



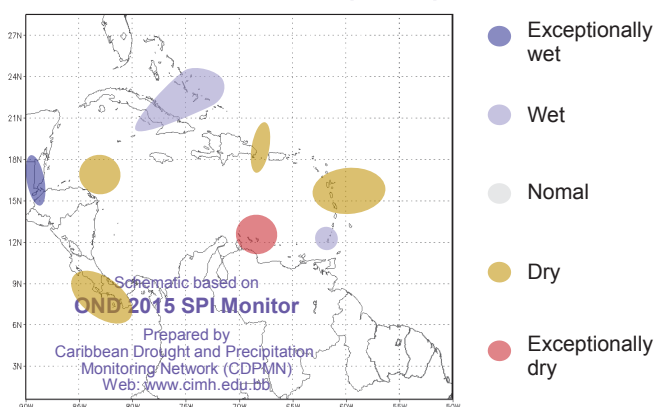
BRIEF SUMMARY: OCTOBER 2015 TO APRIL 2016

End of 2015 was warmer than usual throughout the Caribbean. After a failure of the wet season in ABC Islands and dry conditions in parts of the eastern Caribbean, many island territories remained in drought. Heavy rains in Belize alleviated drought there.

February to April 2016: We expect above-normal, but comfortable temperatures throughout the region, except for cooler temperatures in the extreme north-west. Drought is expected to intensify in the eastern and southern Caribbean, with few rain disruptions of outdoor activities and limited flash flood potential. Intensifying drought worsens current water shortages in households and agriculture, and increases fire risk.

LOOKING BACK:

Oct-Nov-Dec (OND) 2015



Observations

♦ **RAINFALL: December:** extremely 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. **October:** very dry in Aruba and Dominica.

♦ **TEMPERATURES: December, November & October:** above-normal across the Caribbean, record high in some places.

Notable climate records:

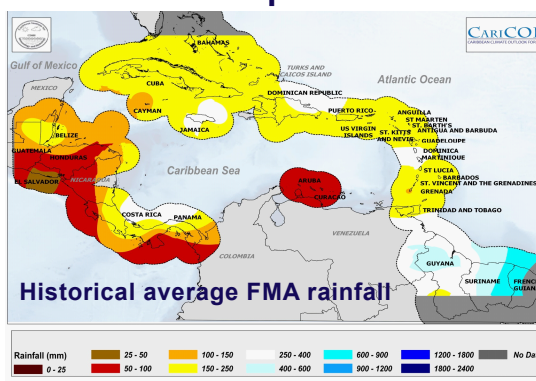
- ♦ **DRY - OND:** 2 territories with locations experiencing record low rainfall (49% of average at 1 location in Barbados, 13-34% of avg. at 2 locations in Dom. Rep.).
- **2015:** 4 territories (Antigua, Aruba, St. Barths, St. Maarten) & 5 territories with locations (Barbados, Dom. Rep., Jamaica, US C'bean Terr., St. Lucia) recording their driest year.
- ♦ **WET - OND:** 2 locations in Belize (almost twice the average).
- ♦ **HOT - OND:** 5 territories with locations recording highest max. temps. (Bahamas, Cayman, Dominica, Guyana, Jamaica).

Notable Impacts

- ♦ Prevailing short- and long-term drought across the Caribbean, notably in Antigua, Barbados, St. Kitts & Nevis with widespread agricultural losses and/or domestic water shortages.

WHAT NEXT?

Rainfall patterns Feb-Mar-Apr (FMA)



Belize: Feb to Apr - dry season. Mostly without heavy rainfall.

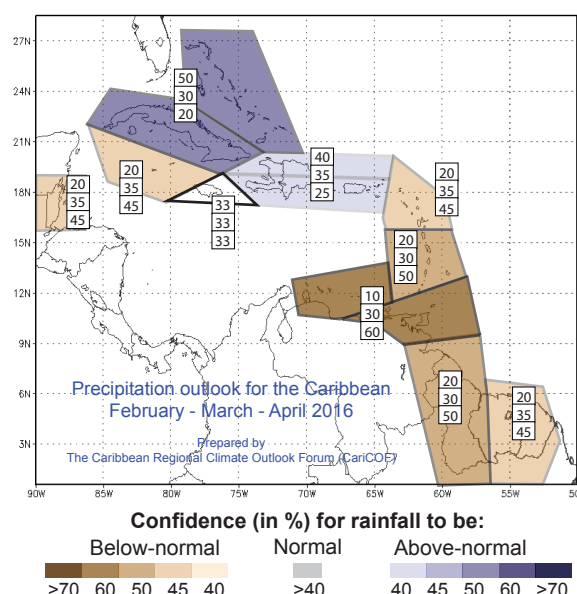
C'bean Islands north of 16°N: Feb to Apr - sunny days and some days with showers.

C'bean Islands south of 16°N (except ABC Islands): Feb to Apr - sunny days and some days with showers.

ABC Islands: Feb to Apr - generally dry.

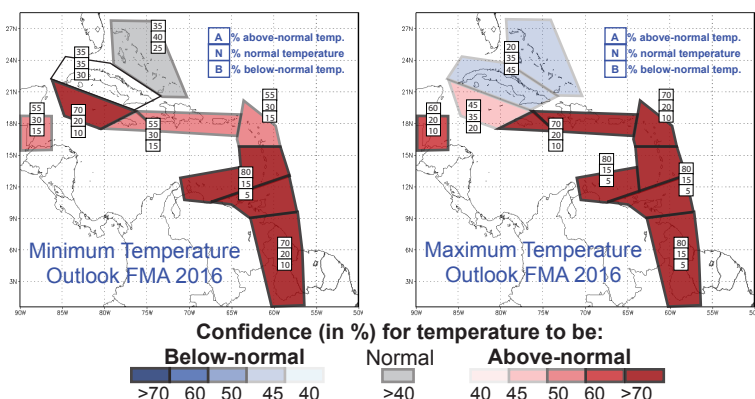
Guianas: Feb to Apr - End of dry season with occasional heavy showers and thunderstorms.

FMA 2016 Rainfall Outlook



FMA rainfall in the Caribbean is likely to be below- to normal in Belize, Cayman, and from Leewards southward; but above- to normal for Bahamas, Cuba, Hispaniola, Turks & Caicos, and US C'bean Terr. There is little predictability for Jamaica at this time.

Min. and max. temperatures up to April



FMA min. & max. temp. in the Caribbean are likely to be above- to normal, except in Bahamas, Cuba and Turks & Caicos.

Wet days and wet spells up to April

What usually happens from February to April?

- Number of wet days: low from February to April, except during February in the Guianas.
- Number of wet spells: very low, except in February in the Guianas.

Forecast and Implications:

- Fewer wet days: fewer disruptions of outdoor activities and increasing surface dryness.
- Few wet spells: limited recharge of water reservoirs.
- Very few extremely wet spells: limited flash flood potential.

Drought conditions up to May

Currently: Most islands are in long-term drought. These places suffer water shortages. Some are also in short-term drought. However, drought was alleviated in Belize.

Alert levels: **Drought warning or worse:** ABC Islands, Barbados, Guianas, southern Leewards, Trinidad & Tobago.

Long-term Concern: Existing water shortages may worsen throughout the first half of 2016, with drought relief not in sight for the remainder of the dry season.

BRIEF CLIMATE OUTLOOK - May to July 2016

Temperatures are expected to rise to uncomfortable, above-normal levels by July across the Caribbean. There are indications (medium to high confidence) that abundant rains may return towards the end of the period. The latter may finally alleviate long-term drought in most places, as well as the drought that builds up this year in the Guianas.

For detailed temperature and precipitation outlooks for MJJ 2016, please visit 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 reached peak strength at the end of 2015; sea-surface temperatures (SSTs) 2.5-3°C above avg. in equatorial eastern Pacific (NINO3.4).

Model forecast and guidance: Models indicate weakening El Niño conditions for FMA (99% confidence), and possible disappearance in MJJ (60-70% confid.).

Expected impacts on rainfall and temperatures: Shift towards higher probabilities for below-normal rainfall for the east and south, as El Niño usually weakens the development of storms. By contrast, a shift towards above-normal rainfall is noted for the NW C'bean due to reduced winds in the upper atmosphere, which allows for stronger showers. Large shift to higher temperatures for the region, except extreme NW.

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, please visit rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/.

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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