

Caribbean Climate Outlook Newsletter - November 2024 to January 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: July 2024 to January 2025

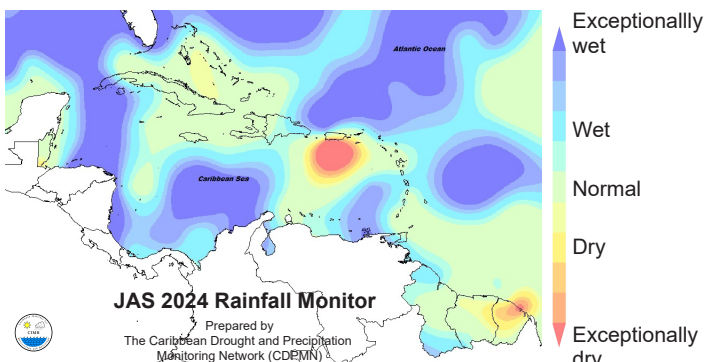
July to September 2025: A record-warm Tropical North Atlantic has fuelled unusually elevated levels of humid heat across the region, as well as the usual or even larger than the usual rainfall totals during the summer portion of the Caribbean Wet Season. Nevertheless, long-term drought remained in place in parts of the Dominican Republic and the Guianas.

November to January 2024-25: Unusually warm Tropical North Atlantic Ocean temperatures and *likely* La Niña conditions in the equatorial Pacific imply: (i) episodes of uncomfortable humid heat fading more slowly than in most years, with the odd heat-wave still a possibility in November, particularly in the ABC Islands, the Guianas and the Windward Islands; (ii) increased severe weather activity through December (January in the Guianas), resulting in *high to extremely high* potential for flooding, flash floods, cascading hazards and associated impacts; (iii) short dry spells are set to increase in frequency, particularly in the far northwest of the region, despite that the Islands and Belize are expected to transition into the 2024-25 Dry Season several weeks late.

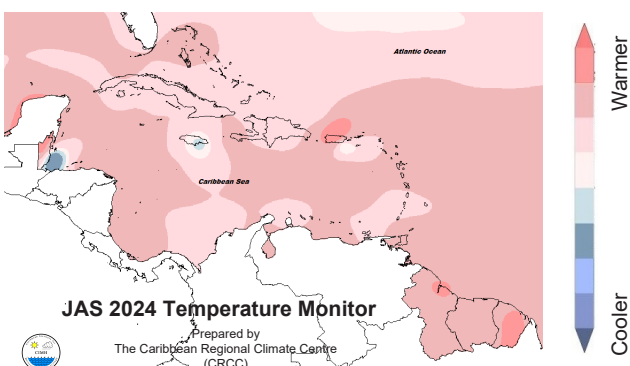
LOOKING BACK:

Jul. - Aug. - Sep. (JAS) 2024

Observations



♦ **RAINFALL:** Northern French Guiana, southern Puerto Rico, St. Croix very dry; Grand Bahama, Western Cuba very wet.



♦ **TEMPERATURE:** Many locations still 0.5-1.5°C warmer than usual. Fewer temperature records broken than earlier this year.

Notable Climate Records in JAS 2024:

WET: 1 location in Barbados reported record-high rainfall totals for this period (151% of avg.).

DRY: 1 location in Puerto Rico reported record-low rainfall totals for this period (31% of avg.).

HOT: Curaçao, French Guiana, Tobago, as well as 1 location in Belize, 2 locations in Guyana, 2 in Puerto Rico reported record-high mean temperatures.

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

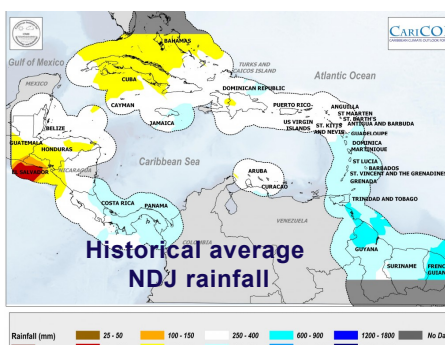
October 2024

find out more by using the clickable images and headings or visit rcc.cimh.edu.bb

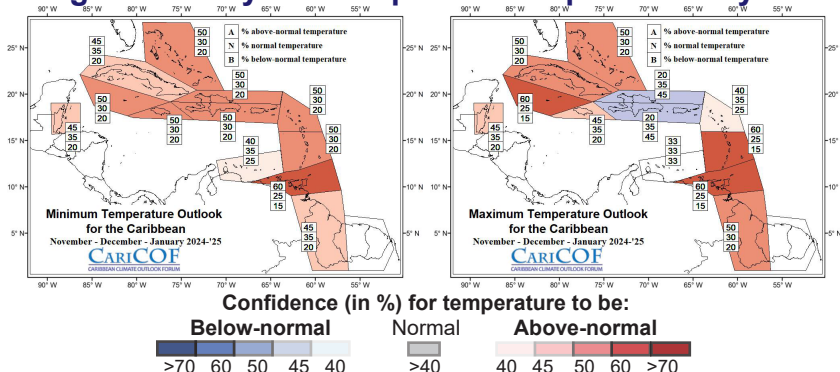
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WHAT NEXT?

Rainfall patterns November-December-January (NDJ)



Night- and daytime temperatures up to January



NDJ night-time (min.) and daytime (max.) temperatures, as well as air humidity will likely be considerably higher than usual in most areas. Episodes of heat stress are expected to steadily decrease through November now that the record-breaking 2024 Heat Season has come to an end. Heat stress should no longer be a significant hazard after November.

Wet days and wet spells up to January

What usually happens from November to January?

- Number of wet days: roughly 35 to 50 (ABC Is: 20 to 45; coastal Guianas: 30 to 50).
- # of wet spells: 2 to 5, of which 1 to 3 are very wet (coastal Guianas: up to 2).
- # of extreme wet spells: up to 2 (Belize & Greater Antilles: up to 1).

Forecast and Implications:

- *High* potential for long-term flooding, flash floods and related hazards across the Caribbean Islands and Belize through December, then decreasing to moderate; *high to extremely high* potential in the Guianas.
- Rising water levels in rivers, large water reservoirs and soils through December.
- Surface wetness makes environmental conditions more conducive to moisture-related pests.

Drought conditions

Latest drought situation: Severe (or worse) short-term drought has developed in French Guiana and southern Puerto Rico; severe (or worse) drought in northern parts of the Dominican Republic, the coastal Guyana, western French Guiana, and eastern Suriname.

Short-term drought (at the end of Jan. 2025) Short-term drought is evolving in southwest Belize and may possibly continue in parts of Puerto Rico.

Long-term drought (at the end of Nov. 2024) Long-term drought is evolving in southwest Belize, French Guiana, and the USVI, and might possibly develop or continue in southeast Belize, coastal Guyana, southwest Puerto Rico, and Trinidad and Tobago.

BRIEF CLIMATE OUTLOOK - February to April 2025

This period marks the peak of the 2024-25 Caribbean Dry Season, and the transition out of the Cool Season in March and into the 2025 Heat Season in April. An unseasonably warm Tropical North Atlantic and, *possibly*, a weak La Niña are forecast for this period. More comfortable temperatures, though *likely* higher and with more humidity than usual are forecast for this Cool Season, with a *likely* accelerated transition into the 2025 Heat Season. The risk of severe weather impacts from intense shower activity, including flooding, flash floods, and cascading impacts should be *limited to moderate*. An intense dry season peak is forecast for the Bahamas and the Greater Antilles. By contrast, less intense dryness is forecast for the ABC Islands, Guianas and Lesser Antilles. *Detailed outlooks for FMA 2025 are available at rcc.cimh.edu.bb/caricof-climate-outlooks*

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: A strong El Niño event which peaked in December in the eastern equatorial Pacific ended in May, with Sea Surface Temperatures (SSTs) having anomalously cooled to -0.5°C by September.

Model forecast and guidance: The forecast models forecast *more likely than not* La Niña conditions (~55-75% confid.) in NDJ and *more likely than not* a return to ENSO neutral conditions by FMA (~50-65% confid.).

Expected impacts on rainfall and temperatures: La Niña conditions are often associated with increased heavy shower activity, rainfall totals, air temperatures and Atlantic Hurricane Season activity in NDJ, as well as a (much) wetter secondary wet season in the coastal Guianas and a drier than usual early dry season in the northwestern Caribbean in FMA.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: Record-warm SSTs in the Caribbean Sea and the Tropical North Atlantic (TNA) around 1°C to 2°C above average have been observed across vast ocean areas since the summer of 2023.

Expected conditions: Models are confidently forecasting warm SST anomalies of 0.5°C to 1°C above average for NDJ and FMA across the Caribbean Sea and the TNA.

Expected impacts: Warm SSTs in and around the Caribbean tend to contribute to higher air temperatures with above-average humidity, seasonal rainfall totals, an increased frequency of extreme rainfall and increased tropical cyclone activity through the end of the year. The likelihood of extreme rainfall is higher than usual, even in the Dry Season.

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 they may provide.

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