GMet

GHANA METEOROLOGICAL AGENCY

CERTIFIED PROVIDER OF AVIATION METEOROLOGICAL SERVICE

ISO-9001: 2015

SEASONAL FORECAST

SOUTHERN GHANA MAJOR RAINY SEASON -2025

The Director General

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Cover Photo: GMet Farmers Community Engagement on 2024 seasonal forecast, Tolon, Northern Region- Ghana

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Major Seasonal Forecast for Southern Ghana 2025

Closing the Early Warning Gap together towards climate resilience to improve livelihood and socio-economic development

A publication of Ghana Meteorological Agency

Research and Applied Meteorology department

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PREFACE

The erratic nature of weather patterns in our world today has contributed to the devastations of lives and property. Over the years there have been incidents of severe drought and flood cases in some portions of the country, because of uncertainties regarding weather and climate. Many Ghanaians have lost valuable resources because of emergency responses to weather related disasters and reconstruction of infrastructures have become a headache for victims in the country, not forgetting farmlands affected by adverse weather and climate conditions. This calls for an early warning approach and disaster risk reduction mechanisms over all the key sectors such as agriculture, water resources, energy, environment, maritime and local government.

For sustainable development, food security, public health and risk management to be achieved, there is the need for advance notice about the overall weather and climate trends expected over a period. This is to allow individuals and industries to make informed decisions based on anticipated weather patterns, particularly in sectors like agriculture, water management, energy planning and disaster preparedness where understanding the broader seasonal climate can significantly impact operations and mitigation strategies.

The seasonal forecast, as part of the mandate of the Ghana Meteorological Agency (GMet) is a document that contains information of the seasonal weather parameters, out of careful observation and atmospheric analysis from leading world forecast centers and climate Prediction centers, through a consensus forum of the Continental climate centers, Regional Climate Centers (RCC) and expert analysis from GMet.

The 2025 forecast for the major rainy season for Southern Ghana is detailed with information regarding the Onset dates, cessation dates and dry spell days, length of season, cumulative rainfall amount, and advisories to key sectors which are enlisted in this document for proper planning and decision making.

This document would not have been possible without the able leadership and direction of the Director General of the Ghana Meteorological Agency, Dr. Eric Asuman and contributions of numerous individuals in the agency. We want to also mention the lead author, Mrs. Francisca Martey (Deputy Director, Research and Applied Meteorology Department), for her expertise and dedication in supervising the compiling of this document. We also acknowledge the other contributing authors, Jeremiah Zusika Lazia (Head, Climatology unit), Nana Kofi Opoku (Head, Agrometeorology unit) leading in the compilation and analyses of the data and the entire Research and Applied Meteorology Department of the Ghana Meteorological Agency (GMet). Their collective efforts have resulted in a comprehensive and insightful seasonal forecast for

the major rainy season. We are also grateful to the various stakeholders who provided valuable feedback and support for the development of this document. The insights and perspectives shared by these individuals have enhanced the quality and relevance of this assessment. Finally, we acknowledge the support of GMet for providing the resources and infrastructure necessary to conduct this important work. Their commitment to advancing climate science and informing policy is essential for ensuring a sustainable and resilient future for Ghana.

FOREWORD

Ghana continues to navigate the challenges of a changing climate; the importance of accurate and timely weather forecasting cannot be overstated. The seasonal forecast, provided by the Ghana Meteorological Agency (GMet), serves as a crucial tool for guiding the nation in its efforts to adapt and respond to seasonal weather patterns. This forecast provides invaluable information about expected rainfall, temperature variations, relative humidity, and other climatic conditions that significantly impact agriculture, water resources, energy, and the well-being of communities across the country.

For many years, the Ghana Meteorological Agency (GMet) has been the leading source of timely and precise seasonal forecasts, providing crucial information about the anticipated weather patterns of the forthcoming season. GMet with its decades of expertise and commitment to providing reliable climate information, is at the forefront of climate forecasting in the country. Using forecasting methods and an analysis of regional and local climate systems, GMet generates a seasonal outlook that provides information on anticipated weather patterns for the upcoming season. The objective of the 2025 seasonal forecast (major season) for southern Ghana is to highlight the importance of adhering to all forecasts and early warnings to mitigate challenges posed by changes in the weather patterns and climate to save lives and properties. This is in alignment with this year's meteorological awareness month theme "Closing the Early Warning Gap Together".

The seasonal forecast for southern Ghana considers the dynamics of West African Monsoon, the Intertropical Convergence Zone (ITCZ), El Nino Southern Oscillation (ENSO), Indian Ocean Dipole (IOD), Teleconnections such as Northern Atlantic Oscillation (NAO) and climate trends across the country. These factors have strong influence over the rainfall season (onset, dry spells, cessation, the length of season, total annual rainfall and temperature) of Ghana which also affects the agricultural calendar, water availability, and the frequency of extreme weather events such as droughts and floods.

In addition to agriculture, the major seasonal forecast for the south also plays a critical role in other sectors such as water management for households and power generation, public health,

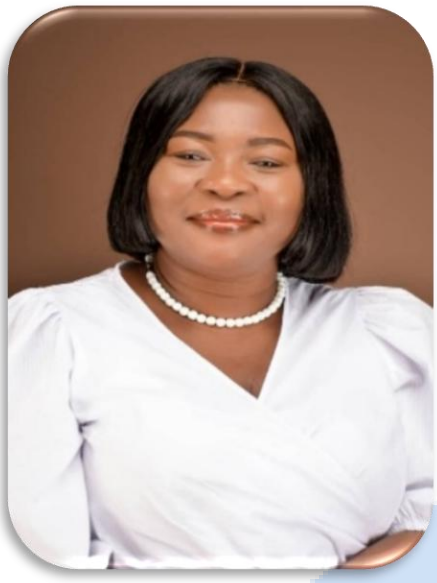
and disaster preparedness. It offers an opportunity for government agencies, businesses, and local communities to make informed decisions, plan for extreme weather events, and implement mitigation strategies in a timely manner. The knowledge provided through this forecast empowers citizens and stakeholders to prepare for weather patterns, reducing vulnerability and increasing resilience to climate-related risks.

The seasonal forecast for Ghana aligns with regional (West Africa), continental (Africa) and global climate initiatives, drawing on expertise from the African Centre for Meteorological Applications for Development (ACMAD), AGRHYMET Regional center for West Africa and the Sahel and the World Meteorological Organization (WMO) to enhance its forecasting capabilities, and ensure that Ghana is well-equipped to face the challenges of a dynamic climate system

As Ghana anticipates the 2025 seasonal forecast (major season), it serves as a reminder of the evolving nature of the country's climate either in preparing for a rainy season that may provide much-needed relief for crops or a dry season that could cause challenges for water supply. Moving forward, it is our collective responsibility to use the knowledge provided by Ghana Meteorological Agency to safeguard the country's environment, economy, and communities from the effects of climate variability and change. Through preparedness, collaboration, and innovation, we can strengthen Ghana's ability to adapt to the evolving climate and ensure a prosperous future for all

Dr. Eric Asuman,
The Director General,
Ghana Meteorological Agency

EXECUTIVE SUMMARY



Seasonal Forecast is prepared by the Ghana Meteorological Agency every year as one of their mandates to provide weather and climate information and advisories on the rainy season, which entails the onset of the rain, cumulative rainfall amount, dry spells, cessation and the length of season in the support of decision-making, policy formulation and planning for weather sensitive sectors such as the agriculture, environment, disaster risk management, water resources, energy, and health.

The 2025 Seasonal rainfall forecast employs the teleconnection between the El-Nino Southern Oscillation (ENSO) observed atmospheric condition over land and ocean, Sea Surface Temperature (SST) anomalies, Mean Sea Level Pressure (MSLP) anomalies, Madden Julian Oscillation

(MJO), Inter-Tropical Convergence Zone (ITCZ), climatic data from GMet observatories across the country which covers a minimum period of 30 years. This Forecast has been agreed upon by the Consensus from Continental Centre ACMAD, Regional Climate Centre (RCC) during the Agro-Hydro Climate characteristics of the Gulf of Guinea Countries (PRESAGG) forum, together with the expertise and downscaled models output from the Ghana Meteorological Agency. The highlights of the 2025 March April May (MAM) and April May June (AMJ) Seasonal Forecast are:

Rainfall Onset Dates

The 2025 rainy season for the Southern part of the country is anticipated to be early to normal, starting between February week 4 to April week 2. Areas along the coast such as Takoradi, Cape Coast, Accra, Tema and Akatsi are expected to have normal to late start of rain between April week 1 to week 2.

Cumulative Rainfall Amount

The March April May (MAM) season for the Southern part of the country is expected to experience normal to below normal rainfall. However, Wenchi and the western parts of the forest zone such as Goaso, Mim, Dormaa, Sunyani are predicted to experience below normal to normal rainfall. Areas along the East Coast such as Saltpond, Accra, Tema, Ada, Koforidua,

Aburi, Ho expected to observe above normal rainfall. The highest amount of rainfall anticipated during the MAM season ranges from 600-800mm and it's to be recorded in Atebubu, whereas the lowest from 200-300mm in Accra.

The April May June (AMJ) season for Southern Ghana is anticipated to experience generally normal to below normal rainfall over most parts of the country, except areas along the East Coast and forest zones such as Saltpond, Accra, Tema, Ada, Koforidua, Aburi, Ho which are predicted to observe above normal rainfall. The AMJ season is expected to have the highest rainfall range of 800-1000mm and to be recorded in Half Assini, with the lowest recorded rainfall range of 200-300mm.

Early Dry Spell Days

At the beginning of the season, the Southern part of the country is expected to experience a long dry spell of 8-10 days. Except for Kete Krachi in the transition and areas along the east coast such as Accra, Ada, Tema and Cape Coast which are expected to experience a longer dry spell of 11-13 days.

Late Dry Spell Days

During the late part of the season, the entire southern sector is expected to have normal to longer dry spells ranging from 10-14 days. However, areas such Wenchi, Bui, and Sefwi Bekwai are expected to experience dry spells ranging from 14-16 days, which are anticipated to be the longest within the season.

Rainfall Cessation Dates

Generally, the 2025 rainfall cessation date for the Southern parts of the country is expected to be early to normal between July week1 and August week 2. In the transition zone, areas such as Kintampo, Prang, Atebubu and Kete Krachi are predicted to have their rains ceased in August week 2.

Length of Season

The 2025 length of rainfall season for the southern part of Ghana is expected to be normal to short and will be ranging between 83-158 days. Areas within the Transition and forest zone, such as Kintampo, Wench, Bogoso, Tarkwa are likely to have a longer length of season range between 127- 158. However, areas along the east coast such as Tema and Akatsi are anticipated to have the shortest season ranging between 83-94.

At the end of this forecast, the public and various stakeholders are provided with recommendations and early warning information for timely preparedness against potential hazards such as heavy rainfall, floods, and longer dry spells in the country. This information is intended to assist in the management of risks.

Mrs. Francisca Martey,
Deputy Director and Head,
Research and Applied Meteorology Department,
Ghana Meteorological Agency

1.0 VERIFICATION OF 2024 SEASONAL FORECAST

The evaluation of the **s**easonal **f**orecasts for the year 2024 involves comparing the forecasts issued for the major rainfall season in southern Ghana with the actual rainfall data recorded by the GMet weather stations across **southern Ghana**. This process assesses the accuracy of the predictions. GMet uses the evaluation results as a basis for improving the precision of forecasts for the following year.

1.1 Onset Probability Forecast and Verification for 2024

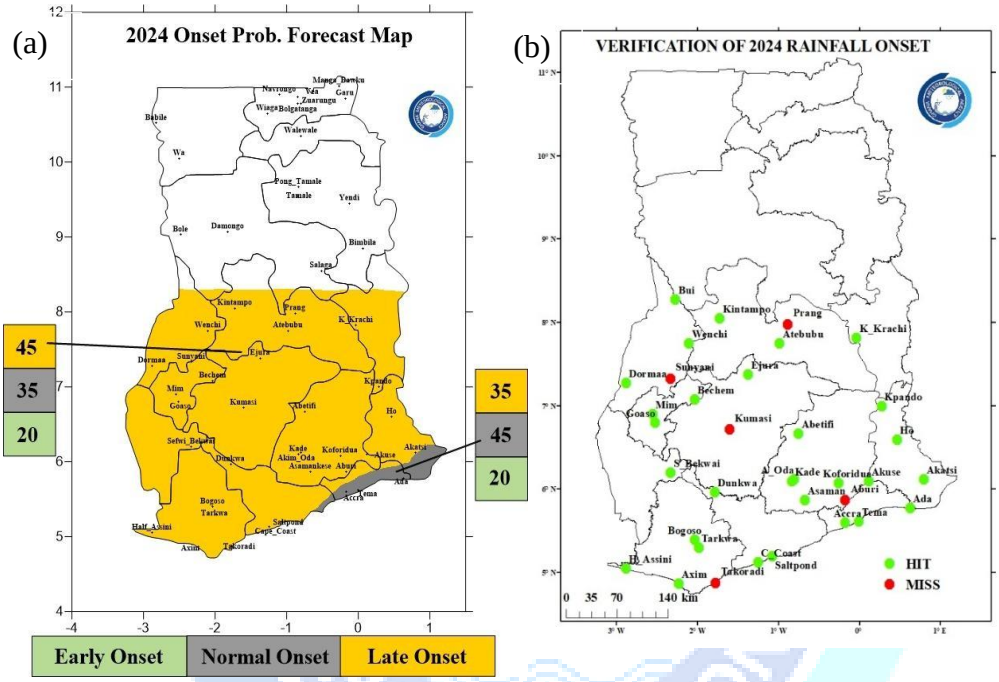


Figure 1(a): Onset Probability Forecast 2024 (b) Verification Map 2024

Total Number of Stations: 35

Percentage Hit: 86% (30)

Percentage Miss: 14% (5)

Onset

The Forest zone and East Coast had late onset and normal onset respectively as forecasted, except for **Prang Sunyani, Kumasi, Aburi** and **Takoradi** having an early onset contrary to the forecast issued.

1.2 MAM Cumulative Rainfall Forecast Verification for 2024

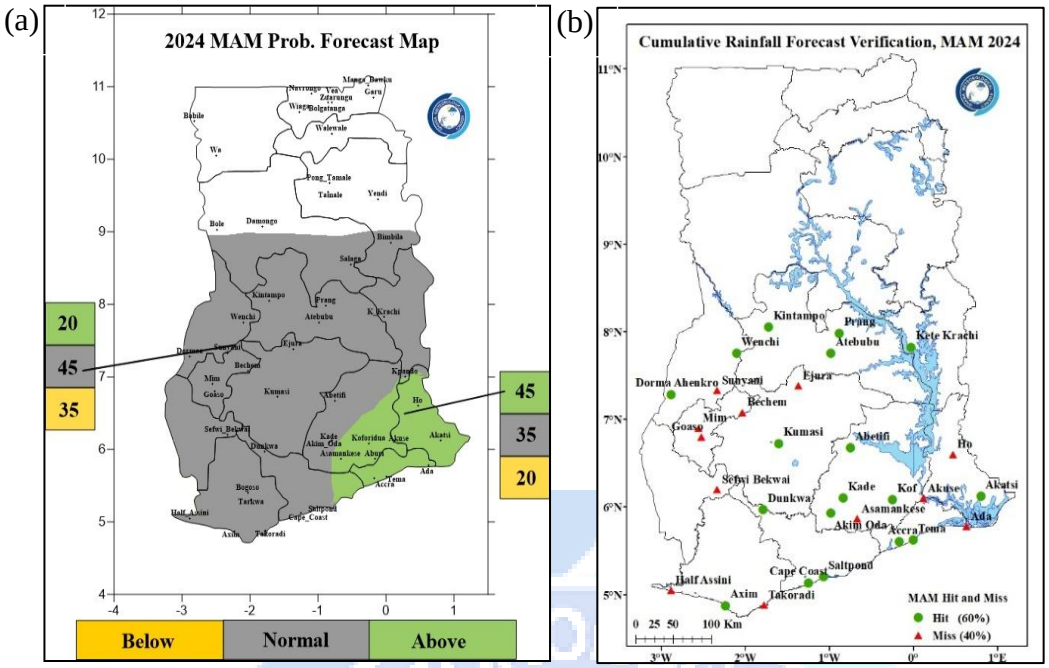


Figure 2(a): MAM Probability Forecast 2024 (b) Verification Map 2024

Total Number of Stations: 29

Percentage Hit: 62% (18)

Percentage Miss: 38% (11)

March-April-May (MAM) 2024 Rainfall

The analysis of rainfall from March to May 2024 indicates that most parts of the country experienced normal rainfall as predicted. However, some locations in the forest zone recorded surplus rainfall (above their long term mean (normal), exceeding forecasted levels. **Sunyani** recorded **444.3mm** (**10.4%** above its normal), **Bechem** had **543.6mm** (**30.8%** above its normal), **Goaso** received **751.3mm** (**60.7%**above its normal)**, Ejura** recorded **521.8mm** (**27.2%** above its normal), **Sefwi Bekwai** had **560.6mm** (**17.5%** above its normal), **Half Assini** recorded **623.8mm** (**9.7%** above its normal), and **Takoradi** received **508.5mm** (**28.7%** above its normal)

In contrast, some areas (**Ho, Asamankese, Akuse** and **Ada**) experienced deficit rainfall (below their long term mean) during the season. **Ho** recorded **304.6mm** (**22.7%** below its normal), Asamankese had **316.1mm** (**24.4%** below its normal), **Akuse** recorded **293.5mm** (**18.1**% below its normal), and **Ada** received **281.7mm** (**9.3**% below its normal), all indicating a rainfall deficit compared to the forecast issued.

1.3 AMJ Cumulative Rainfall Forecast Verification for 2024

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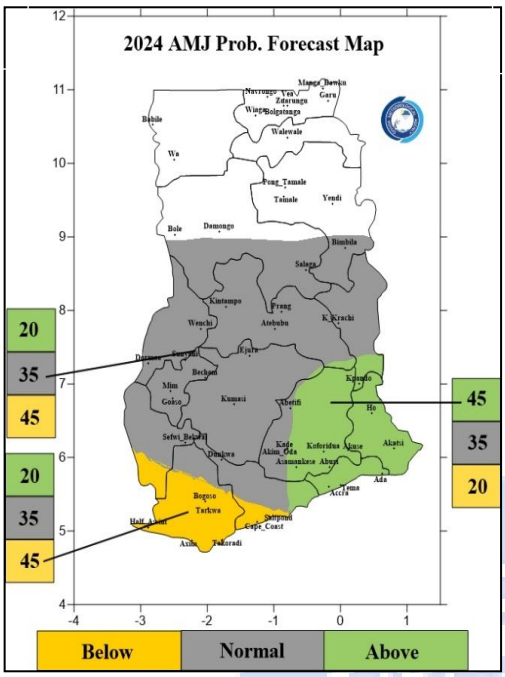
(a)



(b)

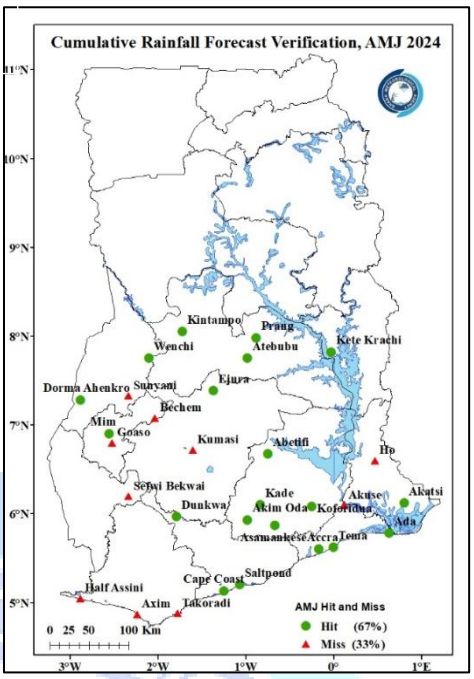


Figure 3(a): AMJ Probability Forecast 2024 (b) Verification Map 2024

Total Number of Stations: 30

Percentage Hit: 67% (20)

Percentage Miss: 33% (10)

April-May-June (AMJ) 2024 Rainfall

The analysis of rainfall from April to June 2024 indicates that most parts of the country experienced generally normal rainfall, as forecasted. However, some stations in the forest zone and along the west coast, specifically **Sunyani**, **Bechem**, **Goaso**, **Kumasi**, **Sefwi Bekwai**, **Half Assini**, **Takoradi**, **Ho** and **Akuse** recorded rainfall levels that did not align with the forecast. Some of these areas experienced surplus rainfall (above the long term mean) during the season. **Sunyani** recorded **589.1mm** (**19.6%** above its normal), **Bechem** had **780.4mm** (**57.7%** above its normal), Goaso received **689.5mm** (**27.0**% above its normal), **Kumasi** recorded **653.3mm** (**15.8%** above its normal), **Sefwi Bekwai** had **595.7mm** (**6.4%** above its normal), **Half Assini** recorded **1263.2mm** (**29.4%** above its normal), and **Takoradi** recorded **976.6mm** (**62.4%** above its normal).

In contrast, **Ho** and **Akuse** recorded deficit rainfall (below their LTM) during the season. **Ho** received **374.3mm** (**22.3%** below its normal), while **Akuse** recorded **342.1mm** (**23.0%** below its normal).

1.4 Early Dry Spell Probability Forecast and Verification for 2024

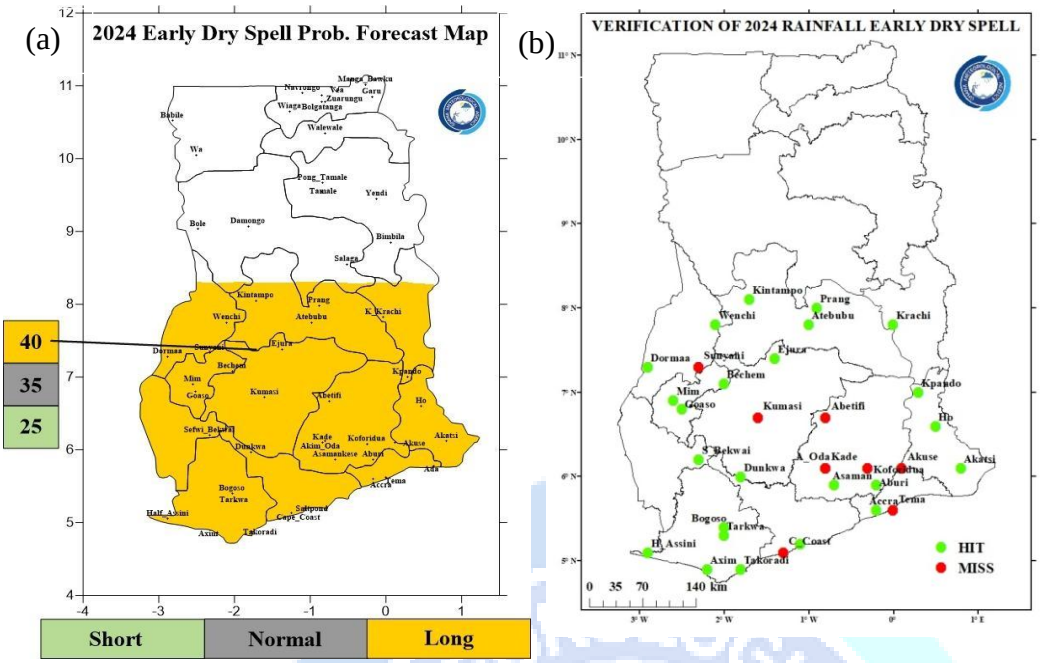


Figure 4(a): Early Dry Spell Probability 2024 (b)Verification Map 2024

Total Number of Stations: 33

Percentage Hit: 73% (25)

Percentage Miss: 27% (8)

Early dry spell

Most areas experienced long first dry spells as predicted, while **Sunyani, Kumasi, Akim Oda, Kade,** and **Akuse** had normal dry spell durations. **Koforidua, Abetifi,** and **Cape Coast**, however, experienced short dry spells.

1.5 Late Dry Spell Probability Forecast and Verification for 2024

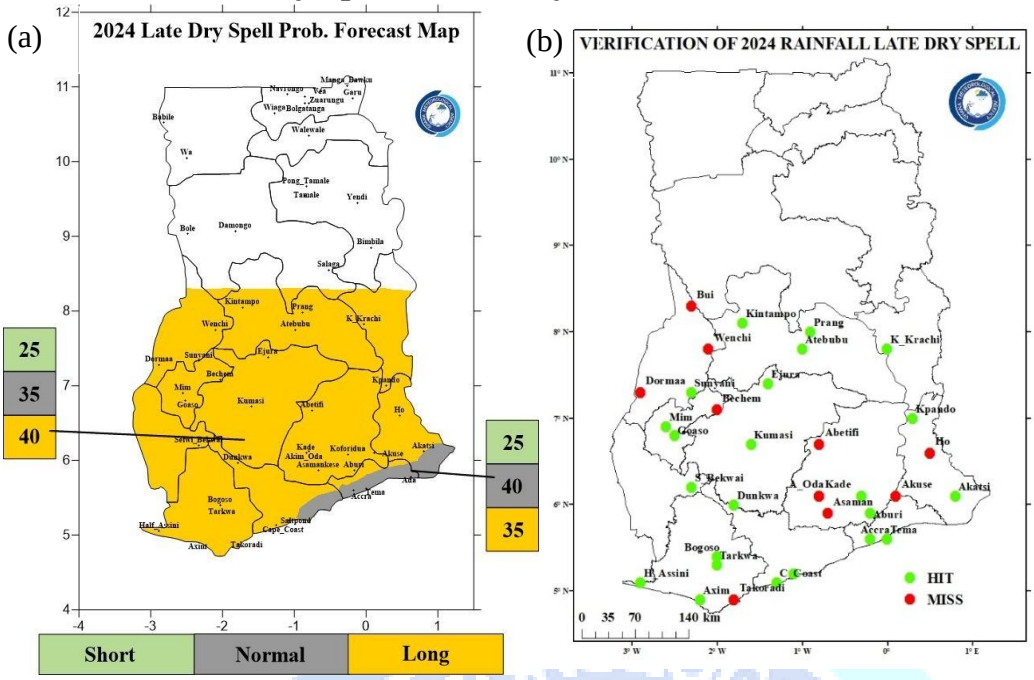


Figure 5(a): Late Dry Spell Probability Forecast 2024 (b) Verification Map 2024

Total Number of Stations: 34

Percentage Hit: 68% (23)

Percentage Miss: 32% (11)

Late dry spell

A long to normal late dry spell was forecasted; however, locations such as **Bui, Dormaa, Bechem, Wenchi, Abetifi, Akim Oda, Kade, Ho, Asamankese, Akuse,** and **Takoradi** all experienced short second dry spells.

1.6 Cessation Probability Forecast and Verification for 2024

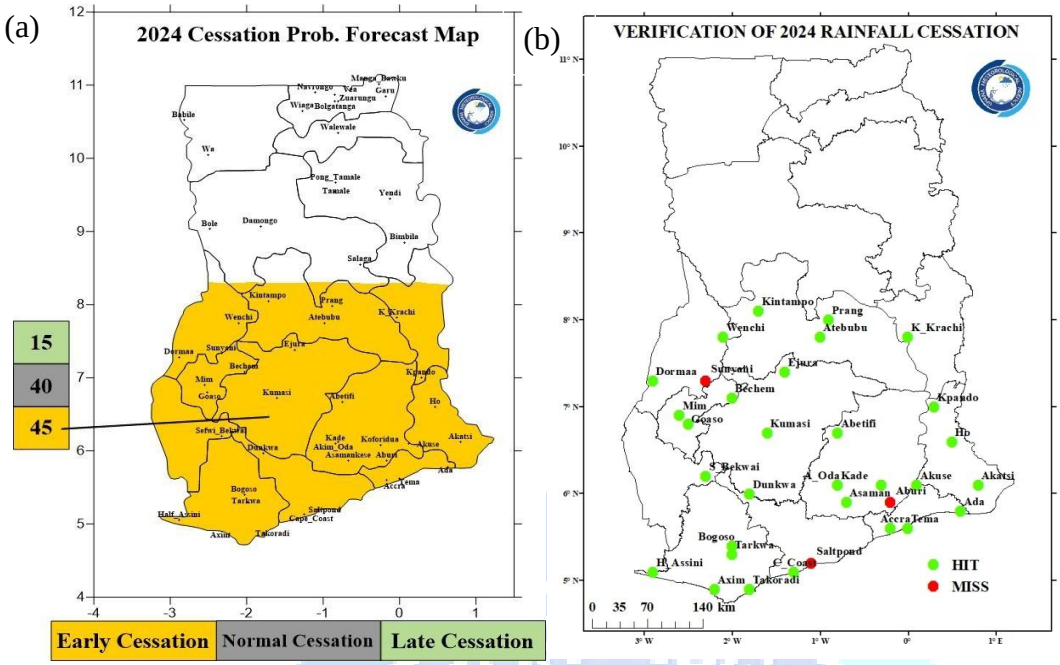


Figure 6(a): 2024 Cessation Probability Forecast 2024 and Verification Map 2024

Total Number of Stations: 34

Percentage Hit:91% (31)

Percentage Miss: 9% (3)

Cessation

The forecast for early cessation was accurate for 31 out of 34 stations, with only **Sunyani** and **Aburi** experiencing an early cessation and **Saltpond** having a normal cessation.

2.0 MAJOR SEASONAL FORECAST FOR SOUTHERN GHANA FOR 2025

2.1 Forecast Maps of Onset Dates for the 2025 Major Season

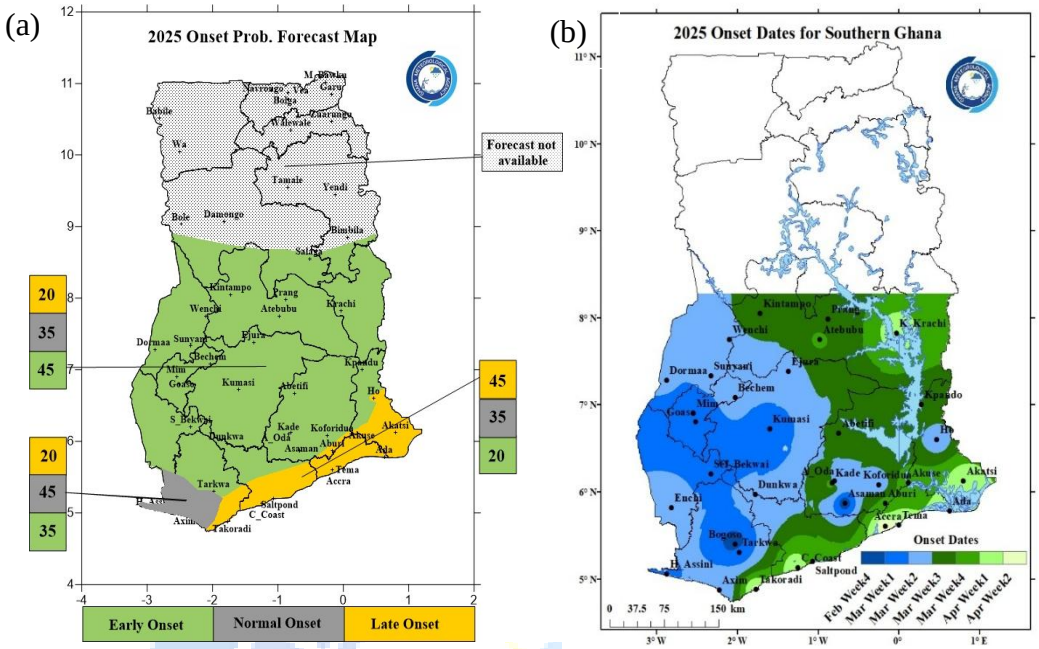


Figure 7(a): Onset Probability Forecast Map 2025 (b)Onset Dates Forecast Map 2025

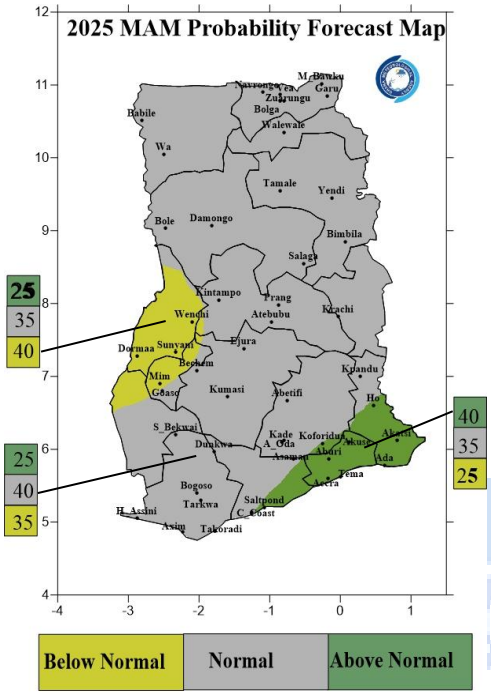
Table 1 Onset Dates for 2025 Season & Long-Term Mean (Normal) of the Onset Dates

ZONE	Normal Onset Dates (LTM)	Forecasted Onset Dates
Transition Zone	4th Week of March – 2nd Week of April	2nd Week of March – 1st Week of April
Forest Zone	1st Week of March – 1st Week of April	4th Week of February – 4th Week of March
West Coast	1st Week of March – 4th Week of March	2nd Week of March – 1st Week of April
East Coast	1st Week of March – 3rd Week of April	4th Week of March – 2nd Week of April

NB: Long-Term Mean (LTM) is the 30-year average condition of a given Zone from 1991-2020.

2.2 Cumulative Rainfall Forecast Maps for the MAM Season, 2025

(a)



(b)

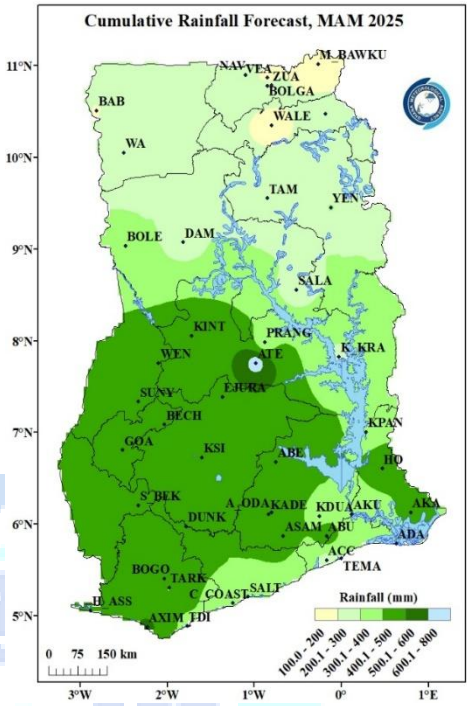


Figure 8(a): MAM Rainfall Probability Forecast Map 2025 (b) MAM Rainfall Forecast Map 2025

Table 2. Forecast of Total Rainfall Amount for the MAM Season, 2025

ZONE	Normal Total Rainfall LTM (mm)	Forecasted Total Rainfall 2025 (mm)
North	130 - 320	177 - 317
Transition Zone	194 - 443	285 - 411
Forest Zone	273 - 576	346 - 497
West Coast	348 - 606	384 - 480
East Coast	217 - 420	262 - 430

NB: Long-Term Mean (LTM) is the 30-year average condition of the given Zone from 1991-2020.

2.3 Cumulative Rainfall Forecast Maps for the AMJ Season, 2025

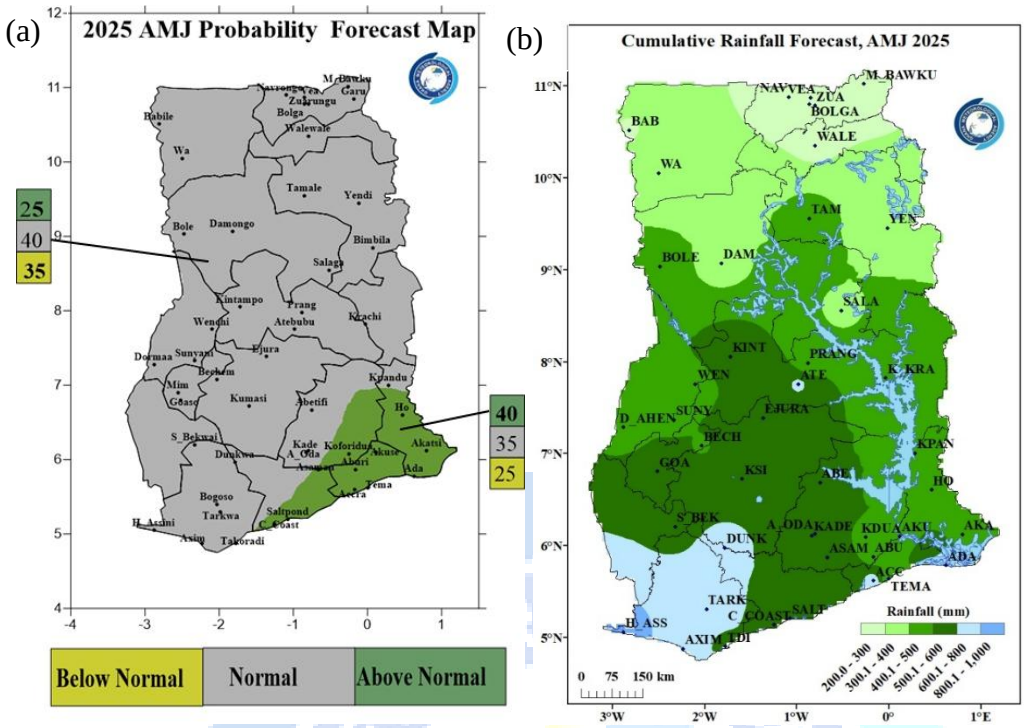


Figure 9(a): AMJ Rainfall Probability Forecast Map 2025 (b)AMJ Rainfall Forecast Map 2025

Table 3. Forecast of Total Rainfall Amount for the AMJ Season, 2025

ZONE	Normal Total Rainfall LTM (mm)	Forecasted Total Rainfall 2025 (mm)
North	241 - 449	230- 440
Transition Zone	369 - 573	413 - 570
Forest Zone	365 - 784	390 - 727
West Coast	512 - 1053	556 – 986
East Coast	305 - 578	405 – 671

NB: Long-Term Mean (LTM) is the 30-year average condition of the given Zone from 1991-2020.

2.4 First (Early) Dry Spell Days Forecast Maps for the 2025 Major Season

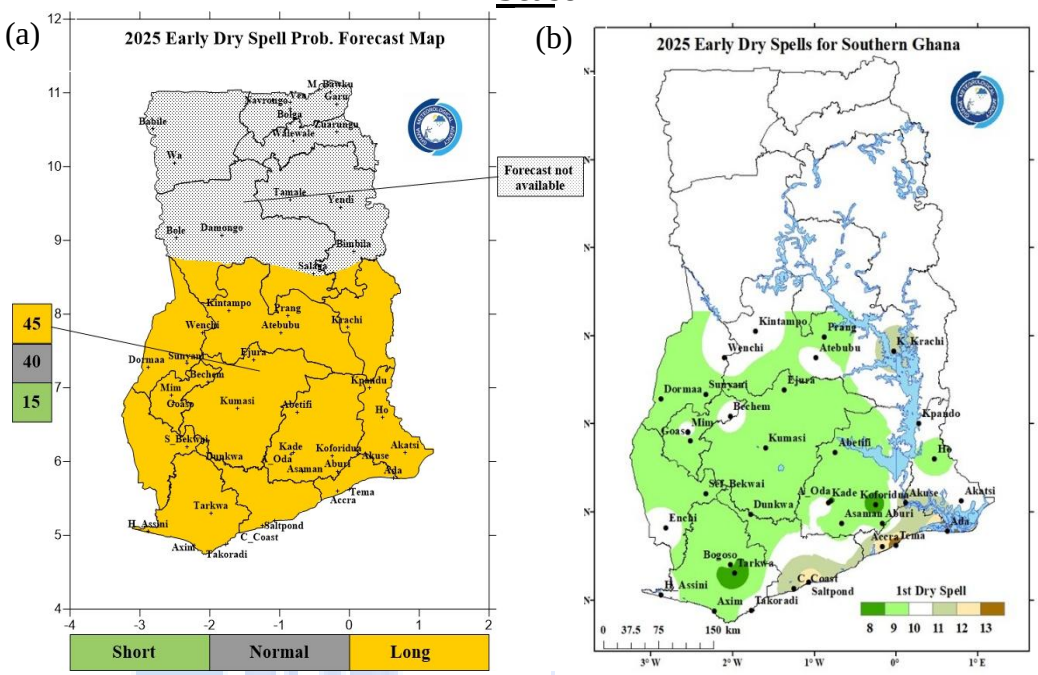


Figure 10 (a): Early Dry Spell Probability Map 2025 (b) Early Dry Spell Forecast Map 2025

Table 4. LTM of First Dry Spell Days and its Forecast of First Dry Spell Days

ZONE	LTM of First Dry Spell (Days)	Forecast of First Dry Spell (days)
Transition Zone	8	9 - 11
Forest Zone	7	8 - 10
West Coast	7	9 - 10
East Coast	9	11 - 13

NB: First (Early) Dry Spell is defined as the longest successive dry days during the first 50 days after the start of the season.

2.5 Second (Late) Dry Spell Days Forecast Maps for the 2025 Major Season

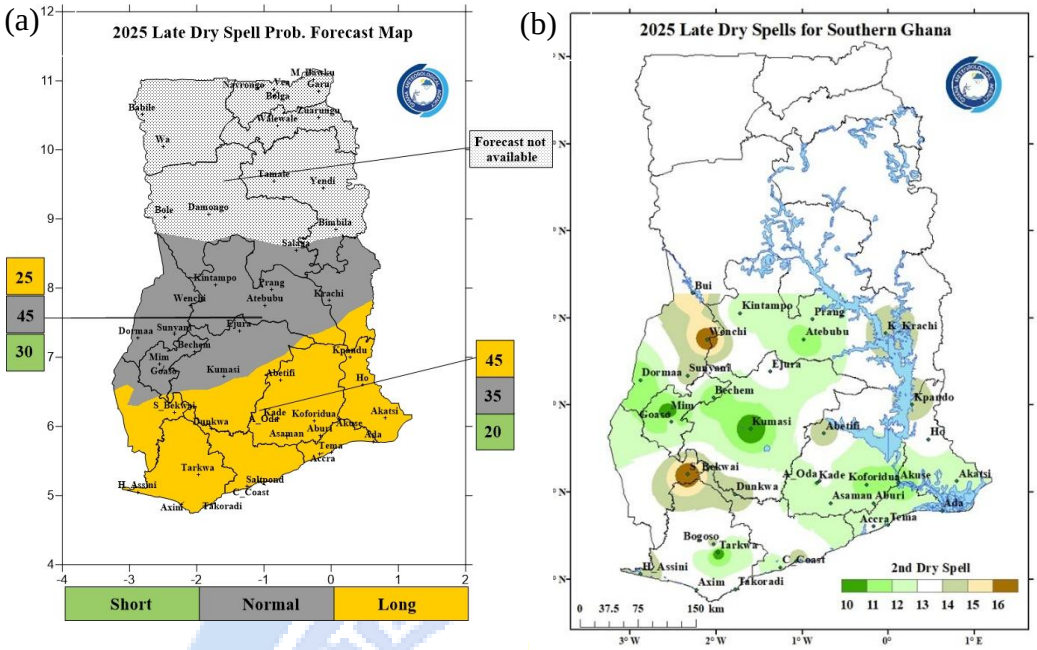


Figure 11 (a): Late Dry Spell Probability Map 2025 (b) Late Dry Spell Forecast Map 2025

Table 5. LTM for Second Dry Spell Days and its Forecast of Late Dry Spell- Days

ZONE	Normal of Late Spell(days)	Forecast of Late Spell(days)
Transition Zone	13	11 - 14
Forest Zone	11	10 - 16
West Coast	12	12 - 14
East Coast	13	12 - 13

NB: Second Dry Spell is defined as the longest successive dry day from the 51st day after the season's start to the end.

2.6 Forecast Maps for Cessation Dates for the 2025 Major Season

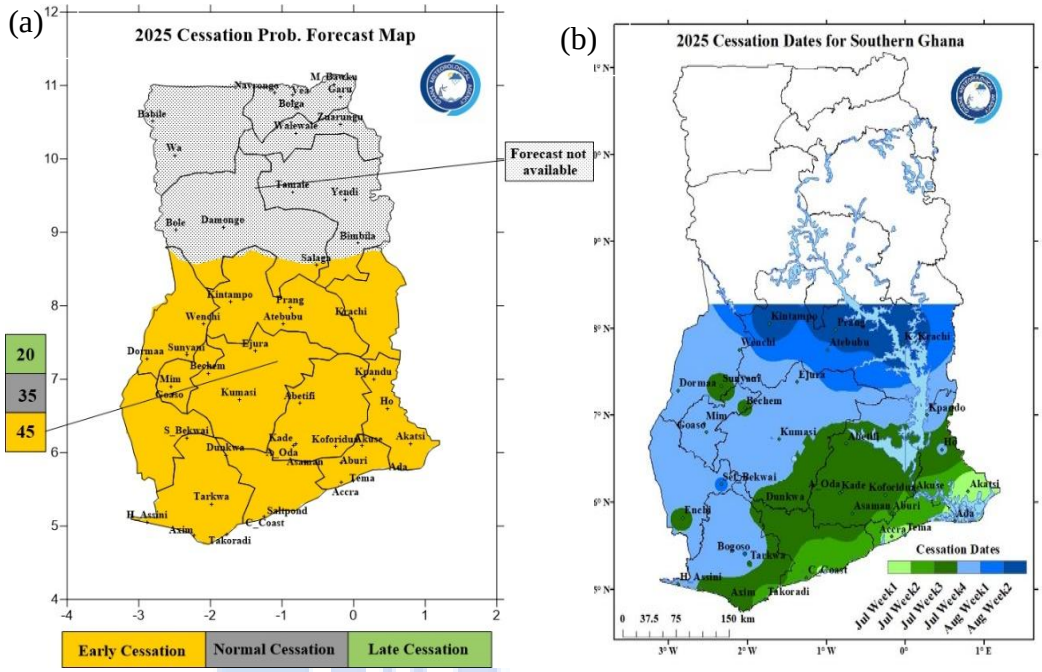


Figure 12 (a): Cessation Probability Forecast Map 2025 (b) Cessation Dates Forecast Map 2025

Table 6. Cessation Dates for 2025 Season & Long-Term Mean of the Cessation Dates

ZONE	Normal Cessation Dates	Forecasted Cessation dates
Transition Zone	4th Week of July – 2nd Week of August	1st Week of August – 2nd Week of August
Forest Zone	2nd Week of July – 1st Week of August	2nd Week of July – 1st Week of August
West Coast	2nd Week of July – 1st Week of August	1st Week of July – 4th Week of July
East Coast	1st Week of July – 3rd Week of July	1st Week of July – 2nd Week of July

NB: Long-Term Mean (LTM) is the 30-year average condition of the given Zone from 1991-2020.

2.7 Length of Major Rainfall Season Forecast Maps, 2025

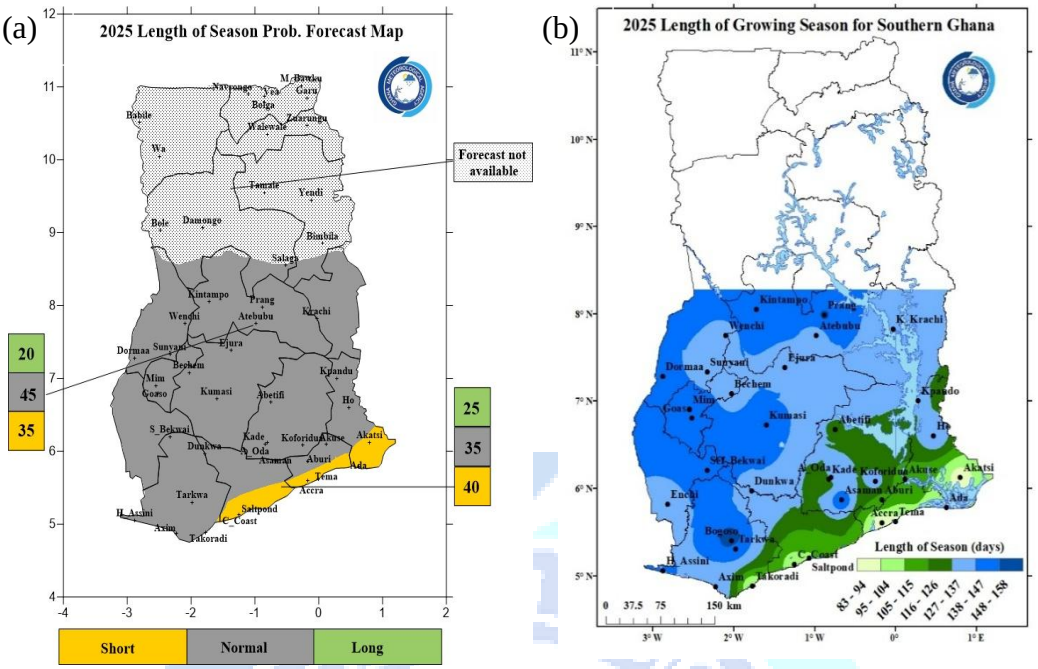


Figure 13(a): Length of Season Prob Forecast Map 2025 (b) Length of Season Forecast Map, 2025

Table 7. Forecast of Length of Rainfall Days and LTM for 2025 Major Season

ZONE	LTM (days)	2025 Length of Season (days)
Transition Zone	130 - 211	127 - 147
Forest Zone	102 - 157	105 - 158
West Coast	112 - 138	95 - 147
East Coast	91 - 112	83 - 104

3.0 SUMMARY OF EXPECTED SEASONAL FORECAST FOR 2025 MAM & AMJ

3.1 Onset

Most places in the transition zone are expected to have a normal start of season apart from **Wenchi** and its environs which are forecasted to have early onset dates. **Goaso**, **Enchi**, **Akim Oda**, **Abetifi** and their surrounding areas in forest zone have a higher likelihood of experiencing a normal start of the rainfall season. However, **Bogoso**, **Asamankese** and their environs are expected to experience early onset. The entire coast is likely to experience a late to normal start of the rainfall season. *(See Table 1 for LTM & 2025 Onset Dates).*

3.2 Cumulative Rainfall Distribution

a) March-April-May (MAM)

The MAM season is forecasted to experience normal to below normal rainfall. However, it is predicted that places within the Forest and Transition zones, such as **Goaso, Mim, Dormaa, Sunyani** will observe below normal to normal rainfall. Stations along the East Coast and Forest zone such as **Saltpond, Accra, Tema, Ada, Koforidua, Aburi, Ho** and their surrounding areas are predicted to observe above normal-to-normal rainfall *(see Table 2 for 2025 MAM & it's LTM).*

b) April-May-June (AMJ)

The AMJ season is forecasted to experience generally normal to below normal rainfall over most parts of the country. Some places in the East Coast and Forest zone such as **Saltpond, Accra, Tema, Ada, Koforidua**, **Aburi, Ho** and their surrounding areas are predicted to observe above - normal to normal rainfall see *(Table 3 for 2025 MAM & it's LTM*).

(** The MAM & AMJ is not the peak of the season for the northern part of Ghana, their season is

yet to start).

3.3 Dry Spells

a) 1st (Early) Dry Spell

At the beginning of the season, the Southern part of the country is expected to experience a longer dry spell between 8 to 13 days. In the Transition belt, Wenchi and Kintampo are expected to experience a dry spell of 10-day, Prang is likely to experience 9 days, whiles Kete Krachi is likely to experience a longer dry spell of 11 days. In the forest Zones, most areas are expected to experience dry spells of 9 days except for Akuse which is likely to experience 11

days of dry spells, Mim, Bechem, Enchi and Kpando are expected to experience dry spells of 10 days, whiles Tarkwa and Koforidua are expected to experience dry spells of 8 days. Areas along the east coast such as Accra, Tema, Ada and Akatsi are expected to experience longer dry spells between 10-13 days, the remaining areas are likely to have dry spells between 8 to 10 days.

b) 2nd (Late) Dry Spell

During the latter part of the season, the entire southern sector is expected to record dry spells ranging from 10-14 days. However, places in and around **Wenchi, Bui** (transition zone) and **Sefwi Bekwai** (forest zone) are expected to experience dry spells ranging from **14-16 days**. **Kumasi**, **Mim** and **Tarkwa** all within the Forest zone are expected to have the shortest dry spells within the southern sector ranging from **8-10 days**.

3.4 Cessation

Generally, the 2025 rainfall cessation for the southern parts of the country is expected to be **early to normal**. In the transition zones, areas such as **Kintampo**, **Prang**, **Atebubu** and **Kete Krachi** are expected to have their rains end between **August week 1** and **week 2**. Areas within the forest zones such as **Kumasi**, **Bogoso** and **Goaso** are anticipated to see cessation mostly by the end of **July week 4** with **Sefwi Bekwai** ceasing in the first week of August. Along the coast, the west coast areas are likely to experience cessation between **July week 1** and **week 4**, while the east coast is expected to be ceasing in **July week 1** in areas such as **Accra**, **Tema**, **Ada** and **Akatsi**.

3.5 Length of Season

Generally, Southern Ghana is forecasted to have a normal to short length of the rainfall season. The West Coast is expected to have a **normal to short** length of the rainfall season. Areas along the East coast such as **Accra**, **Tema**, **Ada**, **Cape Coast**, **Akatsi**, **Saltpond** and their surroundings are likely to experience a short to normal length of the rainfall season.

4.0 POTENTIAL IMPACTS AND RECOMMENDATIONS (ADVISORIES)

March-April-May-June is the major rainfall season for the south of the country (8°N and below).

At the peak of the MAM/AMJ season, there is a high probability of heavy rain accompanied by strong winds and lightning which could lead to flooding and damage to infrastructure. There is also a high probability of experiencing relatively long to normal dry spells at the beginning and towards the end of the season. Places along the east coast and its inland areas such as Accra, Tema, Saltpond, Ada, Akatsi, Akuse, Aburi, Ho, and Koforidua are likely to have some surplus rainfall, albeit not so significant from the normal rainfall. Areas such as Dormaa, Mim, Sunyani, Wenchi and their environs in the Forest and Transition zones of the country will also experience some deficit rainfall amounts for the MAM season.

Therefore, to mitigate any risk that might occur (to people, animals, crops, material goods, and infrastructure), and reduce the impacts, it is recommended that

4.1 Disaster Management Sector

a. Those at risk due to flooding (which is likely to occur in places along the east coast and its inland areas, especially in the months of May and June) are to adhere to the following:

i. Establish and operationalize integrated monitoring and early warning systems for flood risk.

ii. Collaboration between the agencies in charge of flood monitoring, disaster risk reduction, and humanitarian aid should be improved.

iii. Sensitization of the populace in the exposed areas about the impending danger.

iv. As feasible, settlers in endemic flood-prone areas should be relocated.(Domestic / Farming / Commercial places)

v. The Municipal and Metropolitan authorities and the National disaster Agency are advised to put in place the necessary measures to ensure communities and livelihoods are safeguarded.

vi. Authorities should provide emergency/temporal sites for the victims and assist the homeless and vulnerable groups in society during this period.

vii. Ensure the Control/maintenance of dams and road infrastructure.

viii. Promote the cultivation of hydrophilic plants (Plants that absorb high amounts of water) in endemic flood-prone areas as well as swampy and buffer sites (An all-year- round activity)

b. Those at risk due to prolonged dryness, which looks likely to occur in some places in the southern parts of Ghana during the MAM and AMJ 2025 seasons, are to adhere to the following:

i. Step up education and sensitization of the people on the likelihood of bush fires.

ii. Liaise with national meteorological, agricultural, and hydrological experts for information and advice to provide relief to affected areas.

iii. Support the most vulnerable in the affected areas to pursue alternate livelihoods. Some examples are market facilitation, small-scale cottage industries like basket, mat weaving, pot making, etc. People should be trained in bee making.

iv. Prudent use of available water and storage of water whenever it rains.

4.2 Transport and Public Safety

i. Flash Floods are likely to occur especially in Cosmopolitan areas and city centers during the April to June period. Some of the most vulnerable places likely to be affected include Accra, Kumasi, Takoradi. This may lead to some roads becoming impassable when it rains. Road users should be mindful when plying those roads. Drivers are advised to refrain from driving through floodwater.

ii. Light aircraft are advised to take utmost care and avoid flying through deep convective clouds that are associated with severe turbulence and lightning, especially in the afternoon hours.

iii. Motorists should be mindful of fallen trees and objects on roads during or after a storm.

4.3 National/Local Authorities

a. Local authorities in areas where Heavy rainfall is expected especially during the April May June rainfall period are advised to;

i. Provide emergency/temporal sites for the victims.

ii. Ensure the control/maintenance of dams and road infrastructure.

iii. Work hand in hand with the communities through the local authorities (assembly members) to sensitize the populace to sustain community clean-up exercises and

activities.

iv. Encourage the cultivation of hydrophilic plants (Plants that absorb high amounts ofwater) through the departments of Agric.

v. Ensure enough food storage.

vi. Desilt the drains before the rains set in to avoid flash flooding due to surface runoff.

vii. Build the capacity of national health systems and national platforms for disaster riskmanagement.

viii. Provision of mosquito nets, antimalarial drugs in affected areas.

ix. Collaborate with Meteorological Agency, National Disaster Management Organization (NADMO) and Health Services to disseminate warnings and create awareness on climate-related diseases.

x. Monitor the quality treatment of water and sanitation in towns and villages.

xi. Strengthening the dissemination and communication of hydro-climatic information (including seasonal forecasts) and raising community awareness through radio, television, mobile phones, and information platforms for disaster risk reduction management.

xii. Monitor the use of treated water for commercial purposes.

4.4 General Public

i. Taking advantage of average to above average runoff situations to develop fish farmingand optimize fishing yields in river basins,

ii. Continuously desilting drains, especially in front of our homes and shops, before andduring the season.

iii. Monitor water quality and report any suspicions to the environmental offices of theassemblies or to the standard authority.

iv. People should move to higher ground in case they stay in flood-prone areas.

v. Citizens should move to safer places in case there is an approaching storm and strongwinds.

vi. Avoid contact with sewage.

4.5 Health Sector – Facing the risk of diseases.

In places where the rainy season is wetter, there are high levels of risk of Cholera, malaria, dengue fever, bilharzia, and diarrhoea. To mitigate the development of germs and reduce the risk of water and airborne diseases, it is strongly recommended that:

i. Public Education should be intensified through national platforms on disaster risk reduction such as the radio, tv, information vans, churches, mosques etc.

ii. Dissemination of bulletins on climate-sensitive diseases.

iii. Intensify collaboration with stakeholders such as the meteorological, hydrological, anddisaster organisations.

iv. Prevent diseases by vaccinating people and animals.

v. Set up stocks of mosquito-proofed nets, anti-malaria drugs,

vi. Provision of mosquito nets, antimalarial drugs in affected areas.

4.6 Agriculture, Food Security and Livestock Sectors

a. ***For areas where it is more likely to observe normal to surplus rainfall, early season start dates, shorterdry spells and excess flows, it is recommended that farmers, breeders, authorities, projects and NGOs*:**

i. Invest more in improved seed varieties and the development of yield enhancement techniques for both food crops and cash crops.

ii. Provide fertilizers (organic and mineral fertilizers).

iii. Increase vigilance against crop pests (e.g., armyworm and other pests).

iv. In pastoral areas, put in place appropriate technology for pasture for abundant water resources for livestock.

v. Monitor and follow the updates of these seasonal forecasts and the short- and medium-term forecasts produced and disseminated by the national meteorological and hydrological services.

vi. Taking advantage of average to above average runoff situations to develop fish farming and optimize fishing yields in river basins.

b. ***For areas likely to experience water deficits, which arise because of below normal rainfall to longer drySpells expected at the beginning and towards the end of the season, which could affect the planting and growth of crops and promote the development of crop pests.***

i. Focus on drought-tolerant crops and early maturing varieties.

ii. Diversify agricultural practices, through the promotion of irrigation, market gardening and the association of crops (mixed cropping).

iii. Choose short-cycle crop species and varieties that are most tolerant to the water deficit.

iv. Promote and encourage the transfer of risks related to rainfall to protect producers against the effects of crop losses, through the subscription to index-based agricultural insurance.

v. Promote the establishment of food stocks/ buffer stocks.

vi. Strengthen monitoring of food and nutrition security in at-risk areas.

vii. Implement early warning systems to mitigate the impact of the long dry spells anticipated.

viii. Promote climate-smart agricultural practices such as minimum tillage, mulching, selective pruning, and agroforestry to offset the production deficit that could affect areas exposed to dry spells.

ix. Collaborate with the National Meteorological, Agricultural extension and Hydrological agencies for specific information and agro-hydro-meteorological advice on the actions to be taken.

x. Promote irrigation and ensure rational management of water resources for crops and other uses.

4.7 Water Resources Management Sector

Due to the anticipated season, below normal flows are expected for the southwestern areas whilst other basins having normal to above conditions, hence, water resources sectors are expected to be impacted negatively over places in mostly the southwestern parts of the country.

i. Monitor the use of treated water for commercial purposes.

ii. Ensure the regulations of buffer zones along the water bodies are enforced.

4.8 Power

Where necessary and would cause danger in case of heavy rains accompanied by strong winds and lightning which could lead to localized floods, the power companies should make decisions to save

i. Lives from electrocutions.

ii. Continuous monitoring of forecasts from the Meteorological Agency to ensure efficient management of the dam.

NB: This outlook should be used with the Daily, Weekly, Sub seasonal, Monthly and regular updates issued by the Agency.

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