



BMS MONTHLY CLIMATE OUTLOOK NEWSLETTER

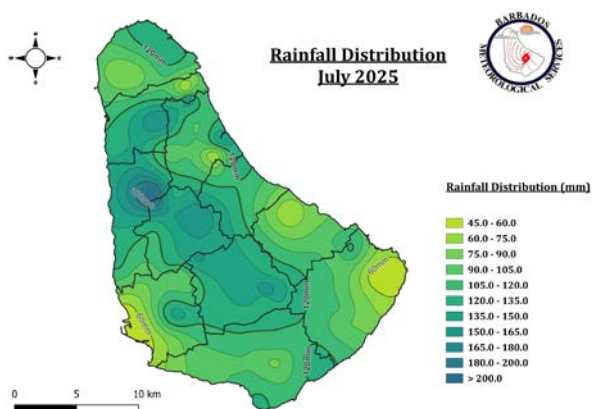
July 2025 | Issue No.66

Key Messages: Near average rainfall is expected in August and below-average rainfall is expected through October. Be Aware of the development of Agricultural Drought and Hydrological Drought during the late Wet season. Persons are, however are urged to continue monitoring the BMS seasonal outlooks for updates. Warmer-than-normal temperatures are will persist until the end of the Heat Season, although not as warm as 2023 and 2024. ENSO neutral conditions are present and are likely to persist through to October. Near to above-average tropical cyclone activity is expected during the 2025 Atlantic Hurricane season.

JULY IN REVIEW

Precipitation

Figure 1: July Rainfall Distribution



Nine (9) Tropical Waves affected the island in July. As three (3) of these features affected the island, they contributed approximately 56% (72.8mm) of the month's rainfall (129.3mm), which is slightly above the climatological average for July (121.5mm). This brings the rainfall total for the year to 470.1 mm, about 93% of the climatological average (from Jan- Jul) of 503.6 mm. Flash-flood watches were in effect during these periods; 3rd, 22nd-23rd and 25th-26th; heavy showers and thunderstorms on the 23rd necessitated the upgrade to a Flash Flood Warning.

During the rest of the month, the winds were usually high at times, with the BMS issuing a Small-Craft Advisory due to these high winds on the 10th and 11th of the month.

Temperature

Figure 2: July Average Temperature Distribution

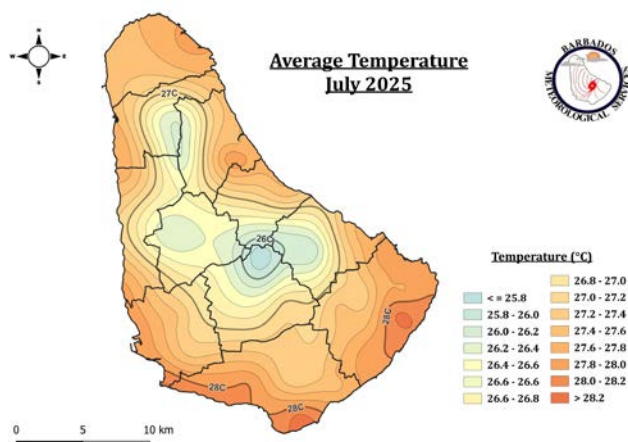
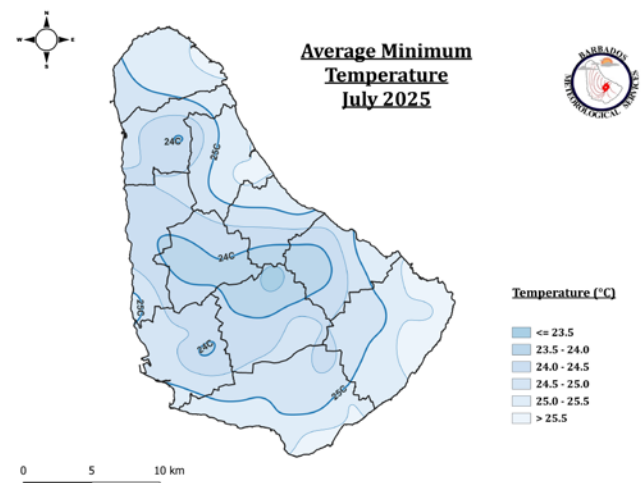


Figure 3: July Average Minimum Temperature Distribution



Air temperatures remain near average in comparison to the climatological record at the BMS in Charnocks; the average maximum temperature was lower by 0.5°C, at 30.2°C, while the average temperature was lower by 0.3°C. The average minimum temperature, however, was higher by 0.4°C, at 25.5°C. Average maximum temperatures across the island ranged between 29.0°C and 32.8°C, while the average temperatures ranged between 25.7°C and 28.3°C. Of note were nighttime temperatures which peaked between 24.4°C and 27.5°C for July. At the BMS station, the warmest nighttime temperature of 27.1°C exceeded the climatological maximum of 26.2°C, by 0.9°C.

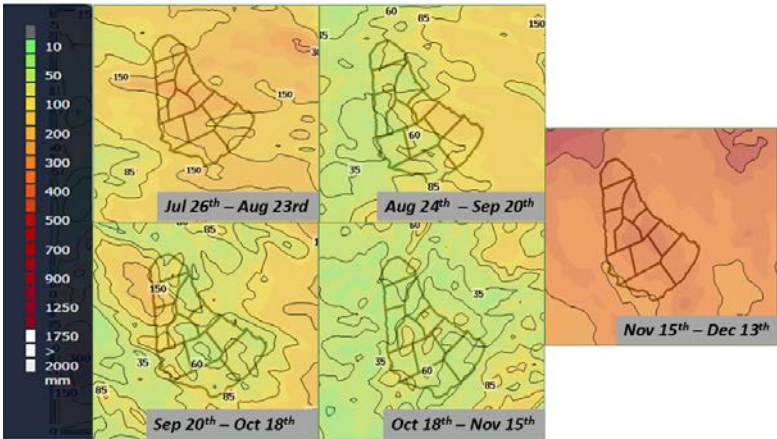


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July 2025 | Issue No.66

PRECIPITATION OUTLOOK

Figure 4: BMS Experimental rainfall forecast from August to December 2025



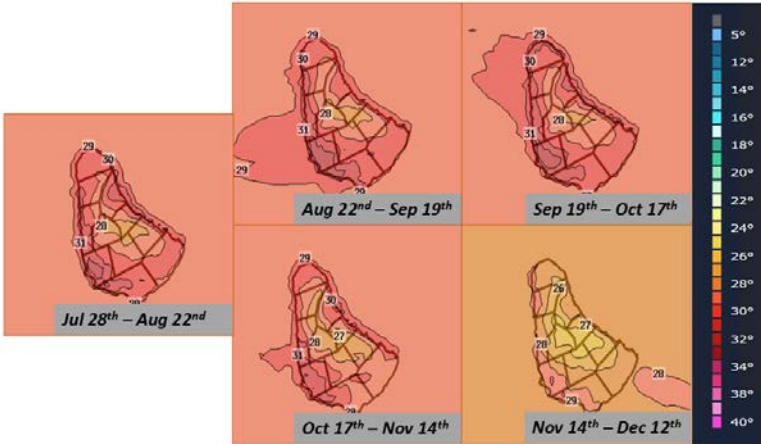
The BMS seasonal rainfall forecast continues to indicate average rainfall for Barbados in August. By the late wet season, below average rainfall is forecast through the end of November. Regional forecasts also indicate below average rainfall through November, which increases forecast confidence. However, the BMS Climate model indicates above average rainfall for late November, with predictions well above the climatological record. This is likely due to the higher resolution model, resolving the effects of upper trough systems; as a result, the prediction for November is revised upwards to near/above average with low confidence. Periodic intrusions of Saharan dust, which are difficult to predict on a seasonal timescale, are likely 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 August to November 2025

Month	Projections (mm)	Deviation from 30-yr Average at Charnocks
August	85-150	Average
September	85 - 150	Below Average
October	85-150	Below Average
November	85-200	Near to Above Average

TEMPERATURE OUTLOOK

Figure 5: BMS Experimental peak temperature forecast from August to December 2025



Seasonal forecasts for Barbados Heat Season 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, mean and maximum temperatures for Barbados' heat season (Table 2). Daytime temperatures will be uncomfortable and are expected to peak between 30°C and 31°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 during the heat season.

Table 2: Temperature Outlook for August 2025 to January 2026

Temperature	Season	Forecast Probability (%)		
		Below	Normal	Above
Minimum Temperature	ASO	12	23	66
	NDJ	16	22	62
Maximum Temperature	ASO	15	31	54
	NDJ	30	24	46
Mean Temperature	ASO	11	28	61
	NDJ	22	29	49

DROUGHT OUTLOOK

The seasonal forecast for below average rainfall in September and October has a medium confidence with the drought outlook alert level at **be aware for Agricultural Drought**. The BWA has begun to notice a dip in the aquifer levels, and we aware therefore **watching for the development of Hydrological Drought** through November. 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 August to November 2025

MONTH	AGRICULTURAL	HYDROLOGICAL
AUGUST	No concern	Be Aware
SEPTEMBER	Be Aware	Be Aware
OCTOBER	Be Aware	Be Aware
NOVEMBER	Be Aware	Be Aware



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July 2025 | Issue No.66

Be Aware of Agricultural Drought

Responses to the predicted Drought Alert Level.

Key Messages:

- Monitor resources
- Prepare the infrastructure for the possibility of drought
- Prepare for the possibility of increased irrigation during periods of extensive dryness
- ✓ 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.

Be Aware of Hydrological Drought

Responses to the predicted Drought Alert Level.

Key Messages:

- Encourage water conservation through public awareness campaigns
- Monitor resources and upgrade infrastructure
- Update and ratify management for the possibility of drought
- ✓ Continue to monitor for updates from the Barbados Water Authority.
- ✓ Continue to monitor the BMS Climate Outlook for monthly updates.

Likely Impacts for the August 2025 to January 2026 Period

**What do these forecasts mean
for Barbados?**

- Continue to conserve water.
- Recharge in 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.

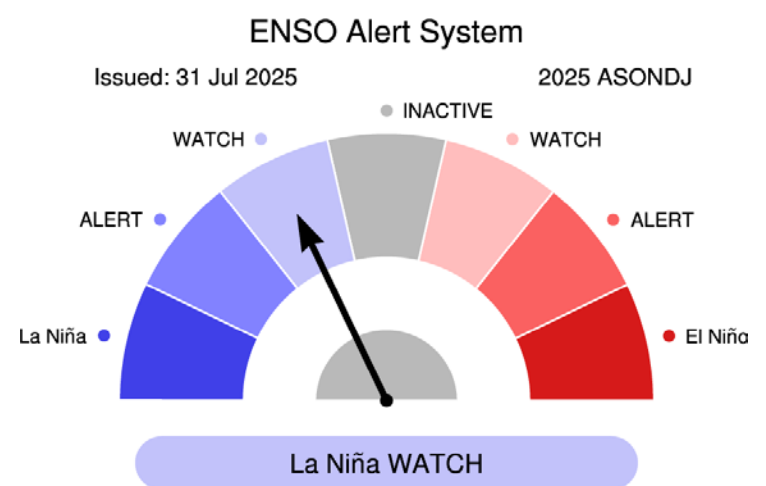
What's the Outlook?

ENSO-neutral is likely to persist through October 2025, after which the likelihood a La Niña event increases.

Impact to the Upcoming Seasons

During ENSO-neutral events there is typically no significant predictability on rainfall or temperature patterns in Barbados.

(Source: APCC/ Climate Information Services)



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CLIMATE OUTLOOK

Sea Surface Temperatures (SSTs)

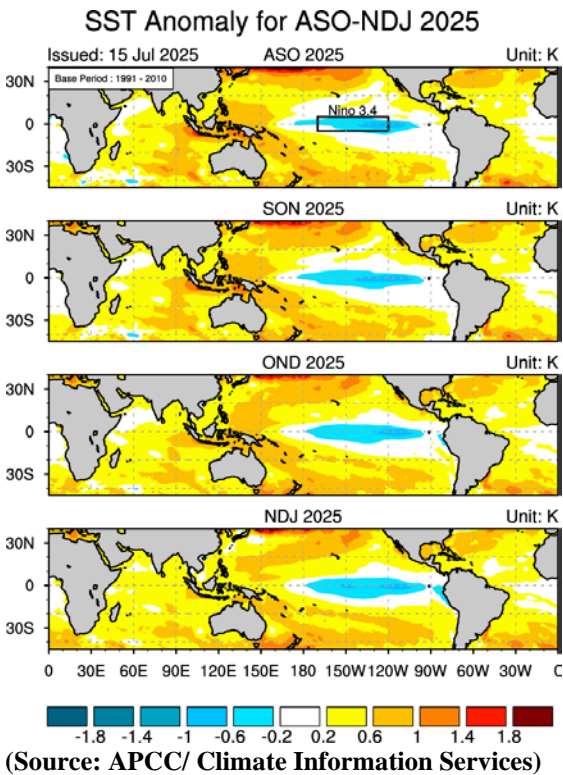
The Multi-Model Ensemble continues to forecast above-normal sea surface temperatures (SSTs) across the tropical Atlantic. SSTs are forecast to remain above normal by 0.2°C through to the end of 2025. Across the eastern and central equatorial Pacific, SSTs are expected to be near normal, consistent with the ENSO-neutral conditions.

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. Barbados is now into the Heat Season and recurrent episodes of heat stress are likely, but not to the degree of the previous two years.



2025 ATLANTIC HURRICANE SEASON OUTLOOK

Forecasts for the 2025 Atlantic Hurricane season from Colorado State University and Tropical Storm Risk indicate near normal activity for the Hurricane Season this year. Meanwhile, the National Oceanic and Atmospheric Administration forecasts above normal activity for the Atlantic basin, given their forecast for weak seasonal wind shear and higher activity from the West African Monsoon. 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). Additional factors influencing activity are warm Sea Surface Temperatures (SSTs), and continued ENSO Neutral conditions across the Tropical Pacific. These factors favour tropical cyclone development over the Atlantic basin. 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 (31 st July)	Observed Tropical Cyclones in the Eastern Atlantic (31 st July)
Named Storms	14	12-19	5-8	4	0
Hurricanes	7	6-10	2-5	0	0
Major Hurricanes (Category 3 and above)	3	3-5	0-2	0	0

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