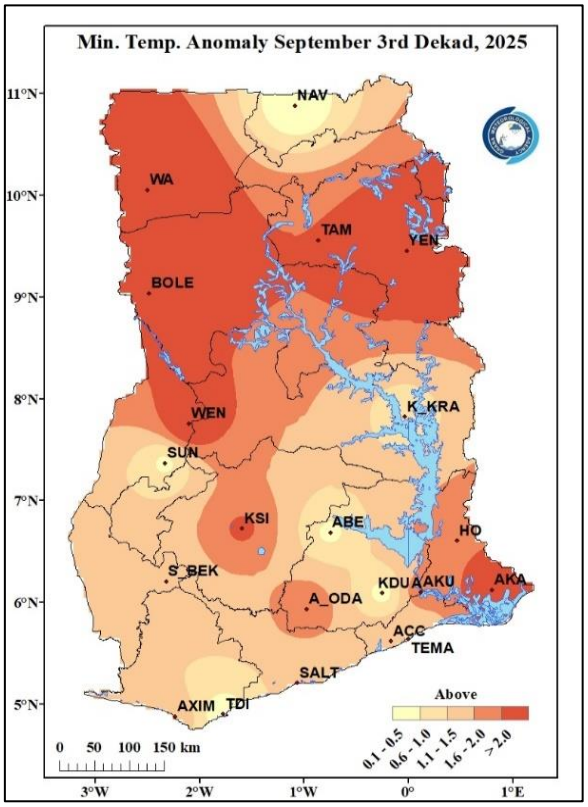


Figure 7b: Minimum Temperature Anomaly September 3rd Dekad, 2025

In *Figure 7a*, the average minimum temperatures varied across different sectors. Places in and around Wa, Bongo, Bole, Yendi, Kete Krachi, Ho, Sefwi Bekwai, Axim, Akim Oda, Saltpond, Accra, Tema, Ada and Akatsi, among others, experienced relatively warmer conditions with temperatures ranging from 23.1°C to 26.0°C. The highest nighttime temperature recorded in the country for the period was at Ada with a temperature of 25.7°C, On the other hand, areas such as Navrongo, Pong Tamale, Sunyani, Atebubu, Assin Fosu, and Abetifi, among others recorded relatively cooler nighttime temperatures ranging between 20.0°C and 23.0°C. The least nighttime temperature during the period was recorded at Abetifi with a temperature of 20.65°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. None of the areas experienced below-normal temperatures.

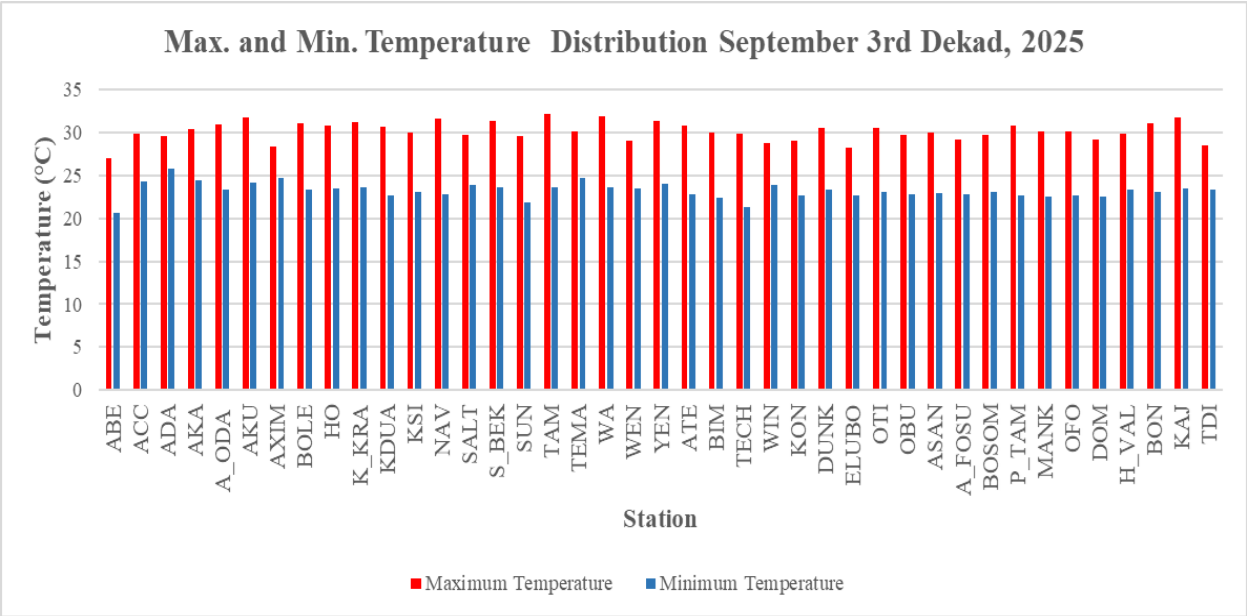


Figure 8: Max. and Min. Temperature Distribution for September 3rd Dekad, 2025

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 experienced RH of 70 to 90%. On the other hand, the Transition and Northern areas experienced RH values ranging from 60 to 80 %. A minimum value of 69% was recorded over Akuse while a maximum value of 85% was recorded over Saltpond.

Average RH Anomaly is also presented in *Figure 9b* below. A below normal RH is observed across the entire country.

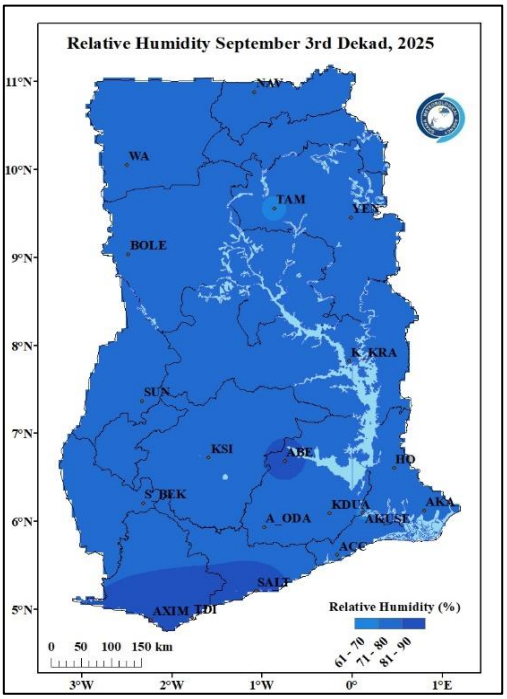


Figure 9a: Average Relative Humidity September 3rd Dekad, 2025

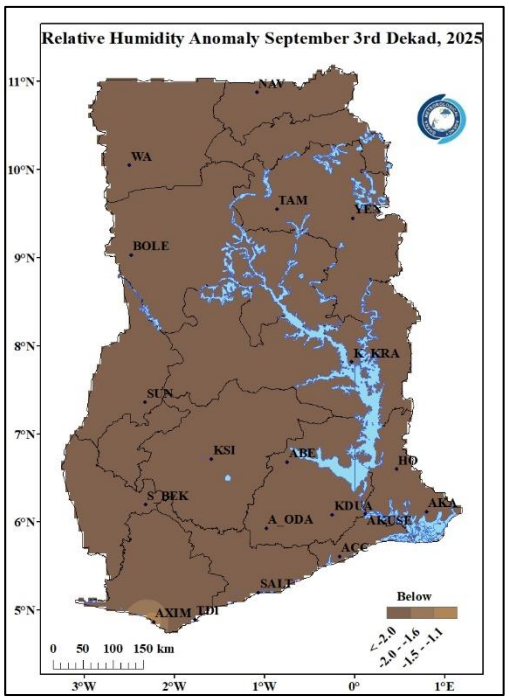
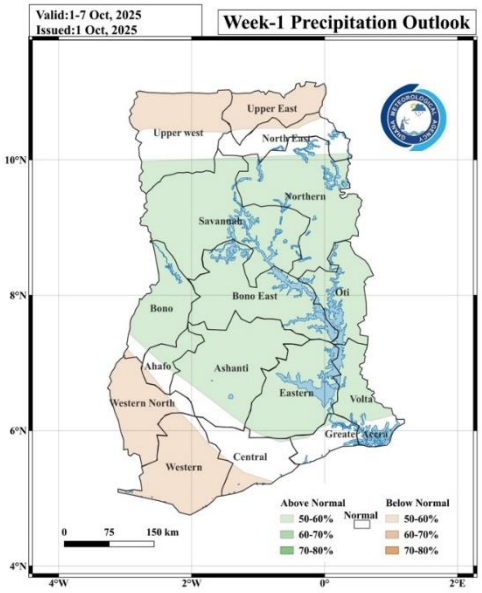
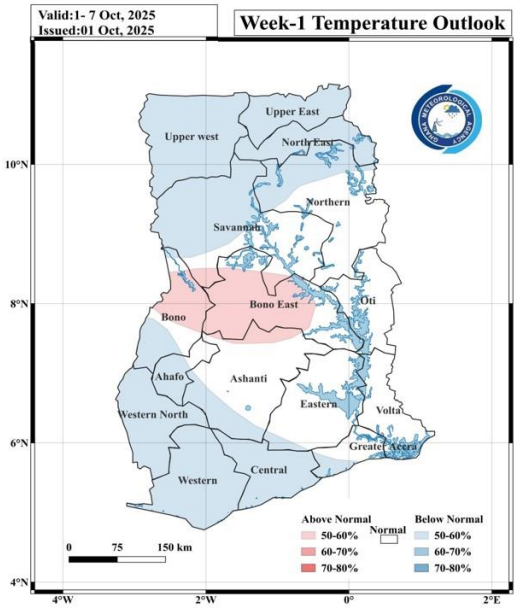


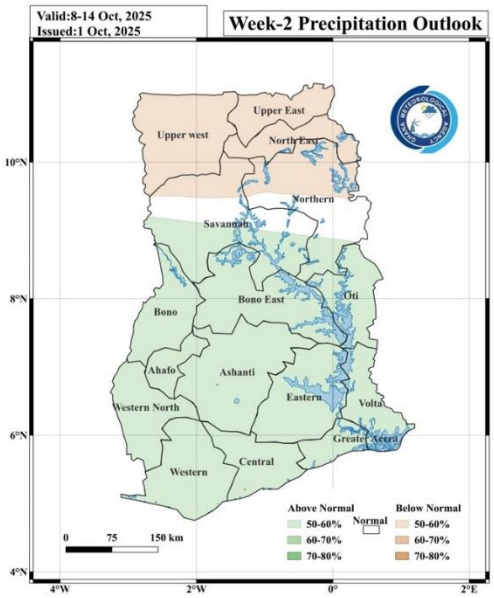
Figure 9b: Average Relative Humidity Anomaly September 3rd Dekad, 2025

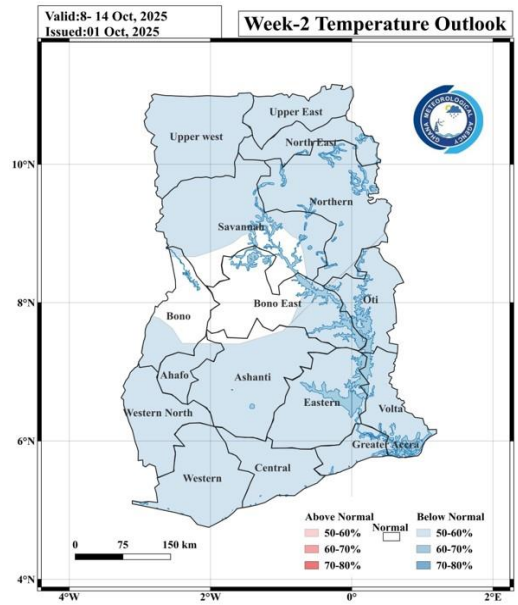
3.0 RAINFALL AND TEMPERATURE OUTLOOK 1ST- 14TH OCTOBER 2025

During Week 1, above-normal rainfall is expected across most parts of the country, while the extreme northern and southwestern portions are anticipated to experience below-normal rainfall. Temperature conditions are generally expected to be below normal nationwide, although a few locations within the middle belt may record slightly above-normal temperatures. In Week 2, rainfall is projected to be above- normal across the southern and middle zones, with parts of the north likely to receive below-normal rainfall. Temperatures during this week are also expected to remain predominantly below normal over most areas of the country.









4.0 ADVISORIES

1. Agriculture

- Farmers in southern and middle zones should take advantage of the expected above-normal rainfall for planting, transplanting, and soil moisture replenishment.
- Farmers in the extreme north and southwestern areas, where below-normal rainfall is expected, should consider water-conserving practices such as mulching and avoid excessive reliance on rainfall for newly planted crops.
- Irrigation scheduling may be needed in areas expecting reduced rainfall to prevent crop stress.

2. Flood and Drainage Management

- Communities in southern and middle belts should clear drainage channels and avoid dumping wastes at inappropriate places to reduce localized flooding risks due to above-normal rainfall.
- Residents in flood-prone areas should stay alert to weather updates from the Ghana Meteorological Agency.

3. Transportation

- Motorists should exercise caution when driving when it is raining as visibility might become poor. Drivers are advised not to drive through flood waters.

4. Health

- Increased rainfall can promote mosquito breeding; communities are encouraged to clear stagnant water and use protective measures such as insecticide-treated nets.
- Cooler, below-normal temperatures may lead to respiratory infections; warm clothing is advised, especially for children and the elderly.

5. Water Resource Management

- Water managers should store and regulate water efficiently in the southern and middle belts to take advantage of increased runoff.
- In the north, prudent water use is recommended due to expected below-normal rainfall.

6. Energy / Power Sector

- Hydropower generation may benefit from increased inflows in the south and middle zones; monitoring of water levels is advised.

5.0 APPENDIX

5.1 TABLE OF STATIONS

TABLE OF STATIONS

Station	Abbreviation	Station	Abbreviation
Abetifi	ABE	Kete Krachi	K_KRA
Accra	ACC	Kade	KADE
Ada	ADA	Koforidua	KDUA
Akatsi	AKA	Kintampo	KINT
Akim Oda	A_ODA	Ho	HO
Akuse	AKU	Kpando	KPAN
Asamankese	ASAM	Kumasi	KSI
Atebubu	ATE	Mim	MIM
Axim	AXIM	Navrongo	NAV
Babile	BAB	Prang	PRANG
Bechem	BECH	Sefwi Bekwai	S_BEK
Bimbila	BIM	Salaga	SALA
Bole	BOLE	Saltpond	SALT
Bolga	BOLGA	Sunyani	SUNY
Bongo	BON	Pong Tamale	P_TAM
Bui	BUI	Tamale	TAM
Cape Coast	C_COAST	Takoradi	TDI
Damongo	DAM	Vea	VEA
Dompase	DOM	Asankragua	ASAN
Dormaa Ahenkro	D_AHEN	Tema	TEMA
Dunkwa Offin	DUNK	Wa	WA
Ejura	EJURA	Walewale	WALE
Elubo	ELUBO	Obuasi	OBU
Enchi	ENCH	Wenchi	WEN
Garu	GARU	Yendi	YEN
Goa	GOA	Zuarungu	ZUA
Half Assini	H_ASS	Assin Fosu	A_FOSU
Hunney Valley	H_VAL	Winneba	WIN
Konongo	KON	Bosomtwe	BOSOM
Mankranso	MANK	Techiman	TECH
Oti	OTI	Kajaji	KAJ

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