

# Caribbean Climate Outlook Newsletter - September to November 2024

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: May to November 2024

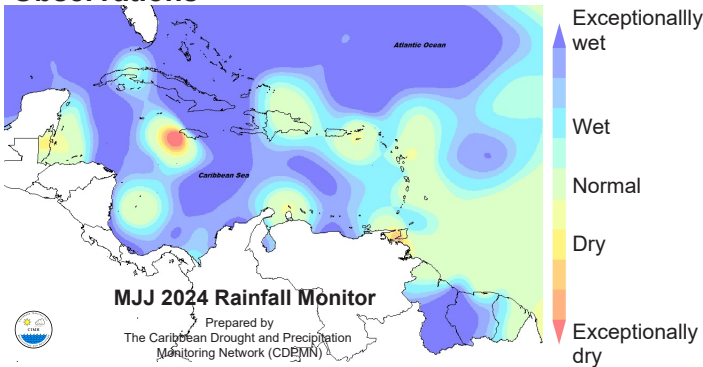
**May to July 2024:** A record-warm Tropical North Atlantic has continued to fuel record-breaking temperatures, as well as the usual or even larger than the usual rainfall totals during the transition into the Caribbean wet season, including record rainfall in inland Guyana and Suriname. Nevertheless, long-term drought remains in place in northern Guyana and westernmost Jamaica.

**September to November 2024:** Cooling temperatures in the equatorial Pacific may possibly result in a progressive transition to La Niña while (near-)record warm Tropical North Atlantic Ocean are set to continue. Therefore, an intense peak and tail end of the 2024 Atlantic Hurricane Season, the Caribbean Wet Season and the Caribbean Heat Season, implying frequent and intense (i) episodes of oppressive humid heat; and (ii) tropical cyclones and severe weather, resulting in high potential for flooding, flash floods, cascading hazards and associated impacts. Though unpredictable conditions in the atmosphere can, at times, present barriers to extreme activity of these three types of seasons, they are unlikely to persist throughout the period.

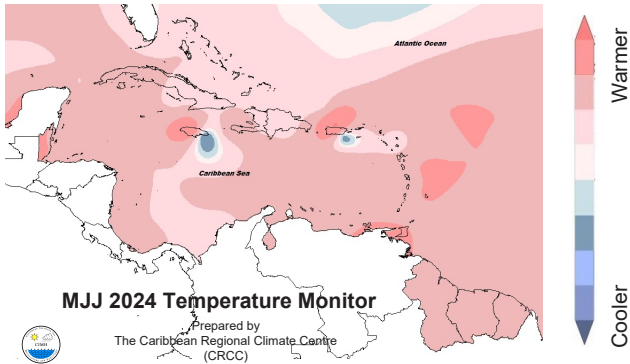
### LOOKING BACK:

#### May - Jun. - Jul. (MJJ) 2024

##### Observations



♦ **RAINFALL:** Southern Belize, western Trinidad very dry; much of The Bahamas, Grand Cayman, westernmost Cuba, southern Hispaniola, southwest Guyana, northern Suriname very wet.



♦ **TEMPERATURE:** Most Caribbean locations 0.5-2.5°C warmer than usual. Several temperature records broken.

#### Notable Climate Records in MJJ 2024:

**WET:** 5 locations in Guyana, 1 in French Guiana reported record-high rainfall totals for this period (160-185% of avg.).

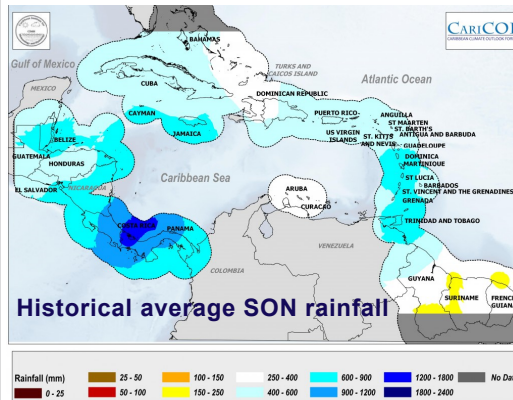
**DRY:** No record-low rainfall totals were reported for this period.

**HOT:** Barbados, Belize, Curaçao, French Guiana, Grenada, Guyana, Martinique, Saint Lucia, Sint Maarten, Tobago, as well as 1 location in Dominica, 2 locations in Guyana, 1 in Jamaica, 4 in Puerto Rico reported record-high mean temperatures.

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

### WHAT NEXT?

#### Rainfall patterns September-October-November (SON)



**Belize & C'bean Islands north of 16°N:**

Sep to Nov - wet season. Usually frequent heavy showers.

**C'bean Islands south of 16°N (except ABC Islands):**

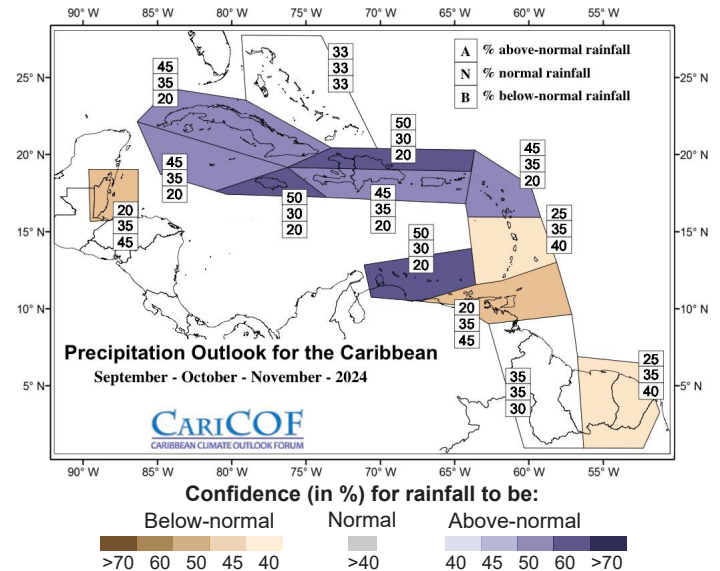
Sep to Nov - wet season. Usually frequent heavy showers.

**ABC Islands:** mostly dry with occasional wet spells.

**Guianas:**

Sep to Oct - Dry season with heavy showers at times.  
November - Increase in showers.

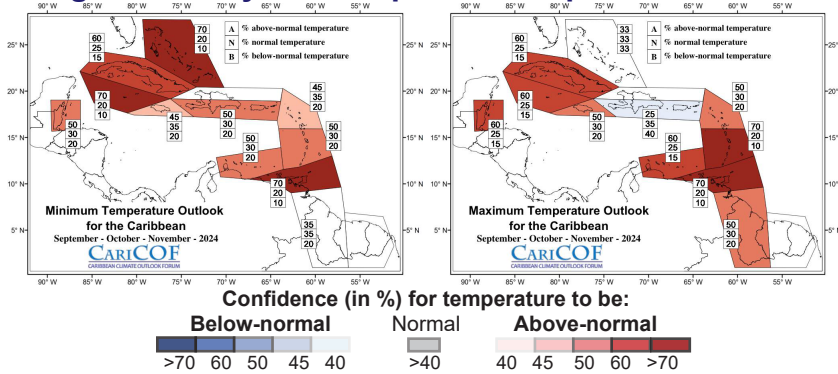
#### SON 2024 Rainfall Outlook



Rainfall totals from September to November are likely to be the usual or higher across the ABC Is., the Greater Antilles and the Leeward Is., but, possibly, the usual or less in Barbados, Belize, eastern parts of the Guianas, Trinidad & Tobago, and the Windward Is.

White areas show where the forecast indicates little information on rainfall totals.

Night- and daytime temperatures up to November



SON night-time (min.) and daytime (max.) temperatures, as well as air humidity will likely be considerably higher than usual in most areas. Frequent episodes of heat stress are expected the region is likely to continue to be in a record Heat Season through October. Heat stress may further ramp up where dry spells are more frequent than usual.

Wet days and wet spells up to November

What usually happens from September to November?

- Number of wet days: roughly 35 to 50 (ABC Is: 10 to 20; coastal Guianas: 20 to 35).
- Number of wet spells: 3 to 6 (coastal Guianas: 1 to 3), of which 1 to 4 are very wet (coastal Guianas: up to 2).
- Number of extremely wet spells: up to 2 (Guianas: none).

Forecast and Implications:

- High potential for long-term flooding, flash floods and related hazards across the Caribbean Islands and Belize; moderate potential in the Guianas, increasing to high by late-November in coastal and northern areas.
- Surface wetness makes environmental conditions more conducive to moisture-related pests in the islands and Belize.
- Rising water levels in rivers, large water reservoirs and soils.
- In the Guianas, a trend towards heavier showers from late-November is likely to significantly increase flood potential.

Drought conditions

**Lastest drought situation:** Severe (or worse) short-term drought has developed in in western Jamaica and southwest Trinidad; severe (or worse) long-term drought in southwest Belize, French Guiana, northern Guyana, western Jamaica and eastern Suriname.

**Short-term drought (at the end of Nov. 2024)** Short-term drought may possibly continue in French Guiana and Trinidad.

**Long-term drought (at the end of Nov. 2024)** Long-term drought is evolving in French Guiana, and Trinidad, and might possibly develop or continue in western and southeastern Belize, northern Guyana and Tobago.

BRIEF CLIMATE OUTLOOK - December 2024 to February 2025

This period marks the first half of the Caribbean dry season and the core of the Cool Season. An unseasonably warm Tropical North Atlantic, potentially combined with La Niña conditions is forecast. Consequently, unusually high air temperatures and humidity remain likely in many locations, but a steady decrease in heat stress is expected in November as the region transitions into the Cool Season by December. The risk of severe weather impacts from frequent tropical cyclones or other shower activity, including flooding, flash floods, and cascading impacts should be initially high to extremely high through December in Belize and the islands, but subsequently decrease. Unusually copious rainfall totals are forecast in the Guianas, Jamaica and the Lesser Antilles. *For temperature and precipitation outlooks for DJF 2024-25, please visit [rcc.cimh.edu.bb/caricof-climate-outlooks](http://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 has ended, with Sea Surface Temperatures (SSTs) having anomalously cooled to average by mid-May.

**Model forecast and guidance:** The forecast models indicate cool-neutral ENSO (~35-55% confidence) or La Niña (~40-65% confid.) conditions in SON and a medium chance of, a La Niña by DJF (~45-65% 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 SON, 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 DJF.

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 SON and DJF 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 throughout the Atlantic Hurricane 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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