Caribbean climate outlook October 2014 to March 2015

CariCOF - The Caribbean Climate Outlook Forum

WHAT HAPPENED? June - July - August (JJA) 2014

Very dry in southern Belize, Haïti, Jamaica; dry in ABC Islands and eastern Caribbean; hot days and increasingly hot nights

+ impacts

little water-bourne diseases outbreaks

- impacts

water shortage in Haïti, Jamaica and eastern Caribbean; rising heat stress & vector-bourne disease outbreaks

Notable climate events

- No rainfall from June up until mid-July in many places in southern Jamaica.
- Record low rainfall in parts of Belize from June-August, with less than 10 % of the average in June at PG airport station (20.1 mm).

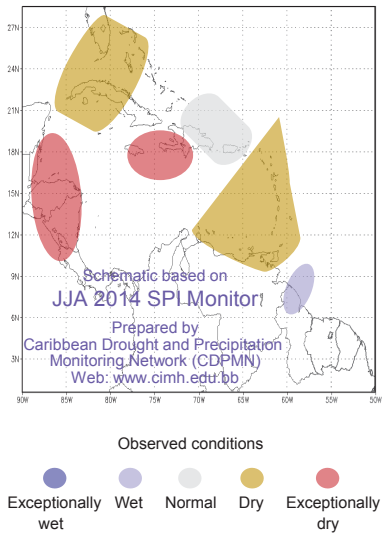
Summary

- 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. August dry in ABC Islands, Anguilla and Belize; wet in Puerto Rico, St. Croix, St. Kitts, US Virgin Islands, W & E Cuba.
- Hot at night and inreasingly hot during daytime from June to August, near- to above-normal temperatures across the Caribbean.

Headline Impacts

- Drought severely affected Jamaica, with USD$ 8.5 million losses in the agriculture sector, 2190 hectares of crops lost, hundreds of hectares destroyed by fire in St. Elizabeth worsened due to severe drought, all in all affecting 18,000 farmers.

JJA 2014 Precipitation



WHAT NEXT? October - November - December (OND) 2014

Consensus Outlook

Transition between wet and dry season in most islands possibly drier than usual; initially hot across the region

+ impacts

long-term flooding risk slightly lower in most of the region

- impacts

elevated heat stress at first, especially in drier areas; reduced recharge of large/deep water reservoirs ahead of the dry season

Our typical OND rainfall patterns

1. **Belize:**

OCT very wet; frequent tropical storms, hurricanes and extreme rainfall events

NOV + DEC wet; occasional tropical storm or hurricane

2. **Islands north of 16ºN:**

OCT very wet; frequent tropical storms, hurricanes and extreme rainfall events

NOV less wet; occasional tropical storm or hurricane

DEC start of the dry season.

3. **Islands south of 16ºN:**

OCT very wet; frequent heavy rainfall, tropical storms and hurricanes

NOV wet, frequent heavy rainfall, occasional tropical storms and hurricanes

DEC less wet, start of the dry season

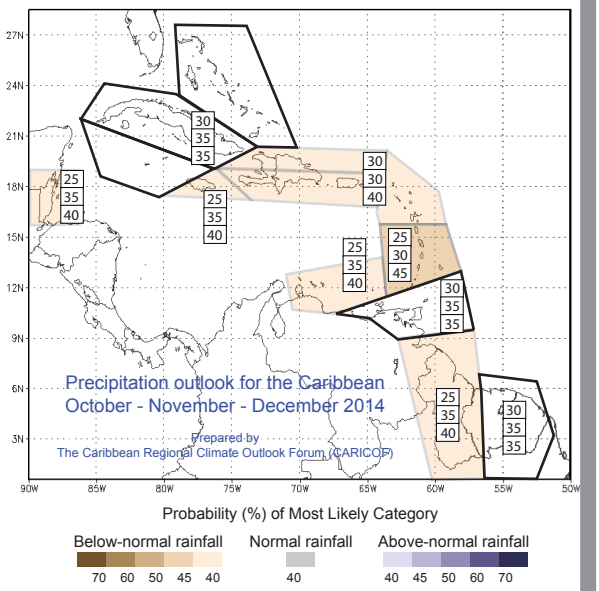
Note The ABC Islands enter their wet season in December.

4. **Guianas:**

OCT + dry season, frequent dry spells, occasional heavy rainfall

NOV increasingly frequent heavy rainfall, occasional dry spell

DEC wet season, frequent heavy rainfall and thunderstorms



OND rainfall in the Caribbean is likely to be below- to normal with the highest confidence in Barbados and the Windward Islands. Note that rainfall is hardly predictable at present in the Bahamas, Cayman, Cuba, eastern parts of the Guianas, the Turks and Caicos Islands, and Trinidad and Tobago.

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

Climate outlook

October - November - December

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

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

Drought conditions July to December

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

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

Drought alert levels: **Drought warning**: drought is evolving over Belize, Dominica and Martinique,,
Other parts of the Antilles and 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, Haïti, Jamaica, Eastern and Southern Caribbean.

January - February - March

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

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

Temperature **Antilles, eastern Guianas**: above- to normal; confidence 80%. **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) 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 OND and JFM, or a weak to moderate El Niño event.
Forecast: 60% confidence in El Niño conditions during OND and JFM.
Expected impacts on rainfall and temperatures: a shift to higher probabilities for below-normal rainfall and higher temperatures south of 20°N for OND and JFM. 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 around to below-average in the Caribbean Sea and Tropical North Atlantic; trade winds above average since April.
Expected conditions: Not much change in SST is expected; trade winds strength is hardly predictable, but might return to stronger than average, especially over the ABC Islands.
Expected impacts: Cooler Atlantic temperatures in this transition period between wet and dry season (as compared to previous years) slow down deep atmospheric convection, potentially reducing the severity of storm-related property damage up until the end of November. 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

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