



Caribbean climate outlook September 2014 to February 2015

CariCOF - The Caribbean Climate Outlook Forum

WHAT HAPPENED?

May - June - July (MJJ) 2014

Very dry in southern Haiti, Jamaica, dry in the ABC Islands and eastern Caribbean islands; hot days and increasingly hot nights

+ impacts

little water-bourne diseases outbreaks

- impacts

growing water shortage in Haiti, Jamaica and Eastern Caribbean; increasing heat stress

Notable climate events

- May near-record dry in Barbados with 8.1mm and 10.3mm at the two main weather stations.
- No rainfall from June up until mid-July in many places in southern Jamaica.

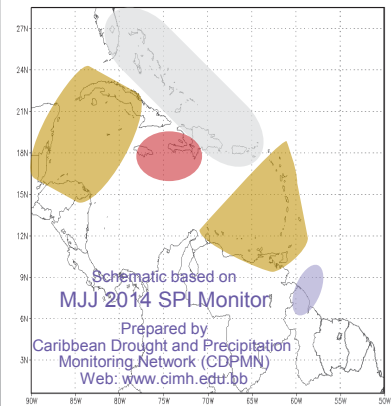
Summary

- May dry in Grenada, St. Lucia and St. Vincent and very dry in Barbados and eastern Guyana; wet in US territories. June dry in Barbados, Grenada and St. Lucia and very dry in Jamaica and St. Croix; very wet in Western Guyana. July very dry in Belize, Cuba, Jamaica and the Leeward Islands, dry in the southern Caribbean islands; wet in northern Guyana.
- Increasingly hot at night from May to July, near to above-average temperatures across the Caribbean.

Headline Impacts

- Drought severely affected parts of (i) Jamaica, with US\$3000/month spent on trucking water to Clarendon residents, elevating food prices; (ii) Antigua, where water supplier SembCorp will provide 200,000 additional gallons daily; (iii) St. Lucia, where government declared a water crisis.
- Hundreds of acres of farmland in St. Elizabeth, Jamaica were destroyed by fire which worsened due to severe drought conditions.

MJJ 2014 Precipitation



Observed conditions

- Exceptionally wet (blue circle)
- Wet (light blue circle)
- Normal (white circle)
- Dry (yellow circle)
- Exceptionally dry (red circle)

WHAT NEXT?

September - October - November (SON) 2014

Consensus Outlook

Wet season in most islands possibly drier than usual, ABC Islands dry; hot across the region

+ impacts

long-term flooding risk relatively low in most of the region

- impacts

elevated heat stress, especially in drier areas; potential reduced recharge of water reservoirs

Our typical SON rainfall patterns

1. Belize:

- SEP + wettest months, most frequent tropical storms, hurricanes and extreme rainfall events
- OCT
- NOV wet, less frequent tropical storms and hurricanes

2. Islands north of 16°N:

- SEP + wettest months; most frequent tropical storms, hurricanes and extreme rainfall events
- OCT
- NOV wet, occasional tropical storm or hurricane

3. Islands south of 16°N:

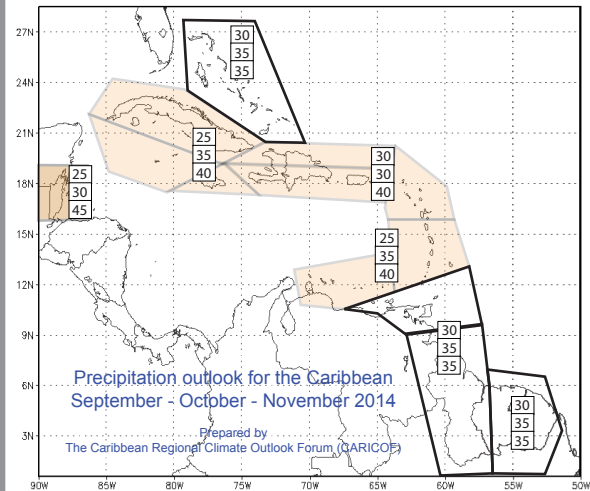
- SEP wet, frequent heavy rainfall; most frequent tropical storms and hurricanes
- OCT wettest month, frequent heavy rainfall, frequent tropical storms and hurricanes
- NOV wet, frequent heavy rainfall, occasional tropical storm or hurricane

Note The ABC Islands are in the latter part of their dry season, very little rainfall

4. Guianas:

- SEP + dry season, frequent dry spells, occasional
- OCT + heavy rainfall
- NOV

SON 2014 Precipitation Outlook



Probability (%) of Most Likely Category

- Below-normal rainfall (brown): 70, 60, 50, 45, 40
- Normal rainfall (white): 40
- Above-normal rainfall (blue): 40, 45, 50, 60, 70

SON rainfall in the Caribbean is likely to be below- to normal with the highest confidence in Belize. Note that it is hardly predictable at present in the Bahamas and the Turks and Caicos Islands, Trinidad and Tobago and the Guianas.

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

Climate outlook

September - October - November

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

Rainfall **Belize:** below- to normal; confidence 75%. **ABC Islands, Barbados, Cayman, Cuba, Jamaica, Windward Islands:** below- to normal; confidence 75%. **Hispaniola, Puerto Rico, US Virgin Islands, Leeward Islands:** below- to normal; confidence 70%. **Elsewhere:** below- or normal; confidence 70%.

Temperature **ABC Islands, Barbados, Cayman, Jamaica, Trinidad & Tobago, Windward Islands:** above- to normal; confidence 80%. **Belize, Guianas, southern Hispaniola, Leeward Islands, Puerto Rico, US Virgin Islands:** above- to normal; confidence 75%. **Elsewhere:** no forecast issued.

Drought conditions May to October

(JJASON drought alert map available at www.cimh.edu.bb/?p=precipoutlook)

Drought situation: Southern Jamaica, Antigua, St. Lucia and Trinidad & Tobago have suffered water shortages.

Drought alert levels: **Drought warning:** drought is evolving over Belize, Jamaica, Antigua, Dominica, Martinique, St. Lucia, St. Vincent, Barbados, Trinidad & Tobago, northern Guyana. Be prepared. **Drought watch:** nearly all other areas. Keep updated.

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

December - January - February

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

Rainfall **ABC Islands, Barbados, Guyana, Trinidad & Tobago, Windward Islands:** below- to normal; confidence 75%. **Suriname:** below- to normal; confidence 75%. **Bahamas, Cuba, northern Hispaniola, Turks & Caicos:** above- to normal; confidence 75%. **Leeward Islands:** below- to normal; confidence 70%. **Elsewhere:** above- or normal; confidence 70%.

Temperature **ABC Islands, Barbados, Belize, Cayman, eastern Guianas, southern Hispaniola, Jamaica, Leeward Islands, Puerto Rico, Trinidad & Tobago, US Virgin Islands, Windward Islands:** above- to normal; confidence 80%. **Western Guianas:** above- to normal; confidence 75%. **Elsewhere:** no forecast issued.

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: ENSO neutral; sea-surface temperatures (SSTs) were 0-0.5°C above average in equatorial eastern Pacific (NINO3.4).

Model guidance: a majority indicate upward trend to 0.5-1.5°C above average for SON and DJF, or a weak to moderate El Niño event.

Forecast: 60% confidence in El Niño conditions by SON, 67% confidence in El Niño during DJF.

Expected impacts on rainfall and temperatures: a shift to higher probabilities for below-normal rainfall and higher temperatures south of 20°N for SON and, especially, DJF.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs around to below-average in the Caribbean Sea and Tropical North Atlantic; trade winds around average since April.

Expected conditions: Not much change in SST is expected except slight warming north of the Greater Antilles; trade winds strength is hardly predictable, but might return to stronger than average, especially over the ABC Islands in DJF.

Expected impacts: Cooler Atlantic temperatures this wet season (compared to previous years) slow down deep atmospheric convection, potentially reducing the severity of storm-related property damage. The signal is for decreased precipitation 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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