

Caribbean Climate Outlook Newsletter - August to October 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: April to October 2021

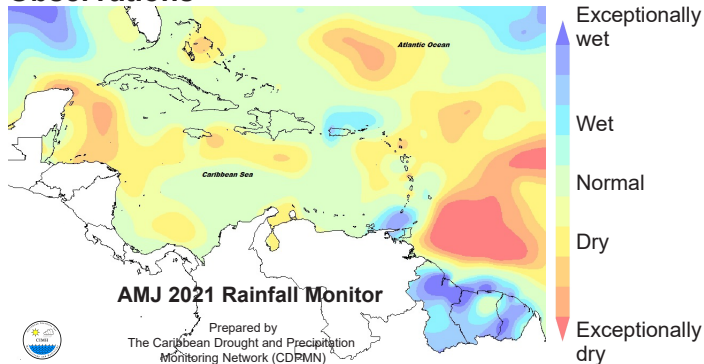
April to June 2021: This period stood out in terms of short term drought in northwestern parts of the Bahamas contrasted with record rainfall totals in large parts of the Guianas, triggering some of the worst flooding in recent history in Guyana. This pattern, along with the absence of unusual heat is partially explained by a fading La Niña.

August to October 2021: The peak of the wet/heat/hurricane season is forecast to bring an increase in wet days and wet spells, heatwaves and tropical cyclone activity in Belize and the Caribbean Islands. This results in frequent disruptions of outdoor activities and rising water levels in soils, rivers and reservoirs. However, the potential for flash floods, long-term flooding and cascading impacts, as well as, for heat stress will be high to extremely high. Heat stress will peak during heat waves of which several can occur anywhere throughout the period. The Guianas enter the dry season, which will help the flood waters to recede in areas still affected. Yet, higher than usual numbers of wet spells will lead to slow improvements.

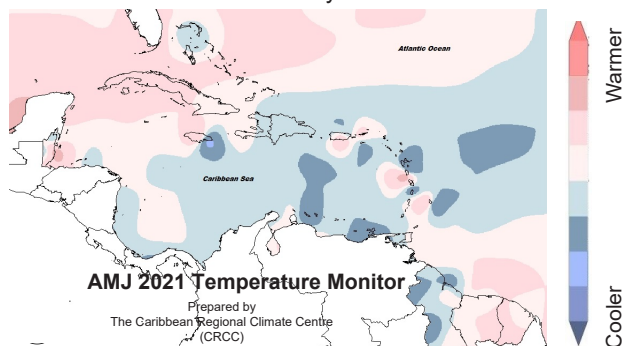
LOOKING BACK:

Apr. - May - Jun. (AMJ) 2021

Observations



♦ **RAINFALL:** Antigua, the northwestern Bahamas, easternmost Jamaica very dry; Grenada, large parts of the Guianas, and westernmost Puerto Rico very wet.



♦ **TEMPERATURE:** Near average temperatures in much of the Caribbean, but parts of coastal Belize were significantly warmer than usual, whereas southeastern Jamaica was signif. cooler than usual.

Notable Climate Records:

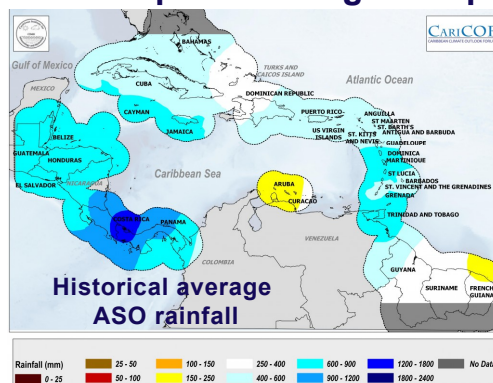
WET: AMJ: 7 locations in Guyana, 1 in Suriname recorded their highest rainfall totals for this period (150-200% of avg.).
Jun.: 1 of the above locations in Guyana recorded its wettest May.

DRY: AMJ: 1 location in Dom. Rep. recorded its lowest rainfall totals for this period (15% of avg.)

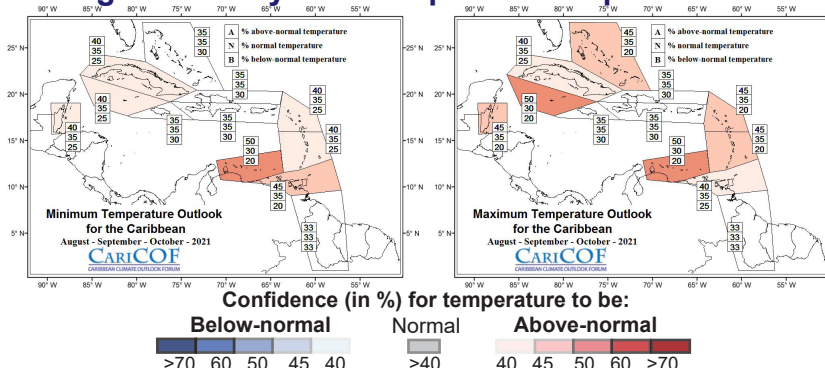
HOT: AMJ: St. Kitts recorded its highest maximum temperature for this period (as well as for June).

WHAT NEXT?

Rainfall patterns August-September-October (ASO)



Night- and day-time temperatures up to October



ASO night-time (min.) and daytime (max.) temperatures are forecast to be the usual or higher in Belize and much of the Antilles. Max. temp. are also forecast to be the usual or higher in the Bahamas. Heat stress is expected to peak in August and September (October in the Guianas), especially during heatwaves.

Wet days and wet spells up to October

What usually happens from August to October?

- Number of wet days: roughly 35 to 50 in flatter areas of the islands, but around 45 to 60 in mountainous areas and 15 to 30 in coastal Guianas (ABC Islands: 10-20).
- # of wet spells: 3 to 6 (coastal Guianas: 1 to 3), of which 1 to 4 are very wet (coastal Guianas: up to 2)
- # of extreme wet spells: up to 1, except in the Guianas.

Forecast and Implications:

- **Flash flood** and **long-term flooding potential** will be a significant concern in Belize and the Islands.
- Frequent **disruptions** of outdoor activities & favourable conditions for **moisture-related pests** and **diseases** in Belize and the Islands.
- **Recharge of large water reservoirs** may be faster than usual in many places.

Drought conditions

Latest drought situation: Severe (or worse) shorter term drought has developed in Antigua, the northwestern Bahamas, easternmost Jamaica, (as of July 1st) northwest Martinique; severe longer term drought has developed in southwest Belize, northwest Martinique and St. Croix.

Shorter term drought Shorter term drought might possibly develop or continue in the northwestern Bahamas.

(at the end of Oct. 2021)

Long term drought Long term drought is evolving in the northwestern Bahamas and might possibly develop or continue in Belize, Dominica, (at the end of Nov. 2021) Martinique, and St. Vincent.

BRIEF CLIMATE OUTLOOK - November 2021 to January 2022

During this transition period from the wet season to the dry season, the number of very wet and extreme wet spells will decrease across Belize and the Islands. By consequence, the potential for flooding and flash floods, as well as, cascading hazards will be decreasing from high or extremely high in November to limited in January. Conversely, in the Guianas which will transition into their secondary wet season in late November, the flood potential is expected to rise from limited or moderate in early November to high or, if La Niña re-emerges, extremely high in January. Temperatures will return to being comfortable. For temperature and precipitation outlooks for NDJ 2021-22, 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 are near average; neutral ENSO conditions are in place.

Model forecast and guidance: The models slightly favour ENSO neutral conditions into ASO (with 50-60% confid.). Large uncertainties remain for NDJ with 30-45% and 40-60% chance of neutral and La Niña conditions, resp.

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall and stronger tropical cyclone activity, but tilts the odds to less rainfall in the northern Caribbean in NDJ. ENSO neutral offers little contribution to seasonal rainfall or temperature prediction in the Caribbean, leading to diminished confidence in seasonal forecasts at this time.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs are near average in much of the Caribbean Sea and the Tropical North Atlantic (TNA), but around 0.5°C above average in the sub-tropical North Atlantic.

Expected conditions: Models are forecasting observed SST around average to maintain or anomalously warm to between 0°C and 0.5°C above average across the Caribbean Sea and the TNA through NDJ.

Expected impacts: Warm SSTs in and around the Caribbean tends to contribute to higher air temperatures with above-average humidity, but also higher Atlantic Hurricane Season activity, seasonal rainfall totals and an increased frequency of extreme rainfall.

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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