



# Caribbean climate outlook September 2015 to February 2016

**CariCOF** - The Caribbean Climate Outlook Forum

## WHAT HAPPENED?

## May - June - July (MJJ) 2015

Dry to very dry in most of the Islands; very wet in Guyana; hot temperatures

### + impacts

Positive discussions on drought mitigation strategies

### - impacts

Water shortages in Antigua & Barbuda, Jamaica, Puerto Rico, St. Lucia; reduced crop production and livestock

### Notable climate events - May to July 2015

- Observed rainfall records: **Dry** - MJJ: 3 stations in Barbados, 1 in Belize, 5 in Dom. Rep., 1 in Guadeloupe, 5 in Jamaica, 4 in Leewards, 1 in Puerto Rico (9-51% of avg.). July: 2 stns in Belize, 5 in Dom. Rep., 3 in Jamaica, 3 in Leewards, 1 in Puerto Rico.

**Wet** - MJJ: 1 stn in French Guiana, 3 in Guyana. (141-186% of avg) July: 3 stns in Guyana.

### Summary

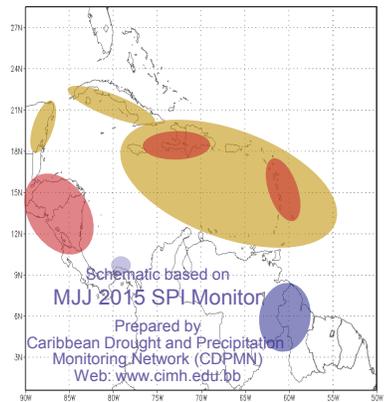
- May: very wet in W & E Guianas; very dry in Dominica, St. Kitts & St. Lucia.  
 - June: very wet in W Guyana; very dry in Dominica, S Dom. Rep. & Jamaica.  
 - July: Very wet in Guyana; very dry in Barbados, N Belize, central Cuba, Dominica, S&E Dom. Rep, Grand Cayman, W Jamaica, Leewards, Puerto Rico and Tobago.

- Temperatures July- normal to above-normal across the Caribbean.

### Headline Impacts

- Prevailing drought across the Caribbean affecting the agriculture sector in Anguilla, Antigua, Cuba, Jamaica, St. Kitts and Nevis and St. Lucia.
- Livestock severely affected in Cuba due to drought.
- Water shortages in Antigua and Barbuda, Jamaica, Puerto Rico & St. Lucia.
- High incidences of bushfires in Antigua and Dominica.

## MJJ 2015 Precipitation



Schematic based on  
**MJJ 2015 SPI Monitor**  
 Prepared by  
 Caribbean Drought and Precipitation  
 Monitoring Network (CDPMN)  
 Web: www.cimh.edu.bb

## WHAT NEXT?

## September - October - November (SON) 2015

### Consensus Outlook

Wet season drier than usual in Antilles, with fewer wet days and wet spells; dry season drier than usual in Guianas; generally hot.

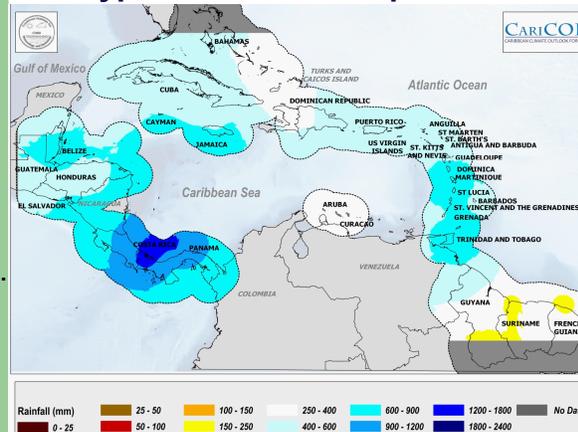
### + impacts

some short-term drought relief, limited water-related pests, epidemics and flood potential

### - impacts

long-term drought remaining in parts the Islands; heat stress

### Our typical SON rainfall patterns



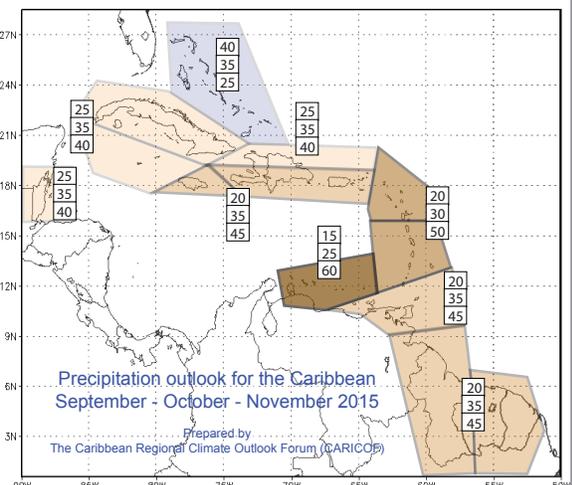
**Belize & Caribbean Islands north of 16°N:**  
 Sep to Nov - wet season. Usually frequent heavy showers.

**Caribbean Islands south of 16°N (except ABC Islands):**  
 Sep to Nov - wet season. Usually frequent heavy showers.

*ABC Islands: mostly dry with occasional wet spells.*

**Guianas:**  
 Sep to Oct - Dry season with heavy showers at times.  
 November - Increase in showers.

### SON 2015 Precipitation Outlook



SON rainfall in the Caribbean is likely to be below- to normal across the Caribbean (except for Bahamas), with fewer wet days and wet spells than usual.

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

## Climate outlook

September - October - November *(SON temperature, wet days and wet spells outlook maps available at [rcc.cimh.edu.bb](http://rcc.cimh.edu.bb))*

**Rainfall** **ABC Islands:** below- to normal, confidence 85%, **Barbados, Leewards, Windwards:** below- to normal, confidence 80%. **Guianas, S Hispaniola, Jamaica, Trinidad & Tobago, US C'bean Terr.:** below- to normal; confidence 80%. **Belize, Cayman, Cuba, N Hispaniola:** below- to normal; confidence 75%. **Elsewhere:** above- or normal; confidence 75%.

**Temperature** **Leewards:** above- to normal; confidence 85%. **Cayman, Jamaica:** above- to normal, confidence 85%. **ABC Islands, Barbados, Windwards:** above- to normal; confidence 80%. **Bahamas, Belize, W Guianas, Hispaniola, Trinidad & Tobago, Turks & Caicos, US C'bean Terr.:** below- to normal, 80% confidence. **Elsewhere:** above- or normal; confidence 75%.

Drought conditions up to November *(Drought outlook available at [rcc.cimh.edu.bb](http://rcc.cimh.edu.bb))*

**Drought situation:** South-eastern Jamaica, Haïti, many of the Leewards & Windwards, Dominica, St. Lucia are in long-term drought and (as of August 1) have suffered water shortages. Barbados, the Leewards and parts of the Windwards are in short-term drought.

**Drought alert levels:** **Drought warning:** Some of the Leewards, Martinique and Tobago.

**Long-term concern:** Water shortages may persist throughout the wet season, especially in St. Lucia and some of the Leeward Islands.

December - January - February *(DJF precip. and temp. outlook maps available at [rcc.cimh.edu.bb](http://rcc.cimh.edu.bb))*

**Rainfall** **ABC Islands** below- to normal, confidence 80%. **Barbados, W Guianas, Trinidad & Tobago, Windwards:** below- to normal, confidence 80%. **Bahamas, Cuba, Turks & Caicos:** above- to normal; confidence 80%. **E Guianas, Leewards:** below- or normal; confidence 75%. **Belize, Cayman:** above- to normal; confidence 75%. **Elsewhere:** above- or normal; confidence 70%.

**Temperature** **Guianas:** above- to normal; confidence 90%. **ABC Islands, Trinidad & Tobago:** above- to normal, confidence 90%. **Barbados, Leewards, Windwards:** above- to normal; confidence 85%. **Cayman, Hispaniola, Jamaica, US C'bean Terr.:** above- to normal; confidence 80%. **Elsewhere:** above- to normal; confidence 75%.

## What influences the next season?

### El Niño Southern Oscillation (ENSO)

**Recent observations:** strong El Niño; sea-surface temperatures (SSTs) 1.5-2°C above avg. & rising in equatorial eastern Pacific (NINO3.4).

**Model guidance:** 95-99% of the models indicate continued El Niño conditions for SON & DJF with many suggesting further warming.

**Forecast:** More than 95% confidence in El Niño conditions during SON and DJF.

**Expected impacts on rainfall and temperatures:** a large shift to higher probabilities for below-normal rainfall and higher temperatures for the region, as El Niño usually weakens the development of rain-, thunder- and tropical storms. However, a shift towards above-normal rainfall is noted for the NW of the Caribbean during DJF due to reduced winds in the upper atmosphere, which allows for stronger showers.

### Climate conditions in the Tropical North Atlantic and Caribbean

**Recent observations:** SSTs 0.5-1°C above-average north of the Caribbean, -1°C to average further southeast; trade wind speed below avg.

**Expected conditions:** SST anomalies expected to warm up towards the southeast; strength of trade winds hardly predictable in most areas, but expected to be stronger over the ABC Islands as a result of the El Niño.

## 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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