



Caribbean climate outlook May to October 2015

CariCOF - The Caribbean Climate Outlook Forum

WHAT HAPPENED?

January - February - March (JFM) 2015

Very wet in Dom. Republic & SW French Guiana, very dry in Leeward Islands; comfortable temperatures

+ impacts

little water-bourne diseases outbreaks in dry areas

- impacts

water shortage in Antigua & Barbuda & St. Lucia; flood-related losses in Dom. Rep.

Notable climate events - January to March 2015

- Observed rainfall records: **Wet** - JFM: 1 station in Dom. Republic and 1 station in French Guiana (both 190% of average), 1 station in Jamaica (235% of average), JAN: 1 station in Dom. Republic, FEB: 4 stations in Dom. Republic, MAR: 2 stations in French Guiana, 1 station in Jamaica.
- Dry** - JFM: 1 station in Anguilla (50% of avg.).

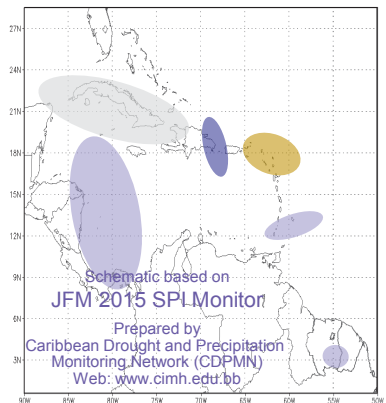
Summary

- January very wet in Dom. Republic, Grenada; very dry in Anguilla and Antigua and Barbuda. February very dry in N Belize. March very wet in Aruba, Barbados, N Guyana and E Jamaica; very dry in Antigua and St. Martin.
- Cool and comfortable temperatures (above-normal across the Caribbean).

Headline Impacts

- Heavy rains from Dec. to Feb. affected N Dom. Republic resulting in floods in Feb., with 1 casualty. 15 475 people displaced, 3 979 houses damaged.
- Continued low rainfall over the past year in Antigua led to Potswort Dam water levels below 33% in Feb., three water catchments falling below extraction levels and difficulties in germinating some crops during JFM; as of March in northern Dominica, farmers complained about uncharacteristic dry conditions.

JFM 2015 Precipitation



Observed conditions

Exceptionally wet Wet Normal Dry Exceptionally dry

WHAT NEXT?

May - June - July (MJJ) 2015

Consensus Outlook

Start of wet season possibly wetter in Cayman and Jamaica and drier in Barbados and Leeward Islands; heat becoming uncomfortable.

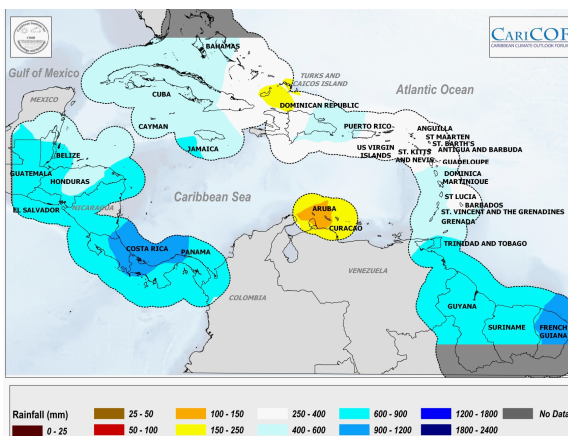
+ impacts

some drought relief in areas with depleted water reservoirs

- impacts

drought potentially remaining in parts of E. Caribbean; heat stress rising

Our typical MJJ rainfall patterns



Belize & Caribbean Islands north of 16°N:

May & Jun - wet season. Usually frequent heavy showers. Jul - wet season, but often including a mid-summer dry spell.

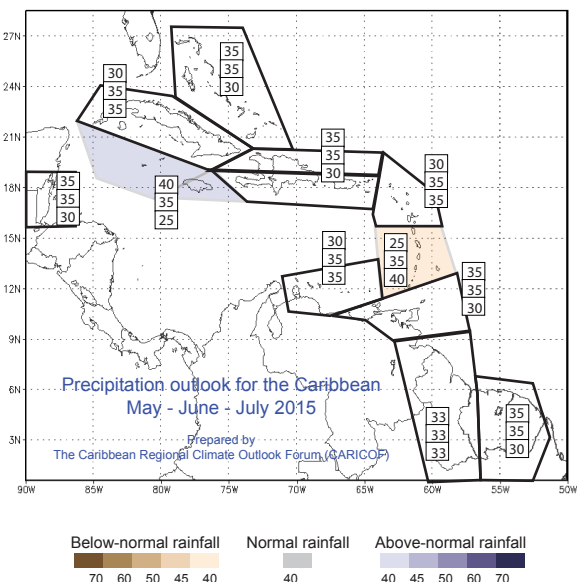
Caribbean Islands south of 16°N (except ABC Islands):

May - last part of dry season. Heavy showers mostly limited in area and duration, though occasionally very wet. Jun & Jul - early wet season. Increasingly heavy showers.

Guianas:

May to Jul - long wet season. Heavy showers are frequent.

MJJ 2015 Precipitation Outlook



MJJ rainfall in the Caribbean is likely to be above- to normal in the Cayman Islands and Jamaica and below- to normal in Barbados and the Windward Islands.

Note that rainfall is hardly predictable at present in other areas.

<<< see outlook discussion on page 2 >>>

Climate outlook

May - June - July

(MJJ temperature outlook map available at www.cimh.edu.bb/?p=precipoutlook)

Rainfall **Cayman, Jamaica:** above- to normal; confidence 75%. **Barbados, Windwards:** below- to normal; confidence 75%. **Bahamas, Belize, E Guianas, Hispaniola, Trinidad & Tobago, Turks & Caicos, US C'bean Terr.:** above- or normal; confidence 70%. **ABC Islands, Cuba, Leewards:** below- or normal; confidence 70%. **Elsewhere:** equal chances for below-, above- or normal.

Temperature **ABC Islands:** below- to normal; confidence 80%. **Cayman:** below- to normal; confidence 75%. **Bahamas, Cuba, Turks & Caicos:** above- to normal; confidence 75%. **Guianas:** below- to normal; confidence 75%. **Jamaica:** above- to normal; confidence 75%. **Elsewhere:** above- or normal; confidence 70%.

Drought conditions February to July

(FMAMJJ drought outlook available at www.cimh.edu.bb/?p=precipoutlook)

Drought situation: Cayman, eastern Jamaica, Haïti and part of the Windward Islands are in drought and have suffered water shortages.
Drought alert levels: **Drought warning:** drought evolving in S French Guiana. **Drought watch:** many islands east & south of Puerto Rico.
Long-term concern: Water shortages may persist in the islands in the dry season, especially in Cayman, Haïti, Jamaica and Windwards.

August - September - October

(ASO precip. and temp. outlook maps available at www.cimh.edu.bb/?p=precipoutlook)

Rainfall **ABC Islands, Cuba, Hispaniola, US C'bean Terr.:** below- to normal; confidence 80%. **Barbados, Jamaica, Leewards & Windwards:** below- to normal; confidence 75%. **Belize, Trinidad & Tobago:** above- to normal; confidence 75%. **Bahamas, Cayman, Turks & Caicos:** below- or normal; confidence 70%. **Guianas:** above- or normal; confidence 70%.

Temperature **Cuba:** above- to normal; confidence 85%. **Jamaica:** above- to normal; confidence 75%. **ABC Islands, E Guianas, Leewards:** below- to normal; confidence 75%. **Cayman, S Hispaniola:** above- or normal; confidence 70%. **Elsewhere:** below- or normal; confidence 70%.

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: weak El Niño; sea-surface temperatures (SSTs) 0.5-1°C above average in equatorial eastern Pacific (NINO3.4).
Model guidance: 80% of the models indicate continued above average SSTs for MJJ & ASO with some suggesting further warming into a moderate or strong El Niño event by ASO, while only 5% has SSTs decreasing to 0-0.5°C below average.
Forecast: 70-80% confidence in El Niño conditions during MJJ and 65-80% during ASO.
Expected impacts on rainfall and temperatures: a small shift to higher probabilities for below-normal rainfall and higher temperatures south of 20°N, especially for ASO, when El Niño may weaken the development of rain-, thunder- and tropical storms. (NOTE: ENSO is considered a minor factor in explaining our rainfall outlooks made in March, April and May. At this time of year, we know we cannot put much trust in models wrt. ENSO forecasts. Hence, we know ENSO could in principle impact rainfall across the region, but cannot say it with confidence.)

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs 0.5°C above-average around the Caribbean, -1.5°C to average further east; trade wind speed above-average.
Expected conditions: Some cooling expected; strength of trade winds hardly predictable, but might become stronger over the ABC Islands.
Expected impacts: Cooler Atlantic temperatures slow down deep atmospheric convection, potentially decreasing precipitation.

Precipitation and temperature outlook - 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.

This consensus outlook is produced by combining global, regional and national forecasts and expert interpretation. National and region-wide forecasts produced using the Climate Prediction Tool (CPT) are considered together with global dynamical climate models. Global forecasts that are examined include those from the IRI, the U.K. Met Office, ECMWF, Météo-France, the WMO LRF-MME and the APCC.

Probabilities for three-month rainfall totals and average temperatures are estimated for sub-regions based on the model outputs, the level of agreement between the different models and expert knowledge of the regional setting.

The Precipitation Outlook is issued in the form of a map, which shows regions where the forecast rainfall has 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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