

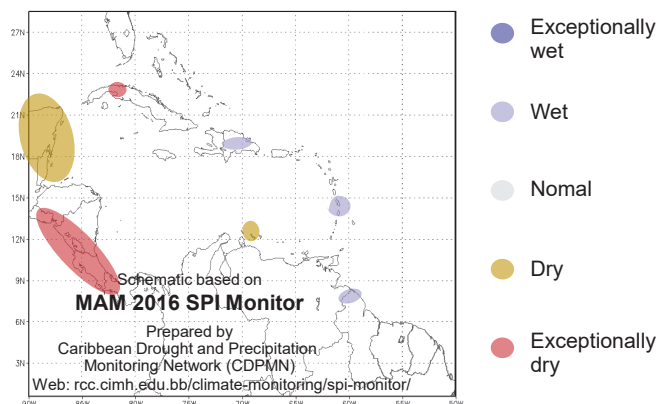
## BRIEF SUMMARY: MARCH TO SEPTEMBER 2016

March to May was warmer than usual throughout the Caribbean. After a failure of the wet season, dry season rains were insufficient to relieve many islands territories from their drought conditions. Nevertheless, some areas (e.g. coastal Guyana) were wet in either March, April or May, bringing (mostly short-term) drought relief there, coming out of the very strong El Niño, which has since weakened and disappeared by the end of May.

**July to September 2016:** We forecast above- to normal temperatures and rainfall conditions across the region with the exception of below- to normal rainfall in Barbados, Belize, the Leeward & Windward Islands. As it is the wet/hurricane season, a good number of days will be wet. Perhaps more concerning, chances of any location experiencing extremely wet spells are real. That means potential for flash flooding.

### LOOKING BACK:

#### March-April-May 2016 (MAM)



### Observations

- ♦ **RAINFALL: May:** very dry in Aruba; very wet in Dominican Republic and north Guyana. **April:** very dry in St. Vincent; very wet in Guyana. **March:** very dry in S Guyana; very wet in Dominica and Martinique.
- ♦ **Temperatures: May, April, March:** above-normal across most parts of the Caribbean.

### Notable climate records:

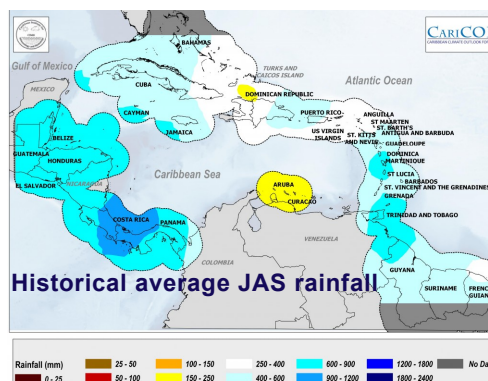
- ♦ **WET - MAM:** 1 location in Jamaica (207% of avg.).  
**May:** record wet in 2 locations in Dominican Republic (294% & 370% of avg.).
- ♦ **DRY - MAM:** Aruba (7% of avg.). **May:** 1 location in Belize (17% of avg.).
- ♦ **HOT - MAM:** 2 & 3 territories with locations recording highest min. & mean temps., respectively (notably Jamaica & Guyana).

### Notable Impacts

- ♦ Prevailing short- and long-term drought across the Caribbean, with:
  - delayed crop planting as a result of dry soil in Belize;
  - water rationing still occurring in Cuba;
  - water shortages resulted in distribution of water by water-tank trucks in Cuba.

### WHAT NEXT?

#### Rainfall patterns July-August-September (JAS)



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

Jul to Aug - wet season. Often incl. a mid-summer dry spell.  
Sep - wet season. Usually frequent heavy showers.

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

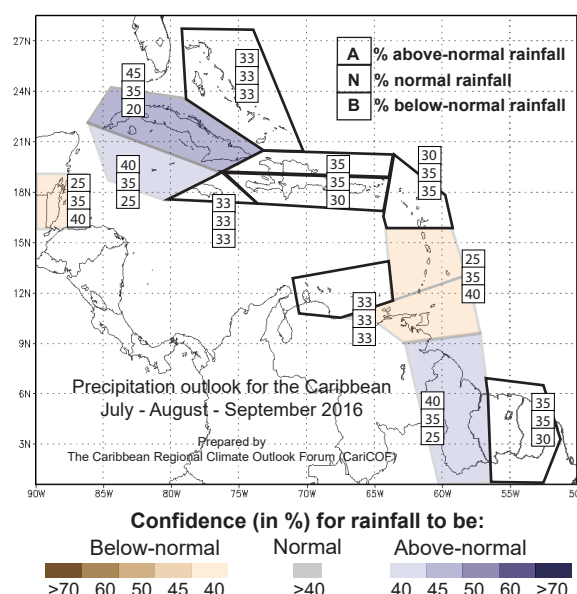
Jul to Sep - wet season. Increasingly frequent heavy showers.

**ABC Islands:** mostly dry with occasional wet spells.

#### Guianas:

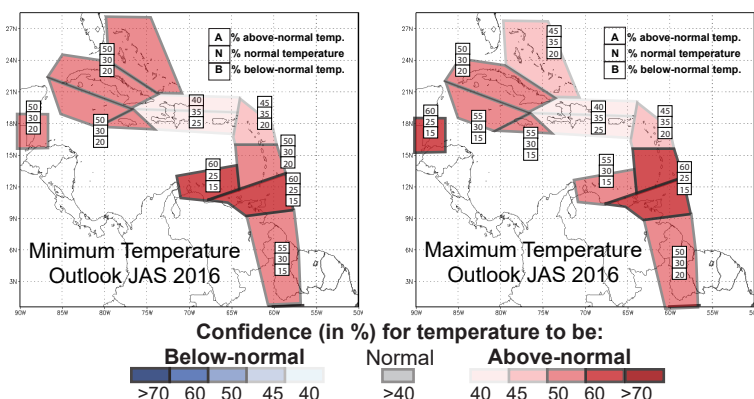
Jul to Aug - long wet season. Heavy showers are frequent. Sep - dry season Heavy showers at times.

### JAS 2016 Rainfall Outlook



JAS rainfall in the Caribbean is likely to be above- to normal in Cayman, Cuba and Guyana, but below- to normal in Barbados, Belize, Trinidad and Tobago, and the Windwards. There is low predictability elsewhere at this time.

## Min. and max. temperatures up to September



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

## Wet days and wet spells up to September

## What usually happens from July to September?

- Number of wet days: roughly 35 to 50.
- Number of wet spells: roughly 3 to 6, of which 1 to 3 are very wet.
- Number of extremely wet spells: up to 1.

## Forecast and Implications:

- Fewer wet days: slightly reduced, but still regular occurrence of rainfall disruptions of outdoor activity.
- Several wet spells: effective recharge of water reservoirs, although possibly at a slightly lower rate.
- Up to 1 extremely wet spell: flash flood potential developing.

## Drought conditions up to September

**Currently:** More and more islands are seeing long-term drought relief, but many islands are still in drought. Short-term drought is noted in Belize and Cuba.

**Alert levels:** **Drought watch:** east-central & south Belize and St. Kitts.

**Long-term Concern:** **Drought watch:** ABC Islands, Antigua, west-central Belize, Dominica, southern French Guiana, Martinique, St. Kitts and St. Vincent.

## BRIEF CLIMATE OUTLOOK - October to December 2016

Temperatures across the Caribbean are forecast to continue to reach uncomfortable, above- to normal levels by September. There are indications (*medium confidence*) that this part of the wet season will be wetter than normal across the entire region, except for the east Guianas. Rains will continue to alleviate long-term drought. However, above average rainfall could increase the risk of long-term flooding.

For detailed temperature and precipitation outlooks for OND 2016, 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:** A now very weak El Niño is slowly transitioning to neutral conditions; sea-surface temperatures (SSTs) 0.5°C above avg. in equatorial eastern Pacific (NINO3.4).

**Model forecast and guidance:** Models indicate transition to La Niña by September (58-65% confidence), with persistent La Niña conditions lasting throughout OND (65-75% confid.).

**Expected impacts on rainfall and temperatures:** Shift towards above- to normal rainfall is noted for the C'bean due to reduced winds in the upper atmosphere, which allows for stronger, local showers to develop. A higher frequency of tropical storm likelihood during La Niña may also contribute to rainfall totals. Higher temperatures are probable for the region, which may lead to increased moisture uptake; hence, to increase precipitation.

## Climate conditions in the Tropical North Atlantic and Caribbean

**Recent observations:** SSTs 0.5-1°C above-average within the C'bean, and higher just to the north (+1°C).

**Expected conditions:** Positive SST anomalies are expected throughout the tropical Atlantic by JAS; strength of trade winds is hardly predictable at seasonal time scales.

**Expected impacts:** Warm Atlantic temperatures increase evaporation and local deep atmospheric convection, potentially increasing precipitation. Average circulation patterns during La Niña periods may also contribute to increased frequency of developing tropical storms.

## 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](mailto: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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