

# Caribbean Climate Outlook Newsletter - April to June 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: December 2020 to June 2021

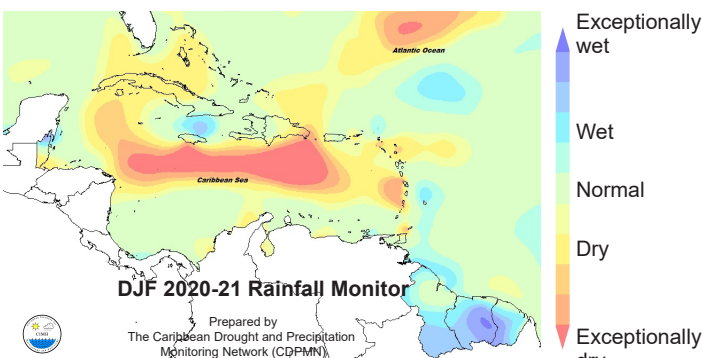
**December 2020 to February 2021:** The first half of the dry season in Belize and the islands stood out in terms of moderate short term drought appearing in many areas. By contrast, the secondary wet season in the Guianas has been as wet to much wetter than usual, in line with the ongoing La Niña event. Temperatures were comfortable.

**April to June 2021:** A likely fading La Niña event is forecast to possibly increase rainfall amounts in the Bahamas, the Cayman Islands and the Guianas during the transition into the wet season. Recurrent very wet spells and the chance of at least one extreme wet spell in the period means a *moderate to high* potential for flooding, flash floods and related hazards, particularly in the Guianas. By contrast, the onset of the wet season might be delayed by up to one month. Where ongoing, short term drought may persist in the Greater and Lesser Antilles from Hispaniola eastwards. In addition, frequent dry spells are expected in Belize and the islands, and may spark some heatwaves in Belize and Trinidad and, as of May, elsewhere.

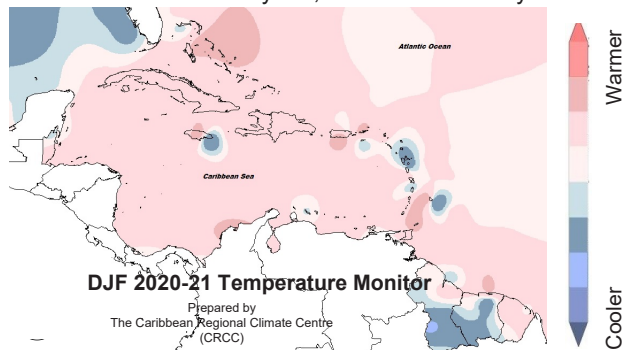
### LOOKING BACK:

#### Dec. - Jan. - Feb. (DJF) 2020-21

##### Observations



**RAINFALL:** northwest Martinique, easternmost Dom. Republic, St. Vincent, and Tobago very dry; northeast Belize, southern French Guiana and Guyana, and Suriname very wet.



**TEMPERATURE:** Much of the Caribbean slightly warmer than the 1991-2020 average, especially in The Bahamas, central Jamaica, southern Puerto Rico, St. Thomas, and Tobago. Antigua, Guadeloupe, the southern half of Guyana, easternmost Jamaica and parts of Suriname cooler than avg.

### Notable Climate Records:

- WET:** DJF: One locations in French Guiana recorded its highest rainfall totals for this period (150% of average).
- DRY:** DJF: One locations in the Dom. Rep. and 1 in Martinique recorded their lowest rainfall for this period (30-45% of avg).
- HOT:** DJF: Tobago recorded its warmest maximum and mean temperature for this period.

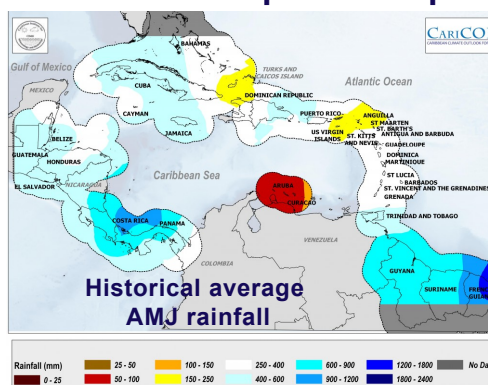
March 2021

find out more by using the clickable images and headings or visit [rcc.cimh.edu.bb](http://rcc.cimh.edu.bb)

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### WHAT NEXT?

#### Rainfall patterns April-May-June (AMJ)



**ABC Islands:** Apr to Jun - mostly dry.

**Guianas:** Apr to Jun - transition to wet season; heavy showers more and more frequent.

#### Belize & C'bean Islands north of 16°N:

Apr - end of the dry season. Limited spatial extent and duration of heavy showers.

May & Jun - usually frequent heavy showers.

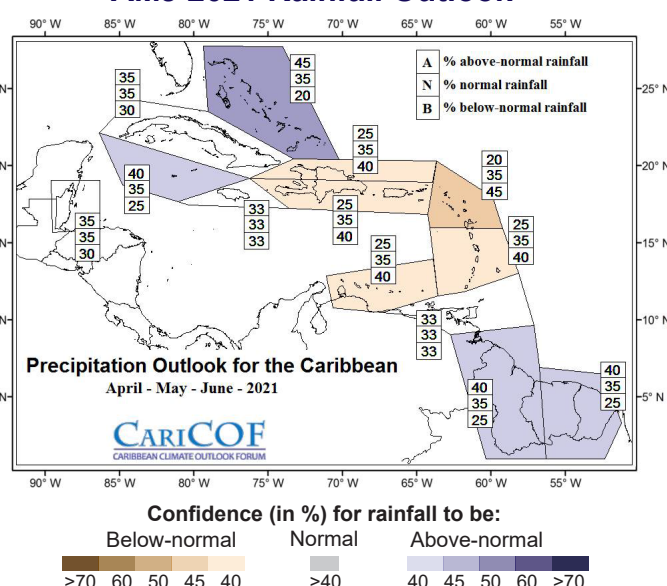
#### C'bean Islands south of 16°N (except ABC Islands):

Apr to May - end of dry season. Limited spatial extent and duration of heavy showers; occasionally very wet.

Jun - onset of wet season.

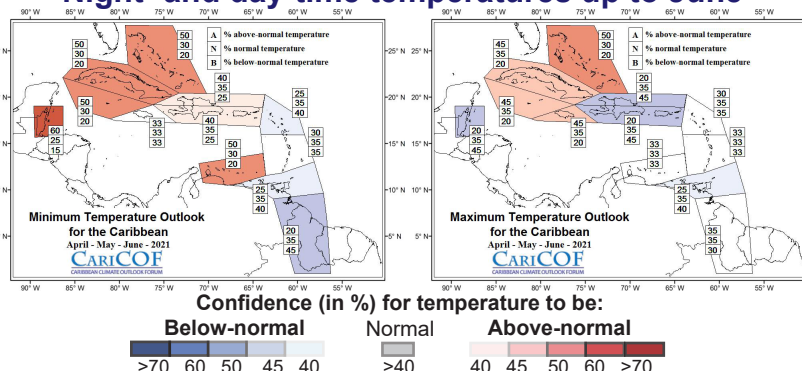
Increasingly heavy showers.

#### AMJ 2021 Rainfall Outlook



Rainfall totals from April to June are likely to be the usual or higher in The Bahamas, Cayman Is. and the Guianas; but likely at most the usual in the ABC Is., Hispaniola, the Leeward and Windward Is. and the US Caribbean Territories. White areas show where the forecast indicates little information on rainfall totals.

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



MAM night-time (min.) and day-time (max.) temperatures will progressively warm into May, which marks the start of the Caribbean Heat Season. Temperatures are likely to be at least as warm as usual in the islands westwards of Hispaniola (and, at night, also in the ABC Is. and Belize), where heat stress may become apparent.

## Wet days and wet spells up to June

## What usually happens from April to June?

- Number of wet days: roughly 20 to 35, (ABC Is. 5-10; Guianas: 40-55).
- # of wet spells: up to 4 (ABC Is. up to 1; Guianas: up to 6), of which up to 2 are very wet (ABC Is. up to 1; Guianas: up to 3).
- # of extreme wet spells: up to 1 (Guianas: up to 2).

## Forecast and Implications:

- Growing concern of flash flood and flooding in the occurrence of extreme wet spells and very wet spells, especially in the Guianas.
- Relatively fast depletion of large water reservoirs across the Caribbean islands until the end of the dry season due to the low frequency of wet spells.
- With few wet days, wild fire potential is expected to peak in May.

## Drought conditions

**Lastest drought situation: (as of March 1st)** Moderate (or worse) shorter term drought has developed in Antigua, The northwestern and central Bahamas, Grand Cayman, south Belize, Central & Western Cuba, southwest Dominica, eastern Dominican Republic, southernmost Jamaica, Martinique, St. Kitts, St. Thomas, St. Vincent, Tobago; moderate (or worse) long term drought has developed in southwest Belize, along the southern coast of Hispaniola, St. Kitts and along the west coasts of the Windward Islands.

**Shorter term drought at the end of June** Shorter term drought might possibly develop or continue Antigua, the north-western Bahamas, southeast Belize, Dominica, Central and Western Cuba, Grenada, Hispaniola, Puerto Rico, Sint Maarten/St-Martin, Trinidad and Tobago and USVI.

**Long term drought at the end of May** Long term drought is evolving in Antigua and St. Kitts and might possibly develop in Central Cuba, Dominica, northern Dominican Republic, Grenada, Martinique, St. Vincent, US Virgin Islands.

## BRIEF CLIMATE OUTLOOK - July to September 2021

This part of the wet season is expected to bring an increase in the number of wet, very wet and extreme spells across the Caribbean, with the potential for flooding and flash floods, as well as, associated hazards increasing from moderate to high by August. Saharan dust incursions may be frequent and heat discomfort will be on the rise, to peak by September. The forecasts suggest that the ABC Islands, the Greater Antilles and the Guianas may be even wetter than usual. Dry spells should become less frequent across the region, but usually coincide with heatwaves, especially in August and September. 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 recently anomalously warmed less than 0.5°C below average; cold-neutral to marginal La Niña conditions are in place.

**Model forecast and guidance:** The models favour a transition to ENSO neutral conditions into AMJ (with 65% confidence). By JAS, ENSO neutral remains the most likely scenario (55% confidence).

**Expected impacts on rainfall and temperatures:** Transitioning out of a La Niña tilts the odds somewhat to drier conditions in AMJ in the islands, i.e. an increased chance for a delayed onset of the wet season, but wetter conditions in the Guianas. Heat during the Caribbean Heat Season post a La Niña event tends to be attenuated.

## Climate conditions in the Tropical North Atlantic and Caribbean

**Recent observations:** SSTs have anomalously cooled somewhat to close to average and up to about 0.5°C above average in much of the Caribbean Sea and the Tropical North North Atlantic (TNA).

**Expected conditions:** Models vary in forecasting whether the observed SST anomalies between 0.2°C and 1°C above average will maintain, decrease or increase somewhat across the Caribbean Sea and the TNA through JAS.

**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 a potential slightly earlier start of the wet season in the Lesser Antilles and the Guianas.

## 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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