

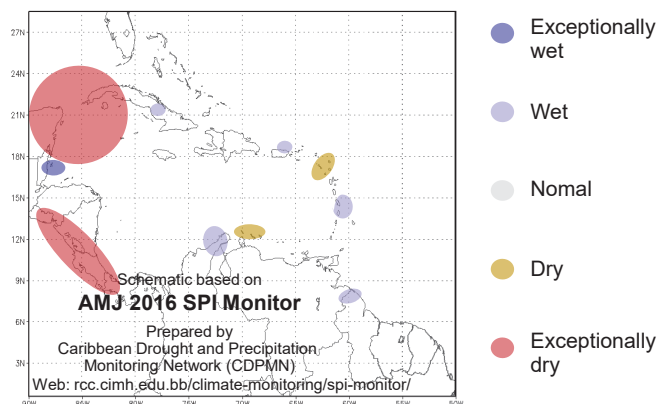
BRIEF SUMMARY: APRIL TO OCTOBER 2016

April to June 2016 was warmer than usual throughout the Caribbean for that period. Many parts of the C'bean were wet in either April, May or June, bringing (short-term and increasingly long-term) drought relief there, with the exception of the Leeward Islands, which are still in long-term drought.

August to October 2016: We forecast above- to normal temperatures across the region, which together with high humidity, means it will feel exceedingly hot at times. Three-month rainfall totals are likely to be above- to normal in the northern half of the C'bean, with up to 20% more days of rain. By contrast, the southern half may be somewhat drier than usual. As we approach the wettest part of the year, a particular concern is the real chance of any location experiencing extremely wet spells and tropical cyclones, with potential for flash flooding.

LOOKING BACK:

April-May-June 2016 (AMJ)



Observations

- ♦ **RAINFALL: June:** Aruba, E & W Cuba, St. Maarten very dry; W Dominican Republic very wet. **May:** very dry in Aruba; very wet in Dominican Republic and north Guyana. **April:** very dry in St. Vincent; very wet in Guyana.
- ♦ **Temperatures: AMJ:** 0.5-1 °C warmer than average in most places.

Notable Climate Records:

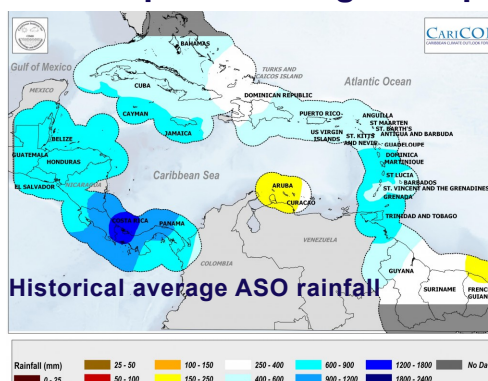
- ♦ **WET - AMJ:** 1 location in: Dominican Republic (208% of avg.), Jamaica (227% of avg.)
- ♦ **DRY - June:** 1 location in Dominican Republic (6% of avg.) and St. Barths (16% of avg.)
- ♦ **HOT - AMJ:** 7, 2 & 1 territories had locations recording their highest min., mean or max. temp., resp.. Notably, St. Kitts broke all three records, as well as their max. temp. for June.

Notable Impacts

- ♦ Short and long term drought impacts are weakening and becoming more sparse across the Caribbean. However the Barbados Water Authority have prolonged water restrictions beyond May.

WHAT NEXT?

Rainfall patterns August-September-October (ASO)



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

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

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

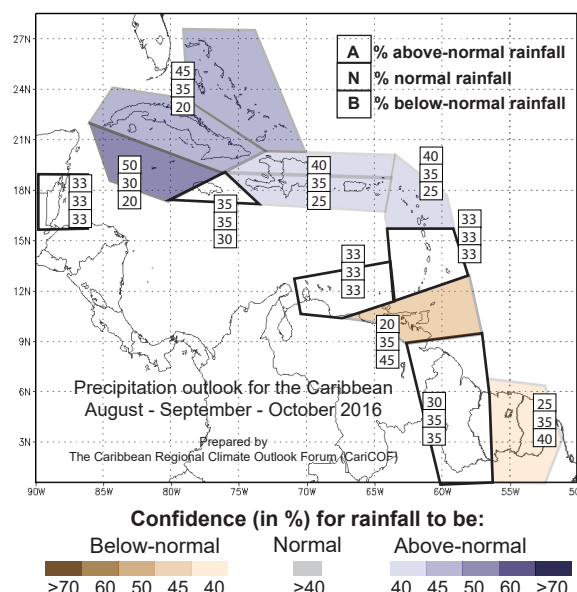
Aug to Oct - wet season. Usually frequent heavy showers.

ABC Islands: mostly dry with occasional wet spells.

Guianas:

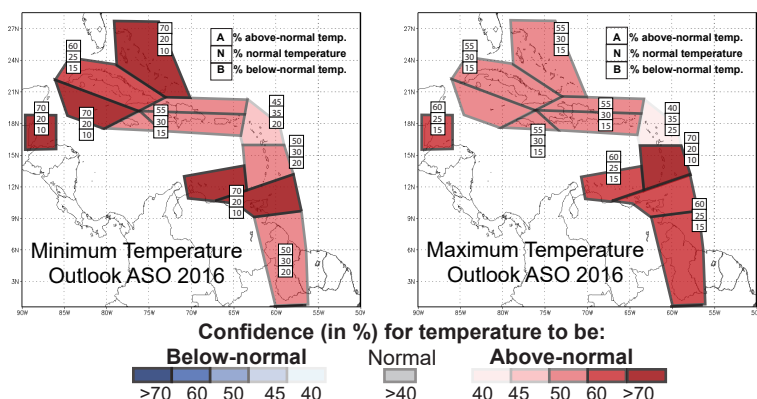
Aug - long wet season. Heavy showers are frequent. Sep to Oct - dry season. Heavy showers at times.

ASO 2016 Rainfall Outlook



ASO rainfall in the Caribbean is likely to be above- to normal in the Bahamas, the Greater Antilles (except Jamaica) and the Leeward Islands, but below- to normal in Trinidad and Tobago and the eastern Guianas. There is low predictability elsewhere at this time.

Min. and max. temperatures up to October



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

Wet days and wet spells up to October

What usually happens from August to October?

- Number of wet days: roughly 35 to 50 (Guianas: 20-30).
- Number of wet spells: roughly 4 to 6 (Guianas: 1-3), of which 1 to 3 (Guianas: 0-2) are very wet.
- Number of extremely wet spells: up to 2 (Guianas: rare).

Forecast and Implications:

- More wet days in north, fewer in south: increase of surface wetness for the northern C'bean.
- Several wet spells: effective recharge of water reservoirs, with the possible exception of the Guianas.
- Up to 2 extremely wet spell: serious flash flood potential developing except in the Guianas.

Drought conditions up to October

Currently: More and more islands are seeing long-term drought relief, but some islands are still in drought, especially the Leewards. Short-term drought is noted in N Belize, W Cuba and St. Maarten.

Alert levels: **Drought watch:** Southern Haïti.

Long-term Concern: **Drought warning:** Suriname, S French Guiana. **Drought watch:** ABC Islands, French Guiana, St. Kitts, St. Lucia, St. Maarten and St. Vincent.

BRIEF CLIMATE OUTLOOK - November 2016 to January 2017

Temperatures across the Caribbean are forecast to continue to reach uncomfortable, above- to normal levels by October. There are indications (*low confidence*) that this transition period between the wet and the dry season will be wetter than normal across much of the region. Rains may prevent or delay surface dryness going into 2017. However, above average rainfall could increase the risk of long-term flooding until the end of 2016.

For detailed temperature and precipitation outlooks for NDJ 2016-'17, please visit rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: Sea-surface temperatures (SSTs) in equatorial eastern Pacific (NINO3.4) have returned to average, meaning ENSO neutral conditions.

Model forecast and guidance: A majority of models indicate a transition to La Niña by September, with 50% confidence of La Niña conditions in place for ASO and about 60% NDJ (60% *confid.*). In Models favouring La Niña conditions, those tend to be weak in most cases.

Expected impacts on rainfall and temperatures: A slight shift towards above- to normal rainfall is noted for much of the C'bean due to slightly 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.

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 N Atlantic by ASO; 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.

Note: Until around September, intrusion of dust and dry air associated with the Saharan Air Layer (SAL) and the trade winds may decrease rainfall chances. This is hardly predictable at seasonal time scales

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.

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

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