



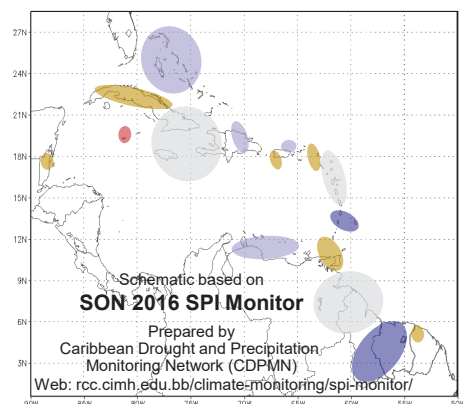
## BRIEF SUMMARY: September 2016 TO JANUARY 2017

September to November 2016 was warmer than usual throughout the region for that period. Given that humidity was high and winds were relatively calm, September and October were uncomfortably hot at times, incl. heat waves at times. Some places were at (near-)record wet, triggering multiple flash flood and flooding episodes.

**January to March 2017:** We are entering the driest part of the year (except coastal Guianas). This means above-normal to normal forecast rainfall from the Leeward Is. southward may delay the buildup of usual dry season impacts on water availability, except in areas already in drought (e.g. Cayman and Tobago). Apart from a small chance in the Guianas, there is virtually no flash flood potential in this season. Finally, with generally lower humidity and breezy conditions, and with no heat waves on forecast, we expect to feel comfortable.

### LOOKING BACK:

#### September-October-November 2016 (SON)



- Exceptionally wet
- Wet
- Normal
- Dry
- Exceptionally dry

#### Observations

- ♦ **RAINFALL: November:** Barbados, N Dom. Republic, Guyana, S Puerto Rico, St. Lucia, St. Vincent, Suriname very wet; Cayman, NW French Guiana very dry. **October:** NE Guyana, St. Maarten and Trinidad very dry; S Dom. Republic and S Guianas very wet. **September:** Cayman and W Dom. Republic very dry; Barbados, E Guyana, St. Lucia, W Suriname very wet.
- ♦ **TEMPERATURES: SON:** warmer than average in most places.

#### Notable Climate Records:

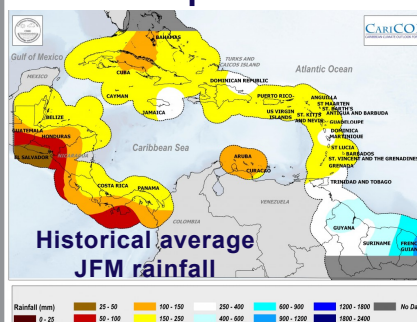
- ♦ **WET - SON:** 8 locations in Dom. Rep. (200-350% of avg.), 2 in Jamaica (~220% of avg.), 1 in Martinique, Puerto Rico and St. Vincent (160-180% of avg.) **November:** 12 locations in Dom. Rep., 1 in Puerto Rico and St. Vincent.
- ♦ **DRY - SON:** 2 locations in French Guiana recorded their lowest rainfall, incl. a record low for any 3-month period. **November:** Cayman, French Guiana and Jamaica.
- ♦ **HOT - SON:** 4, 4 & 4 territories had locations recording their highest min., mean or max. temp., resp. Notably, Piarco, Trinidad broke all three records.

#### Notable Impacts

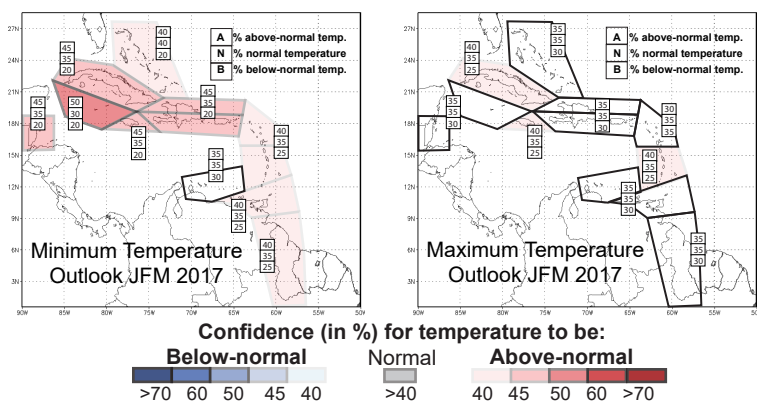
- ♦ Repeated flooding in St. Vincent & the Grenadines and Barbados after (near-)record rainfall in November.
- ♦ Return of long-term drought in Grand Cayman.

### WHAT NEXT?

#### Rainfall patterns January-February-March (JFM)



## Min. and max. temperatures up to March



JFM min. & max. temp. in the Caribbean are likely to be above- to normal.

## Wet days and wet spells up to March

### What usually happens from January to March?

- Number of wet days: roughly 20 to 40.
- Number of wet spells: up to 3 (ABC Is and Guianas: up to 4), of which up to 1 is very wet (ABC Is: up to 2; Guianas: up to 3).
- Number of extremely wet spells: up to 2 (ABC Is up to 3).

### Forecast and Implications:

- Relatively few wet days and resulting rain disruptions as compared to other times of the year.
- Very few wet spells: little recharge of large water reservoirs at this time of year.
- No extremely wet spells, so no major flash flood concerns, except possibly in the coastal Guianas.

## Drought conditions up to March

**Currently:** Short-term and long-term drought is once more a concern in Cayman, long-term drought is also prevalent in S Belize, N Leewards, Tobago.

**Alert levels:** **Drought warning:** Cayman. **Drought watch:** Cuba, French Guiana, Grenada, Leewards (except Antigua), Tobago.

**Long-term Concern:** **Drought emergency:** Cayman. **Drought warning:** Central Cuba, Grenada, SE Puerto Rico and Tobago. **Drought watch:** N Belize, E Cuba, French Guiana, Jamaica, NW Puerto Rico, Trinidad.

## BRIEF CLIMATE OUTLOOK - April to June 2017

Temperatures across the Caribbean are forecast to rise but generally continue to be comfortable until April, with the chance of heat waves appearing in May and June for many. As the region transitions from the dry to the wet season, there are indications (*low to medium confidence*) that April to June will be wetter than normal in the Bahamas, Belize, Cayman, Cuba, Jamaica, Leewards, Turks and Caicos and Windwards.

For detailed temperature and precipitation outlooks for AMJ 2017, please visit [rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/](http://rcc.cimh.edu.bb/long-range-forecasts/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) hovered around 0.5°C below-average, which equates to borderline La Niña conditions.

**Model forecast and guidance:** A majority of models suggest a return to ENSO neutral conditions by JFM (with 55% - 75% confidence).

**Expected impacts on rainfall and temperatures:** La Niñas tend to shift rainfall chances for JFM to above-normal in the southern-most islands of the Caribbean, and below-normal in the Bahamas and Cuba. However, with the forecast ENSO conditions suggesting a weak La Niña at most, their effect on rainfall may not be dominant. Because of the absence of an El Niño, less solar radiation and more cooling by clouds and rain than last year should keep temperatures closer to normal in JFM and AMJ.

### Climate conditions in the Tropical North Atlantic and Caribbean

**Recent observations:** SSTs up to 0.5°C above-average within the C'bean and the Tropical North Atlantic east of the islands. However, after 2 years with (near-)record warm temperatures north of the Greater Antilles, SSTs are now near-average; trade winds were at their usual strength.

**Expected conditions:** Near normal SST are expected to return to the Caribbean Sea and further east by AMJ; strength of trade winds is hardly predictable at seasonal time scales.

**Expected impacts:** A slight probability shifts towards above- to normal rainfall is expected for JFM as positive SST anomalies in the Caribbean Sea and Tropical North Atlantic tend to increase humidity in the region, which in turn can lead to increased rainfall. This influence will tend to subside by AMJ.

## Climate outlooks - background

The Caribbean Climate Outlooks are prepared by the Caribbean Regional Climate Outlook Forum (CariCOF). The Caribbean Institute for Meteorology and Hydrology, in its role as WMO Regional Climate Centre in demonstration phase, coordinates the CariCOF process. Contributors to the Outlooks are the Meteorological Services from the region. For more information on how the outlooks are produced, please visit [rcc.cimh.edu.bb](http://rcc.cimh.edu.bb).

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

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