

Caribbean Climate Outlook Newsletter – July to September 2022

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: March to September 2022

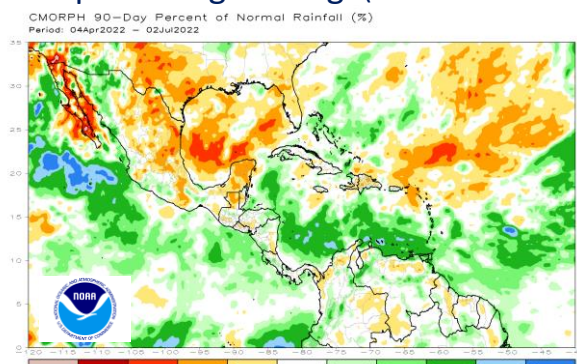
March to May 2022: The Caribbean RCC is currently resolving a technical issue with the generation of the CDPMN rainfall, drought and temperature monitoring maps. In the meantime, RCC-Washington's estimated rainfall and temperature products suggest that April to June rainfall totals were the usual or higher throughout the region, except for Belize, the Cayman Is. and the Leeward Is., which were drier than usual. Near-average temperatures seem to have prevailed throughout the region.

July to September 2022: This part of the wet/heat/hurricane season is forecast to bring an increase in rainfall totals, wet days and wet spells, and tropical cyclone activity in the Caribbean Islands and in Belize. This results in an increase in 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 will increase from moderate in July to high in August and September. Though to a lesser degree than in recent hot years (e.g. 2020), heat stress will also increase along due to higher humidity levels and reduced winds after July. The Guianas will enter their dry season in August and floods should then recede in affected areas, but the improvements may be slow in view of forecasted higher numbers of wet spells than usual.

LOOKING BACK:

Rainfall & Temperature Apr. 4th –Jul. 2nd 2022

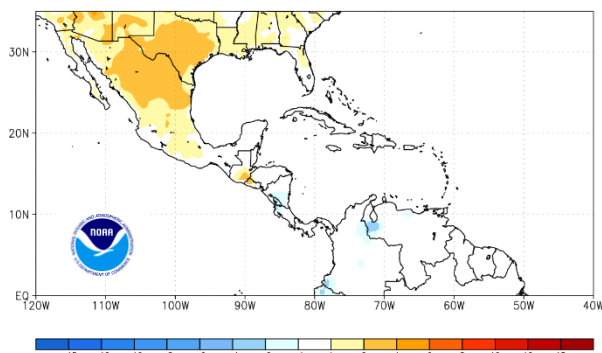
Estimated percentage of avg. (source: RCC-Washington)



RAINFALL: Belize, Cayman Is., Leeward Is. (except western Guadeloupe) drier than usual; ABC Is., the Bahamas, coastal Guyana, Hispaniola, southern Suriname, Trinidad & Tobago, the Windward Is. were very wet.

Estim. temperature anomaly (source: RCC-Washington)

CPC Global Daily Gridded 90-day Mean Temperature Anomaly (°C)
Valid: 04 Apr 2022 – 02 Jul 2022

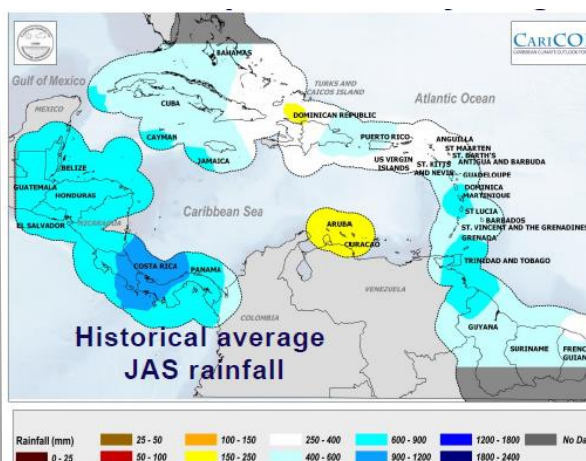


TEMPERATURE: Mean temperatures across the region hovered within 1 degree Celsius of avg. for this time of the year.

March-May records: 1 location in Belize & 1 in French Guiana recorded their **highest rainfall totals** for this period (~270% and 160% of avg., resp.).

WHAT NEXT?

Rainfall patterns July – August - September



Guianas: Jul to Aug – long wet season; heavy showers are frequent.
Sep – dry season; heavy showers at times.

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

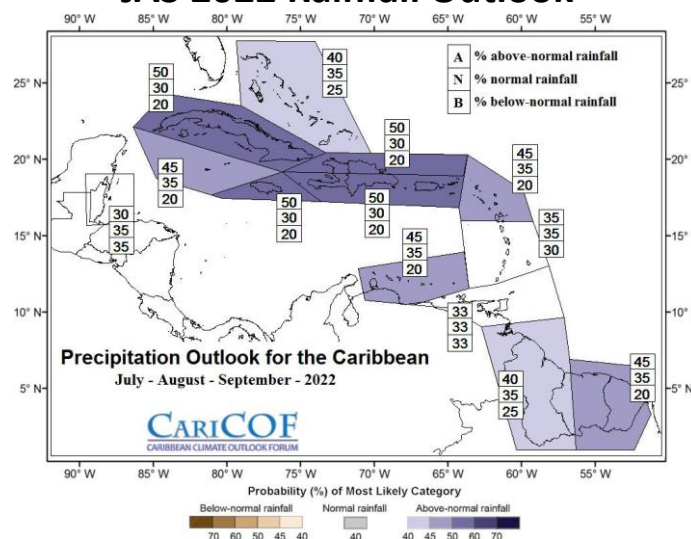
Jul to Aug – wet season. Often includes a mid-summer dry spell.
Sept. - wet season. Usually frequent heavy showers.

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

Jul to Sept. – wet season. Increasingly frequent heavy showers.

ABC Islands: mostly dry with occasional wet spells.

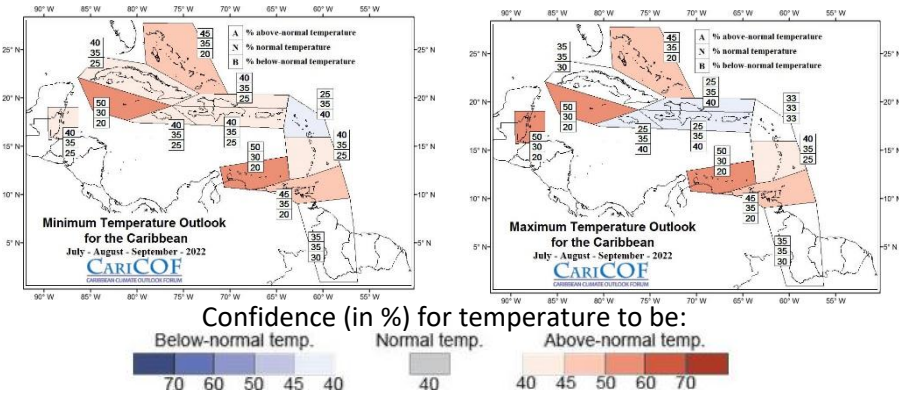
JAS 2022 Rainfall Outlook



Rainfall totals from July to September are likely to be at least as high as usual across most of the Caribbean Islands and the Guianas.

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

Night/Day – time temperatures up to September



JAS night-time (min.) and day-time (max.) temperatures are expected to at least as warm as usual. However, max. temp. may be cooler than usual for Jamaica, Hispaniola, and the US Territories. Heat stress will increase after July due to slower wind speeds and higher humidity on most days, especially during heatwaves, but to a lesser extent than in recent hot years (e.g., 2016, 2020).

Wet days and wet spells up to September

What usually happens from July to September?

- Number of wet days: roughly 35 to 50 in flatter areas of the islands, 50 to 65 in mountainous areas and in the Guianas (ABC Is. 5 to 15).
- # of wet spells: 2 to 6 (ABC Islands: 1 to 4), of which 1 to 3 are very wet (ABC Is: up to 2)
- # of extreme wet spells: up to 1 (or 2 in mountainous areas).

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 decrease of wildfire potential related to an increase in the number of wet days. Accelerating recharge rates of rivers, large water reservoirs and soil moisture related to an increase in the number of wet spells.
- In the Guianas, the inverse trend is expected after July.

Drought conditions

Lastest drought situation (as of June 1st): As soon as the Caribbean RCC resolves a technical issue with the generation of the CDPMN SPI monitoring maps, this statement will be updated. We thank you for your understanding.

Short-term drought (at the end of September 2022): Short-term drought may possibly develop in in west-central Belize.

Long-term drought (at the end of November 2022): There is no concern for long-term drought by the end of November 2022 at this time.

BRIEF CLIMATE OUTLOOK – October to December 2022

During the final quarter of 2021, a long lasting, weak La Nina in the Pacific and slightly warmer than average sea surface temperatures around the Caribbean will likely persist, potentially increasing heavy shower activity and tropical cyclone frequency. The number of very wet and extreme wet spells remains high across Belize and the Islands, with a high to extremely high potential for flooding and flash floods, as well as cascading hazards. This is with the exception of the Guianas, which will be in their long dry season until mid-November. By consequence flood potential is expected to remain limited until the secondary wet season starts in late-November. After October, temperatures should be comfortable. For temperature and precipitation outlooks for OND2022, 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 remain below normal -0.6°C ; La Niña conditions have maintained into the middle of 2022.

Model forecast and guidance: The models forecast indicate La Niña conditions in JAS (55-45% confidence), which may maintain into OND (60-55% confidence).

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall activity in JAS and OND, except in the northern Caribbean where it tilts the odds to less rainfall. La Niña also tilts the odds for higher tropical storm frequency in the Atlantic Basin.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: Warmer than usual SSTs persisted up to 1°C above average around the northern section of the Caribbean Sea and in the sub-tropical portions of the North Atlantic in May. Elsewhere in the Caribbean SSTs were near normal.

Expected conditions: Models are forecasting SST to maintain anomalously warm ($0.5-1^{\circ}\text{C}$ above average) around the Caribbean and in the sub-tropical North Atlantic.

Expected impacts: Warm SSTs in and around the Caribbean tend to contribute to higher air temperatures with above-average humidity, 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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