



Caribbean climate outlook December 2014 to May 2015

CariCOF - The Caribbean Climate Outlook Forum

WHAT HAPPENED?

August - September - October (ASO) 2014

Very dry in E Jamaica, Haïti, W Martinique; dry in E Caribbean; hot days and nights

+ impacts

little water-bourne diseases outbreaks in dry areas

- impacts

water shortage in Haïti and E Jamaica; elevated heat stress, flood damage, and vector-bourne disease outbreaks

Notable climate events - August to October 2014

- Record low rainfall over September and October combined at Nickerie, Suriname, with 12.2mm (10% of average)..

Summary

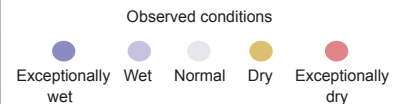
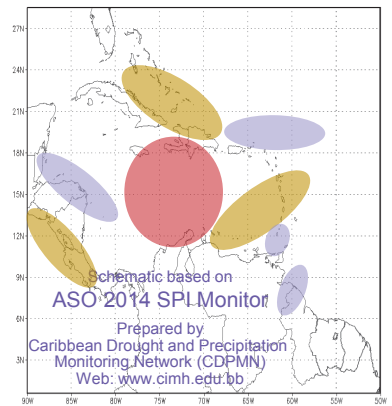
- August dry in ABC Islands, Anguilla and Belize; wet in Puerto Rico, St. Croix, St. Kitts, US Virgin Islands, W & E Cuba. September very dry in Eastern Guyana and eastern Jamaica; dry in Anguilla, Antigua, Dominica, St. Martin and Tobago; very wet in parts of coastal French Guiana, wet in Belize, Grenada 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.

- Hot at night and during daytime, especially toward the end of September, near- to above-normal temperatures across the Caribbean.

Headline Impacts

- Repeated torrential rains affected communities in St. Vincent in September, resulting in landslides and severe flooding in Kingstown and several other communities.

ASO 2014 Precipitation



WHAT NEXT?

December 2014 / January - February 2015

Consensus Outlook

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

+ impacts

reduced heat stress; little drought impacts in areas that are not currently facing drought

- impacts

areas with reduced recharge of large/deep water reservoirs during 2014 may see drought evolving in early 2015

Our typical DJF rainfall patterns

1. Belize:

DEC occasionally wet or dry
JAN start of dry season; occasionally still wet
FEB dry season; mostly without heavy rainfall.

2. Islands north of 16°N:

DEC dry season moving in from NW to SE; occasional heavy rainfall
JAN+ alternation of sunny and showery days,
FEB mostly without heavy rainfall.

3. Islands south of 16°N:

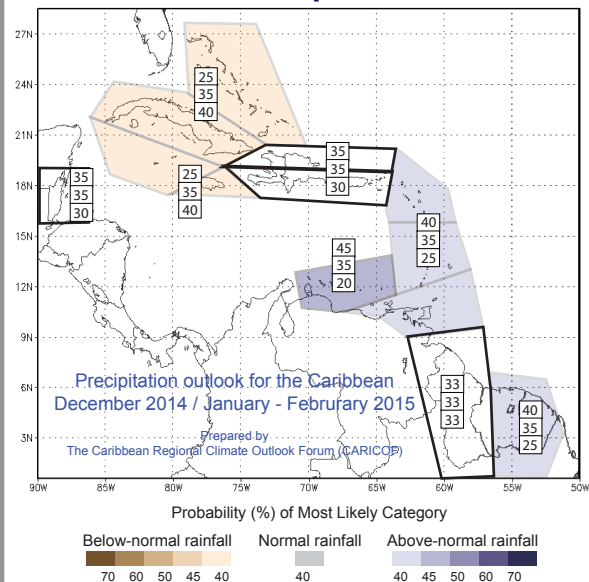
DEC drying trend into the dry season
JAN+ alternation of sunny and showery days,
FEB mostly without heavy rainfall.

Note Wet season in ABC Islands in Dec-Jan; Feb usually drier.

4. Guianas:

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

DJF 2014-5 Precipitation Outlook



DJF rainfall in the Caribbean is likely to be above- to normal in much of the eastern half of the Caribbean, and below- to normal in the Bahamas, Cayman, Jamaica and Turks & Caicos Islands. Note that rainfall is hardly predictable at present in other areas.

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

Climate outlook

December - January - February

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

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

Temperature **Cayman, Jamaica, southern Hispaniola, Puerto Rico, US Virgin Islands:** above- to normal; confidence 90%. **Leeward Islands:** above- to normal; confidence 80%. **ABC Islands, Barbados, eastern Guianas, Windward Islands:** above- to normal; confidence 80%. **Belize, western Guianas, Trinidad & Tobago:** above- to normal; confidence 75%. **Cuba:** above- to normal; confidence 70%.

Drought conditions September to February

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

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

Drought alert levels: **Drought warning:** drought is evolving over E Jamaica, Puerto Rico and portions of the Leeward and Windward Islands. 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, Jamaica, and E Caribbean.

March - April - May

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

Rainfall **Barbados, Windward Islands:** above- to normal; confidence 70%. **Bahamas, Cuba, Hispaniola, Puerto Rico, Turks & Caicos, US Virgin Islands:** above- or normal; confidence 70%. **Elsewhere:** equal chances.

Temperature **Windward Islands, Trinidad & Tobago:** above- to normal; confidence 80%. **Elsewhere:** above- to normal; confidence 80%.

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: ENSO neutral; sea-surface temperatures (SSTs) nearly 0.8°C above average in equatorial eastern Pacific (NINO3.4).

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

Forecast: 55-70% confidence in El Niño conditions during DJF and MAM.

Expected impacts on rainfall and temperatures: a small shift to higher probabilities for below-normal rainfall and higher temperatures south of 20°N for DJF and MAM. In the latter period, El Niño usually delays the onset of the wet season in the eastern Caribbean, but increases chances for above-normal rainfall in the Greater Antilles and the Bahamas.

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 grow stronger, over ABC 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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