

# Caribbean Climate Outlook Newsletter - February to April 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: October 2020 to April 2021

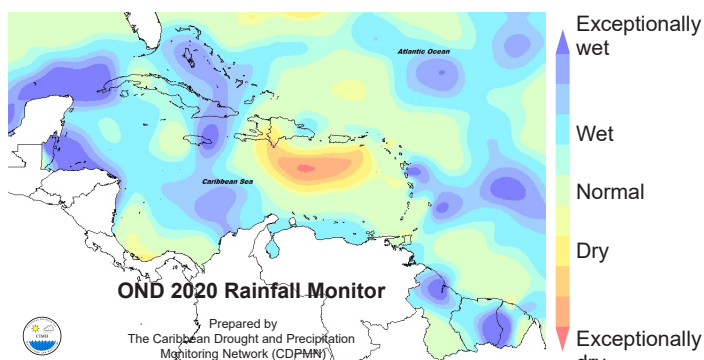
**October to December 2020:** The end of 2020 stood out in terms of recurrent extreme rainfall events causing flooding, flash floods and related hazards in many parts of Belize and the Islands. Heat discomfort progressively decreased along the three-month period as the Caribbean transitioned out of the intense 2020 Heat Season.

**February to April 2021:** With La Niña conditions in place during the core of the dry season, frequent dry spells from the Dominican Republic westwards are likely to increase local airborne dust. In Cuba and the Bahamas, an increase in wildfire potential and decrease water levels in surface reservoirs and ponds are expected. By contrast, a few wet spells from Dominica southwards may help keep water levels from dropping fast. From April onwards, the potential for flood-related hazards and progressively rising heat discomfort are expected across the region.

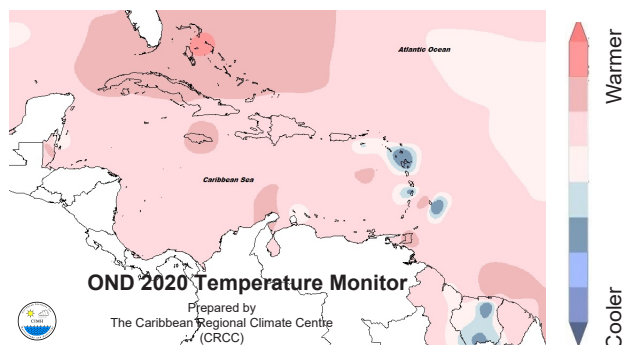
### LOOKING BACK:

#### Oct. - Nov. - Dec. (OND) 2020

##### Observations



♦ **RAINFALL:** Southernmost Dom. Rep. very dry; The Bahamas, parts of Barbados, Belize, Dominica, Guianas, Jamaica very wet.



♦ **TEMPERATURE:** Much of the Caribbean significantly warmer than avg., especially in The Bahamas, Cuba and Jamaica. Antigua, Guadeloupe and parts of Suriname cooler than avg.

### Notable Climate Records:

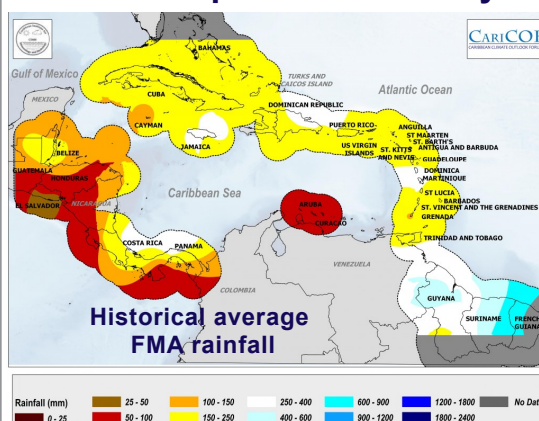
**WET:** OND: Two locations in Martinique, 1 in Dominica and 1 in Jamaica recorded their highest rainfall totals for this period (165-225% of average).

**DRY:** OND: none

**HOT:** OND: 1 location in Jamaica recorded its warmest maximum temperature for this period.

### WHAT NEXT?

#### Rainfall patterns February-March-April (FMA)



**Belize:** Feb to Apr - dry season. Mostly without heavy rainfall.

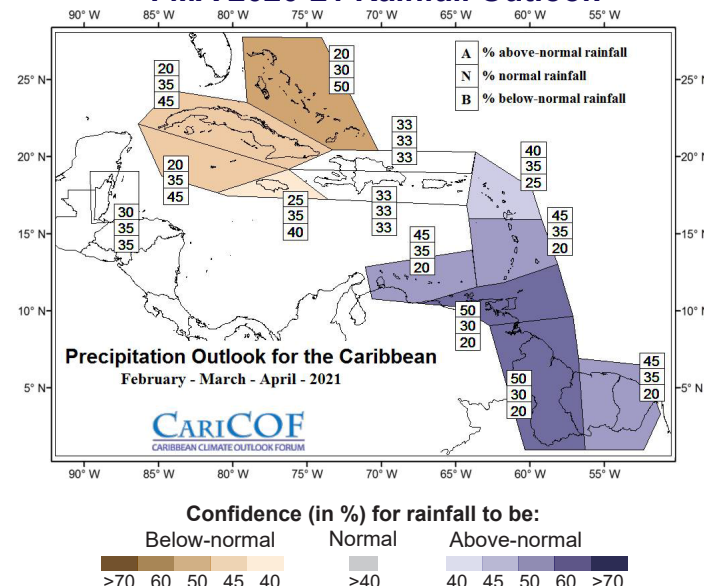
**C'bean Islands north of 16°N:** Feb to Apr - sunny days and some days with showers.

**C'bean Islands south of 16°N (except ABC Islands):** Feb to Apr - sunny days and some days with showers.

**ABC Islands:** Feb to Apr - generally dry.

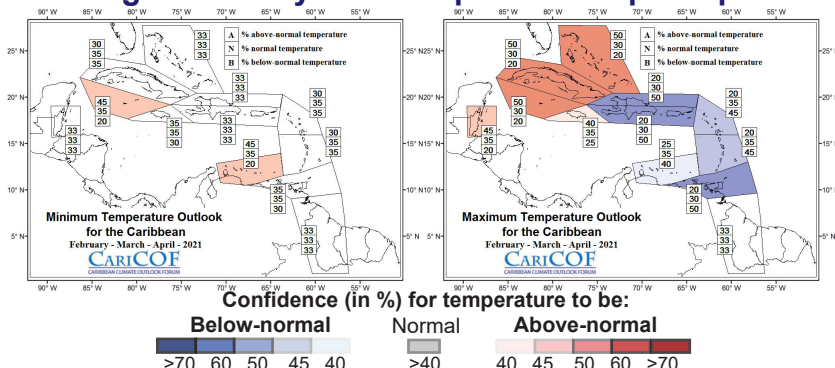
**Guianas:** Feb to Apr - End of dry season with occasional heavy showers and thunderstorms.

#### FMA 2020-21 Rainfall Outlook



Rainfall totals from February to April are likely to be at least as high as usual in the ABC Islands, the Guianas and the Lesser Antilles; but likely the usual or drier in the Bahamas, the Cayman Islands, Cuba and Jamaica. White areas show where the forecast indicates little information on rainfall totals.

## Night- and day-time temperatures up to April



FMA night-time (min.) and day-time (max.) temperatures will progressively warm into April, but remain comfortably cool until March. Daytime temperatures are likely to be at least as warm as usual in Belize and Cuba - *where heatwaves are expected in April* -, as well as the Bahamas and Jamaica, but possibly cooler than usual in other islands. At higher elevations and in Belize, some cold nights are expected through early-March.

## Drought conditions

**Drought situation:**  
(as of January 1st)

Severe (or worse) shorter term drought has developed in southernmost parts of the Dominican Republic; long term drought in southwestern Belize, along the southern coastline of the Dominican Republic, along the Windward Islands and, locally, on the northcoast of French Guiana.

**Shorter term concern:**  
(at the end of April)

Shorter term drought should not be a major concern by the end of April, but might possibly develop or continue in Western Cuba, St. Kitts, Sint Maarten, and the US Virgin Islands.

**Long term concern:**  
(at the end of May)

Long term drought should not be a significant concern in most affected areas by the end of May in most areas. However, long term drought should evolve in southwest Belize, and may possibly develop in Barbados and St. Vincent.

## BRIEF CLIMATE OUTLOOK - May to July 2021

The transition from the dry to the wet season is expected to bring an increase in the number of wet days and wet spells across the Caribbean, with a moderate potential for flooding and associated hazards and an uptick in the frequency of Saharan dust incursions. The forecasts suggest that Belize and the islands may experience the usual rainfall totals or less from Hispaniola east- and southwards, but the usual or wetter further west and north. Persistently warm ocean water is forecasted to potentially intensify the onset of the 2021 Caribbean Heat Season in May, but a near-record heat season like that of 2020 is unlikely. For temperature and precipitation outlooks for AMJ 2021, please visit [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:** Sea Surface Temperatures (SSTs) in the eastern Pacific SSTs have been hovering between 1°C and 1.5°C below average since October; as such, moderate La Niña conditions are in place.

**Model forecast and guidance:** The models favour La Niña to continue into FMA (with around 70-80% confidence) and, more likely than not, a return to ENSO neutral conditions by MJJ (55-65% confidence).

**Expected impacts on rainfall and temperatures:** During the Caribbean dry season, La Niña tilts the odds to more frequent, more intense rainfall and attenuates heat in the southeastern half of the region, but it has the opposite effects on rainfall and temperature in the northwestern third of the region.

### Climate conditions in the Tropical North Atlantic and Caribbean

**Recent observations:** SSTs have anomalously warmed to about 0.5°C to 1°C above average in much of the Caribbean Sea and western portions of the Tropical North Atlantic (TNA).

**Expected conditions:** Most models maintain the observed SST anomalies between 0.2°C and 1°C above average across the Caribbean Sea and the TNA through MJJ.

**Expected impacts:** Continued warm SSTs in and around the Caribbean tends to contribute to above-average humidity, seasonal rainfall totals, reduced dry spell frequency and drought, but tilts the odds to a warmer than average early Heat Season starting April or May.

## 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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