

Caribbean Climate Outlook Newsletter - November 2021 to January 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: July 2021 to January 2022

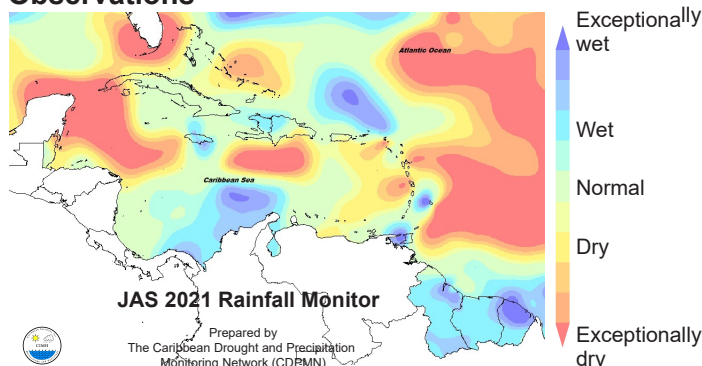
July to September 2021: This period stood out in terms of most areas receiving amounts of rainfall that were either close to the usual or less, but largely without drought impacts across the majority of Caribbean Islands. By contrast, much heavier rainfalls than usual for this part of the wet season were noted in portions of Barbados, the Guianas, Jamaica and Trinidad. While this period marks the peak of the Heat Season in most areas, heat stress was only unusually strong in September.

November 2021 to January 2022: La Niña conditions are in place. This means particularly high flooding, flash flood, landslide, rockfall and soil erosion potential across Belize and the Caribbean Islands until December and, from late-November, in the coastal Guianas. With the transition into the dry season in Belize and the islands, frequent, short dry spells are expected from Hispaniola westward, potentially impacting unprotected crop farming, especially in the case of pre-existing drought. On a positive note, with the 2021 Heat Season ending in October, heat stress should quickly subside.

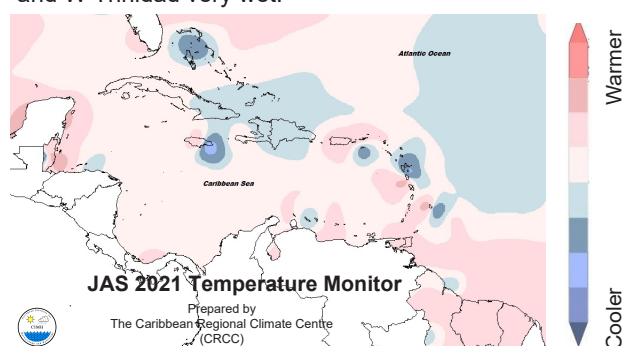
LOOKING BACK:

July - August - September (JAS) 2021

Observations



• **RAINFALL:** NW & SE portions of The Bahamas, N Belize, westernmost Cuba, E Guadeloupe, NW Martinique, and St. Barth's very dry; parts of Barbados, the Guianas, Jamaica and W Trinidad very wet.



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

Notable Climate Records:

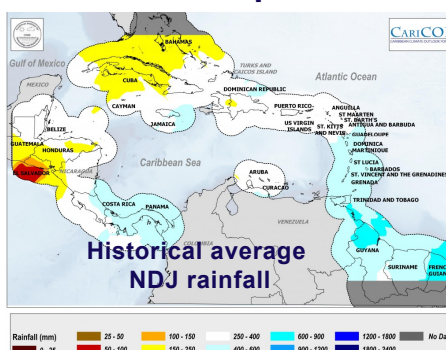
WET: JAS: 2 locations in French Guiana recorded their highest rainfall totals for this period (~165-185% of avg.).

DRY: JAS: 1 location in Martinique recorded its lowest rainfall totals for this period (~45% of avg.).

HOT: JAS: 1 location in Belize recorded its warmest mean temperature for the this period.

WHAT NEXT?

Rainfall patterns Nov. - Dec. - Jan. (NDJ)



Belize :

Nov to Dec - wet season. Frequent heavy showers.

January - dry season. Few heavy showers in some years.

C'bean Islands north of 16°N:

Nov to Dec - transition to dry season.

Decreasing shower frequency & intensity.

January - sunny days and some days with showers.

C'bean Islands south of 16°N

(incl. ABC Islands):

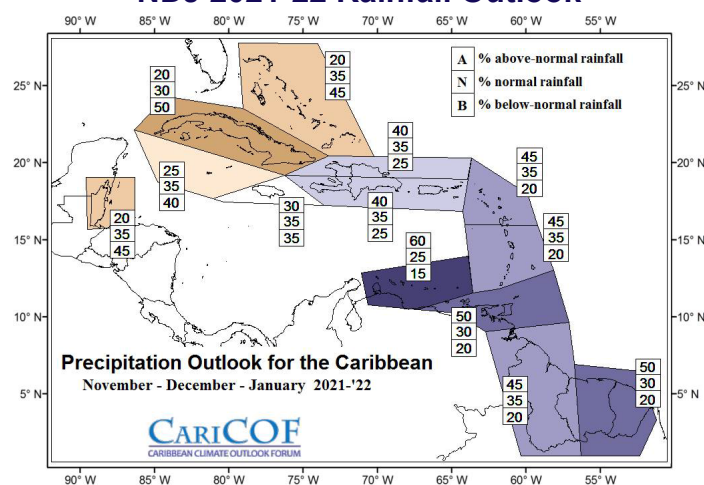
Nov - wet season. Frequent heavy showers.

Dec to Jan - transition to dry season.

Decreasing shower frequency & intensity.

Guianas:
Nov to Jan - wet season. Frequent, heavy showers.

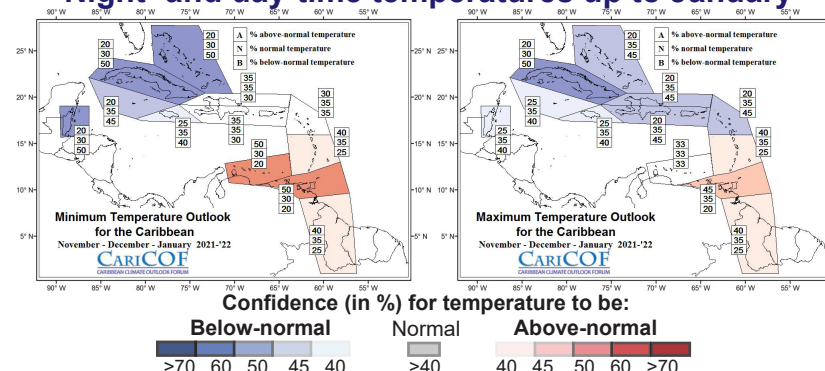
NDJ 2021-22 Rainfall Outlook



Rainfall totals from November to January are likely to be at least as high as usual across the Antilles from Hispaniola east and southwards and in the Guianas, but the usual or less in the Bahamas, Belize, Cayman Is. and Cuba.

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

Night- and day-time temperatures up to January



NDJ night-time (min.) and daytime (max.) temperatures are forecast to be close to the usual or slightly lower in many areas north of 16°N, but the usual or slightly higher south of 16°N. Heat stress, if still present in early-November, should rapidly subside. At higher elevations and in Belize, some cold nights are expected in December and January.

Wet days and wet spells up to January

What usually happens from November to January?

- Number of wet days: roughly 35 to 50 (ABC Is: 20 to 45; coastal Guianas: 30 to 50).
- # of wet spells: 2 to 5, of which 1 to 3 are very wet (coastal Guianas: up to 2).
- # of extreme wet spells: up to 2 (Belize & Greater Antilles: up to 1)..

Forecast and Implications:

- **Flash flood, long-term flooding, land slide, rock fall 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.
- Decreasing surface wetness makes environmental conditions progressively less conducive to **mosquitoes & moisture related pests** Belize and the islands.

Drought conditions

Lastest drought situation: Severe (or worse) shorter term drought has developed in the northwestern and southeastern portions of The Bahamas, northern Belize, westernmost Cuba, easternmost Guadeloupe, northwest Martinique and St. Barth's; severe longer term drought has developed in northwest Martinique, St. Barth's and St. Croix.

Shorter term drought At the time of writing, there does not appear to be any significant concern for short term drought in the region at the end of January 2022. However, all are encouraged to keep monitoring any potential developments in coming months.

Long term drought Long term drought is evolving in southeast Belize and in Dominica and might possibly develop or continue in the northern-most Bahamas, southwest Belize, Western Cuba, Martinique, Sint Maarten / St-Martin, St. Vincent, and the USVI.

BRIEF CLIMATE OUTLOOK - February to April 2022

Indications are that the peak of the 2021-22 dry season may be characteristic of a La Niña event. Wetter than usual conditions are likely in the Guianas, the ABC Is. and the Lesser Antilles. However, it may possibly be even drier than usual in the Bahamas, Belize and the Greater Antilles. Frequent dry spells may impact crop production, particularly in the northwestern part of the region. Temperatures usually remain comfortable through March, but tend to increase in April. The forecasts suggest the rising heat merits monitoring in Belize and Cuba, where the heat season tends to start in April, versus May elsewhere. For temperature and precipitation outlooks for FMA 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 have recently dropped to below -0.5°C; after a few months of neutral ENSO conditions, La Niña conditions are returning.

Model forecast and guidance: The models forecast indicate La Niña conditions in NDJ (80-90% confidence), which may continue into FMA (40-60% confid.), or return to ENSO neutral conditions (35-55% confid.).

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall activity in NDJ and FMA (and to more Atlantic Hurricane Season activity in November), except in the northern Caribbean where it tilts the odds to less rainfall. 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 have warmed to 0.5-1°C above average around the Caribbean and in equatorial sub-tropical portions of the Tropical North Atlantic (TNA).

Expected conditions: Models are forecasting observed SST around average to maintain anomalously warm (0-1°C above average) 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 and an increased frequency of extreme rainfall, but also higher Atlantic Hurricane Season activity through November or December.

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/colest 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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