

Caribbean Climate Outlook Newsletter - March to May 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: November 2020 to May 2021

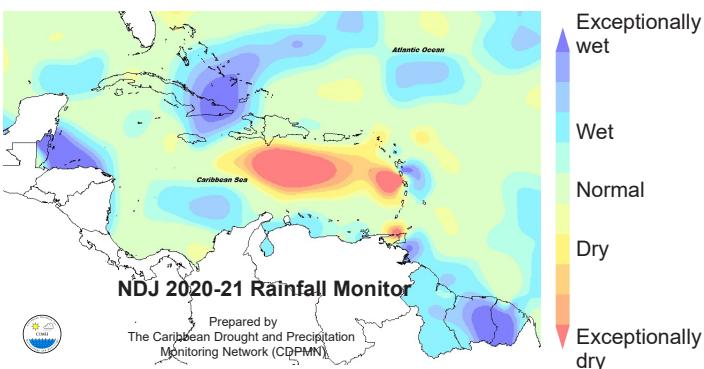
November 2020 to January 2021: The period stood out in terms of recurrent extreme rainfall events causing flooding, flash floods and related hazards Belize and Cuba. The secondary wet season was wet to exceptionally wet in the Guianas. Comfortable temperatures returned to the region after an otherwise hot 2020.

March to May 2021: A likely fading La Niña event is forecast to possibly increase rainfall amounts in Belize and the Guianas. At the same time, the potential for flooding, flash floods and related hazards will increase from *marginal* in March across the region to *limited to moderate* by May. Importantly, dry spells are likely to be frequent in Belize and the islands, except in mountainous areas. Towards May, such dry spells may spark some heatwaves as the region moves into the Heat Season, which could start intensely in the Western Caribbean.

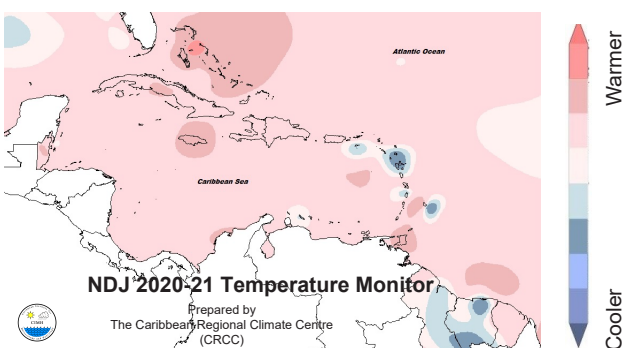
LOOKING BACK:

Nov. - Dec. - Jan (NDJ) 2020-21

Observations



RAINFALL: Southwest Dominica, northwest Martinique, north-west Trinidad very dry; southeast Bahamas, northeast Belize, Eastern Cuba, northeast Dominica, French Guiana, central Guyana, northeast Jamaica and Suriname very wet.



TEMPERATURE: Much of the Caribbean warmer than avg., especially in The Bahamas, Jamaica and Trinidad & Tobago. Antigua, Guadeloupe and parts of Suriname cooler than avg.

Notable Climate Records:

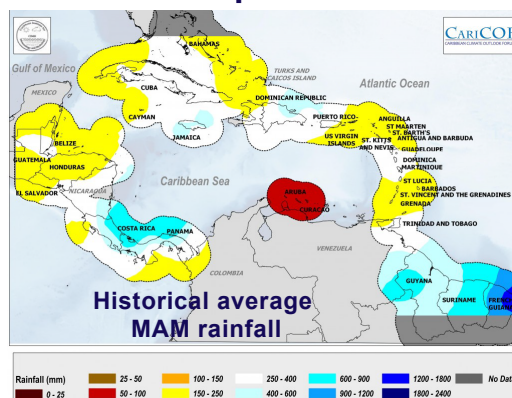
WET: NDJ: Three locations in Belize and 1 in French Guiana recorded their highest rainfall totals for this period (200-305% of average).

DRY: NDJ: none

HOT: NDJ: St. Kitts recorded its warmest maximum temperature for this period.

WHAT NEXT?

Rainfall patterns March-April-May (MAM)



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

Mar to Apr - latter part of dry season; limited duration and area of heavy showers. May - transition to wet season.

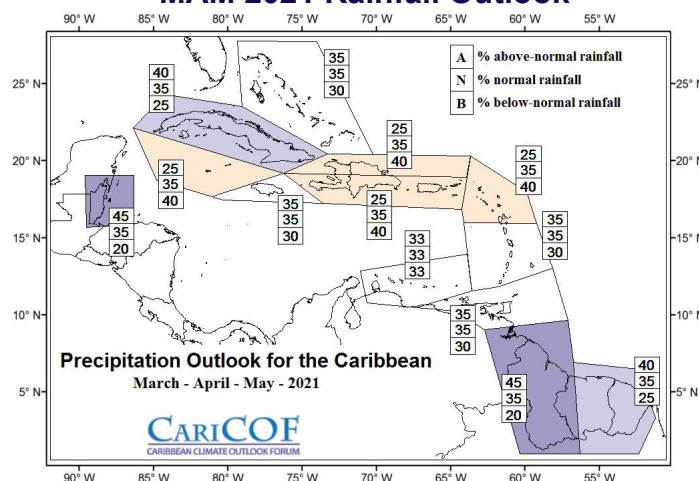
C'bean Islands south of 16°N (except ABC Islands):

Mar to May - second half of dry season; limited duration and area of heavy showers; April & May occasionally very wet.

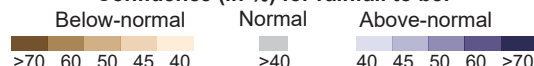
ABC Islands: Mar to May - generally dry.

Guianas: Mar to May - transition to wet season; heavy showers more and more frequent.

MAM 2021 Rainfall Outlook



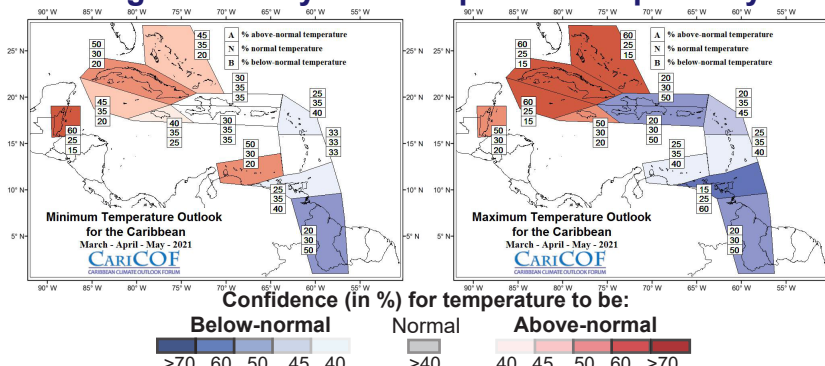
Confidence (in %) for rainfall to be:



Rainfall totals from March to May are likely to be at least as high as usual in Belize, Cuba and the Guianas; but likely the usual or drier in the Cayman Islands, Hispaniola, the Leeward Islands and the US Caribbean Territories.

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

Night- and day-time temperatures up to May



MAM night-time (min.) and day-time (max.) temperatures will progressively warm into May, but remain comfortably cool until March. Temperatures are likely to be at least as warm as usual westwards of Hispaniola, where heat stress is likely to become apparent by April or May. By contrast, temperatures, particularly at night, may remain cooler elsewhere.

Wet days and wet spells up to May

What usually happens from March to May?

- Number of wet days: roughly 15 to 30 (ABC Is.: 5 to 15; northern Guianas: 20 to 45).
- # of wet spells: up to 2 or 3, of which up to 1 is very wet (northern Guianas: up to 2).
- # of extreme wet spells: up to 1 or two in the northern Guianas and mountainous areas. Virtually none elsewhere.

Forecast and Implications:

- Limited to moderate potential for flash floods and associated hazards in Belize and the islands in April and May, with increased concern in the Guianas.
- Slower depletion of water reservoirs than usual from Dominica southwards due to more frequent wet spells than usual; faster depletion may occur in Belize and the Greater Antilles.
- Increasing wildfire potential and local airborne dust from Hispaniola westwards. Slower increase from Dominica southwards.

Drought conditions

Lastest drought situation: (as of February 1st) Moderate (or worse) shorter term drought has developed in southern Dominica, northern Martinique, Sint Maarten/St-Martin and northwest Trinidad; moderate (or worse) long term drought has developed in southwest Belize, along the south coast line of the Dom. Rep., southwest Jamaica, and along the Windward Islands.

Shorter term drought at the end of May Shorter term drought is evolving in the northernmost Bahamas, Cayman Is., Western Cuba and eastern Dom. Rep., and might possibly develop or continue in northwest Bahamas, the remainder of the Greater Antilles and the Lesser Antilles (except Barbados, St. Kitts).

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

BRIEF CLIMATE OUTLOOK - June to August 2021

This part of 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 in June and July, rising to high by August. Saharan dust incursions may be frequent and heat discomfort will be on the rise. The forecasts suggest that the Greater Antilles, the Guianas and the Leeward Islands may be even wetter than usual, whereas Belize and Trinidad & Tobago might end up drier than usual. Dry spells should become less frequent across the region, but usually coincide with heatwaves, especially in August. For temperature and precipitation outlooks for AMJ 2021, 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 SSTs have slightly anomalously warmed to between 0.5°C and 1°C below average; as such, weak La Niña conditions are in place.

Model forecast and guidance: The models favour La Niña to continue into MAM (with around 60% confidence) and, more likely than not, a return to ENSO neutral conditions by JJA (around 55% 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: 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 JJA.

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/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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