











Caribbean Climate Outlook Newsletter

January to March 2019

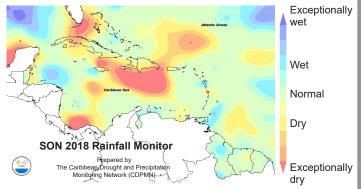
BRIEF SUMMARY: September 2018 to March 2019

September to November 2018: Northwestern parts of The Bahamas and Cuba, southern- and eastern-most parts of the Hispaniola observed less than the usual rainfall, leading to short term drought there. Long term drought is ongoing in S Hispaniola, Cayman and much of the Leewards. Temperatures were slightly above average.

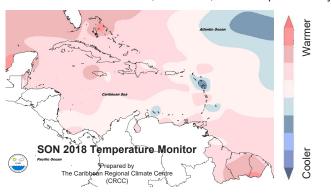
January to March 2019: With an El Niño on forecast, chances of drought and recurrent dry spells during the dry season are increased, except in The Bahamas, Cayman and Cuba. Region-wide, extreme drought is unlikely. Wet days and wet spells are expected to become least frequent by March. Extreme wet spells in the coastal Guianas, though less likely than in other years, remain possible there, leading to concerns of flash flood potential. Temperatures will be seasonably comfortable at least through February, and start rising thereafter.

LOOKING BACK:

Sep. - Oct. - Nov. 2018 (SON) **Observations**



RAINFALL: NW Bahamas, NW Cuba, S & E Hispaniola very dry.



• TEMPERATURES: Antigua and Guadeloupe significantly cooler than avg.; NW Bahamas, SE Guianas, W Jamaica sign. warmer than avg.

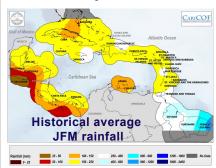
Notable Climate Records:

WET: SON: 3 locations in Dom. Republic, 2 in Puerto Rico recorded their highest rainfall totals (160-270% of avg.).

HOT: SON: 2 locations in The Bahamas recorded their highest max. temperature, 1 location in Martinique their highest min. temperature.

WHAT NEXT?

Rainfall patterns January-February-March (JFM)



Jan - start of dry season; occasionally still wet. Feb to Mar - dry season. Mostly without heavy

C'bean Islands north of 16°N:

Jan to Mar - sunny days and some days with

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

Jan to Mar - sunny days and some days with

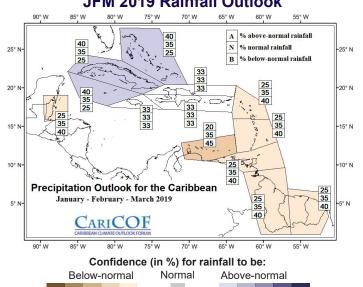
ABC Islands: wet season ending in Jan. Feb to Mar generally dry.

Guianas:

Jan - wet season. Frequent, heavy showers

Feb - Mar - dry season; occasional heavy showers and thunderstorms.

JFM 2019 Rainfall Outlook



Rainfall totals from January to March are likely to be the usual or drier in the ABC Islands, Belize, Guianas and the Lesser Antilles, but at least as wet as usual in The Bahamas, Cayman and Cuba.

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

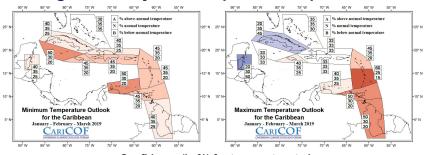
>70 60 50 45 40

40 45 50 60 >70

More on the climate outlook

January to March 2019

Night- and day-time temperatures up to March



Confidence (in %) for temperature to be:

Below-normal Normal Above-normal >70 60 50 45 40 >40 40 45 50 60 >70

JFM day-time (max.) temp. in the Caribbean are likely to be at least as warm as usual in the ABC Islands, the Lesser Antilles, Guyana and Jamaica, but usual or cooler in Belize and Cuba. Nights are forecast to be at least as warm as usual.

Wet days and wet spells up to March What usually happens from January to March?

- Number of wet days: roughly 20 to 40.
- # of wet spells: up to 3 (ABC Is. & Guianas: up to 4), of which up to 1 are very wet (ABC Is.:up to 2 & Guianas:
- # of extreme wet spells: 0 (coastal Guianas: up to 1).

Forecast and Implications:

- Some flash flood and flooding concern in coastal Guianas from possible extreme wet spells and recurrent very wet spells, respectively. Little concern elsewhere.
- Potentially slightly faster depletion of large water reservoirs in the eastern and southern Caribbean than usual during the dry season.
- Decrease in disruptions of outdoor activities by rainfall.

Drought conditions up to March

Drought situation: Short term drought in northwestern parts of The Bahamas and Cuba, and in southern- and eastern-most Hispaniola. Long (as of December 1) term drought in Cayman, southern-most Hispaniola, eastern Jamaica and much of the Leeward Islands.

Shorter term outlook: Shorter term drought is evolving in Barbados, Cayman Islands, and coastal Suriname, and is possible in many other areas.

Long term drought is evolving in in Antigua, northern Bahamas, Cayman Islands, western Cuba, Grenada, eastern Long term concern:

Jamaica and St. Kitts, and may possibly develop in many other areas in the Caribbean Islands.

BRIEF CLIMATE OUTLOOK - April to June 2019

April to June marks the transition from the dry to the wet season. Dry spells are common, while the chance of heavy rainfall increases steadily. Temperatures will, at times, become uncomfortably hot for vulnerable portions of the population. Moreover, forecasts suggest warmer than usual temperatures, with the possibility of heat waves in May, particularly in Belize and Trinidad. In view of drought relief in areas that become affected by drought by the month of March, April to June rainfall as a whole may be wetter than usual in the eastern Caribbean.

For detailed temperature and precipitation outlooks for AMJ 2019, please visit rcc.cimh.edu.bb/caricof-climate-outlooks/

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: In recent months, sea-surface temperatures (SSTs) in the equatorial eastern Pacific (NINO3.4) have increased to 1.0°C above average, meaning weak to moderate El Niño conditions. Model forecast and guidance: Most models suggest ENSO conditions to maintain as a moderate El Niño (with 90-95% and 60-85% confidence for JFM and AMJ, respectively).

Expected impacts on rainfall and temperatures: An El Niño state will tend to tilt the odds to drier conditions with less shower activity, except in the Bahamas and parts of the Greater Antilles (particularly Cuba), where wetter conditions become more likely. Note, however, that these effects tend to be more dominant with stronger El Niño signals.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs Tropical North Atlantic (TNA) and Caribbean Sea SSTs have warmed to around the seasonal average. The subtropical areas of the North Atlantic have remained 1°C above average.

Expected conditions: Sustained warm SST anomalies north of the Caribbean are forecast to remain in place, while Caribbean Sea SSTs are expected to increase to slightly above avg. and TNA SSTs are expected to be near average.

Expected impacts: Warm SSTs north of the Caribbean may lead to above-average humidity and atmospheric instability there. Those factors tilt the odds towards a wetter and warmer beginning of the year in the north. Meanwhile, near normal SSTs in the eastern will tend to have little influence on rainfall in the eastern C'bean.

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 - within the wettest/hottest third of the historical record (A)

- within the middle third of the historical record Near-normal (N)

(B) - within the driest/coldest third of the historical record Below-normal

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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DECEMBER 2018