



# Caribbean climate outlook November 2014 to April 2015

**CariCOF** - The Caribbean Climate Outlook Forum

## WHAT HAPPENED?

## July - August - September (JAS) 2014

Very dry in St. Martin, Haïti, Martinique; dry in Belize, Cayman, Jamaica, north-eastern Caribbean; hot days and nights

### + impacts

little water-bourne diseases outbreaks

### - impacts

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

### Notable climate events - July to September 2014

- Record low rainfall at Spanish Lookout, SW Belize and Marigot, St. Martin, with 290.1 mm (55% of average) and 110.7mm (28% of average), resp.
- Record rainfall at Zanderij, N Suriname, with 760mm (155% of average).

### Summary

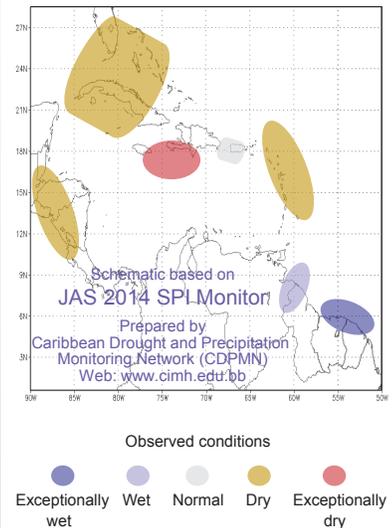
- July very dry in Belize, Cuba, Jamaica and the Leeward Islands, dry in the southern Caribbean islands; wet in northern Guyana. August dry in ABC Islands, Anguilla and Belize; wet in Puerto Rico, St. Croix, St. Kitts, US Virgin Islands, W & E Cuba. September very dry in Eastern Guyana and Eastern Jamaica; 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.

- 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..

## JAS 2014 Precipitation



## WHAT NEXT?

## November - December 2014 / January 2015

### Consensus Outlook

Transition between wet and dry season in some islands 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 NDJ rainfall patterns

#### 1. Belize:

NOV + wet; occasional tropical storm or hurricane  
DEC  
JAN start of dry season; occasionally still wet.

#### 2. Islands north of 16°N:

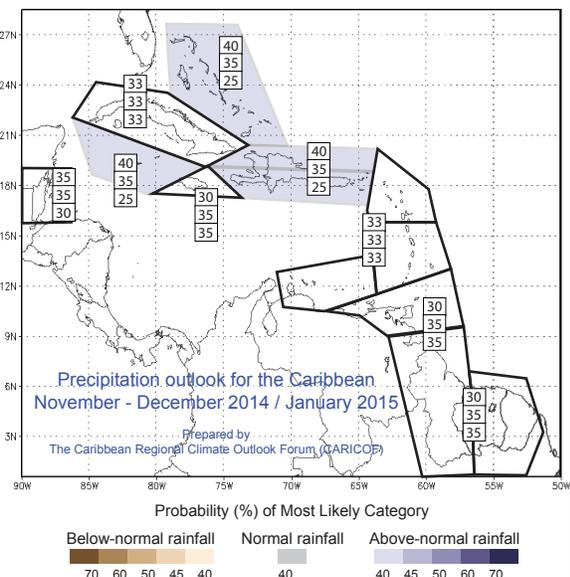
NOV start of dry season in Bahamas and Cuba; wet from Jamaica eastwards; occasional tropical storm or hurricane  
DEC dry season moving in from NW to SE; occasional heavy rainfall  
JAN alternation of sunny and showery days, mostly without heavy rainfall.

#### 3. Islands south of 16°N:

NOV wet, frequent heavy rainfall, occasional tropical storms and hurricanes  
DEC less wet, start of the dry season  
JAN alternation of sunny and showery days, mostly without heavy rainfall  
Note Wet season in ABC Islands in Dec-Jan.

#### 4. Guianas:

NOV increasingly frequent heavy rainfall, occasional dry spell  
DEC+ wet season; frequent heavy rainfall and thunderstorms,  
JAN



NDJ rainfall in the Caribbean is likely to be above- to normal in the Bahamas, Cayman, Hispaniola, Puerto Rico, Turks and Caicos and the Virgin Islands. Note that rainfall is hardly predictable at present in other areas.

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

## Climate outlook

### November - December - January

(NDJ temperature outlook map available at [www.cimh.edu.bb/?p=precipoutlook](http://www.cimh.edu.bb/?p=precipoutlook))

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

**Temperature** **Jamaica, southern Hispaniola, Puerto Rico, US Virgin Islands:** above- to normal; confidence 80%. **ABC Islands, Barbados, Belize, Cayman, Leeward Islands, Windward Islands:** above- to normal; confidence 80%. **Elsewhere:** above- to normal; confidence 75%.

### Drought conditions August to January

(ASONDJ drought outlook available at [www.cimh.edu.bb/?p=precipoutlook](http://www.cimh.edu.bb/?p=precipoutlook))

**Drought situation:** Haïti, Jamaica and the leeward side of Martinique and St. Martin are in drought and have suffered water shortages.

**Drought alert levels:** **Drought warning:** drought is evolving over SW Belize and Cayman, Be prepared. **Drought watch:** nearly all other areas. Keep updated.

**Long-term concern:** Reduced water availability in the dry season, especially in parts of Belize, Cayman, Haïti, Jamaica, Eastern and Southern Caribbean.

### February - March - April

(FMA precip. and temp. outlook maps available at [www.cimh.edu.bb/?p=precipoutlook](http://www.cimh.edu.bb/?p=precipoutlook))

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

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

## What influences the next season?

### El Niño Southern Oscillation (ENSO)

**Recent observations:** ENSO neutral; sea-surface temperatures (SSTs) nearly 0.5°C above average in equatorial eastern Pacific (NINO3.4).

**Model guidance:** a majority indicate upward trend to 0.5-1.0°C above average for NDJ and FMA, or a weak El Niño event.

**Forecast:** 60-65% confidence in El Niño conditions during NDJ and FMA.

**Expected impacts on rainfall and temperatures:** a small shift to higher probabilities for below-normal rainfall and higher temperatures south of 20°N for NDJ and FMA. In the latter period, El Niño usually 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 0-1°C above-average in Caribbean Sea and Tropical North Atlantic; trade winds weaker than average since August.

**Expected conditions:** Not much change in SST expected; trade winds strength hardly predictable, but might grow stronger, over ABC Islands.

**Expected impacts:** Slightly warmer Atlantic temperatures in transition period between wet and dry season promotes deeper atmospheric convection, potentially increasing precipitation in this season, especially in the eastern Caribbean.

## 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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