Caribbean Climate Outlook Newsletter - April to June 2025

For climate information specific to your country, please consult with your national meteorological service.

CariCOF outlooks speak to recent and expected seasonal climate trends across the Caribbean in general.

BRIEF SUMMARY: December 2024 to June 2025

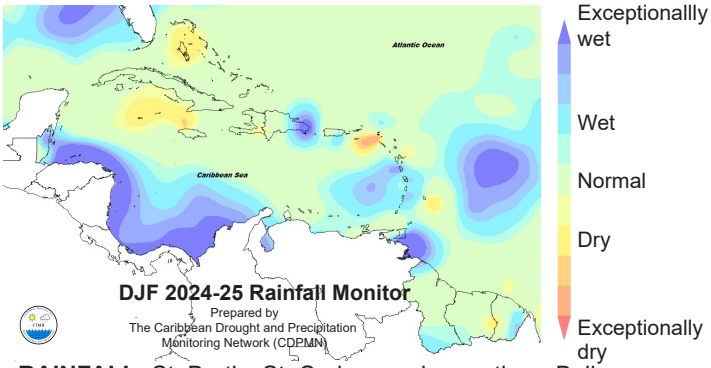
December 2024 to February 2025: Tropical North Atlantic ocean temperatures have been cooling faster than around the same time in 2024, though remaining unusually high around the Caribbean; weak La Niña conditions occurred in the Pacific. Most areas observed at least the usual rainfall totals during the early Caribbean Dry Season. Milder, drier air has returned as the region's cool season unfolded.

April to June 2025: ENSO neutral conditions in the Pacific, combined with unusually warm waters around the Caribbean and temporarily cooler waters in the eastern Tropical North Atlantic imply: (**i**) a Caribbean Heat Season with heatwaves occurring as early as April and gradually ramping up, but *unlikely* to match 2023 and 2024; (**ii**) in April, high evaporation rates, frequent short dry spells and buildup of any ongoing drought increases wildfire potential; (**iii**) except for the mostly dry ABC Islands, rainfall intensity and shower frequency should rise towards May (the Bahamas, Guianas and Greater Antilles) or June (Belize and the Lesser Antilles), resulting in *high* to *extremely high* potential for flooding, flash floods, cascading hazards and associated impacts. Episodes of Saharan dust intrusion will *likely* be frequent; the more frequent these are, the more dryness and heat, and the more *erratic* the occurrence of severe weather.

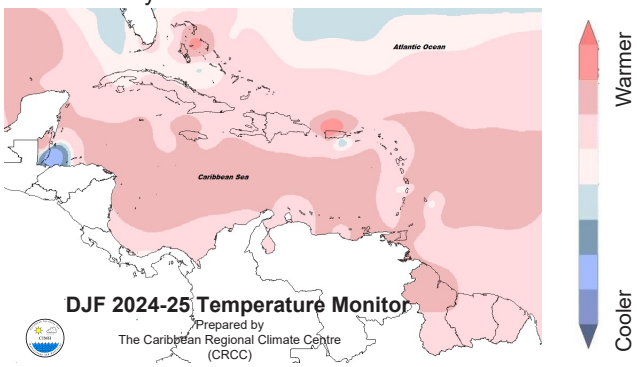
LOOKING BACK:

Dec. - Jan. - Feb. (DJF) 2024-25

Observations



- **RAINFALL:** St. Bart's, St. Croix very dry; northern Belize, Dominica, eastern Dominican Rep., St. Vincent, southern Trinidad very wet.



- **TEMPERATURE:** Most locations 0.5-1.5ºC warmer than usual, with New Providence and parts of Puerto Rico exceeding +1.5ºC anomaly; 1ºC cooler than usual in portions of southern Belize.

Notable Climate Records in NDJ 2024-25:

WET: 1 location in Belize, 1 in the Dom. Rep., 1 in Trinidad reported record high rainfall for this period (~175-255% of average).

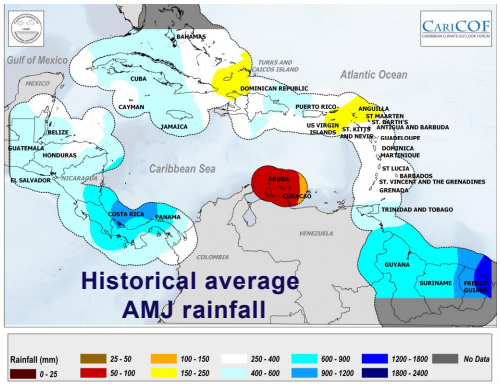
DRY: *No locations reported record-low rainfall totals for this period.*

HOT: 1 location in Jamaica and 1 in Puerto Rico reported record-high mean temperatures.

More at *https://carogen.cimh.edu.bb/index.php/component/countrydata/*

WHAT NEXT?

Rainfall patterns April-May-June (AMJ)



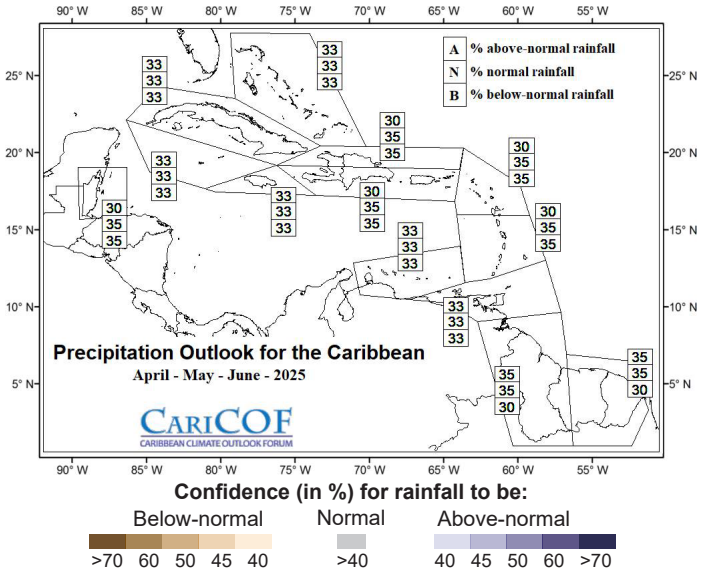
Belize & C'bean Islands north of 16ºN:
Apr - end of the dry season. Limited spatial extent and duration of heavy showers.
May & Jun - usually frequent heavy showers.

C'bean Islands south of 16ºN (except ABC Islands):
Apr to May - end of dry season. Limited spatial extent and duration of heavy showers; occasionally very wet.
Jun - onset of wet season. Increasingly heavy showers.

ABC Islands: *Apr to Jun - mostly dry.*

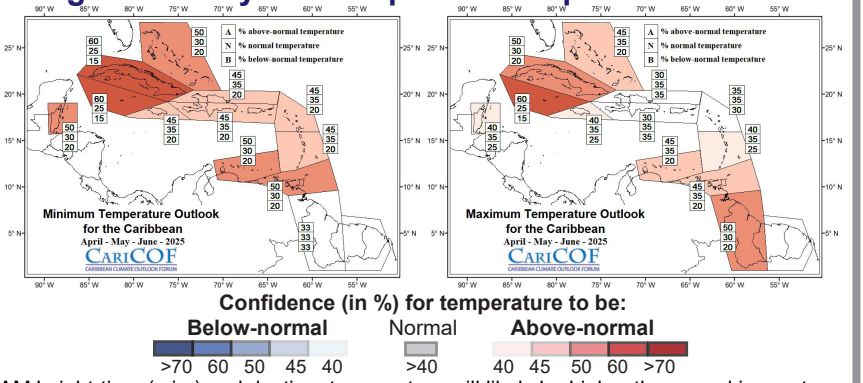
Guianas: Apr to Jun - transition to wet season; heavy showers more and more frequent.

AMJ 2025 Rainfall Outlook



At this time, the forecast shows very little indication of distinct shifts in seasonal rainfall totals from April to June at the regional level in the Caribbean. It should be emphasised that national forecasts in some countries may be more confident at any time, including when no regional signal is found in the forecast.

Night- and daytime temperatures up to June



AMJ night-time (min.) and daytime temperature will likely be higher than usual in most areas. Episodes of hazardous, extreme heat with - possibly recurring - heatwaves could occur as early as April and ramping up into May. There is *increased risk* in areas that are windsheltered and/or in drought, particularly when dusty air combines with high humidity.

Wet days and wet spells up to June

What usually happens from April to June?

- Number of wet days: roughly 20 to 35, (ABC Is. 5-10; Guianas: 40-55).
- # of wet spells: up to 4 (ABC Is. up to 1; Guianas: up to 6), of which up to 2 are very wet (ABC Is. up to 1; Guianas: up to 3).
- # of extreme wet spells: up to 1 (Guianas: up to 2).

Forecast and Implications:

- The potential for flooding, flash floods and cascading impacts arising from runoff during intense rainfall events will be high, particularly in mountainous areas and in the Guianas.
- Water recharge rates in surface reservoirs and rivers will likely rapidly accelerate, particularly in the Guianas.
- Accelerated rise in wet day frequency into May to increasingly disrupt outdoor tourism activities, make conditions conducive to moisture-related pests, but dampen wildfire potential .

Drought conditions

Lastest drought situation: (*as of Mar.1st, 2025*)	*Moderate* (or worse) short-term drought has developed in the central and northern Bahamas, the Cayman Islands, parts of St. Croix, Sint Maarten and St. Bart's; *moderate* (or worse) long-term drought in southern Belize, northern Dominican Republic, southwest Jamaica, St. Bart's, St. Vincent, southeast Suriname, northwest Trinidad.
Short-term drought (*at the end of June 2025*)	Short-term drought *might possibly develop or continue* in The Bahamas, Grand Cayman, Western Cuba, northwest Puerto Rico and the USVI.
Long-term drought (*at the end of May 2025*)	Long-term drought is *evolving* in the northern Bahamas, southwest Belize, parts of Central Cuba and the USVI, and *might possibly develop* in the ABC islands, the central Bahamas, parts of Eastern Cuba, and coastal French Guiana and Guyana.

BRIEF CLIMATE OUTLOOK - July to September 2025

This period marks the buildup into the annual peak of the Caribbean Wet Season and Heat Season, as well as the Atlantic Hurricane Season. The tropical North Atlantic Ocean is forecast to remain unseasonably warm around the Caribbean - albeit not at record levels as experienced in 2023 and 2024. Unusually high air temperatures will most likely prevail with significant heat stress to become recurrent. The *risk* of severe weather impacts, including flooding, flash floods, and cascading impacts is expected to be *even higher* than usual. Whereas hurricane season activity tends to be higher than average when the waters around the Caribbean are warmer than usual, confident forecasts for the 2025 season will not be available before late-May. *For temperature and precipitation outlooks for JAS 2025, please visit rcc.cimh.edu.bb/caricof-climate-outlooks.*

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: Weak La Niña conditions have emerged in December 2024, with Sea Surface Temperatures (SSTs) having anomalously cooled to 0.7°C below average by January 2025, but rebounded to near-average in February.

Model forecast and guidance: The forecast models forecast a return to ENSO neutral conditions in AMJ (~80-85% confidence), *more likely than not* remaining neutral through AS (~55-65% confidence).

Expected impacts on rainfall and temperatures: La Niña conditions are often associated with increased heavy shower activity in the southeastern Caribbean, but the opposite in the northwestern Caribbean through April. *ENSO neutral conditions do not contribute to seasonal forecast skill.*

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: Though cooling faster than in 2024 in February in the eastern Tropical North Atlantic (TNA), unseasonably warm SSTs remained in place in and around the Caribbean Sea at around 0.5°C to 1.5°C above average by the end of February.

Expected conditions: Models are confidently forecasting persistently warm SST anomalies of 0.25°C to 1°C above average in AMJ and in JAS across the Caribbean Sea and western half of the TNA.

Expected impacts: Warm SSTs in and around the Caribbean tend to contribute to higher air temperatures, humidity, seasonal rainfall totals, an increased frequency of severe weather. The likelihood of extreme rainfall and related impacts is higher than usual.

Climate outlooks - background

The Caribbean Climate Outlooks are prepared by the Caribbean Climate Outlook Forum (CariCOF). The Caribbean Institute for Meteorology and Hydrology, in its role as WMO Regional Climate Centre, coordinates the CariCOF process. Contributors to the Outlooks are the Meteorological Services from the region.
The Precipitation and Temperature Outlooks are issued in the form of a map, which shows regions where the forecast rainfall or temperatures have the same probabilities to be:

Above-normal	(A)	- within the wettest/hottest third of the historical record
Near-normal	(N)	- within the middle third of the historical record, i.e. a range called the 'usual'
Below-normal	(B)	- within the driest/coldest third of the historical record

CariCOF Outlooks offer consensus-based information averaged across multiple territories. In some cases, individual national results may differ from region wide results. To get information on your specific country context, please consult your National Meteorological and Hydrological Services and/or any national level bulletins thay may provide.

DISCLAIMER