

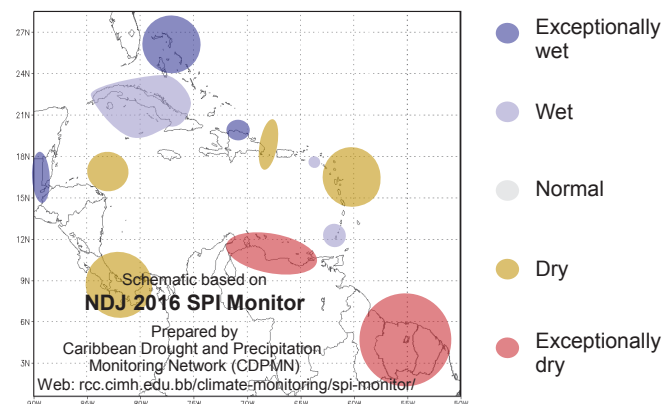
## BRIEF SUMMARY: NOVEMBER 2015 TO MAY 2016

November to January was warmer than usual throughout the Caribbean. After a failure of the wet season in ABC Islands and of the secondary wet season in the Guianas, as well as with dry conditions in parts of the eastern Caribbean, many island territories remained in drought. Heavy rains in Belize alleviated drought there.

**March to May 2016:** We expect above-normal, increasingly uncomfortable temperatures throughout the region. Drought is expected to intensify in the eastern and southern Caribbean until April, with few rain disruptions of outdoor activities. Intensifying drought worsens water shortages in households and agriculture, increases fire risk, and heightens food insecurity in Haiti. However, the wet season may start abruptly and up to one month earlier than usual (April to May), with raised flash flood potential from then onwards.

### LOOKING BACK:

#### Nov-Dec-Jan 2015-6 (NDJ)



### Observations

- **RAINFALL: January:** very dry in ABC Islands, Dominica, St. Croix. **December:** very dry in Dominica, NW Dom. Rep., Jamaica; very wet in NE Dom. Rep. (almost twice average). **November:** very dry in S Dom. Rep.; very wet in S Belize, N Dom. Rep., NW Guyana, W Puerto Rico.
- **Temperatures: January, December, November:** above-normal across the Caribbean, record high in some places.

### Notable climate records:

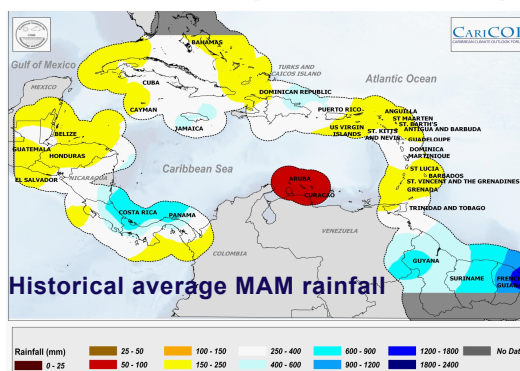
- **DRY - NDJ:** 3 territories with locations experiencing record low rainfall (14-28% of average at 2 locations in Dom. Rep. and 1 location in Puerto Rico, 36-48% of avg. at 4 locations in French Guiana).
- **WET - NDJ:** 1 location in Belize (165% of avg.).
- **HOT - NDJ:** 6 territories with locations recording highest max. temps. (Bahamas, Cayman, Jamaica, St. Vincent, Tobago).

### Notable Impacts

- Prevailing short- and long-term drought across the Caribbean, with a doubling of food insecurity in Haiti, a major blow to 2016 sugar cane harvest in Barbados; low water levels in the East Demarara Water Conservancy in Guyana; Tobago facing water shortage sparking fears of tourist vacation cancellations.

### WHAT NEXT?

#### Rainfall patterns Mar-Apr-May (MAM)



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

Mar to Apr - latter part of dry season; limited duration and area of heavy showers.  
May - transition to wet season.

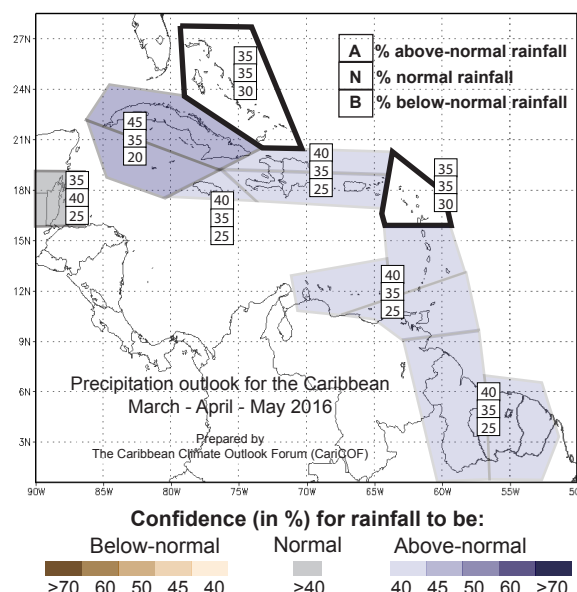
#### C'bean Islands south of 16°N (except ABC Islands):

Mar to May - second half of dry season; limited duration and area of heavy showers; April & May occasionally very wet.

ABC Islands: Mar to May generally dry.

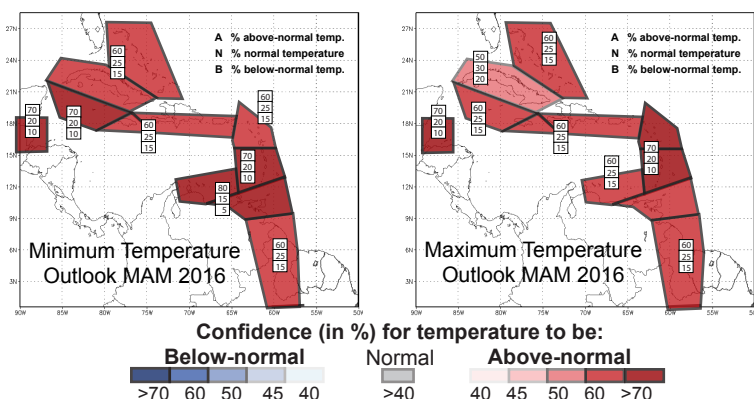
Guianas: Mar to May - transition to wet season; heavy showers more and more frequent.

### MAM 2016 Rainfall Outlook



MAM rainfall in the Caribbean is likely to be above- to normal across the region; but normal- to above for Belize.

## Min. and max. temperatures up to May



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

## Wet days and wet spells up to May

## What usually happens from March to May?

- Number of wet days: low in March and April, and usually increases in May.
- Number of wet spells: very few between March to April, with a small increase in May.

## Forecast and Implications:

- Fewer wet days: fewer disruptions of outdoor activities, increasing surface dryness.
- Few wet spells: low to no recharge of water reservoirs until April.
- Very few extremely wet spells until April: limited flash flood potential up until April, but increasing from May.

## Drought conditions up to May

Currently:  
(as of Jan. 31)

Alert levels: Most islands are in long-term drought (except Bahamas and Cuba). These places suffer water shortages. Short-term drought is noted in Belize and from the US Caribbean east and southward.

Long-term Concern:

**Drought warning or worse:** ABC Islands, French Guiana and the Antilles, SE Hispaniola, SW Belize.

Existing water shortages may worsen up until the end of the dry season. Drought relief may occur as the wet season may start up to one month earlier than usual.

## BRIEF CLIMATE OUTLOOK - June to August 2016

Temperatures are expected to rise to uncomfortable, above-normal levels by August across the Caribbean. There are indications (medium confidence) that abundant rains may return towards the end of the period. The return rains may alleviate long-term drought in most places, including the Guianas. Rainfall is likely to be below- to normal for Belize (low confidence).

For detailed temperature and precipitation outlooks for JJA 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:** Very strong El Niño is now slowly weakening after reaching peak strength by the end of 2015; sea-surface temperatures (SSTs) 2.5°C above avg. in equatorial eastern Pacific (NINO3.4).

**Model forecast and guidance:** Models indicate weakening El Niño conditions for MAM (90-99% confidence), and a return to normal conditions by JJA (51-55% confid.) with increasing chances of La Niña conditions (22-28% confid.).

**Expected impacts on rainfall and temperatures:** Shift towards above-normal rainfall is noted for the C'bean due to reduced winds in the upper atmosphere, which allows for stronger showers. Large shift to higher temperatures for the region which may also add to increase moisture uptake and leads to increase precipitation.

## Climate conditions in the Tropical North Atlantic and Caribbean

**Recent observations:** SSTs 0-1°C above-average north of C'bean; trade wind speed stronger than avg; upper level winds stronger than usual in the south, weaker in the north.

**Expected conditions:** SST anomalies expected to warm up towards the east; strength of trade winds hardly predictable.

**Expected impacts:** Warm Atlantic temperatures increase evaporation and local deep atmospheric convection, potentially increasing precipitation. However, strong high level winds are expected to reduce shower activity from Leewards southward by prohibiting vertical growth of clouds.

## 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  |

## DISCLAIMER

The information contained herein is provided with the understanding that The Caribbean Climate Outlook Forum makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the Outlook. The information may be used freely by the public with appropriate acknowledgement of its source, but shall not be modified in content and then presented as original material.