Caribbean Climate Outlook Newsletter - September to November 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: May to November 2021

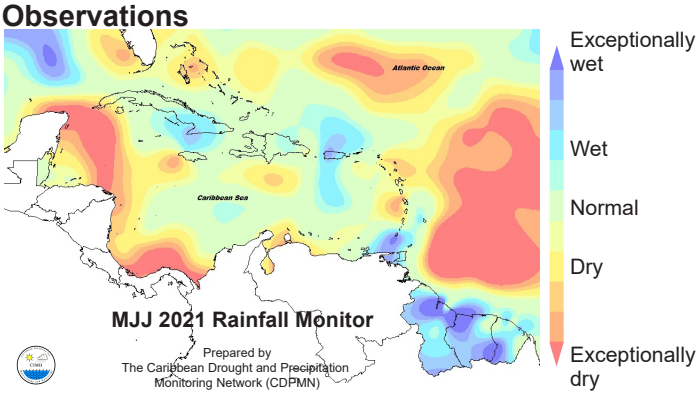
May to July 2021: This period stood out in terms of short term drought in northwestern parts of the Bahamas contrasted with record rainfall totals in large parts of the Guianas, triggering some of the worst flooding in recent history in Guyana. This pattern, along with the absence of unusual heat is partially explained by a faded La Niña.

September to November 2021: The second half of the wet/hurricane season is forecast to have frequent wet days and wet spells and ample tropical cyclone activity in Belize and the Caribbean Islands. This results in frequent disruptions of outdoor activities and rising water levels in soils, rivers and reservoirs. However, the potential for flash floods, long-term flooding and cascading impacts is high. In addition, through September in the Bahamas and Greater Antilles and through October in the Lesser Antilles, heat stress will be peaking during heat waves. By contrast, this period marks the hot, dry season in the Guianas. Yet, higher than usual numbers of wet spells may lead to slow regression of any flood waters.

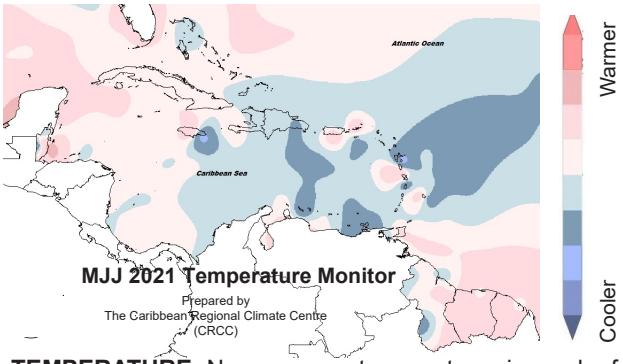
LOOKING BACK:

May - June - July (MJJ) 2021

Observations



- **RAINFALL:** Antigua, the northwestern Bahamas and northwest Martinique very dry; parts of southern Cuba, Grenada, large parts of the Guianas, and westernmost Puerto Rico 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:

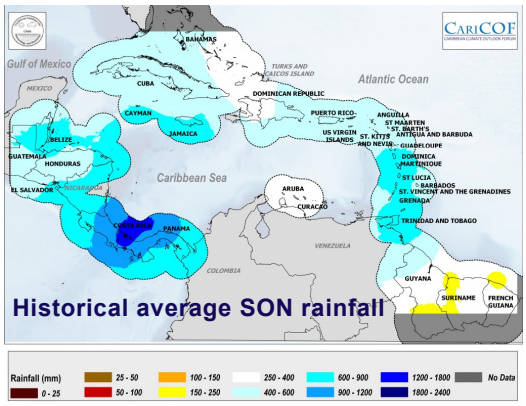
WET: *MJJ:* 5 locations in Guyana, 1 in French Guiana, 1 in Suriname, 1 in Trinidad recorded their highest rainfall totals for this period (~150-175% of avg.).

DRY: *MJJ:* 1 location in Jamaica recorded its lowest rainfall totals for this period (~25% of avg.)

HOT: *MJJ:* no heat records measured over this period.

WHAT NEXT?

Rainfall patterns Sept. - Oct. - Nov. (SON)



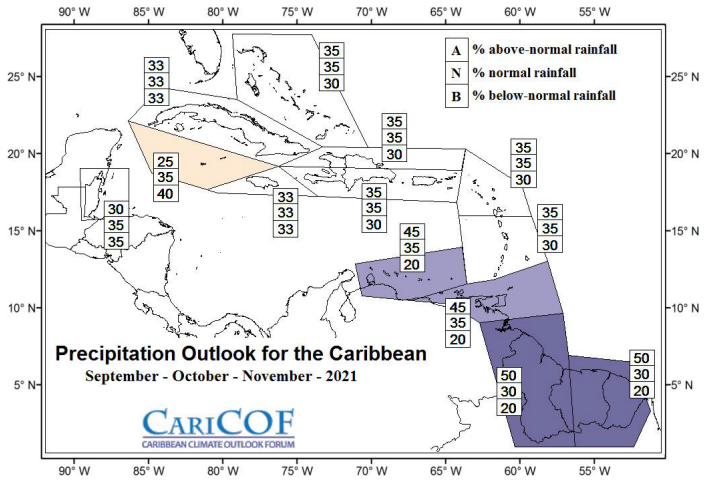
Belize & C'bean Islands north of 16°N:
Sep to Nov - wet season. Usually frequent heavy showers.

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 2021 Rainfall Outlook

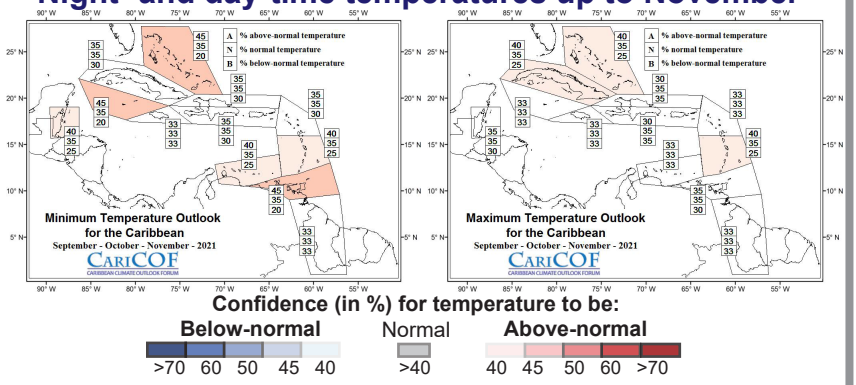


Confidence (in %) for rainfall to be:

Below-normal					Normal	Above-normal				
>70	60	50	45	40	>40	40	45	50	60	>70

Rainfall totals from September to November are likely to be at least as high as usual across the ABC Islands, the Guianas and Trinidad and Tobago, but the usual or less in the Cayman Islands.
White areas show where the forecast indicates little information on rainfall totals.

Night- and day-time temperatures up to November



SON night-time (min.) and daytime (max.) temperatures are forecast to be close to the usual or slightly higher in many areas. Heat stress is expected to peak in September in the Lesser Antilles (October in the Guianas), especially during heatwaves.

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:

- **Flash flood** and **long-term flooding potential**, as well as, **land slide** and **soil erosion** will be a significant concern in Belize and the Islands due to recurrent very wet and some extreme wet spells.
- Frequent **disruptions** of outdoor activities & favourable conditions for **moisture-related pests** and **diseases** in Belize and the Islands due to the many wet days.

Drought conditions

Lastest drought situation: (*as of August 1st*)	Severe (or worse) shorter term drought has developed in Antigua, the northwestern Bahamas and northwest Martinique; severe longer term drought has developed in northwest Martinique and St. Croix.
Shorter term drought (at the end of Nov. 2021)	Shorter term drought might possibly develop or continue in the northern Bahamas, southeast Belize, and Dominica.
Long term drought (at the end of Nov. 2021)	Long term drought is evolving in The Bahamas and might possibly develop or continue in Dominica, coastal French Guiana, Martinique, St. Vincent and parts of Suriname.

BRIEF CLIMATE OUTLOOK - December 2021 to February 2022

There are indications that climatic conditions during the early 2021-22 dry season might be characteristic of a La Niña, possibly being wetter than usual from Dominica southwards, but possibly drier than usual in the Bahamas, the Cayman Islands and Cuba. This results in a lingering potential for flooding, flash floods, and cascading hazards through the end of 2021. In addition, tropical cyclone activity may still occur as late as December. On a brighter note, chances are good that drought impacts should not be widespread during the first half of the dry season. Comfortably cool temperatures are expected. For temperature and precipitation outlooks for DJF 2021-22, 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 are unclear whether ENSO neutral (40-50% confidence) or La Niña (40-60% confid.) conditions will manifest in SON. Large uncertainties remain for DJF with 30-50% and 45-65% chance of neutral and La Niña conditions, resp.
Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall and stronger tropical cyclone activity in SON, but tilts the odds to less rainfall in the northern Caribbean in DJF. 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 North Atlantic.
Expected conditions: Models are forecasting observed SST around average to maintain or anomalously warm to between 0°C and 0.5°C above average across the Caribbean Sea and the TNA through DJF.
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 thay may provide.

DISCLAIMER