

Caribbean Climate Outlook Newsletter - October to December 2022

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 2022

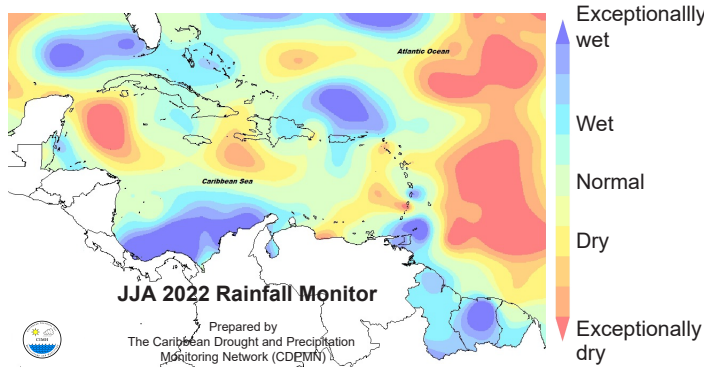
June to August 2022: With a La Niña event unfolding in the Pacific, only few areas received less than the usual amount of rainfall. Most areas recorded at least seasonably high -- or even much higher -- rainfall totals for this portion of the wet season. Fewer heatwaves than in recent hot years (such as 2020) limited heat stress in this part of the Heat Season.

October to December 2022: This transition between wet and dry season is forecast to feature frequent wet days, excessive rainfall and above-average tropical cyclone activity across the Caribbean region, as exacerbated by La Niña. This results in frequent disruptions of outdoor activities and rising water levels in soils, rivers and reservoirs. The potential for floods and cascading hazards is forecast to be extremely high across the Lesser Antilles, high elsewhere across the Caribbean Islands and in Belize, and moderate in the coastal Guianas (where the chance of excessive rainfall increases during November). In October, high humidity and temperatures at times may increase heat stress south of Guadeloupe.

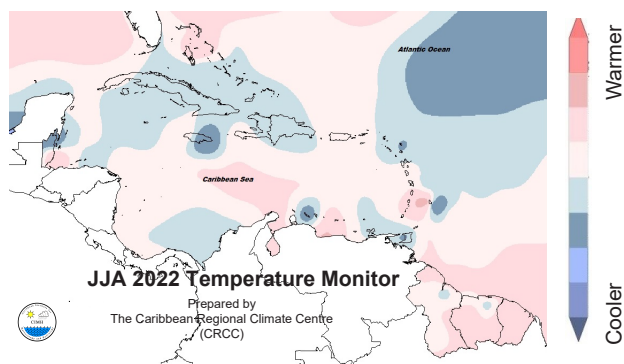
LOOKING BACK:

June - July - August (JJA) 2022

Observations



• **RAINFALL:** Southwest Haiti, St. Kitts and St. Vincent very dry; Northwestern Bahamas, north & south Guyana, northern Puerto Rico, Saint Lucia, Suriname and Trinidad & Tobago very wet.



• **TEMPERATURE:** Near average temperatures in much of the Caribbean, but parts of Barbados, northern Belize, Curaçao, Jamaica and Trinidad were significantly cooler than usual.

Notable Climate Records:

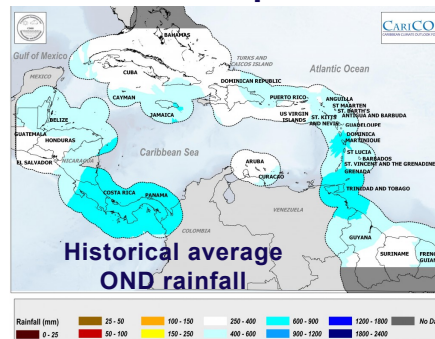
WET: JJA: 2 locations in Trinidad, 1 in Guyana, 1 in Suriname recorded their highest rainfall totals for this period (~135-180% of avg.).

DRY: JJA: no lowest rainfall totals records measured for this period.

HOT: JJA: St. Kitts recorded its highest daytime maximum temperatures for this period.

WHAT NEXT?

Rainfall patterns Oct. - Nov. - Dec. (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.

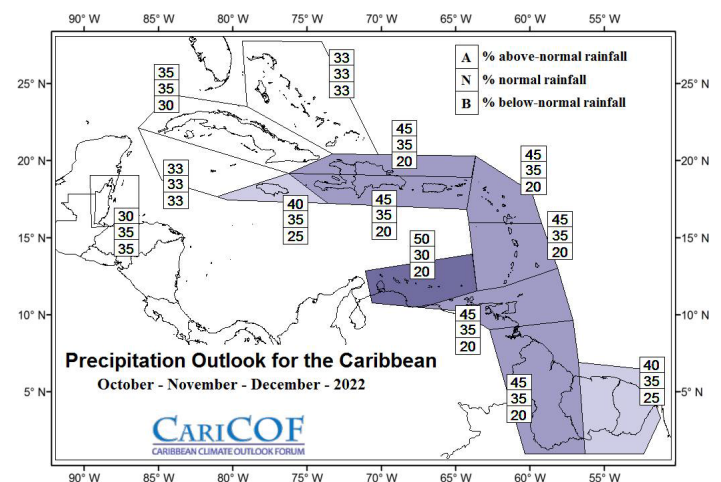
ABC Islands:

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 2022 Rainfall Outlook



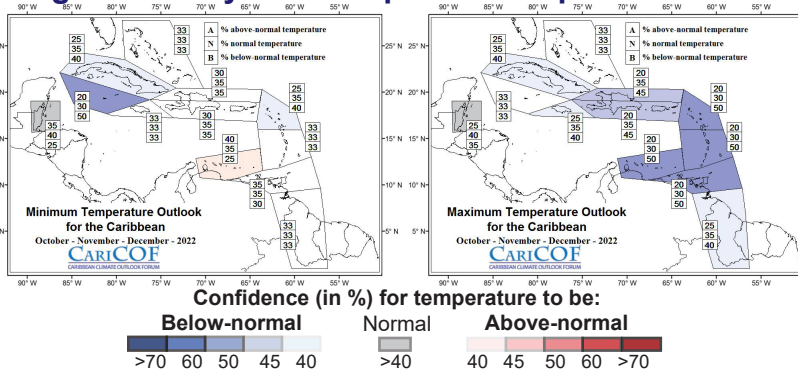
Confidence (in %) for rainfall to be:



Rainfall totals from October to December are likely to be at least as high as usual across most of the Antilles (with the possible exception of the Cayman Is. and Cuba) and the Guianas.

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

Night- and day-time temperatures up to December



OND night-time (min.) and daytime (max.) temperatures are forecast to be close to the usual or slightly lower in many areas, except for night-time temperatures in the ABC Is. Heat stress should decrease from October -- when it should peak in the Guianas and, in the event of a heatwave, still be high in Barbados and the Windward Is -- to November.

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:

- **Flash flood, long-term flooding, land slide and widespread soil erosion potential** remain a concern across Belize, the Islands and, from late-November, the coastal Guianas due to very wet spells and extreme wet spells.
- Frequent **disruptions** of outdoor activities & favourable conditions for **moisture-related pests and diseases** in Belize and the Antilles due to the many wet days.

Drought conditions

Latest drought situation: Severe (or worse) short-term drought has developed in the northwestern Bahamas, northwest Martinique and St. Barts; (as of September 1st) severe (or worse) long-term drought has developed in Antigua, Western Cuba, Guadeloupe, southwest Haiti, eastern Jamaica, Martinique, St. Barts, Sint Maarten, and St. Vincent.

Shorter term drought (at the end of Dec. 2022) There is no concern for short term drought for the region at the end of 2022.

Long term drought (at the end of Nov. 2022) Long term drought might possibly develop or continue in southwest Belize, Guadeloupe, Sint Maarten / St-Martin, and the USVI.

BRIEF CLIMATE OUTLOOK - January to March 2023

There are indications that climatic conditions during the first three months of 2023 may still be characteristic of a La Niña, potentially being wetter than usual in the ABC Islands, the Guianas and the Lesser Antilles, as well as in Belize, but possibly drier than usual in the Bahamas, the Cayman Islands and Cuba. This results in a high potential for flooding, flash floods, and cascading hazards through early-February in the coastal Guianas. By contrast, water shortages associated with the core of the dry season may be exacerbated in the Bahamas, Cayman Islands, and Cuba. Temperatures will be comfortably cool. *For temperature and precipitation outlooks for JFM 2023, please visit rcc.cimh.edu.bb/caricof-climate-outlooks*

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: Sea Surface Temperatures (SSTs) in the eastern Pacific remain below normal (i.e. -1°C); La Niña conditions have so far maintained for all of 2022.

Model forecast and guidance: The forecast models indicate La Niña conditions in OND (80-90% confidence), which may maintain into DJF (45-55% confidence).

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall and stronger tropical cyclone activity in OND and JFM, except in the northern Caribbean where it tilts the odds to less rainfall JFM. ENSO neutral offers little contribution to seasonal rainfall or temperature prediction in the Caribbean.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs are within 0.5°C around the average in much of the Caribbean Sea and the Tropical North Atlantic (TNA), but around 0.5-1°C above average in the sub-tropical North Atlantic.

Expected conditions: Models are forecasting observed SST to remain between 0°C and 0.5°C above average across the Caribbean Sea and the TNA.

Expected impacts: Warm SSTs in and around the Caribbean tends to contribute to higher air temperatures with above-average humidity, but also higher Atlantic Hurricane Season activity, seasonal rainfall totals and an increased frequency of extreme rainfall.

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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