

# Caribbean Climate Outlook Newsletter - October to December 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: June to December 2024

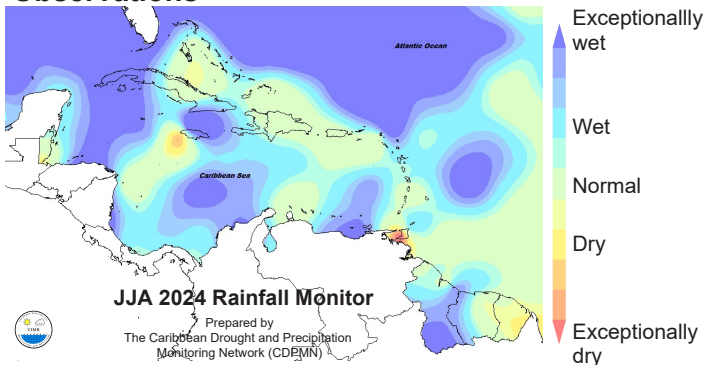
**June to August 2024:** A record-warm Tropical North Atlantic has continued to fuel record-breaking temperatures, as well as the usual or even larger than the usual rainfall totals during the transition into the Caribbean wet season. Nevertheless, by the end of August, long-term drought remained in place in parts of the interior of the Guianas.

**October to December 2024:** A transition to La Niña may occur in the equatorial Pacific while near record-warm Tropical North Atlantic Ocean temperatures will likely continue. For the Caribbean Islands and Belize, such ocean conditions imply increased tropical cyclone and severe weather activity through December, resulting in high potential for flooding, flash floods, cascading hazards and associated impacts. Unusual oceanic heat further implies episodes of oppressive humid heat could continue into early-November, particularly in the ABC Islands, the Guianas and the Windward Islands. Finally, the Guianas will transition from the hot and dry season into cooler and (much) wetter conditions from late-November, except in the far southwest.

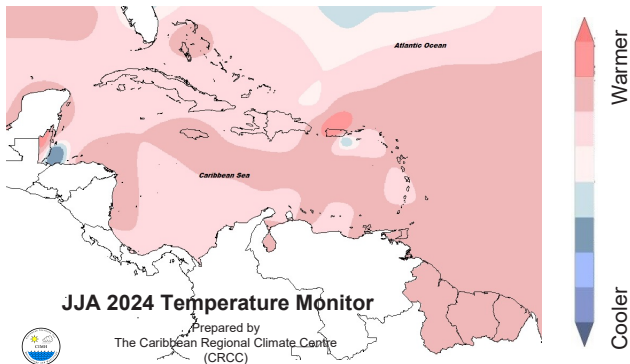
### LOOKING BACK:

#### Jun. - Jul. - Aug. (JJA) 2024

##### Observations



♦ **RAINFALL:** St. Croix, Western Trinidad very dry; Grand Cayman, Western & extreme southern Cuba, southern and central Guyana, northern Jamaica, St. Martin, western Suriname very wet.



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

#### Notable Climate Records in JJA 2024:

**WET:** 1 location in Guyana, 1 in Jamaica reported record-high rainfall totals for this period (155-270% of avg.).

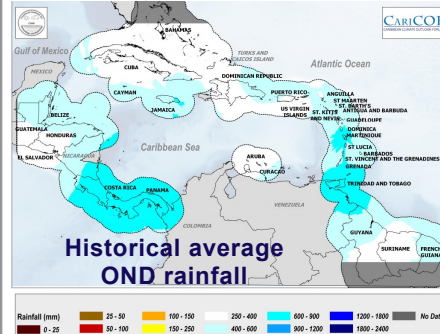
**DRY:** St. Croix, 1 location in Puerto Rico reported record-low rainfall totals for this period (35-40% of avg.)

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

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

### WHAT NEXT?

#### Rainfall patterns October-November-December (OND)



##### Belize :

Oct to Dec - wet season. Frequent heavy showers.

##### C'bean Islands north of 16°N:

Oct - wet season. Frequent heavy showers  
Nov to Dec - transition to dry season.  
Decreasing shower frequency & intensity.

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

Oct to Nov - wet season. Frequent heavy showers. Dec - transition to dry season.  
Decreasing shower frequency & intensity.

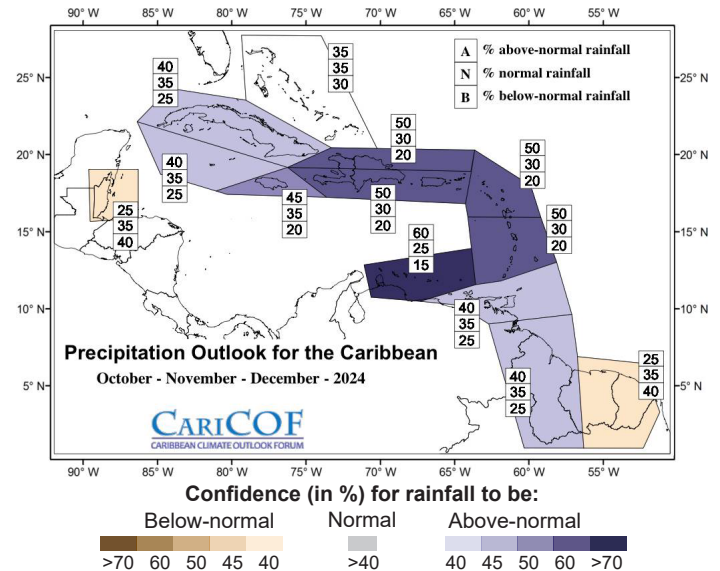
##### ABC Islands:

Oct to Dec - frequent showers, occasionally heavy.

##### Guianas:

Oct - Dry season with heavy showers at times.  
Nov to Dec - transition to wet season. Increase in showers.

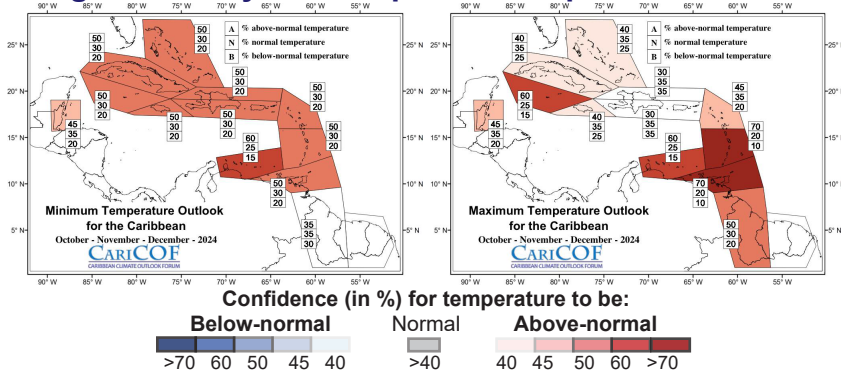
#### OND 2024 Rainfall Outlook



Rainfall totals from October to December are likely to be the usual or higher across the Antilles and western parts of the Guianas, but, possibly, the usual or less in Belize and eastern parts of the Guianas.

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

Night- and daytime temperatures up to December



OND 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 through October in this record-breaking Heat Season. Heat stress may further ramp up where dry spells are more frequent than usual.

Wet days and wet spells up to December

What usually happens from October to December?

- 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 Trinidad; severe (or worse) drought in interior parts of the Guianas. (as of Sept.1st, 2024)

**Short-term drought** Short-term drought may possibly continue in Suriname. (at the end of Dec. 2024)

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

BRIEF CLIMATE OUTLOOK - January to March 2025

This period marks the progression of the Caribbean Dry Season to its usual peak by March and the Cool Season. An unseasonably warm Tropical North Atlantic, potentially combined with La Niña conditions is forecast for this period. More comfortable temperatures, though likely higher and with more humidity than usual are forecast for this Cool Season. The risk of severe weather impacts from intense shower activity, including flooding, flash floods, and cascading impacts should decrease from moderate in early January to marginal in early March in Belize and the islands. An intense Dry Season is forecast for the Bahamas, Cayman Islands and Cuba, potentially leading to short-term drought. By contrast, unusually copious rainfall is forecast for the ABC Islands, Guianas and Lesser Antilles. Detailed outlooks for JFM 2025 are available at [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 ended in May, with Sea Surface Temperatures (SSTs) having anomalously cooled to -0.5°C by September.

**Model forecast and guidance:** The forecast models indicate likely La Niña (~60-80% confid.) conditions in OND and more likely than not continued La Niña conditions by JFM (~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 OND, 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 JFM.

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 OND and JFM 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, and even through the usually cooler and drier JFM period.

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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