

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of March, 2019

### Definitions used in the forecast and bulletin:

Term	Meaning	
Dekad	10 day rainfall measuring period	
Rain Day	A day with 1.0 mm or more of rainfall amount	
Wet Day	A day with 10.0 mm or more rainfall amount	
Extremely Wet Day	A day with 25.0 mm or more of rainfall amount	
Normal Rainfall	Between 75% and 125% of the average	
Below Normal Rainfall	Rainfall below 75% of the average	
Above Normal Rainfall	Rainfall in excess of 125% of the average	
Much Below Normal Rainfall	Rainfall below 50% of the average	
Much Above Normal Rainfall	Rainfall above 150% of the average	
Scanty Rainfall	Less than 1 mm	
Moderate Rainfall	1-10 mm	
Heavy Rainfall	10-50 mm	
Very Heavy Rainfall	Greater than 50 mm	
Probability of 1-30 %	Low Chance	
Probability of 30-70 %	Moderate Chance	
Probability greater than 70 %	High Chance	
Term	Amount of Rain	Type of day
Scanty Rainfall	Less than 1 mm	Relatively dry day
Moderate Rainfall	1-10 mm	Relatively wet day
Heavy Rainfall	10-50 mm	Wet day
Very Heavy Rainfall	Greater than 50 mm	Excessively wet day

### Weather Assessment for the First Dekad (1<sup>st</sup>-10<sup>th</sup>) of March, 2019.

On days: 2<sup>nd</sup> and 3<sup>rd</sup>, Trinidad experienced some useful rainfall, while on days 1<sup>st</sup>, 5<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> Tobago had some useful rainfall, which assisted both Islands in moistening their soils. Preliminary results of rainfall amounts for Trinidad, showed that North-eastern and eastern areas had rainfall totals as follows: Piarco (6.3 mm), Cumaca (0.0 mm) and Sangre Grande (6.2 mm) were within the forecasted range of 0.0 mm to 10.0 mm. Similarly, northern areas such as Caura (5.0 mm) and St Anns (4.8 mm) had rainfall amounts within the range 0.0 mm to 10.0 mm. Likewise, north-western areas of Trinidad such as Moka (0.8 mm) and Diamond Vale (6.4 mm) were within expected range of 0.0 mm to 10.0 mm.

However, central areas had rainfall totals as follows: Chaguanas (8.1mm), Flanagin Town (15.1 mm), Navet (18.8 mm), Tamana (15.6 mm), which were mostly above range forecasted of 0.0 mm to 10.0 mm. Similarly, southern areas had the

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following rainfall amounts: Point Fortin (26.6 mm), Barrackpore (18.8 mm), Penal (15.8 mm), Cats Hill (30.8 mm) and Guayaguayare (11.1 mm), all above the range forecasted of 0.0 mm to 10.0 mm.

Tobago had experienced some rainfall, central areas such as Mt. Pleasant had 15.4 mm while western areas such as Crown Point had rainfall totals around 23.0 mm, above the forecasted amount of 0.0 mm to 10.0 mm.

Trinidad's temperature was generally outside of the expected range, maximum temperature went up to 32.1°C, which was slightly above the expected high of 32.0°C. At the same time Tobago's maximum got up to 30.0°C, slightly below the expected high of 30.8°C. Similarly, lowest temperatures recorded were 20.6°C in Trinidad and 21.9°C in Tobago. In Trinidad's case, the minimum temperature was below the expected minimum of 23.0°C. Similarly, the minimum temperature was below the expected minimum of 23.5°C for Tobago. The average humidity for both islands remained in the upper sixties to upper seventies throughout the dekad.

### **Expected Weather for Second Dekad (11<sup>th</sup> – 20<sup>th</sup>) of March 2019 and Likely Impact on Agriculture.**

The forecast for the second dekad of March indicates that farmers can expect similarly dry conditions as compared to the first dekad of March 2019. But relatively wet days: on 12<sup>th</sup>, 13<sup>th</sup> and 15<sup>th</sup>; with relatively dry days: 11<sup>th</sup>, 14<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>. During relatively wet days, expect during early morning or late afternoon patchy cloudiness with light rainfall over some areas; while during relatively dry days, expect few cloudy patches. The ten-day period rainfall totals, forecast to range between 10.0 mm and 15.0 mm in Trinidad and Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 26.0°C and 26.8°C. Expect the highest maximum temperature over the dekad to peak near 32.2°C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 20.6°C. Especially along the foothills and valleys during relatively cloud-free nights. Likewise, during the dekad, in **Tobago**, the highest maximum temperature will peak near 31.3°C, while the lowest minimum temperature will dip below 21.8°C, mostly during relatively cloud-free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 68% and 77%. However, during relatively wet days, RH percentage values will range around 78% to 92%. At the same time, wind speeds are expected to range between 30km/h and 46 km/h but can gust to 60 km/h. In addition, evaporation rates are expected to range between 5.0 mm/day and 9.2 mm/day. There is also a moderate (70%) probability of visitation of Saharan dust/haze that will occasionally reduce visibility to less than 12.0 km, particularly during days: 11<sup>th</sup>, 14<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>.

### **Impacts on Agriculture:**

Due to the existing and further decrease in rainfall amounts (dry season) at the is time, more frequent irrigation may be warranted during the dekad. Additionally, owing to the combination of winds, dry vegetation/foilage and hot conditions, there is a high probability (80%) of an increase frequency of bush and forest fires at this time. Farmer should be more vigilant to protect, crops, livestock and property at this time.

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### **Sun, Moon and bright objects in the sky:**

The sun is presently at a latitude approximately 4 degrees south latitude, and with this position, the day length for this dekad will be 11.9 to 12.0 hours. The intense solar irradiance episodes will continue to be low during this dekad when the sky is generally cloud free. There is low probability (10%) of heat stress on certain variety plant seedlings and animals from direct exposure to solar radiation and high temperatures. Additionally, the moon's first quarter phase will be on the 14<sup>th</sup> followed by its full moon phase on the 20<sup>th</sup>. Which may result in illumination over crop fields and livestock. As the sun sets in the west, planets, Mars will be seen in the evening sky followed by Jupiter.

### **Trinidad's Mean Daily Rainfall Forecast for the Second Dekad of March(11<sup>th</sup>–20<sup>th</sup>) 2019.**

#### **Northern & Northwestern areas:**

Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

#### **North-Eastern and Eastern areas:**

Moderate chance (68%) of mean daily rainfall up to 1.4 mm.

#### **Central, West-Central and inland areas:**

Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

#### **South-Eastern areas:**

Moderate chance (68%) of mean daily rainfall up to 1.1 mm.

#### **Southern areas:**

Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

#### **South-Western areas:**

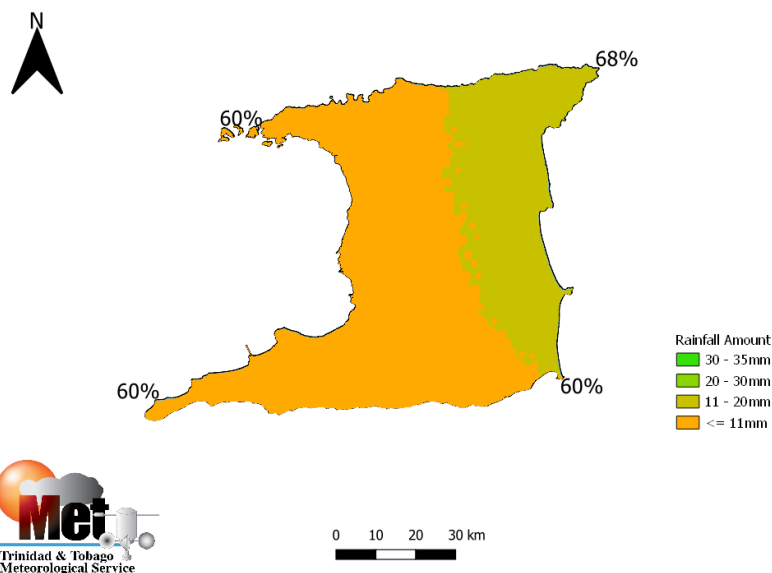
Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

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**Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during second dekad of March 2019 and percentage probability of occurrence.**

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### Tobago's Mean Daily Rainfall Forecast for the Second Dekad of March (11<sup>th</sup>-20<sup>th</sup>) 2019.

#### Northeastern areas:

Moderate chance (60%) of mean daily rainfall up to 1.0 mm.

#### South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 1.4 mm.

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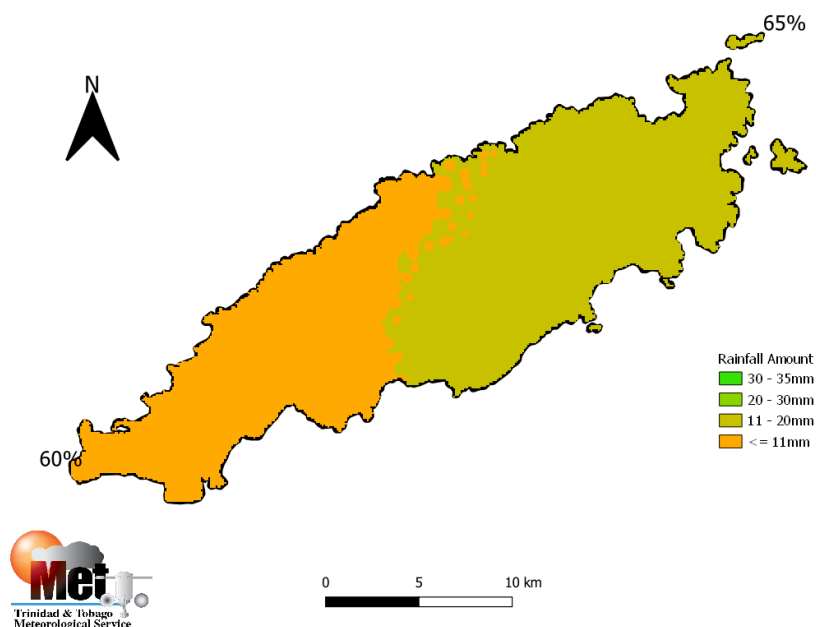


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during second dekad of March 2019 and percentage probability of occurrence.

## Temperatures:

### Trinidad's Temperature Forecast for the Second Dekad of March (11<sup>th</sup>–20<sup>th</sup>) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 31.9 °C, peaking near 32.2 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.3 °C, dropping as low as 20.6 °C.

### Tobago's Temperature Forecast for the Second Dekad of March (11<sup>th</sup>–20<sup>th</sup>) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 30.5 °C, peaking near 31.3 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.2 °C, dropping as low as 21.8 °C.

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