

DECEMBER 2025

# CLIMATE BULLETIN



DEKAD 3, DECEMBER (21-31)

GMET/CLIMATE/211225 FORM337

12/21/2025

# TABLE OF CONTENT

SUMMARY .....	1
1.0 OBSERVED CLIMATE DRIVERS .....	2
1.1 INTERTROPICAL FRONT .....	2
1.2 MADDEN-JULIAN OSCILLATION (MJO) .....	4
2.0 RAINFALL, TEMPERATURE AND RELATIVE DISTRIBUTION .....	5
2.1 RAINFALL .....	5
2.2 TEMPERATURE .....	7
2.3 RELATIVE HUMIDITY.....	<b>Error! Bookmark not defined.</b>
3.0 RAINFALL AND TEMPERATURE OUTLOOK 21 <sup>ST</sup> DECEMBER 2025 - 3 <sup>RD</sup> JANUARY 2026 .....	10
4.0 ADVISORIES.....	11
5.0 APPENDIX.....	12
5.1 TABLE OF STATIONS.....	12



## LIST OF FIGURES

Table 1: Dekadal evolution of the ITF position over Ghana 2025.....	3
Figure 1: Current MJO position as at December 2nd Dekad, 2025 .....	4
Figure 2b: Rainy Days December 1st Dekad, 2025 .....	5
Figure 2a: Total Rainfall December 1st Dekad, 2025 .....	5
Figure 4: Rainfall Anomaly for December 1st Dekad, 2025 .....	6
Figure 3: TAMSAT Total Rainfall December 1st Dekad, 2025 .....	6
Figure 5b: Maximum Temperature Anomaly December 1st Dekad, 2025 .....	7
Figure 5a: Maximum Temperature December 1st Dekad, 2025 .....	7
Figure 6b: Minimum Temperature Anomaly December 1st Dekad, 2025 .....	8
Figure 6a: Minimum Temperature December 1st Dekad, 2025 .....	8
Figure 7: Max. and Min. Temperature Distribution for December 1st Dekad, 2025 .....	9



## SUMMARY

- **Rainfall:**
  - Few areas in the southern sector received substantial rainfall above 50mm.
  - Axim received the highest rainfall of 100 mm.
  - Axim and Akim Oda recorded the highest rainy days of 6 days.
- **Rainfall Anomalies:**
  - Surplus rainfall was recorded over the most areas within the southern sector and part of the transition while the northern recorded a deficit in rainfall.
- **Temperatures:**
  - **Maximum:**
    - Above normal temperatures experienced in almost of the country.
    - The maximum of the Maximum temperature of 38.7°C was recorded in Mankranso.
    - The minimum of the maximum temperature of 27.5°C was recorded in Awudome.
  - **Minimum:**
    - Above normal temperatures recorded over the entire of the country
    - Warmer temperatures in parts of the Northern and Coastal areas
    - The maximum of the Minimum temperature of 26.5°C was recorded in Yendi.
    - The minimum of the Minimum temperature was recorded in Akuse, reaching 20.4°C.



## 1.0 OBSERVED CLIMATE DRIVERS

### 1.1 INTERTROPICAL FRONT

This is 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. Table 1 below shows the evolving ITF's position over Ghana from January to December, located between 5W and 5E. During the second dekad of December, the ITF was reduced to approximately 2.3°N with respect to the Greenwich meridian.

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
October 1	15.6	16.3	17
October 2	16.4	15.5	13.8
October 3	11.9	11.4	11
November 1	8.3	9.1	9.8
November 2	6.4	7.2	7.9
November 3	4.6	5.3	6.1
December 1	3.8	4.5	5.2
December 2	2.6	3.2	3.9
December 3	1.8	2.3	3.0

*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.

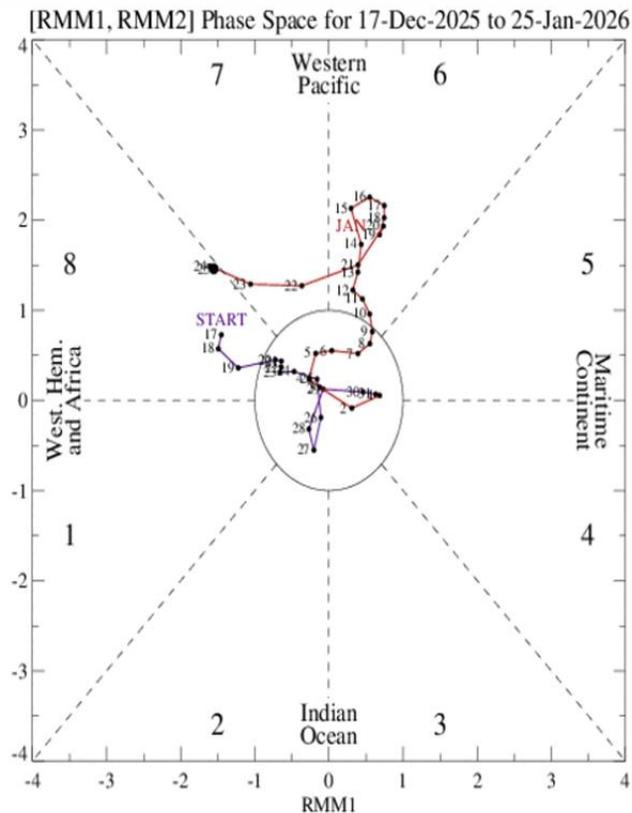


Figure 1: Current MJO position as at December 3rd Dekad, 2025

As depicted in *Figure 1*, the Madden-Julian Oscillation (MJO) was observed in Phases 8 and 1 corresponding to the Western Pacific and Indian Ocean. However, its position is observed to be moving near the centre of the phase-space diagram which indicates a weak amplitude, signifying a less active MJO signal during this period.

Given its current phase and weak amplitude, the MJO was not expected to substantially enhance convective activity over West Africa. This likely contributed to the short-term suppression of rainfall over Ghana, as a weak MJO typically exerts limited influence on the region's weather patterns.

## 2.0 RAINFALL, TEMPERATURE AND RELATIVE DISTRIBUTION

### 2.1 RAINFALL

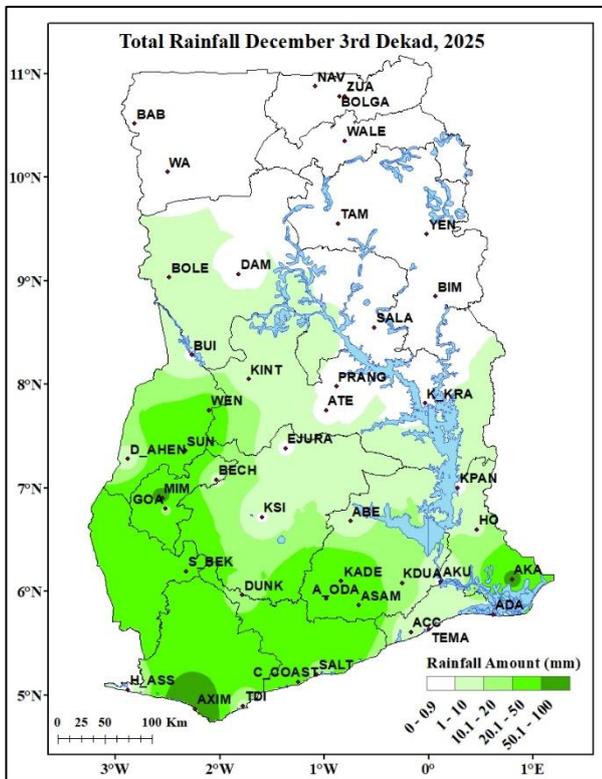


Figure 2a: Total Rainfall December 3rd Dekad, 2025

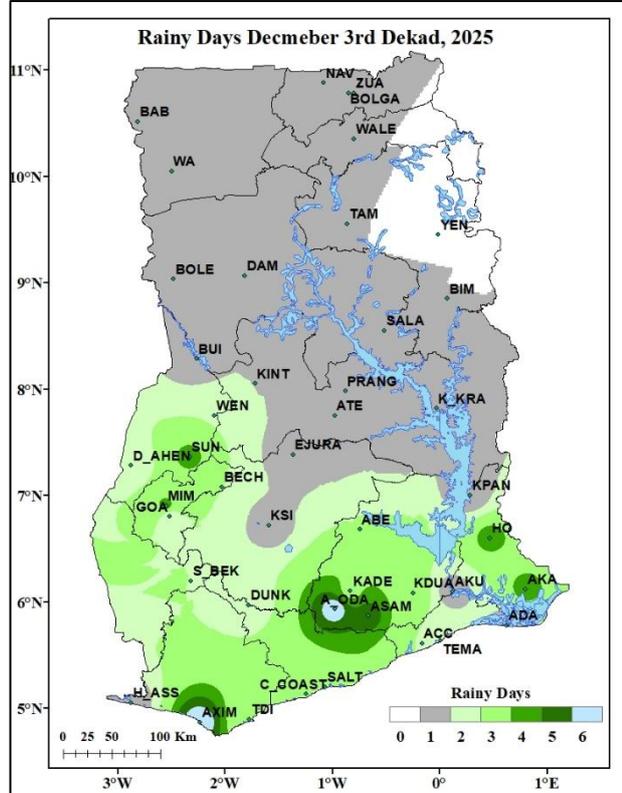


Figure 2b: Rainy Days December 3rd Dekad, 2025

Figure 2a illustrates the spatial distribution of rainfall across Ghana during third dekad of December. The country received a reduction in rainfall. Most areas in the north received little rainfall less than 1mm whereas the southern received some substantial amount of rainfall where Axim recorded the highest rainfall of about 100mm.

Axim and Koforidua recorded the maximum number of 6 rainy days. Most areas within the southern sector recorded rainfall in 2-5 days with few places like Kumasi and Akuse as well as places within the transition and the north reporting rainfall in 1 day.

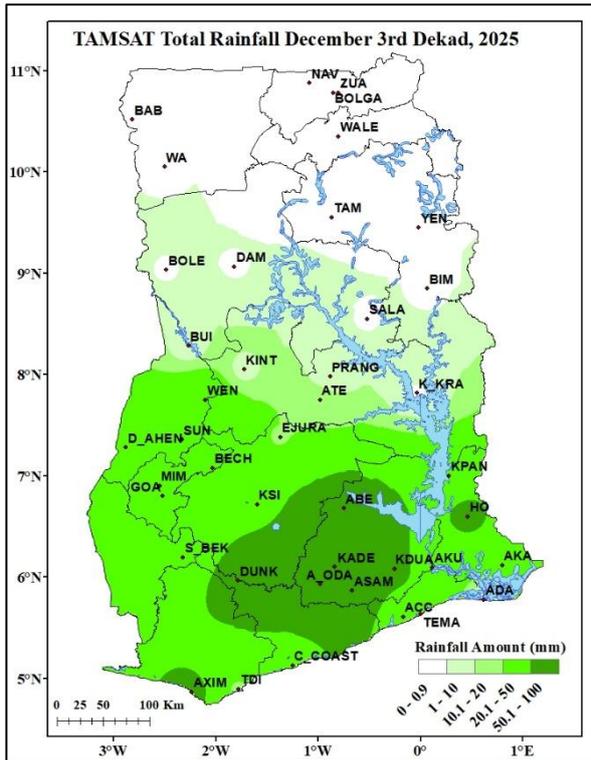


Figure 3: TAMSAT Total Rainfall December 3rd Dekad, 2025

Figure 3 shows the total rainfall for the period, derived from TAMSAT satellite rainfall estimates. The satellite-based data provides a useful overview of rainfall distribution across the country. However, the image indicates that TAMSAT estimates did not fully align with ground-based observations. Rainfall amounts recorded were overestimating the actual rainfall observed in the southern sector which was seen within the central part of the southern. The northern sector was seen to have experienced less to no rains whilst the southern sector reported more rains above 50mm over places within the central

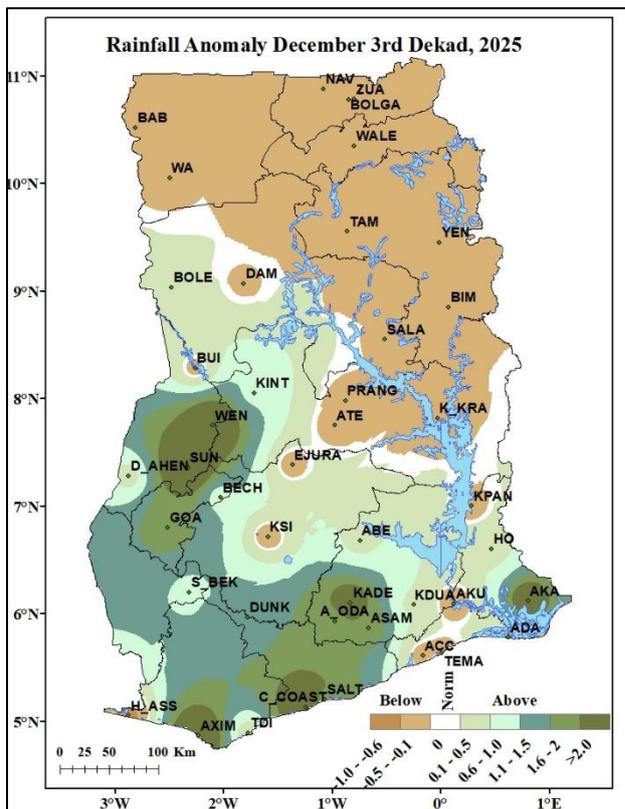


Figure 4: Rainfall Anomaly for December 3rd Dekad, 2025

Figure 4 illustrates the areas across the country that experienced deviations from normal rainfall during the period. The northern sector and most parts within the transition as well as few areas such as Ejura, Kumasi, Accra, Akuse, Kpando and Half Assini within the southern experienced a deficit in rainfall. The rest of the country had a surplus in rainfall

## 2.2 TEMPERATURE

### Maximum Temperature

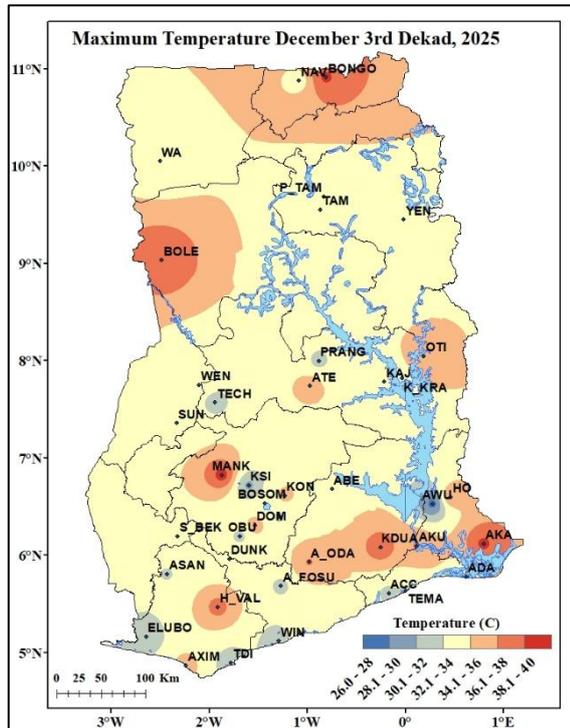


Figure 5a: Maximum Temperature December 3rd Dekad, 2025

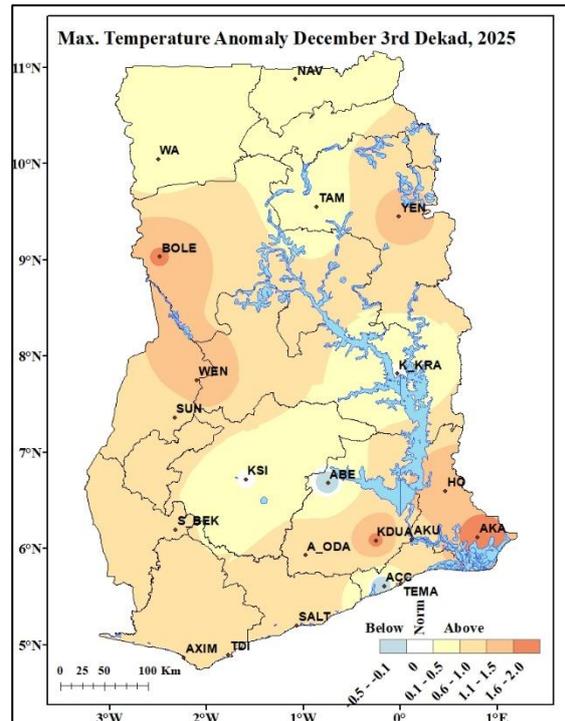


Figure 5b: Maximum Temperature Anomaly December 3rd Dekad, 2025

Figure 5a illustrates the spatial distribution of average maximum temperatures across the country. During the reporting period, the highest temperatures were observed over the northern portions in areas such as Bongo, Navrongo and Bole, few areas such as Oti, Atebubu within the transition and Akim Oda, Akuse, Axim, Koforidua, Ho, Hunney Valley and Akatsi the southern portions, with values ranging from 34.1°C to 40°C. The highest maximum temperature of 38.2°C, 38.3°C and 38.7°C was recorded at Bongo, Akatsi and Mankranso respectively while the lowest value of 27.5°C was observed at Awudome.

Figure 5b depicts the maximum temperature anomalies during the dekad. The whole country experienced an increase in maximum temperature with exception of Kumasi, Accra and Abetifi which experienced a normal to below normal temperature.

## Minimum Temperature

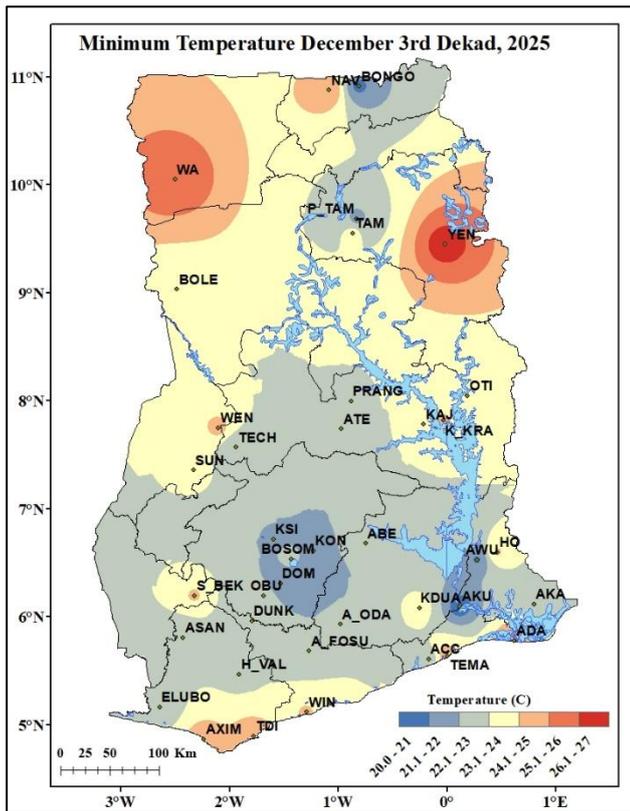


Figure 6a: Minimum Temperature December 3rd Dekad, 2025

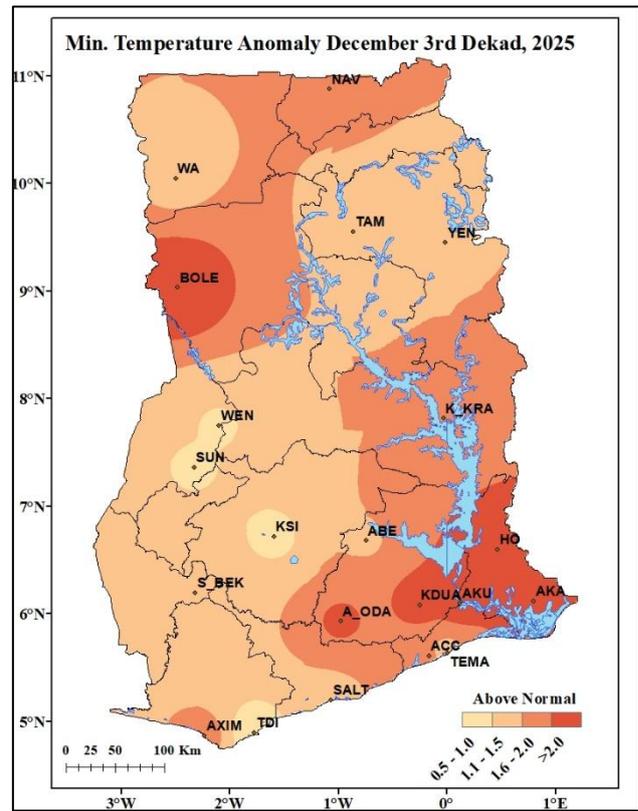


Figure 6b: Minimum Temperature Anomaly December 3rd Dekad, 2025

In *Figure 6a*, the average minimum temperatures varied across different sectors. Relatively high temperatures were observed in the north and south along the coast with temperatures ranging from 25°C to 27°C. The highest minimum temperature of 26.5°C was recorded over Yendi in the north and 25.6°C over Ada in the south. The lowest temperature was recorded in Bongo in the north having 20.4°C and Awudome in the south having 20.9°C.

*Figure 6b*, shows the Minimum Temperature Anomaly for this period. The entire country recorded an increase or above normal temperatures than usual.

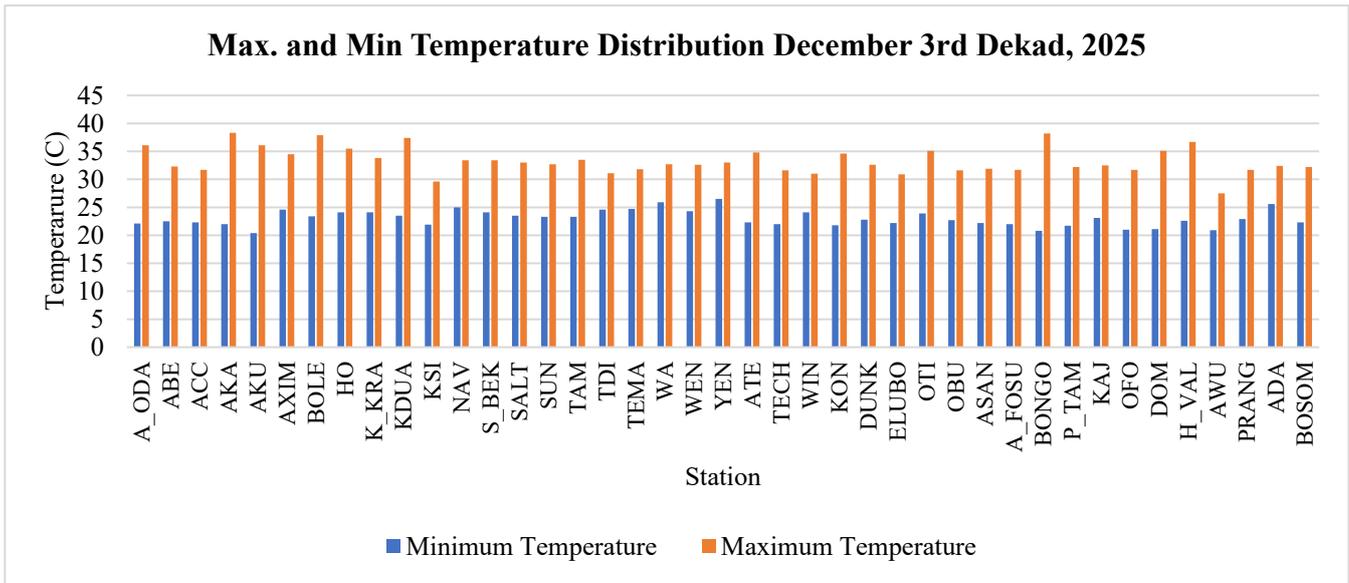
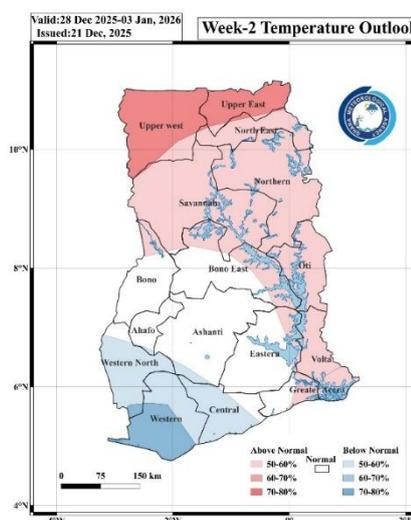
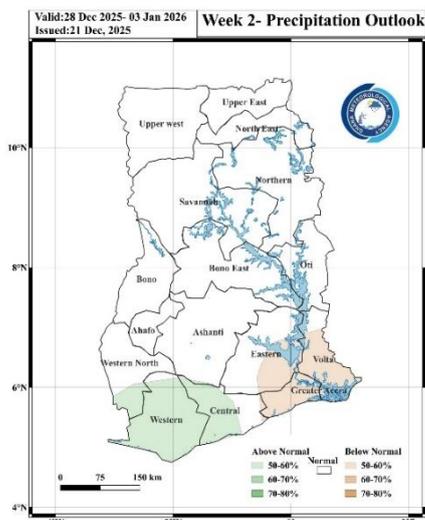
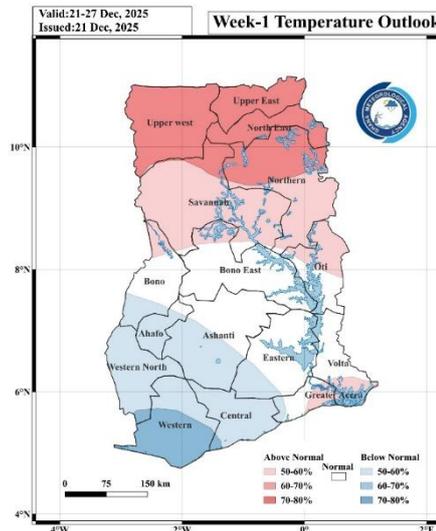
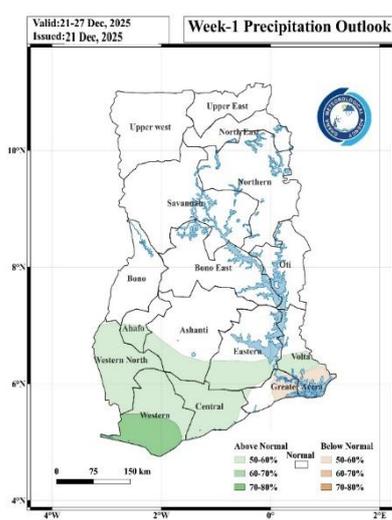


Figure 7: Max. and Min. Temperature Distribution for December 3rd Dekad, 2025

### 3.0 RAINFALL AND TEMPERATURE OUTLOOK 21<sup>ST</sup> DECEMBER 2025 - 3<sup>RD</sup> JANUARY 2026

During Week 1, above-normal rainfall is expected over the south western portion, while the extreme east coast is likely to experience a below normal rainfall. Normal rainfall conditions are expected throughout the rest of the country. Temperature conditions are generally expected to be above normal at the northern portions and transitions as well as the extreme east coast whereas below normal temperatures are expected over the south western portions and the forest areas and the remaining parts of the country from the transition through to the east coast will experience a normal temperature condition.

In Week 2, rainfall is projected to be above- normal across the southwestern parts and few areas within the forest zone whiles the east coast and slightly above the coast will experience a below normal rainfall whereas the rest of the country expected to have normal conditions of rainfall. Temperatures during this week (week 2) are expected to be above normal over the northern portions, through to the transitions and the eastern side of the southern sector and below normal over the south western portions and some areas within the forest zone. The transition and the south eastern portions will have normal temperatures.



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## 4.0 ADVISORIES

### 1. Agriculture

- Farmers in the north 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.
- Residents in flood-prone areas should stay alert to weather updates from the Ghana Meteorological Agency.

### 3. Transportation

Motorists should drive with caution during rainfall, as visibility may be significantly reduced. Drivers are also strongly advised to avoid attempting to drive through floodwaters.

### 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.
- During extreme heat, stay hydrated, avoid outdoor activity at peak hours and dress in light clothing.

### 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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