



**ANNOUNCEMENTS**

The region’s meteorologists and climatologists continue to monitor conditions in the Pacific as El Nino conditions are very likely to build and have implications for the Caribbean. The possible development is reflected in the May to October rainfall forecasts of predominantly normal to below normal amounts over most of the Caribbean. (except for the northwest Caribbean during May to July).

**REGIONAL OVERVIEW ON WEATHER AND CLIMATE FOR APRIL 2014**

The islands of the eastern Caribbean were normal to below normal for the month. Trinidad, Grenada, St. Lucia, Dominica and Antigua were normal; Barbados and St. Vincent moderately dry. Rainfall in Guyana ranged from very wet in the west to normal in the east. Jamaica was predominantly normal apart from the extreme west that was abnormally wet. Belize was dry except for the extreme north that was abnormally dry.

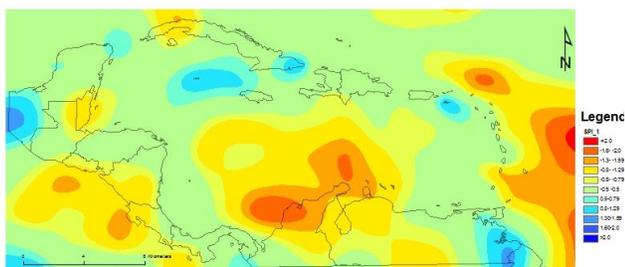


Figure 1. SPI for the Caribbean for April 2014. More information on the SPI can be viewed at <http://63.175.159.26/~cdpmn/spimonitor.html>.

Most annual cropping takes place over a period of about three months. Apart from Grenada that was abnormally wet, the islands of the eastern Caribbean were normal to below normal. Trinidad, St. Vincent, and Dominica were abnormally dry; Tobago, Barbados and St. Lucia normal; Guyana was abnormally wet in the west and normal in the east.

Jamaica was normal; while conditions in Belize ranged from extremely dry in the west to severely wet in the south and to abnormally wet in the north.

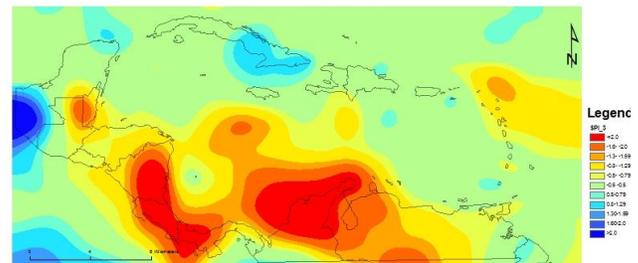


Figure 2. SPI for the Caribbean for February to April 2014. More information on the SPI can be viewed at <http://63.175.159.26/~cdpmn/spimonitor.html>

The region was predominantly influenced by a mid to upper level ridge, along with strong subsidence, and dry and stable air that resulted in fair skies, and an overall lack of any significant convection for most of the month across most of the region. Around the middle of the month, however, the stable conditions gave way to weak instability that produced some showers and broke the dry spell in some countries.

**NATIONAL OVERVIEWS**

**Antigua and Barbuda**

The month of April saw periods of instability and transportation, by the trade winds, of shallow pockets of moisture that resulted in periods of

cloudiness with brief scattered showers across the islands. At V.C Bird Airport, there was 45.3mm of rainfall, which is below the monthly average of 67.1mm. The highest 24hr recorded rainfall was on the 16<sup>th</sup> with 10.5 mm.

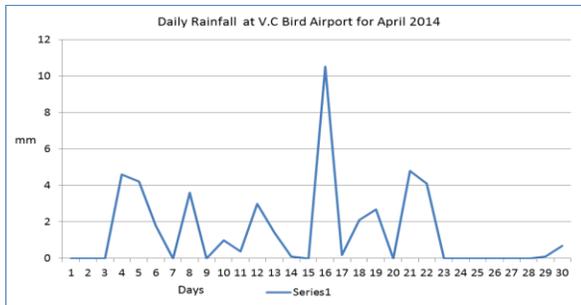


Figure 3 Daily rainfall at VC Bird Airport for April 2014.

The month’s average air temperature recorded at the V.C Bird Int’l Airport was near normal at 25.9°C. The highest maximum of 30.0°C was on the 26<sup>th</sup> while the lowest minimum temperature of 20.9°C was recorded on the 13<sup>th</sup>. The average relative humidity for the month was 71.2%.

Table 1 Weather summary at VC Bird Airport for April 2014.

Weather Summary for April at V.C Bird Int’l Airport	
Temperature (°C)	
Absolute Maximum	30.0
Mean Daily Maximum	28.9
Mean Daily	25.9
Mean Daily Minimum	23.3
Absolute Minimum	20.9
Warmest Day	26.8
Coollest Day	25.0
Rainfall (totals in mm)	
Total	44.6
Rainiest Day	10.5
Measurable Rainfall Day (rainfall ≥0.1mm)	16
Days ≥1.0 mm	13
Days ≥ 10.0 mm	01
Days ≥20.0 mm	0

The month of April was challenging due to the effect of the dry conditions and the water rationing, although, some farmers still harvested food to the market like onion, carrot, beet, tomato, sweet pepper, corn, cucumber, butternut squash, cassava, melon, seasoning pepper, lettuce, spinach, okra and many other vegetables or crops. Some have been planted before the dry period earlier in the year or last year. The effect of the dryness has significantly reduced the production of a follow up crop and as well many farmers are doing nothing but awaiting

the rains. Farmers in the North East of the Island are greatly affected by the condition. Most of the water catchments are dry, land cracking due to lack of moisture, along with lost of crops, which means lost of income to some farmers. The month saw the abundant supply of tomatoes and onion. Farmers have used the month to prepare the land in anticipation of increasing rains in May. Cases of disease and pest attack are very low during April most especially worm attack, due to the dry weather.

**Barbados**

This was the 8<sup>th</sup> driest April based on records since 1942, with the rainfall total of 12.3mm being only 20% of the long-term average at Grantley Adams Airport. This compares with April, 2013 (153.4mm) being the second wettest. There were just three rain days (≥1mm), which produced 4.4mm on the 12<sup>th</sup>, 5.4mm on the 17<sup>th</sup> and 1.0mm on 19<sup>th</sup>. The cumulative total rainfall for the period January to April 2014 of 166.7mm is 20% below the long-term cumulative average for the period. Meanwhile, Golden Ridge in St. George recorded a total of 17.0mm for April over 8 rain days.

Prevailing easterly to east-northeasterly trade winds during April averaged 27.4km/hr with a 39-45km/hr wind maximum being recorded on the 19<sup>th</sup>. Daytime humidity averaged 71% while during the night time it averaged 79%.

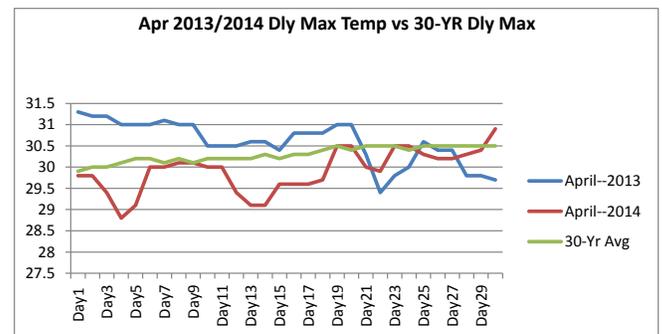


Figure 4 April 2014 daily maximum temperature compared with the average at Grantley Adams Airport.

The temperature averaged 26.7°C while maximum temperatures averaged 30.3°C, the same as the 30-year average (1981-2010). The observed daily maximum temperatures ranged between 28.8°C and 30.1°C during the first eighteen days of the month and between 30.2° and 30.5C for the remainder of the month reaching a high of 30.8°C on the last day

of April. The lowest minimum of 22.8°C occurred on the 13<sup>th</sup> April. Figure 4 shows that maximum temperatures for April, 2014 were generally cooler than both the long-term average and those experienced in April 2013.

### Belize

The month commenced with sunny and dry weather, with gusty surface winds which prevailed for several days during the first week of the month. On the 8<sup>th</sup>, in association with a cold front, small areas of showers were identified in the north and over the Maya Mountains. At midday, showers and thunderstorms near northwestern border areas and southeast to central and southern Belize were also being experienced. The front crossed Belize during the evening with high winds. Several stations recorded winds gusts above 55.6 km/hr. Rainfall was rather light and brief for coastal areas. By the morning of the 9<sup>th</sup> the rain had decreased significantly and mild morning temperatures were the only evidence of a frontal passage the previous night. Cloudy and cool weather characterized weather conditions the following day. Low temperatures ranged from 13.5°C at Baldy Beacon in the Mountain Pine Ridge to 19.1°C at the Philip Goldson International Airport. During the afternoon of the 11<sup>th</sup>, a trough induced a few showers along coastal Belize districts, the cayes and inland portions of the Corozal district. The surface flow was a light east to northeasterly. On the 12<sup>th</sup>, skies remained cloudy in the south of the country and early morning showers occurred at Belize City and Ladyville. By day's end, however, most of the country experienced sunny weather.

Sunny and mostly dry started off the week of the 13<sup>th</sup>. On 16<sup>th</sup>, cloudy skies and showers prevailed over northern, western and central Belize. Rainfall was particularly intense over northern Belize where Libertad recorded 72.3mm. La Democracias in central Belize district recorded 32.3mm. Weather conditions improved generally on 17<sup>th</sup> and 18<sup>th</sup>. Several showers occurred along coastal and central Belize on 19<sup>th</sup> morning associated with another cold front. Several showers occurred in the south of the country late on the 20<sup>th</sup> and the following morning. The northern portion of the country enjoyed much better weather. Warm and dry weather persisted throughout the country until the 27<sup>th</sup>.

Gusty southeasterly surface flow produced hot and hazy weather during 28<sup>th</sup>. During the afternoon isolated thunderstorms were experienced over the Vaca Plateau on the southwest slopes of the Mountain Pine Ridge. More isolated thunderstorms developed until the afternoon of the 30<sup>th</sup> in the same general location.

Table 2 Rainfall and Temperature Summary for April 2014 for stations in Belize

Station	Libertad	Zoo	PGIA	Belmopan	Central Farm	Savannah
Elevation (m)	12	30	5	90	90	13
<b>Rainfall (mm)</b>	<b>90.2</b>	<b>27.3</b>	<b>9.4</b>	<b>0.0</b>	<b>5.0</b>	<b>30.1</b>
Mean.	34.8.	39.2	55.7	43.0	44.3	46.7
Max	72.3	18.0	6.0		4.2	25.5
Rain days	3	2	2		1	1
<b>Temp (°C)</b>						
Mean Min.	<b>22.2</b>	<b>20.4</b>	<b>24.6</b>	<b>22.1</b>	<b>21.5</b>	<b>23.3</b>
Mean	21.0	21.0	23.5	20.5	20.1	23.3
Lowest Min.	17.5	15.1	19.1	16.5	16.3	18.1
Mean Max.	<b>31.9</b>	<b>33.1</b>	<b>31.3</b>	<b>33.8</b>	<b>34.6</b>	<b>33.6</b>
Mean	33.0	33.8	30.9	32.9	33.4	32.1
Highest Max.	35.2	35.0	34.9	37.6	39.0	35.5

Rainfall values in **Green** represent amounts above the monthly average; Temperature values in **Red** represent means above the monthly average; Temperature values in **Blue** represent means below the monthly average

### Dominica

Rainfall totals ranged from below normal to above normal across the island with occasional breezy conditions.

The Canefield Airport recorded 21% above average rainfall total for April with a total of 66.3mm of rainfall. The highest daily total recorded was 30.0mm on the 21<sup>st</sup>. The number of rainfall days was normal, with 7 days recorded. Dry spells dominated the first and third dekad (ten days) of the month. The average air temperature recorded was 27.7°C and this is 0.2°C below the average. The highest daily temperature recorded was 32.6°C on the 23<sup>rd</sup> with the lowest being 21.1°C on the 3<sup>rd</sup>. The average wind direction was south easterly at an average speed of 7km/hr. The highest wind gust of 56km/hr, which occurred on the 19<sup>th</sup>, was generated during weak unstable conditions across the island.

The Melville Hall Airport recorded 51% below average rainfall with a total of 87.4mm recorded. The highest daily total recorded was 24.1mm on the 21<sup>st</sup>.

The number of rainy days of 10 were down by 5 from the average. Dryspell lengths were the same as that of the Canefield Airport. Average air temperature recorded this month was 27.7°C. The highest temperature recorded was 29.9°C on the 8<sup>th</sup> and the lowest recorded was 19.6°C on the 3<sup>rd</sup>. Winds maintained an east south east direction at an average speed of 15km/hr. The highest wind gust recorded was 65km/hr on the 19<sup>th</sup> and 20<sup>th</sup>.

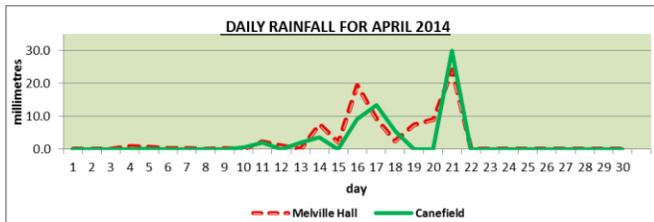


Figure 5 April 2014 daily rainfall at Melville Hall and Canefield

Farmers’ prayers were answered during mid-month when showers of blessing watered the farm lands after days of dry conditions. Though mainly dry, an abundance of tomatoes, cucumbers, pumpkins, herbs, watermelons and plantains were observed at the markets. Irish potato farmers continued harvesting throughout the month. Land preparation for root crops establishment continued in anticipation of the wet season. Irish potato farmers reported Army Worms affecting their produce. There is a high incidence of the Chikungunya Virus, spread by the Aedes Aegypti Mosquito on island. Various measures are being undertaken to help curb its spread.

**Grenada**

During the month Grenada experience mostly fair weather conditions and little rainfall. The highest maximum temperature was 31.1 °C, which took place on the 9<sup>th</sup> and 10<sup>th</sup>. This was the lowest maximum for April during the last ten years. The lowest minimum of 22.5 °C took place on the 18<sup>th</sup> and 19<sup>th</sup> of the month.

On the 8<sup>th</sup>, broken to overcast low and mid-level clouds produced 4.3mm of rainfall. April was relatively dry with a total rainfall of 11mm making it the third driest April in the last ten years. There were twenty-three days of insignificant to no rainfall during the month.

A relatively steep pressure gradient across the Atlantic produced strong winds and moderate to rough seas during the month. Marine advisories were issued by the meteorological office on the 7<sup>th</sup>, 8<sup>th</sup> and 20<sup>th</sup> to small craft operators and sea bathers. Despite these, fisherfolk were able to venture out of port when it was ideal and caught and sold tuna, kingfish, Bonita, small jacks and hind.

The raging dry season did not prevent farmers from producing and selling fruits and vegetables plantain, yams dasheen, Tania’s, cabbage, lettuce and cucumbers at market.

**Guyana**

Across the country there was an average of 11 rainy days and 83.2mm of rainfall in total for the month. Region 2 recorded the highest rainfall total of 127.4mm within an average of 13 rainy days. The highest 24 hour rainfall was recorded at Kaieteur in Region 8 of 71.0mm on the 15<sup>th</sup>. Kaieteur also recorded the highest monthly total with 349.7mm.

The highest mean maximum temperature was recorded at Lethem in Region 9 with 33°C. Lethem also recorded the highest 24 hour temperature with 35.5°C on the 10<sup>th</sup>. The lowest mean minimum temperature was recorded at Kaieteur of 20.8°C, while Timehri recorded the lowest temperature for the month of 19°C on the 5<sup>th</sup>.

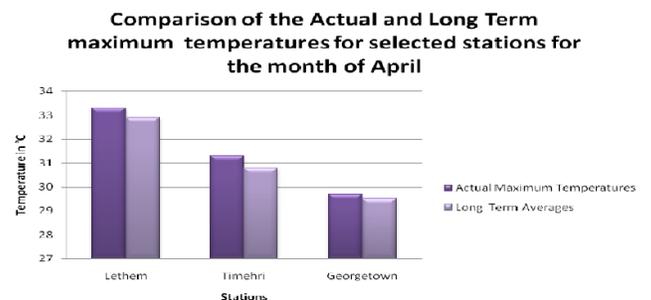


Figure 6 Actual versus longterm average of maximum temperatures for April 2014 in Guyana

**Jamaica**

Surface troughs coupled with a few frontal systems were the dominant weather features across the island during the month of April. Most of the rainfall occurred mainly over western parishes with eastern parishes recording below average. Rainfall data from Sangster International Airport (Sangster) in the northwest indicates above average rainfall while

Norman Manley International Airport (Norman Manley) in the southeast recorded below average.

During the month, Sangster recorded 81.0 mm of rainfall, while Norman Manley recorded 19.2 mm. There were four rainfall days reported for Sangster while only two were reported for Norman Manley during the month. Sangster recorded 30% above the 1971-2000 mean while Norman Manley recorded 60% of its mean for the month of April.

The highest maximum temperature recorded for Sangster Airport was 33.5°C (7<sup>th</sup>) while 33.8°C was reported for Norman Manley Airport on the 10<sup>th</sup>. It was noted that the 20-year mean extreme maximum temperature was exceeded at both airports.

Table 3 Climatological Statistics for Manley and Sangster Airports for April 2014.

Monthly Averages	Norman Manley	Sangster
Extreme Maximum Temperature	33.8 °C <b>(33.2 °C)</b>	33.5 °C <b>(32.8 °C)</b>
Lowest Minimum Temperature	23.4 °C <b>(21.7 °C)</b>	22.1°C <b>(21.1 °C)</b>
Rainfall Total	19.2 mm <b>(30.0)</b>	81.0 mm <b>(62.0)</b>
Rainfall days (≥1mm)	2 days <b>(4.2)</b>	4 days <b>(9.6)</b>

Values in red indicate the 1992-2010(19-year) averages. Values in orange represent 1971-2000 mean.

### St Vincent and the Grenadines

During the month, a warm, dry trend continued across St. Vincent and the Grenadines (SVG). There was an eleven-day dry spell occurring from the 20<sup>th</sup> to 30<sup>th</sup>. Brisk easterly winds were observed throughout most of the month, with the highest wind gust being recorded on the 7<sup>th</sup> at 52 km/hr in the Arnos Vale area. These moderate winds generated moderate sea conditions, with above normal sea swells triggering a few small craft advisories. Sahara dust haze occasionally reduced visibility during the first and third weeks.

A total of 31.6 millimeters was recorded at the E.T. Joshua Airport. This was significantly below the average of 95.9 mm for this station. The highest 24 hour rainfall was a mere 6.8 millimeters, which was recorded on the 19<sup>th</sup>. Rainfall distribution showed the first dekad (ten-day period) had ~30.7%; the second had ~68.7% and the third had ~0.63% of the total rain fall. There were only 8

days with rainfall ≥ 1mm; this was also below the climatological average for this station.

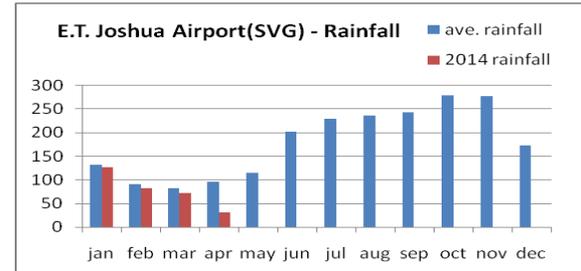


Figure 7 Monthly rainfall at E.T. Joshua Airport until April 2014 and the averages for each month..

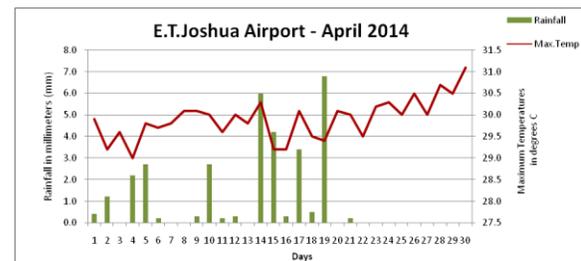


Figure 8 April 2014 daily rainfall and temperature at ET Joshua Airport.

### Trinidad and Tobago

Dry and hot conditions continued its dominance over Trinidad and Tobago’s during the month, with rainfall remaining in the below average category at Piarco and Crown Point. Total rainfall for the month amounted to 38.6 mm or 66% of the 1981-2010 average at Piarco while at Crown Point it totalled 11.5 mm or 28% of the average. Accompanying the hot and dry conditions were higher than average temperatures. At Piarco, mean daily temperatures exceeded the 1981-2010 mean by 0.2 °C to reach a mean of 27.4 °C, while the mean maximum and minimum temperatures were 32.7 °C and 24.0 °C respectively, which exceeded the mean by 0.2 °C and 0.7 °C respectively. At Crown Point similar behavior was observed in the temperatures.

During the first ten days rainfall amounts and frequency improved across Trinidad and Tobago, but remained a concern for the farming community. Ten-day rainfall totals in Trinidad climbed above 10.0 mm for the first time since the first dekad of February with 10.1 mm recorded in the Piarco district, but this may have been greater in other areas, especially in northern Trinidad, the Caroni and Caparo Basins. Ten-day rainfall totals in Tobago reached a high of 10.0 mm in the northeast areas of

the island but remained near 8.0 mm at Crown Point in the southwest.

Rainfall amounts continued to improve across Trinidad during the second ten days, but dry conditions in Tobago intensified. In Trinidad, ten-day rainfall totals surpassed 15.0 mm in districts such as Piarco and Brasso while across the waters in Tobago it totaled only 2.6 mm. The rainfall in Trinidad provided a tremendous boost to water and soil moisture content for agriculture as most areas experienced moderate to heavy showers; on the other hand Tobago was not as fortunate as a strengthening dry weather regime reduced the occurrence of rainfall further. The last ten days of the month saw a return to very dry conditions in Trinidad and even further drying in Tobago. Ten-day rainfall amounted to only 5.5 mm at Piarco while only 1.1 mm was recorded at Crown Point.

With dry weather dominating most of the country, water for agriculture and soil moisture content would have been further eroded during the month. Without adequate water management this would have negatively impacted crop growth and development. In general, the rainfall would not have been sufficient to impact green-up in pastures in any significant way and hence livestock grazing management and alternate feeding methods would have been beneficial. The alternating periods of dry and occasional rain would have increased the potential for the development of pests and diseases but incidence of these would still be at a minimal, given the overall hot and dry conditions.

#### REGIONAL OVERVIEW ON SEASONAL CLIMATE FORECAST

#### ENSO Conditions

ENSO-neutral conditions persist, with Eastern Pacific equatorial Sea Surface Temperatures (SSTs) close to 0°C. However, most models indicate upward trend to about 0.5-1.5°C above average between August and October, initiating an El Niño event potentially as early as between May and July, – a development that the region should continue to monitor closely. Due to ENSO, there is a real chance for a shift to below-normal rainfall south of 20°N for May to July, including a delay of onset of wet

season, with the likelihood for below normal rainfall increasing substantially into August to October. A small shift to above-normal rainfall is suggested further north between May to July.

#### Conditions in the Tropical North Atlantic and Caribbean

SSTs are 0.5-1.5°C above average around the northern islands, and below-average to the east of the Antilles. The above average SSTs are forecasted to remain in the north, while a rise in SST to slightly below-average is expected to the east of the islands by August to October. The atmosphere is expected to continue to contain little moisture for May, gradually increasing into June-July, which marks the usual onset of the wet season. The Trade Winds are currently slightly above average, and are expected to remain stronger than average until August to October. Warm SSTs from around the Cayman Islands to far north-east of the Bahamas is expected to shift rainfall somewhat to above normal. Cool Atlantic temperatures slow down strong convection, thus potentially reducing precipitation, especially in the Eastern Caribbean.

#### May to July 2014

There is a high predictability of normal to below normal rainfall, with greater likelihood for below normal, all across the eastern as well as Belize. The highest certainty for below normal rainfall exists over Barbados, the Windward and the Leeward Islands. Low predictability continues for Guyana and Jamaica, but if anything with a just slightly better than average chance for normal to above normal. The northwest Caribbean would more likely be above normal.

Temperatures are expected to be normal to above normal, with greatest confidence for above normal being in the Lesser Antilles..

#### August to October 2014

Toward August to October, predictability increases for Guyana, and it suggests normal to below normal rainfall for the period, with highest probability for below normal. Though with lower certainty, the remainder of the Caribbean chain and Belize is expected to be normal to below normal.

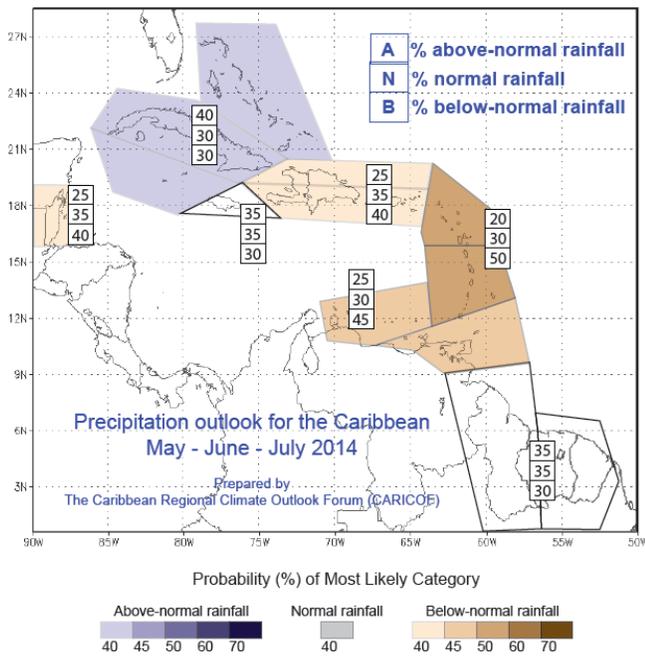


Figure 9 The May to July 2014 rainfall forecast

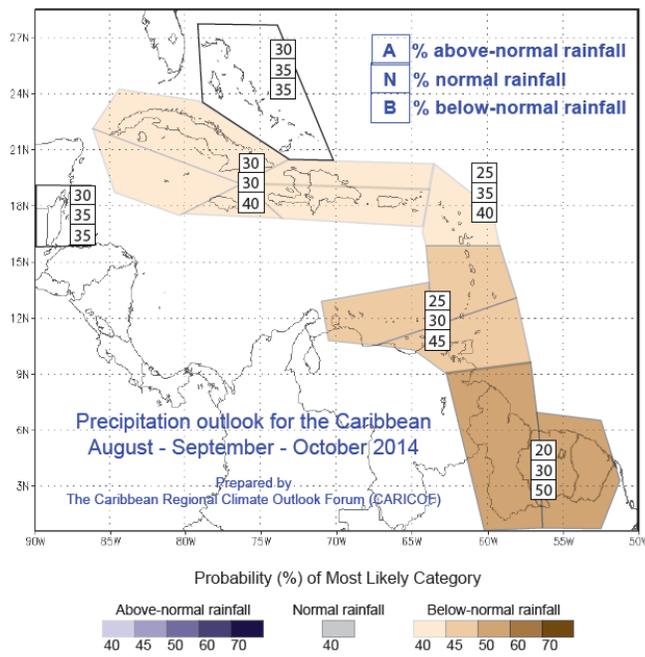


Figure 10 The August to October 2014 rainfall forecast

*Prepared by*

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