

DECEMBER 2025

CLIMATE BULLETIN



DEKAD 2, DECEMBER (11-20)

GMET/CLIMATE/1112 25 FORM337

12/11/2025

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SUMMARY

- **Rainfall:**
 - Few areas in the country received rainfall above 50mm.
 - Kade and Wa received the highest rainfall of 67 mm.
 - Axim recorded the highest rainy days of 5 days.
- **Rainfall Anomalies:**
 - Surplus rainfall was recorded over almost the entire country except few places which experienced a deficit rainfall.
- **Temperatures:**
 - **Maximum:**
 - Above normal temperatures experienced in almost of the country.
 - The maximum of the Maximum temperature of 36.7°C was recorded in Pong Tamale.
 - The minimum of the maximum temperature of 26.7°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 26.3°C was recorded in Yendi.
 - The minimum of the Minimum temperature was recorded in Pong Tamale, 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 3.2°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

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.

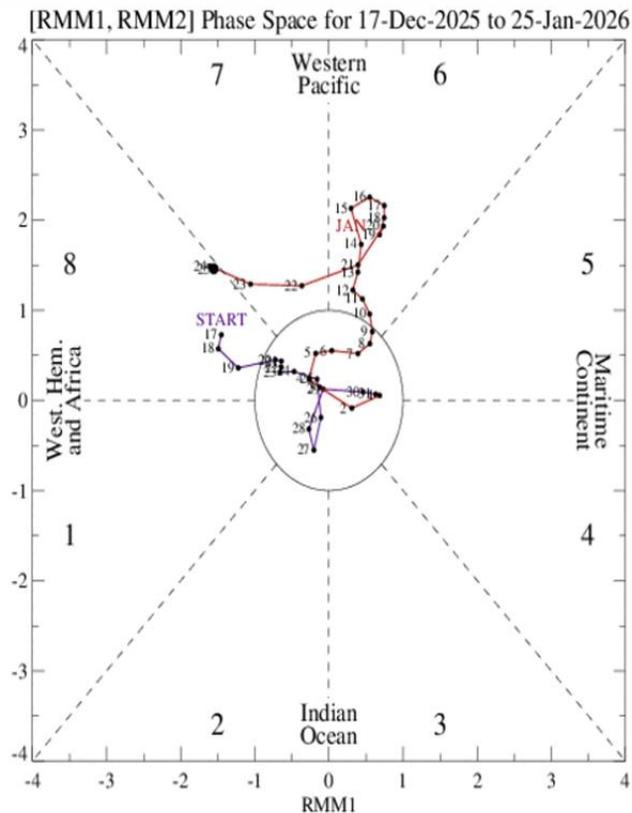


Figure 1: Current MJO position as at December 2nd Dekad, 2025

As depicted in *Figure 1*, the Madden-Julian Oscillation (MJO) was observed in Phases 8 corresponding to the Western Pacific and West Hemisphere and Africa regions. 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.

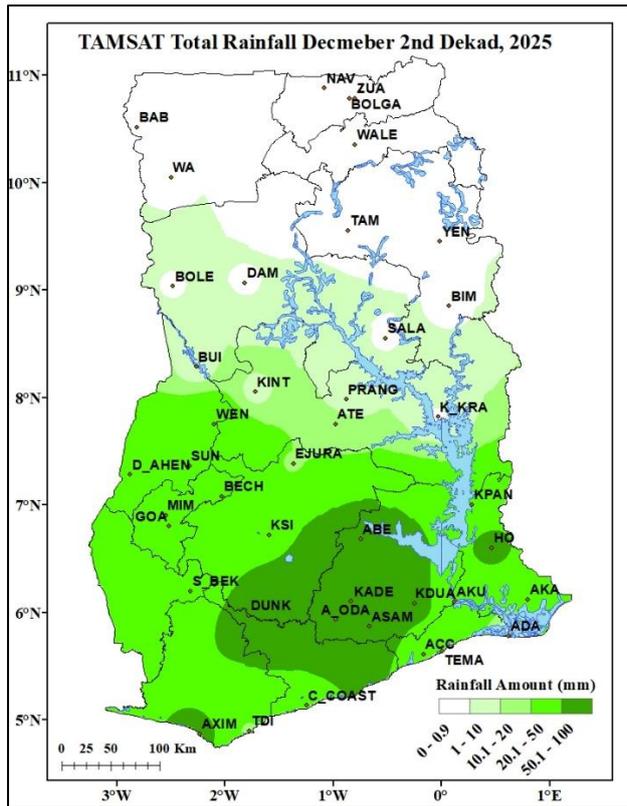


Figure 3: TAMSAT Total Rainfall December 2nd Dekad, 2025

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 which were recorded was underestimating the actual rainfall observed. 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 portions of the south.

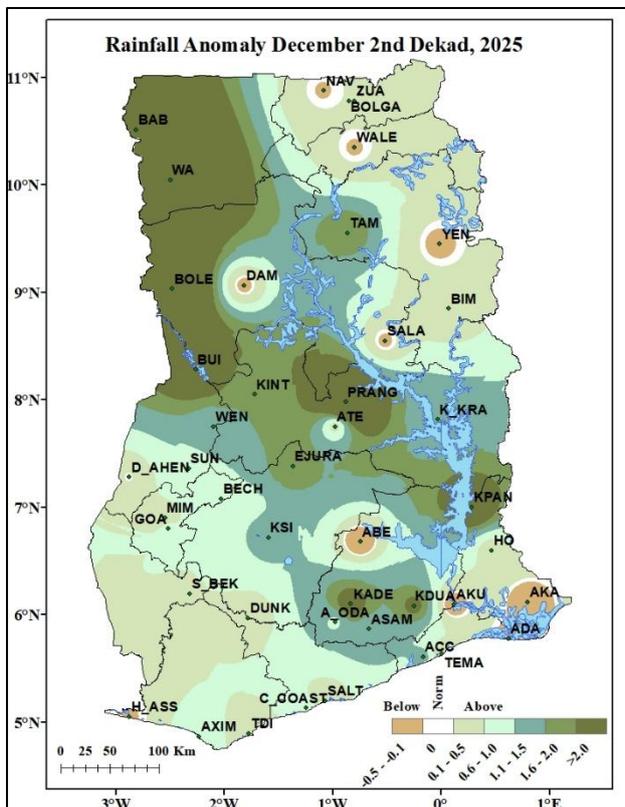


Figure 4: Rainfall Anomaly for December 2nd Dekad, 2025

Figure 4 illustrates the areas across the country that experienced deviations from normal rainfall during the period. The entire country experienced a surplus in rainfall than usual except for few spots of areas such as Navrongo, Walewale, Yendi, Damongo, Salaga in the north as well as Abetifi, Akuse, Akatsi, and Ada in the south that recorded a deficit in rainfall.

2.2 TEMPERATURE

Maximum Temperature

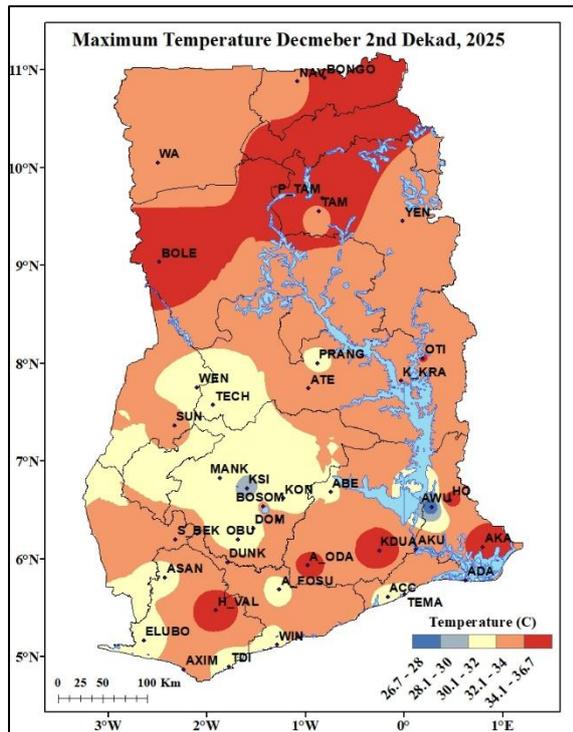


Figure 5a: Maximum Temperature December 2nd Dekad, 2025

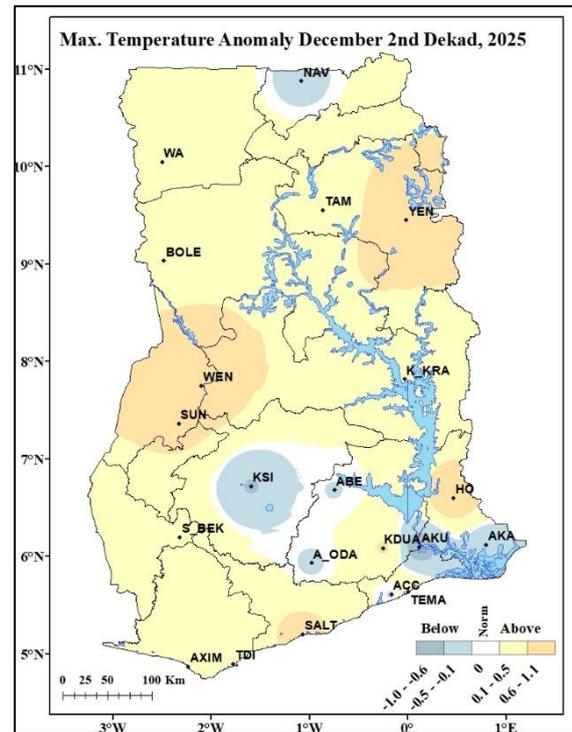


Figure 5b: Maximum Temperature Anomaly December 2nd Dekad, 2025

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, Pong Tamale and Bole, few areas such as Oti within the transition and Akim Oda, Koforidua, Ho, Hunney Valley and Akatsi the south eastern portions, with values ranging from 34.1°C to 36.7°C. The highest maximum temperature of 36.7°C was recorded at P_Tamale, while the lowest value of 26.7°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 Navrongo, Kumasi, Akim Oda, Accra, Akatsi, Akuse and Abetifi which experienced a normal to below normal temperature.

Minimum Temperature

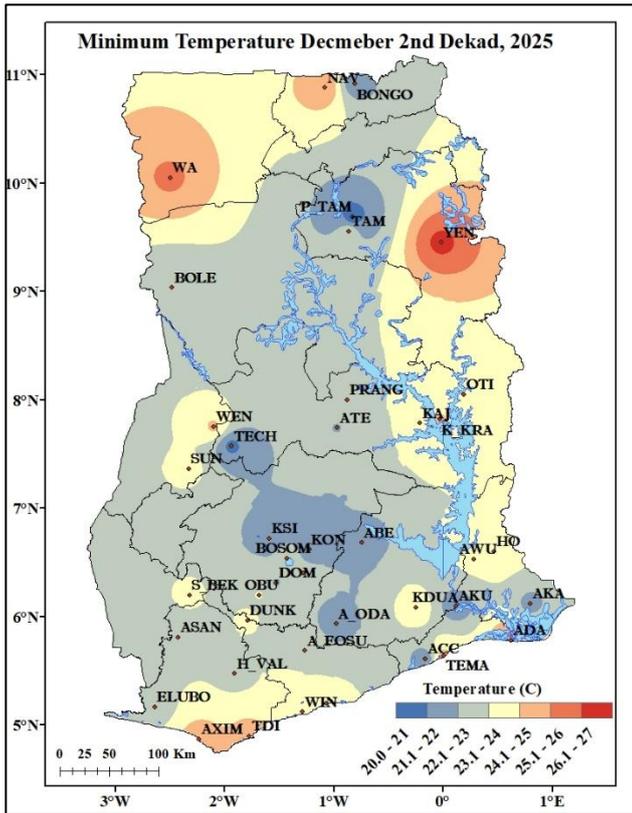


Figure 6a: Minimum Temperature December 2nd Dekad, 2025

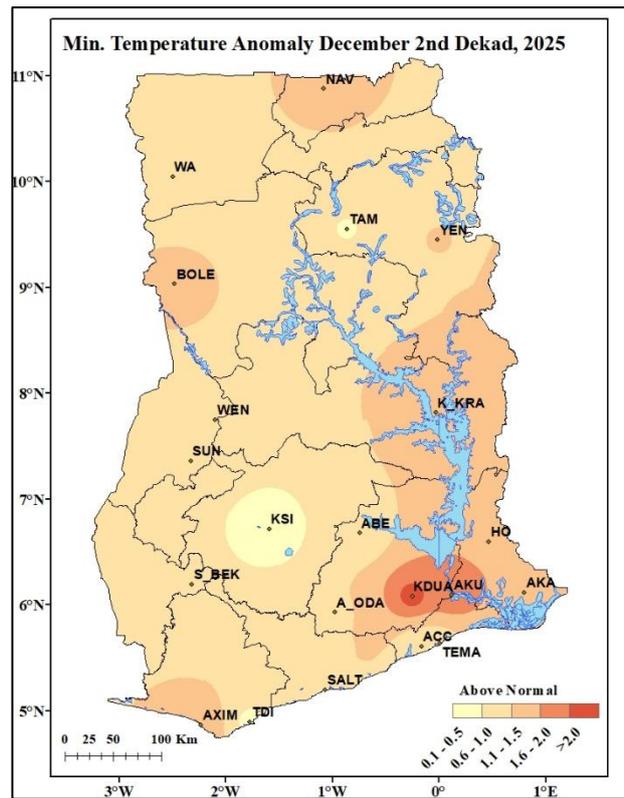


Figure 6b: Minimum Temperature Anomaly December 2nd Dekad, 2025

In Figure 6a, the average minimum temperatures varied across different sectors. Relatively high temperatures were observed in the north and south with temperatures ranging from 24°C to 27°C. The highest minimum temperature of 26.3°C was recorded over Yendi. The lowest temperature was recorded in Pong Tamale having 20.4°C.

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

Max. and Min Temperature Distribution December 2nd Dekad, 2025

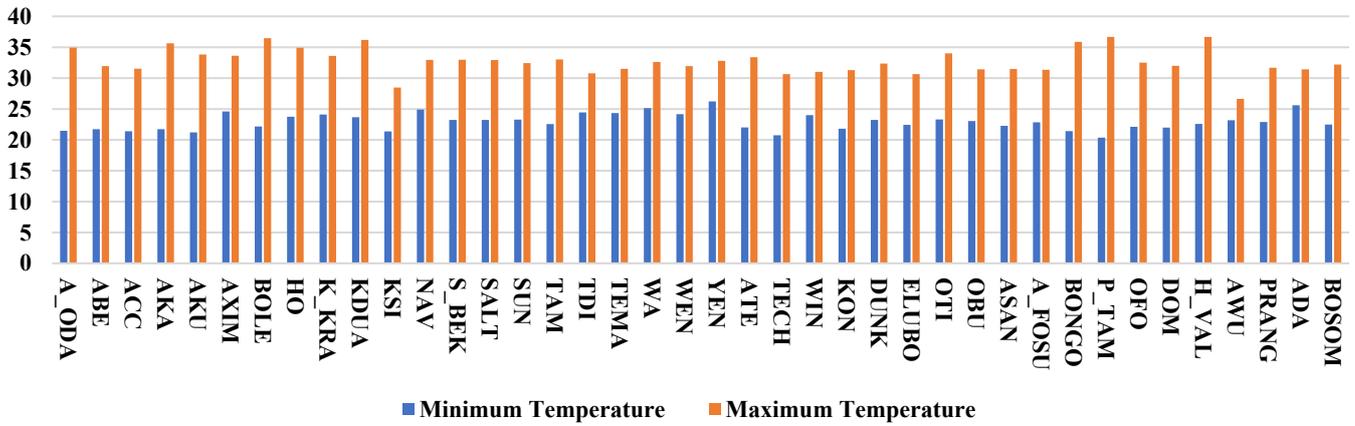
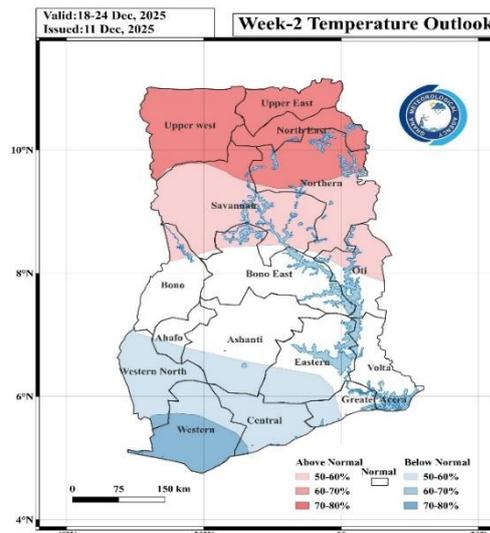
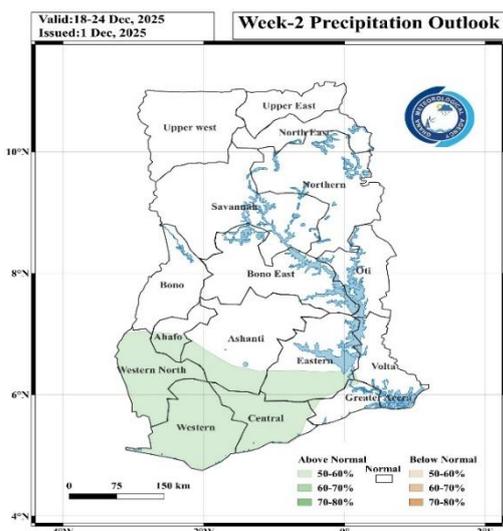
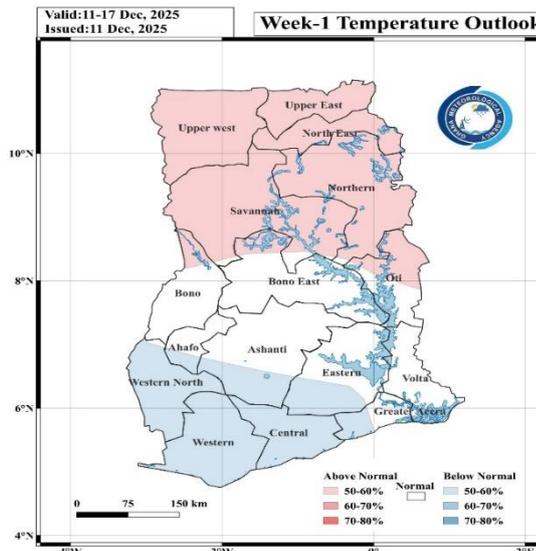
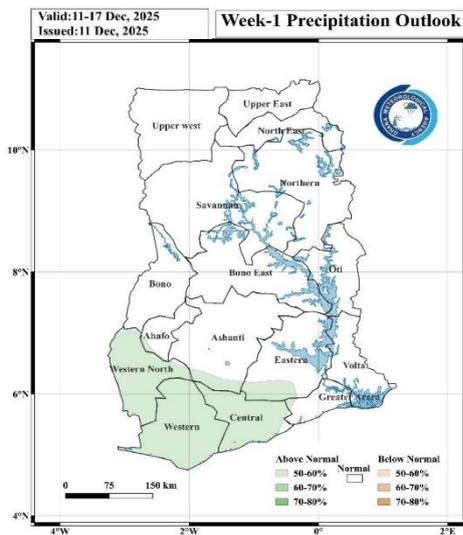


Figure 7: Max. and Min. Temperature Distribution for December 2nd Dekad, 2025



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

During Week 1, above-normal rainfall is expected over the south western portion, while normal rainfall conditions are expected throughout the country. Temperature conditions are generally expected to be above normal at the northern portions whereas below normal temperatures are expected over the south western portions 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 and 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 and below normal over the south most especially the western portions. The transition and the south eastern portions will have normal temperatures.



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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