



Caribbean climate outlook January to June 2015

CariCOF - The Caribbean Climate Outlook Forum

WHAT HAPPENED?

September - October - November (SON) 2014

Very dry in E Jamaica, Haïti, very wet from Barbados southwards to N Guyana; initially hot days and nights

+ impacts

little water-bourne diseases outbreaks in dry areas

- impacts

water shortage in Haïti and E Jamaica; elevated heat stress, and flood-related infrastructural damage

Notable climate events - September to November 2014

- Many rainfall records were recorded over these three months, most notably Sep-Nov was record dry in at least 2 stations in Jamaica & 1 in Suriname; but record wet in 1 station in Guyana and 1 in Trinidad. In addition, 2 stations in Trinidad had their wettest month on record this November.

Summary

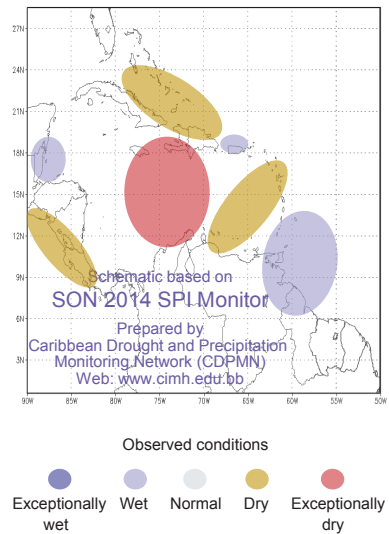
- September very dry in Eastern Guyana and eastern Jamaica; dry in Anguilla, Antigua, Dominica, St. Martin and Tobago; very wet in parts of coastal French Guiana, wet in Belize, Grenada and W Puerto Rico. October very wet in St. Kitts, Anguilla and W Guyana; wet in Trinidad, Grenada, St. Martin, St. Croix and S Belize; very dry in Dominica, St. Vincent, eastern Jamaica and portions of Puerto Rico. November very wet in Guyana, and Puerto Rico; wet in Antigua, Barbados, Grenada, St. Croix, St. Lucia, St. Martin and St. Vincent; dry in Cayman.

- Hot at night and during daytime in September and early-October. Near- to above-normal temperatures during Sep-Nov across the Caribbean.

Headline Impacts

- Repeated torrential rains affected communities in St. Vincent in September, resulting in landslides and severe flooding; also in Barbados and Trinidad in November, leading to widespread flooding and extensive road damage.

SON 2014 Precipitation



WHAT NEXT?

January - February - March 2015

Consensus Outlook

Early dry season in some islands & E Guianas possibly drier than usual; cool across the region

+ impacts

limited heat stress

- impacts

areas with reduced recharge of large/deep water reservoirs during 2014 may see drought evolving or aggravating in early 2015, in particular Cayman & Jamaica

Our typical JFM rainfall patterns

1. Belize:

JAN start of dry season; occasionally still wet
FEB+ dry season; mostly without heavy rainfall.
MAR

2. Islands north of 16°N:

JAN+ dry season; alternation of sunny and
FEB+ showery days, mostly without heavy
MAR rainfall.

3. Islands south of 16°N:

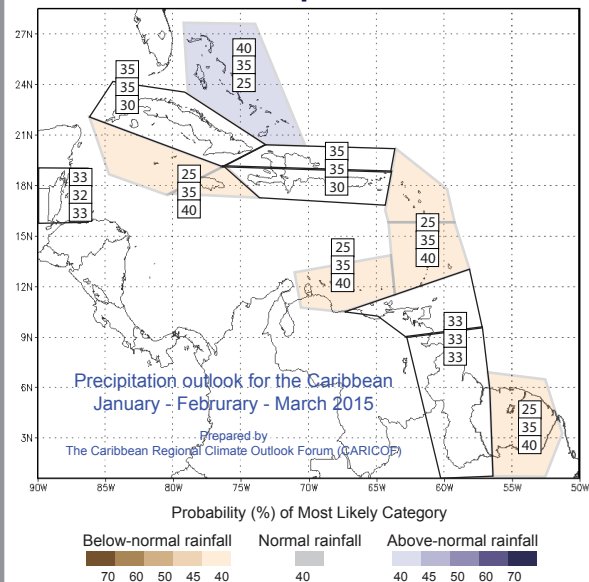
JAN+ dry season; alternation of sunny and,
FEB+ showery days, mostly without heavy
MAR rainfall.

*Note Wet season in ABC Islands ends in Jan;
Feb usually drier, Mar usually dry.*

4. Guianas:

JAN wet season; frequent heavy rainfall and
thunderstorms
FEB+ dry season; occasional heavy rainfall and
MAR thunderstorms.

JFM 2015 Precipitation Outlook



JFM rainfall in the Caribbean is likely to be below- to normal in the ABC Islands, Barbados, Cayman, eastern Guianas, Jamaica and the Leeward and Windward Islands. Note that rainfall is hardly predictable at present in other areas.

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

Climate outlook

January - February - March

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

Rainfall **ABC Islands, Barbados, Cayman, eastern Guianas, Leeward & Windward Islands:** below- to normal; confidence 75%. **Bahamas, Turks & Caicos:** above- to normal; confidence 75%. **Cuba, Hispaniola, Puerto Rico & US Virgin Islands:** above- or normal; confidence 70%. **Elsewhere:** equal chances for below-, above- or normal.

Temperature **southern Hispaniola, Leeward Islands, Puerto Rico, Trinidad & Tobago, US Virgin Islands:** above- to normal; confidence 80%. **ABC Islands, Barbados, Cayman, eastern Guianas, Jamaica, Leeward Islands:** above- to normal; confidence 80%. **western Guianas:** above- to normal; confidence 75%. **Elsewhere:** equal chances.

Drought conditions October to March

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

Drought situation: Cayman, Jamaica, Haïti and, to a lesser extent, part of the Windward Islands are in drought and have suffered water shortages.

Drought alert levels: **Drought warning:** drought is evolving in many portions of the Antilles and Guianas. Be prepared. **Drought watch:** most other areas. Keep updated.

Long-term concern: Water shortages may occur in portions of the Antilles during the dry season, Especially in Cayman, Haïti and Jamaica.

April - May - June

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

Rainfall **ABC Islands, Bahamas, Barbados, eastern Guianas, Leeward Islands, Turks & Caicos, Windward Islands:** above- to normal; confidence 75%. **Cuba:** below- to normal; confidence 75%. **Cayman, Hispaniola, Jamaica, Puerto Rico, US Virgin Islands:** above- or normal; confidence 70%. **Elsewhere:** equal chances.

Temperature **Antilles and Guianas:** above- to normal; confidence 80%. **Belize:** equal chances.

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: ENSO neutral; sea-surface temperatures (SSTs) nearly 0.9°C above average in equatorial eastern Pacific (NINO3.4).

Model guidance: a majority indicate continued 0.5-1.0°C above average SSTs for JFM and AMJ, which is called a weak El Niño event.

Forecast: 60-70% confidence in El Niño conditions during JFM and 50-60% confidence in AMJ.

Expected impacts on rainfall and temperatures: a small shift to higher probabilities for below-normal rainfall and higher temperatures south of 20°N for JFM. In AMJ period, El Niño may shift the onset of the wet season in the eastern Caribbean. Models are not clear on the direction of this shift, with most CariCOF statistical models indicating an early onset, while dynamical models indicate a late onset of the wet season at this time.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs 1°C above-average north and north-east, but average east of the Caribbean; trade winds fluctuating around average.

Expected conditions: Some cooling expected; trade winds strength hardly predictable, but might be stronger over ABC and Windward Islands.

Expected impacts: Slightly warmer Atlantic temperatures promote deeper atmospheric convection, potentially increasing 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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