

Caribbean Climate Outlook Newsletter - May to July 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: January to July 2021

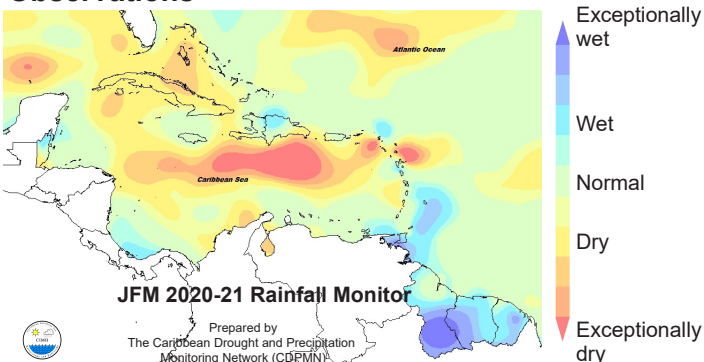
January to March 2021: This period in the dry season in Belize and the islands stood out in terms of moderate short term drought appearing in many areas. By contrast, as is typical for La Niña, the Guianas (of which most parts transitioned out of the secondary wet season in February) were particularly wet. Temperatures were seasonably comfortable in most places.

May to July 2021: The transition into the wet season is forecast to increase rainfall amounts in the Bahamas, the Cayman Islands, Cuba and the Guianas. By contrast, the onset of the wet season may be delayed by up to one month in the other islands and in Belize. Despite these contrasting scenarios, very wet spells and, possibly, extreme wet spells in the period means a *moderate to high* potential for flooding, flash floods and related hazards, particularly in the Guianas. Ongoing short term drought might persist in the Antilles from Hispaniola eastwards. Dry spells, though decreasing in frequency, may spark heatwaves throughout Belize and the Caribbean Islands. Incursions of Saharan dust typically peak in frequency at this time.

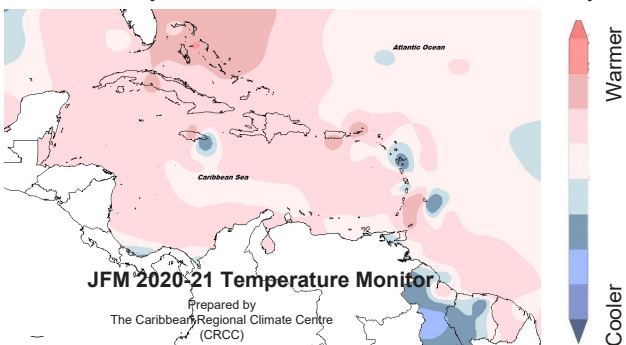
LOOKING BACK:

Jan. - Feb. - Mar. (JFM) 2021

Observations



RAINFALL: Antigua, part of the Northwestern Bahamas, parts of Western and Central Cuba very dry; eastern French Guiana, southern Guyana, and much of western Suriname very wet.



TEMPERATURE: Much of the Caribbean slightly warmer than the 1991-2020 average, especially in The Bahamas, parts of Central Cuba, central Jamaica, southern Puerto Rico, St. Thomas and Tobago. Guadeloupe, much of Guyana, south-eastern Jamaica and large parts of Suriname cooler than avg.

Notable Climate Records:

WET: Mar: Two locations in Trinidad recorded their highest rainfall totals for March (420% & 525% of average, resp.).

DRY: JFM: no records were broken during this period.

HOT: Mar: One location in Jamaica recorded its warmest max. temperature, and St. Thomas its warmest min. temperature for this period.

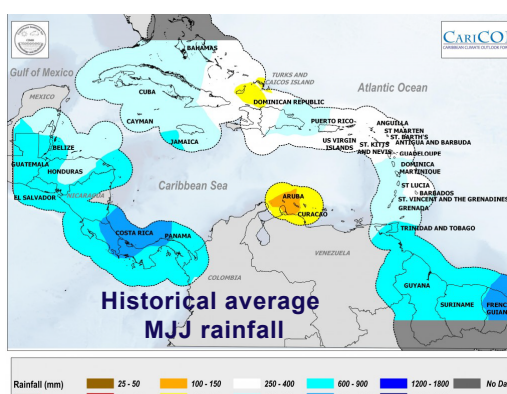
April 2021

find out more by using the clickable images and headings or visit rcc.cimh.edu.bb

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WHAT NEXT?

Rainfall patterns May-June-July (MJJ)



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

May & Jun - usually frequent heavy showers.

Jul - wet season, often including a mid-summer dry spell.

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

May - end of dry season.

Limited spatial extent and duration of heavy showers; occasionally very wet.

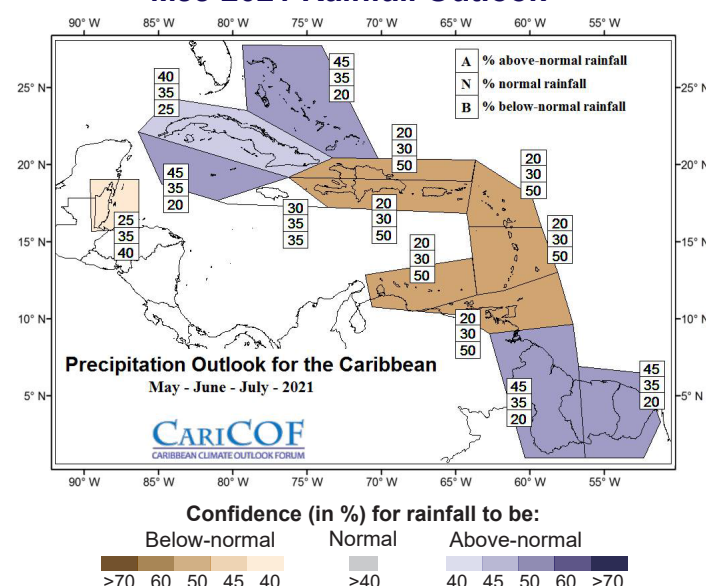
Jun & Jul - early wet season.

Increasingly heavy showers.

ABC Islands: May to Jul - mostly dry.

Guianas: May to Jul - long wet season; heavy showers are frequent.

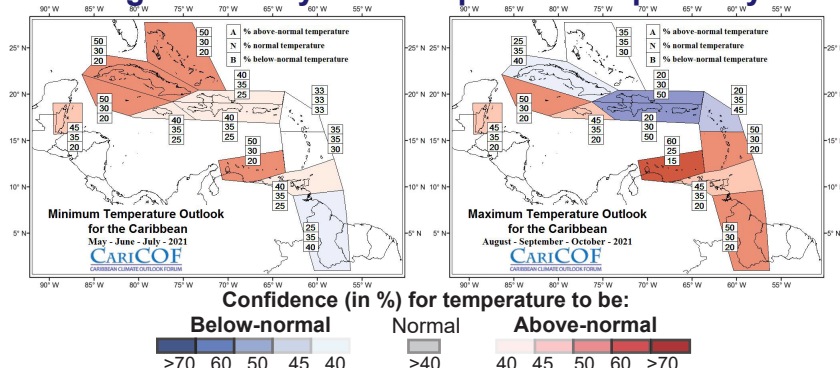
MJJ 2021 Rainfall Outlook



Rainfall totals from May to July are likely to be the usual or higher in The Bahamas, Cayman Is., Cuba and the Guianas; but likely at most the usual in the ABC Islands, Belize, Hispaniola, the Lesser Antilles and the US Caribbean Territories.

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

Night- and day-time temperatures up to July



MJJ night-time (min.) and daytime (max.) temperatures during this first half of the Heat Season are likely to be at least as warm as usual in most areas, with the possible exception of Cuba, Hispaniola, the Leeward Islands and the US Caribbean Territories during the day and Guyana at night. Heat stress may appear and would peak during heatwaves.

Wet days and wet spells up to July

What usually happens from May to July?

- Number of wet days: roughly 20 to 40, (ABC Is. 5-15; Guianas: 45-65).
- # of wet spells: 1 to 5 (Guianas: 4 to 7), of which 2 or 3 are very wet (ABC Is. up to 1; Guianas: 1 to 5).
- # of extreme wet spells: up to 1 in most locations.

Forecast and Implications:

- Moderate to high potential for long-term flooding, flash floods and related hazards from very wet and extreme wet spells.
- Increasingly frequent disruptions of outdoor activities and (in islands relatively slow) decrease of wild fire potential related to an increase in the number of wet days.
- Accelerating recharge rates of large water reservoirs and soil moisture, though possibly slower than usual in the islands where fewer wet spells than usual occur.

Drought conditions

Lastest drought situation: (as of April 1st) Moderate (or worse) shorter term drought has developed in most parts of The Bahamas, southwest Belize, Grand Cayman, Cuba, southeastern- and southwestern-most Hispaniola, the Leeward Islands and St. Vincent; moderate (or worse) long term drought has developed in southwest Belize, along the southern coast of Hispaniola, St. Croix, St. Kitts and the west coasts of the Windward Islands.

Shorter term drought at the end of July 2021 Shorter term drought might possibly develop or continue along the northern Bahamas, southeast and west-central Belize, Western Cuba, and the USVI.

Long term drought at the end of May 2021 Long term drought is evolving in Antigua, southwest Belize, and St. Kitts and might possibly develop in west-central Belize, Dominica, northern parts of the Dominican Republic, Grenada, Martinique, Sint Maarten/St-Martin, and St. Vincent.

BRIEF CLIMATE OUTLOOK - August to October 2021

During this part of the wet season, the number of very wet and extreme wet spells reaches its annual peak across Belize and the Islands, with a high potential for flooding and flash floods, as well as, associated hazards. There is considerable uncertainty with respect to the forecasted evolution of the El Niño Southern Oscillation. If La Niña re-emerges, the region can expect to be at least as wet or even wetter than usual, with the potential for a busy peak of the Atlantic Hurricane Season. Heat stress is expected to be high during the second half of the Heat Season, especially in view of high humidity and recurrent heatwaves. For temperature and precipitation outlooks for MJJ 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 recently anomalously warmed to within 0.5°C below average; cold-neutral to marginal La Niña conditions are in place.

Model forecast and guidance: The models favour ENSO neutral conditions into MJJ (with 80% confid.). Large uncertainties exist for ASO with 50% and 30-40% chance of neutral and La Niña conditions, resp.

Expected impacts on rainfall and temperatures: Transitioning out of a La Niña tilts the odds somewhat to drier conditions in MJJ 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 to close to average in much of the Caribbean Sea and the Tropical North Atlantic (TNA) and around 0.5°C above average in the sub-tropical North Atlantic.

Expected conditions: Models vary in forecasting whether the observed SST anomalies between 0°C and 0.5°C above average will maintain, decrease or increase somewhat across the Caribbean Sea and the TNA through ASO.

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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