

Caribbean Climate Outlook Newsletter - October to December 2021

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 2021

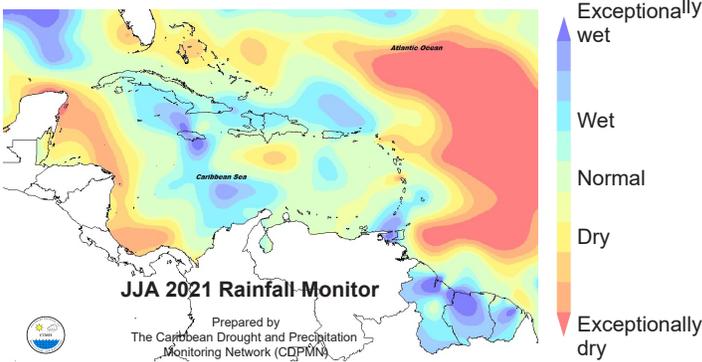
June to August 2021: This period stood out in terms of most areas receiving the usual amount of rainfall or (much) more, limiting drought to very few pockets of the Caribbean, namely in northwestern parts of the Bahamas and Martinique. While many places observed a few heatwaves, heat stress was not unusually elevated in this part of the Heat Season.

October to December 2021: This transition between wet and dry season is forecast to feature frequent wet days and wet spells and above-average tropical cyclone activity in the Caribbean Islands and Belize. This results in frequent disruptions of outdoor activities and rising water levels in soils, rivers and reservoirs. In addition, the potential for flooding, flash floods and cascading hazards is forecast to be high across the Caribbean Islands and Belize (in the coastal Guianas from late-November). A likely unfolding of La Niña conditions in the Pacific increases the probability of such hazards. In October, heat stress will likely remain high due to high humidity and temperatures south and eastwards of Guadeloupe.

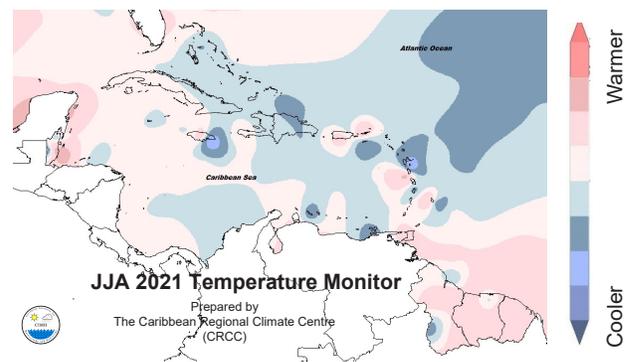
LOOKING BACK:

June - July - August (JJA) 2021

Observations



♦ **RAINFALL:** Northwestern Bahamas, northwest Martinique and St. Barth's very dry; Grenada, large parts of the Guianas, and western Trinidad very wet.



♦ **TEMPERATURE:** Near average temperatures in much of the Caribbean, but parts of coastal Belize were significantly warmer than usual, whereas southeast Guadeloupe and southeast Jamaica were signif. cooler than usual.

Notable Climate Records:

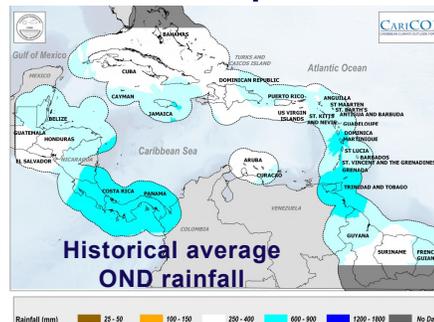
WET: JJA: 3 locations in Guyana, 1 in Suriname, 1 in Trinidad recorded their highest rainfall totals for this period (~130-155% of avg.).

DRY: JJA: 1 location in Dom. Rep., 1 in Martinique recorded their lowest rainfall totals for this period (~15-45% of avg.).

HOT: JJA: no heat records measured over 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.

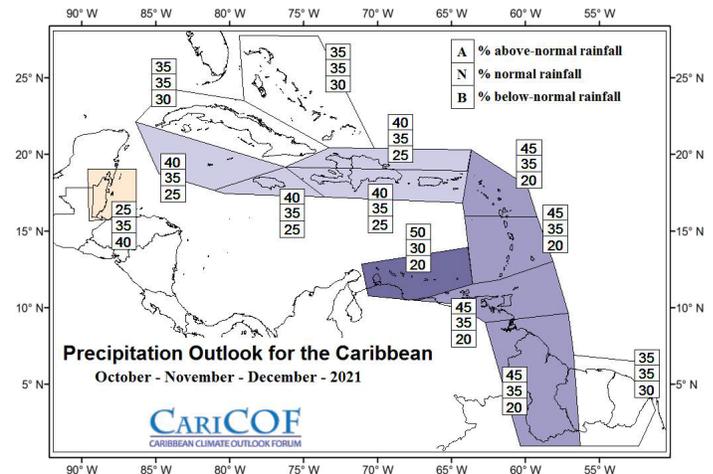
Guianas:

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

ABC Islands:

Oct to Dec - frequent showers, occasionally heavy.

OND 2021 Rainfall Outlook



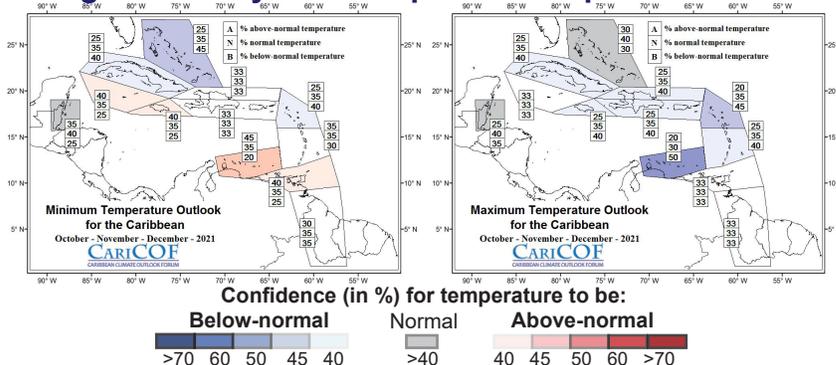
Confidence (in %) for rainfall to be:



Rainfall totals from October to December are likely to be at least as high as usual across the Antilles (with the possible exception of Cuba) and the Guianas, but the usual or less in Belize.

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., Cayman Is., Jamaica and Trinidad & Tobago. In October, heat stress should peak in the coastal Guianas and still be high in Barbados and the Windward Is. during heatwaves.

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) shorter term drought has developed in the northwestern Bahamas, northwest Martinique and St. Barth's; (as of September 1st) severe longer term drought has developed in northwest Martinique, St. Barth's and St. Croix.
- Shorter term drought** There is no concern for short term drought for the region at the end of 2021.
(at the end of Dec. 2021)
- Long term drought** Long term drought is evolving in The Bahamas and might possibly develop or continue in southern Belize, Dominica,
(at the end of Nov. 2021) Martinique, St. Barth's, Sint Maarten/St-Martin, and the USVI.

BRIEF CLIMATE OUTLOOK - January to March 2022

There are strong indications that climatic conditions during the first three months of 2022 may be characteristic of a La Niña, potentially being wetter than usual from Hispaniola east- and southwards as well as in Belize, but possibly drier than usual in the Bahamas, the Cayman Islands and Cuba. This results in a very high potential for flooding, flash floods, and cascading hazards through early-February in the coastal Guianas, whereas water shortages and cascading hazards 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 2022, 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 are just below average; neutral ENSO conditions are in place.

Model forecast and guidance: The models forecast indicate the emergence of La Niña conditions by OND (65-80% confidence). Significant uncertainty remains for JFM with 50-60% chance of persistent La Niña conditions, but 40-50% chance of neutral conditions, resp.

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 0.5-2°C above average in the sub-tropical and the equatorial North Atlantic.

Expected conditions: Models are forecasting observed SST around average to maintain or become anomalously warm to 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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