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BMS MONTHLY CLIMATE OUTLOOK NEWSLETTER

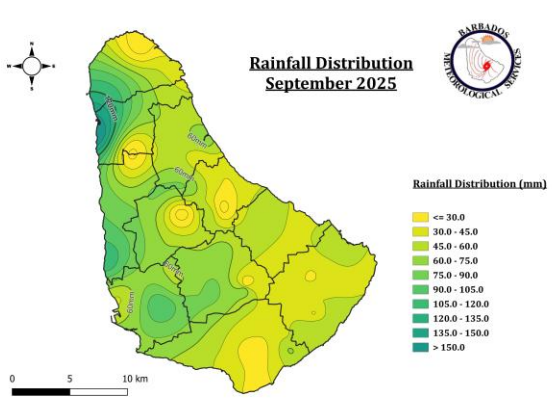
September 2025 | Issue No.68

Key Messages: Average to above average rainfall is expected for October and **near to below average rainfall** is expected thereafter. **Agricultural Drought and Hydrological Drought Watches** are now in effect for the late Wet season and early Dry season. **Warmer-than-normal temperatures are will persist until the end of the Heat Season, although not as warm as 2023 and 2024**. Weak La Niña conditions are expected around the beginning of the forecast period, transitioning to ENSO neutral thereafter. **Slightly above-average tropical cyclone activity** is expected for the rest of the 2025 Atlantic Hurricane season. Persons are, however are urged to continue monitoring the BMS seasonal outlooks for updates.

SEPTEMBER IN REVIEW

Precipitation

Figure 1: September Rainfall Distribution



Similar to August, September was not a typical month for the wet season, with up to 15 days of rainfall totals below 1 mm. Here at Charnocks, rainfall for the month of September was 58.6mm, roughly a third of climatological average for September (162.6mm). Meanwhile, rainfall across the island ranged from 0.4mm to 158.0mm.

On the 23rd of September, the lone significant rainfall event occurred due to a tropical wave. As a result, a flash flood watch was issued and between 1 and 2 inches of rainfall was recorded across the island.

Temperature

Figure 2: September Average Temperature Distribution

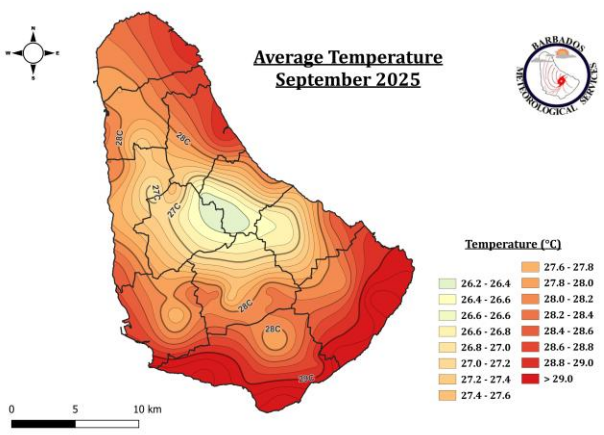
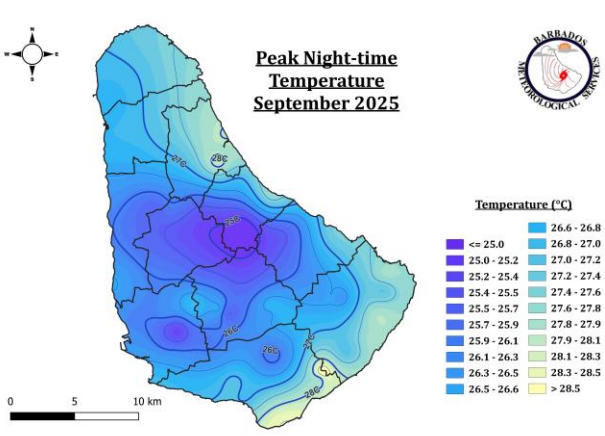


Figure 3: September Peak Night-time Temperature Distribution

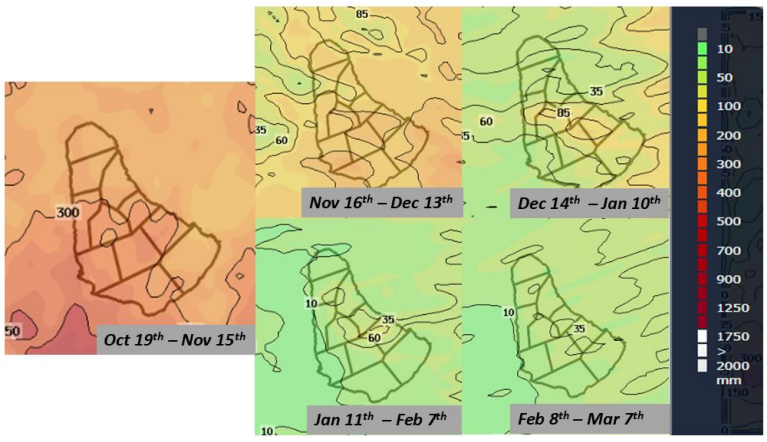


Temperatures continued to feel uncomfortable as the heat season continued its peak; being above average as compared the climatological record at the BMS in Charnocks. The average temperature was 0.9°C higher at 28.8°C, the average maximum higher by 1°C at 32.0°C and average minimum temperature higher by 1.9°C at 26.7°C. Across the island, average air temperatures ranged between 26.2°C and 29.5°C, while peak nighttime temperatures ranged between 24.3°C and 28.8°C as seen in figure 2 and 3.

BMS MONTHLY CLIMATE OUTLOOK NEWSLETTER
September 2025 | Issue No.68

PRECIPITATION OUTLOOK

Figure 4: BMS Experimental rainfall forecast from Oct 2025 to Feb 2026



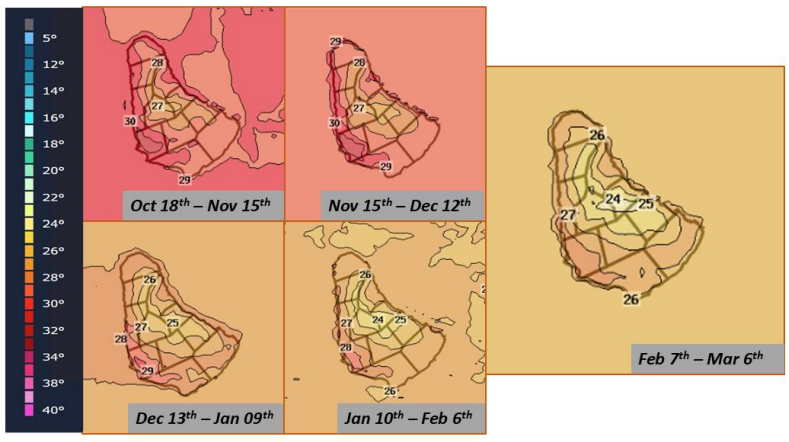
The BMS seasonal rainfall forecast indicates below-average rainfall for Barbados for the entire forecast period. Regional forecasts also indicate near to below-average rainfall through February; while near average rainfall is expected at the end of the forecast period, that will be during the dry season where accumulations are climatologically the lowest. As we enter the dry season periodic intrusions of Saharan dust, which are difficult to predict on a seasonal timescale, are likely to continue to reduce rainfall accumulations. This forecast is likely to be adjusted in subsequent newsletters and as a result, all forecast should be monitored for updates.

Table 1: Rainfall Projections for October 2025 to February 2026

Month	Projections (mm)	Deviation from 30-yr Average at Charnocks
October	150 - 350	Average to Above Average
November	35 - 200	Below Average
December	30 - 125	Below Average
January	10 - 60	Below to Near Average
February	10 – 40	Near Average

TEMPERATURE OUTLOOK

Figure 5: BMS Experimental peak temperature forecast from Oct 2025 to Feb 2026



As the Heat Season ends, seasonal forecasts for Barbados continue to project above normal temperatures. The latest probabilistic and dynamic model forecasts and the BMS experimental WRF model (figure 5) continue to project above-normal minimum and mean temperatures for the forecast period (Table 2). As for the maximum temperature, the probabilistic forecast is leaning towards above-normal temperatures through December and below normal thereafter. Daytime temperatures will continue to be slightly uncomfortable and are expected to peak between 30°C and 32°C. The BMS urges members of the public to continue monitoring the temperature outlook for updates in the coming months and adhere to any recommendations coming from the Ministry of Health and Wellness although the heat season is coming to a close.

Table 2: Temperature Outlook for September 2025 to January 2026

Temperature	Season	Forecast Probability (%)		
		Below	Normal	Above
Minimum Temperature	**OND**	8	20	72
	JFM	23	20	57
Maximum Temperature	**OND**	23	30	47
	JFM	40	32	28
Mean Temperature	**OND**	18	17	65
	JFM	23	27	50

DROUGHT OUTLOOK

Rainfall continues to be below average for 2025, with the outlook for the rest of the wet season indicating below average rainfall; Considering that we are entering the dry season, and that the BWA has also began to notice a rise in the salinity levels; the alert levels for Agricultural and Hydrological Drought remain at Drought Watch through December and a tentative Drought Warning for January and February. Persons in the agricultural sector are urged to continue monitoring the Ministry of Agriculture, Food and Nutritional Security for updates and the BMS for updates to the seasonal drought outlook. Members of the public are urged to take responsibility and continue to conserve water, regardless of the drought alert level and to continue monitoring the BWA and the BMS for updates. Below is a table of the forecast drought alert levels based on the forecast rainfall accumulations (Table 1).

Table 3: Drought Outlooks for October 2025 to February 2026

Month	Agricultural	Hydrological
October	Drought Watch	Drought Watch
November	Drought Watch	Drought Watch
December	Drought Watch	Drought Watch
January	Drought Warning	Drought Warning
February	Drought Warning	Drought Warning

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Agricultural Drought Watch

Responses to the predicted Drought Alert Level.

Key Messages:

- *Protect resources*
- *Conserve and recycle water*
- *Repair and upgrade infrastructure*
- *Prepare for increased irrigation during periods of extensive dryness*
- *Report Impacts*

✓ ***Continue to monitor for updates from the Barbados Water Authority and Ministry of Agriculture, Food and Nutritional Security.***

✓ ***Continue to monitor the BMS Climate Outlook for monthly updates.***

Hydrological Drought Watch

Responses to the predicted Drought Alert Level.

Key Messages:

- *Encourage water conservation through public awareness campaigns*
- *Last minute infrastructural repairs and upgrades*
- *Implement drought management plans*

✓ ***Continue to monitor for updates from the Barbados Water Authority.***

✓ ***Continue to monitor the BMS Climate Outlook for monthly updates.***

Likely Impacts for the October 2025 to February 2026 Period

What do these forecasts mean for Barbados?

- Unchanged/ falling reservoir/aquifer levels.
- Employ rainwater harvesting techniques for rain feed crops during dry periods.
- Increased likelihood of flooding during intense rainfall events.
- Increase in soil moisture content and possible saturation during excess rainfall events.
- Uncomfortable temperatures which may lead to an increased need for cooling and hydration.
- Heat stress in farm animals and pets.
- Air quality may be impacted by periodic intrusions of Saharan dust.
- Keep updated with daily weather as well as seasonal forecasts issued by the BMS.

CLIMATE OUTLOOK

ENSO (El Niño Southern Oscillation)

ENSO is the interaction between the ocean and atmosphere in the equatorial Pacific which results in periodic departures from the expected sea surface temperatures. There are two phases of ENSO, the cold phase of sea surface temperatures, La Niña and the warm phase, El Niño. La Niña conditions usually results in higher rainfall for Barbados. El Niño conditions usually result in lower rainfall for the island. Neutral conditions which are close to average or what is normally expected. These are the general conditions associated with each phase however, there are other factors which influence the rainfall patterns across Barbados which may result in a deviation from the norm.

Current state

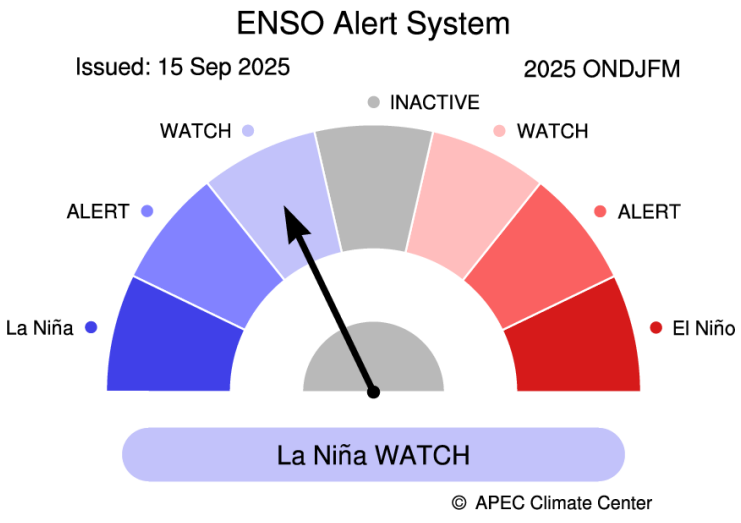
ENSO Neutral conditions remain present across most of the Pacific Ocean.

What's the Outlook?

Weak La Niña conditions are expected at the beginning of the forecast period with the odds moving in favour of ENSO neutral by the end of the forecast period.

Impact to the Upcoming Seasons

Weak La Niña conditions may favour an increase in rainfall across Barbados; there is typically no significant predictability on rainfall patterns in Barbados during ENSO-neutral events.



(Source: APCC/ Climate Information Services)

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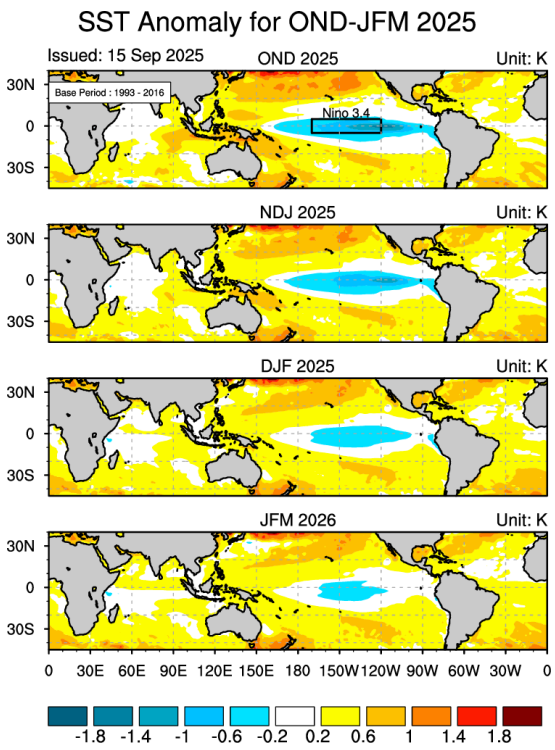
CLIMATE OUTLOOK

Sea Surface Temperatures (SSTs)

The Multi-Model Ensemble continues to forecast above-normal sea surface temperatures (SSTs) across the tropical Atlantic. SSTs are forecast to remain above normal by 0.2°C through to March 2026. Across the eastern and central equatorial Pacific, SSTs are expected to be 0.2 to 1 °C cooler than normal, consistent with the ENSO-neutral to weak La Niña conditions.



(Source: APCC/ Climate Information Services)

Impact on Rainfall

Warmer-than-normal SSTs in the Atlantic may favour periods of increased rainfall characterized by intense rainfall events; this may result in flash flooding across the island.

Impact on Temperatures

Warmer-than-normal SSTs across the tropical Atlantic will result in warmer-than-normal temperatures and humid conditions, although not as warm as 2023 and 2024. Recurrent episodes of heat stress are likely, but not to the degree of the previous two years, until the Heat Season Ends around November.

2025 ATLANTIC HURRICANE SEASON OUTLOOK

Forecasts for the 2025 Atlantic Hurricane season from Colorado State University, Tropical Storm Risk and the National Oceanic and Atmospheric Administration indicate slightly above-normal activity for the remainder Hurricane Season. With all centres leaning towards ENSO- neutral to weak La Niña and warm sea surface temperatures making conditions more. The Barbados Meteorological Services has also produced a forecast, a hybrid statistical and deterministic product to predict the activity in the Eastern Atlantic (bounded by 10°W – 65°W, 5°N – 20°N). The table below summarizes these forecasts as compared to Atlantic hurricane season Climatology.

Table 3: 2025 Atlantic Hurricane Season Forecast compared to Atlantic Hurricane Season

	Atlantic Basin Climatology (1991-2020)	Cumulative Forecast Ranges for 2025 Hurricane Season	BMS 2025 Eastern Atlantic Outlook	Observed Tropical Cyclones in the Atlantic (30th September)	Observed Tropical Cyclones in the Eastern Atlantic (30th September)
Named Storms	14	12-19	5-8	9	3
Hurricanes	7	6-10	2-5	4	1
Major Hurricanes (Category 3 and above)	3	3-5	0-2	3	1

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Editors: Mr. Christophe Martin (Meteorologist Ag), **Mr. Don Layne** (Senior Meteorological Assistant), **Ms. Shanice Whitehall** (Meteorologist Ag), **Ms. Cherise Brathwaite** (Meteorologist Ag), **Ms. Danielle Nurse** (Meteorologist Ag)

For more information, contact the Barbados Meteorological Services at
CAD Building Charnocks Christ Church
Tel: 535-0023|Fax: 535-0029|Email: BMS.Climat@barbados.gov.bb

CONTRIBUTORS: