Caribbean Climate Outlook Newsletter - January to March 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: September 2021 to March 2022

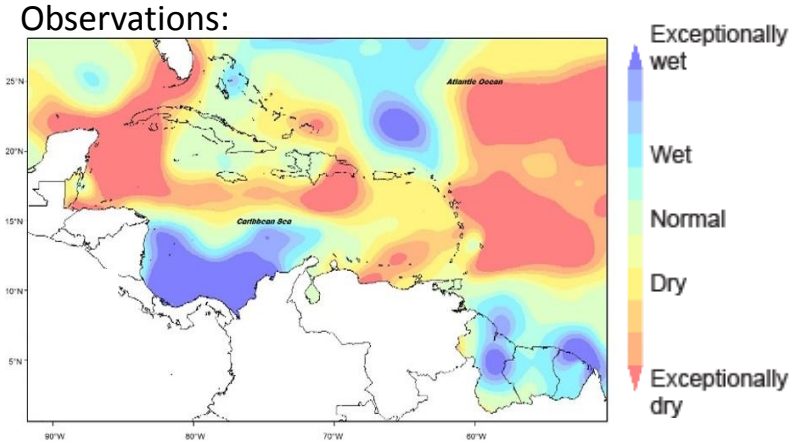
September to November 2021: The peak of the 2021 Caribbean Wet Season in the islands and Belize realised dry anomalies in most areas. Contrastingly, the Guianas experienced record rainfall leading to flooding and related hazards. The hurricane season ended as the third most active on record, but fortunately intense cyclones avoided landfall.

January to March 2022: La Niña conditions remain in place in this cool part of the dry season, leading to frequent dry spells in areas west of Puerto Rico -- particularly in the Bahamas, Cayman Is. and Cuba – and are likely to increase wildfire potential and decrease water levels in surface reservoirs and ponds. By contrast, more wet days and a few wet spells may slow water reservoir loss in the Guianas and the Lesser Antilles. Finally, a particularly wet season is expected until February in northern parts of the Guianas, with high potential for flooding and associated hazards.

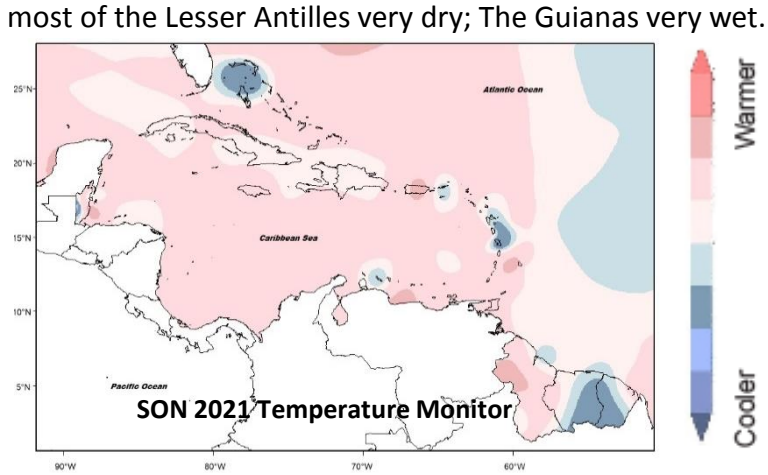
LOOKING BACK:

Rainfall Sept. - Oct. - Nov. (SON) 2021

Observations:



RAINFALL: southern Belize, western Cuba, eastern Dom. Rep., most of the Lesser Antilles very dry; The Guianas very wet.



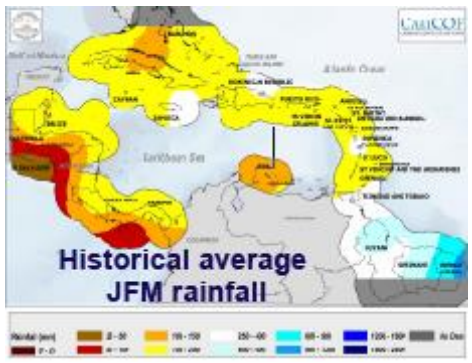
TEMPERATURE: Near average temperatures in much of the Caribbean, but NW sections of The Bahamas, western French Guiana, Martinique, and eastern Suriname were cooler than normal.

Notable Climate Records:

WET: *SON: 5 locations in Guianas all time record*
DRY: *SON: 5 locations (Antigua, Dom. Repub., Jamaica, and Martinique ; 30-45% of average)*
HOT: *November: Haiti and St. Kitts all time high*

WHAT NEXT?

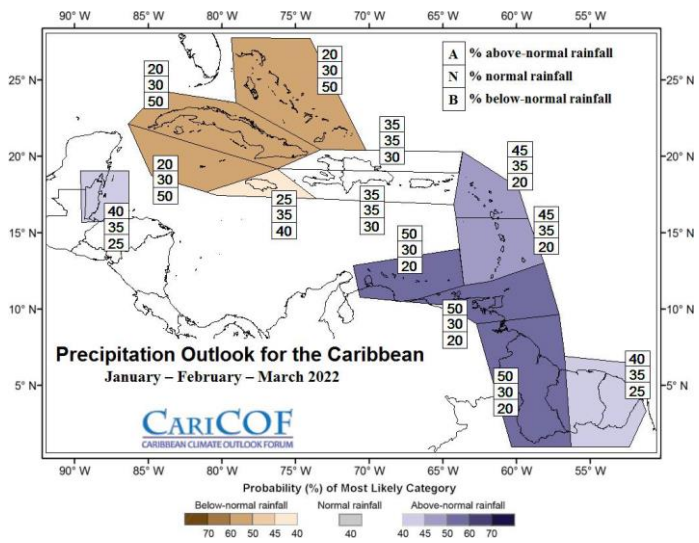
Rainfall patterns January - February - March



Belize : Jan - start of dry season; occasionally still wet. Feb to Mar - dry season. Mostly without heavy rainfall.
C'bean Islands north of 16N: Jan to Mar - sunny days and some days with showers.
C'bean Islands south of 16N: Jan to Mar - sunny days and some days with showers
ABC Islands: Jan - wet season ending. Feb to Mar - generally dry.

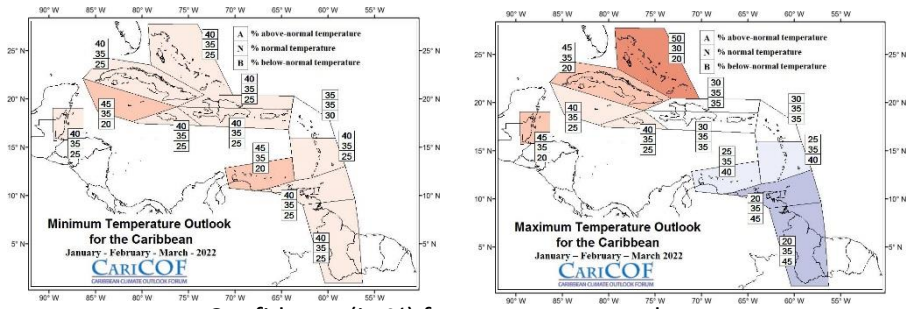
Guianas: Jan - wet season. Frequent, heavy showers. Feb - Mar - dry season; occasional heavy showers and thunderstorms.

JFM 2022 Rainfall Outlook



Rainfall totals from January to March are likely to be at least as high as usual in the ABC islands, Belize, Lesser Antilles, and the Guianas; but likely the usual or drier in the Bahamas, the Cayman Islands, Cuba, and Jamaica.
White areas represent areas of low forecast predictability for this season.

Night/Day – time temperatures up to March



Confidence (in %) for temperature to be:

Below-normal temp. 70 60 50 45 40 | Normal temp. 40 | Above-normal temp. 40 45 50 60 70

JFM night-time (min.) and day-time (max) temperatures will be comfortable, despite night-time likely being the usual or slightly warmer across the region and daytime the usual or slightly warmer in Belize, The Bahamas, Cayman Is., Cuba, and Jamaica. Warmer days may be expected throughout the northwestern part of the region with cooler days expected around the southeastern section.

Wet days and wet spells up to March

What usually happens from December to February?

- Number of wet days: roughly 15 to 30 wet days (ABC Islands: 10-25; coastal Guianas: 20 to 50).
- # of wet spells: 1 to 3 (ABC Is.: 1 to 4; Guianas: up to 4), of which 1 may be very wet (ABC Is & Guianas: up to 2-3).
- # of extreme wet spells: up to 1 or 2 extreme wet spells occur from January to March in the coastal Guianas, but virtually none elsewhere

Forecast and Implications for JFM 2022:

- High potential for surface dryness and wildfire along the NW part of the region.
- Slower depletion of large water reservoirs and above normal soil moisture along the eastern Caribbean.
- In the coastal Guianas, flash flood potential is expected to be particularly high.

Drought conditions

Lastest drought situation (as of November 1st) : Moderate (or worse) shorter term drought has developed in Aruba, southern Belize, western Cuba, eastern Hispaniola, southern Jamaica, and all portions of the Lesser Antilles with the exception of Trinidad; moderate longer term drought has developed in The Bahamas, south Belize, Western Cuba, Dominica, eastern Dominican Republic, throughout the Leeward Islands, in Martinique, St. Lucia, St. Vincent, and northern Suriname.

Short-term drought (at the end of Feb. 2022) : Short term drought is evolving in central and southern Belize, western Cuba, and USVI and may develop or continue in Barbados, Dominica, southern Dominican Republic northern Haiti, Martinique, Puerto Rico, USVI, and Saint Kitts.

Long-term drought (at the end of May 2022) : Long term drought is evolving in central and southern Belize, western Cuba, and USVI and might possibly develop or continue in Antigua, the northern Bahamas, northern Belize, Dominica, southern Dominican Republic, Guadeloupe, Martinique, Saint Lucia, Saint Vincent, and Sint Maarten / St-Martin.

BRIEF CLIMATE OUTLOOK –April to June 2022

Indications are that an existing moderate La Nina may phase into neutral conditions leading up to the wet season with near normal sea surface temperatures across the Caribbean. The ABC islands and the Windward Islands may end up drier than normal with the rest of the region predicted to be as wet or wetter than normal. Dry spells are expected to diminish into June when an increase in seasonal wet day frequency is expected to return. Temperatures may be warmer than normal west of Hispaniola and generally comfortable elsewhere during the spring season. For temperature and precipitation outlooks for AMJ 2022, 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 have recently dropped to below -1.0°C; La Niña conditions have maintained to the end of this year.

Model forecast and guidance: The models forecast indicate La Niña conditions in JFM (80-90% confidence), which may phase into ENSO neutral into AMJ (55-60% confid.).

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall activity in JFM and AMJ, except in the northern Caribbean where it tilts the odds to less rainfall. ENSO neutral offers little contribution to seasonal rainfall or temperature prediction in the Caribbean.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs have warmed to 1°C above average around most of the Caribbean Sea and in the sub-tropical portions of the North Atlantic in October and persisted into November.

Expected conditions: Models are forecasting SST to maintain anomalously warm (0.5-1°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 thay may provide.