

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st - 30th) of April, 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 Second Dekad (11th -20th) of April, 2019.

On days: 13th, 16th and 17th, Trinidad and Tobago experienced some useful rainfall that assisted in moistening soils and rejuvenating crops and vegetation. As of the 17th April, 2019, the preliminary results of rainfall amounts for Trinidad, showed that north-eastern and eastern areas had rainfall totals as follows: North Oropouche (11.4 mm), Navet (2.4) and Sangre Grande (7.0 mm) were below the forecasted range of 10.0 mm to 20.0 mm. Similarly, northern areas such as Piarcro (1.7 mm), Caura (0.0 mm) and St Anns (11.6 mm) had rainfall amounts mostly within the range 0.0 mm to 10.0 mm. Additionally, north-western areas of Trinidad such as Moka (2.8 mm) and Diamond Vale (5.6 mm) were within expected range of 0.0 mm to 10.0 mm.

However, central areas had rainfall totals as follows: Mamoral (1.6 mm), Flanagin Town (2.0 mm), Tamana (5.0 mm), which

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were mostly within the range forecasted of 0.0 mm to 10.0 mm. Similarly, southern areas had the following rainfall amounts: Point Fortin (0.0 mm), Barrackpore (0.0 mm), CatsHill (0.6 mm) and Guayaguayare (1.0 mm), mostly below the range forecasted of 10.0 mm to 20.0 mm.

Tobago had experienced some rainfall, western areas such as Crown Point had rainfall totals of 21.6 mm, above the forecasted amount of 10.0 mm to 15.0 mm.

Trinidad's temperature was generally inside of the expected range, the maximum temperature went up to 33.3 °C, which was within the expected high range of 32.6 °C to 33.7 °C. At the same time, Tobago's maximum got up to 31.2 °C, within the expected high range of 31.0 °C to 31.9 °C. Similarly, lowest temperatures recorded were 21.8 °C in Trinidad and 23.0 °C in Tobago. In Trinidad's case, the minimum temperature was slightly below the expected minimum range of 23.4 °C to 21.9 °C. However, the minimum temperature was within the expected minimum range of 24.3 °C to 22.7 °C for Tobago. The average humidity Tobago remained in the upper sixties to low eighties while Trinidad's average humidity remained in the low to high seventies, throughout the dekad.

Expected Weather for Third Dekad (11th – 20th) of April 2019 and Likely Impact on Agriculture.

The forecast for the third dekad of April indicates that farmers can expect mix conditions as compared to the first dekad of April, 2019. Relatively wet days: on 21st, 22nd, 23rd, 24th and 25th; and relatively dry days: 26th, 27th, 28th, 29th and 30th. 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 15.0 mm and 25.0 mm in Trinidad and Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 27.0 °C and 27.9 °C. Expect the highest maximum temperature over the dekad to peak near 33.6 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 21.8 °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 31.2 °C, while the lowest minimum temperature will dip below 23.0 °C, mostly during relatively cloud-free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 68% and 79%. However, during relatively wet days, RH percentage values will range around 80% to 85%. At the same time, wind speeds are expected to range between 30 km/h and 55 km/h but can gust to 60 km/h. In addition, evaporation rates are expected to range between 9.0 mm/day and 15.0 mm/day.

There is also a moderate (80%) probability of visitation of Saharan dust/haze that will occasionally reduce visibility to less than 10.0 km, particularly during days: 26th, 27th, 28th, 29th and 30th.

Impacts on Agriculture:

Due to the existing conditions (dry season) at the is time, more frequent irrigation may be warranted during the dekad. Additionally, the combination of winds, dry vegetation/foilage and hot temperatures, there is a high probability (90%) of an increase in the frequency of bush and forest fires at this time. Farmer should be more vigilant to protect, crops, livestock

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and property at this time.

Sun, Moon and bright objects in the sky:

The sun is presently at Trinidad's latitude of 10.5 degrees' north latitude, and with this position, the day length for this dekad will be 12.3 to 12.4 hours. The intense solar irradiance will be at its highest and more frequent episodes of intense solar radiation will occur during this dekad when the sky is generally cloud free. There is a high probability (70%) of heat stress on certain variety of plant seedlings and animals from direct exposure to solar radiation and high temperatures. Additionally, the third quarter moon phase will be on the 26th. This may result in low-intensity moonlight over crop fields and livestock. As the sun sets in the west, planets: Venus, Mars, Jupiter and Saturn will be seen in the evening sky.

Trinidad's Mean Daily Rainfall Forecast for the Third Dekad of April (21st–30th) 2019.

Northern & Northwestern areas:

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 2.2 mm.

Central, West-Central and inland areas:

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 2.1 mm.

Southern areas:

Moderate chance (60%) of mean daily rainfall up to 1.7 mm.

South-Western areas:

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

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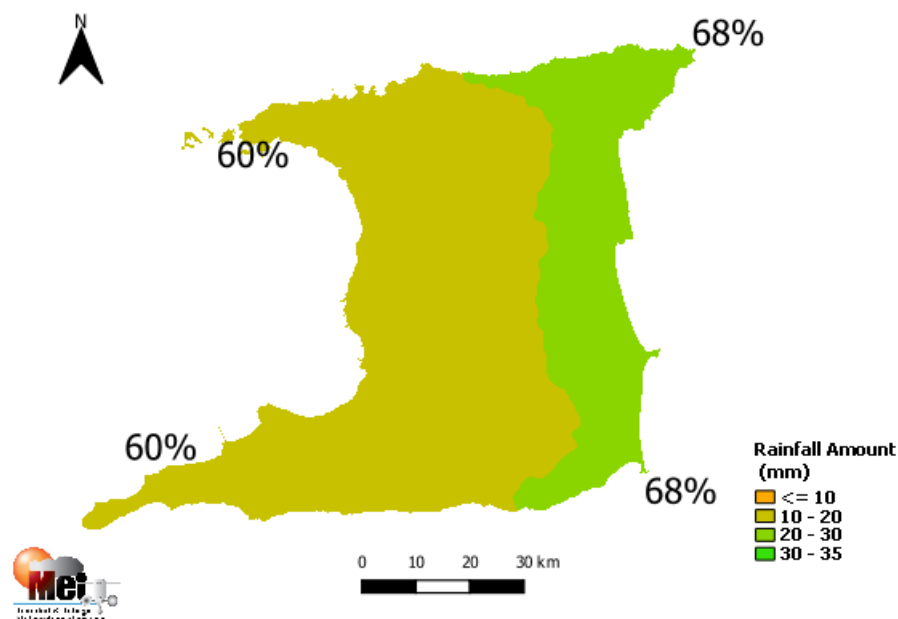


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during the third dekad of April 2019 and percentage probability of occurrence.

Tobago's Mean Daily Rainfall Forecast for the Third Dekad of April (21st–30th) 2019.

Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 2.4 mm.

South-Western areas:

Moderate chance (60%) of mean daily rainfall up to 1.7 mm.

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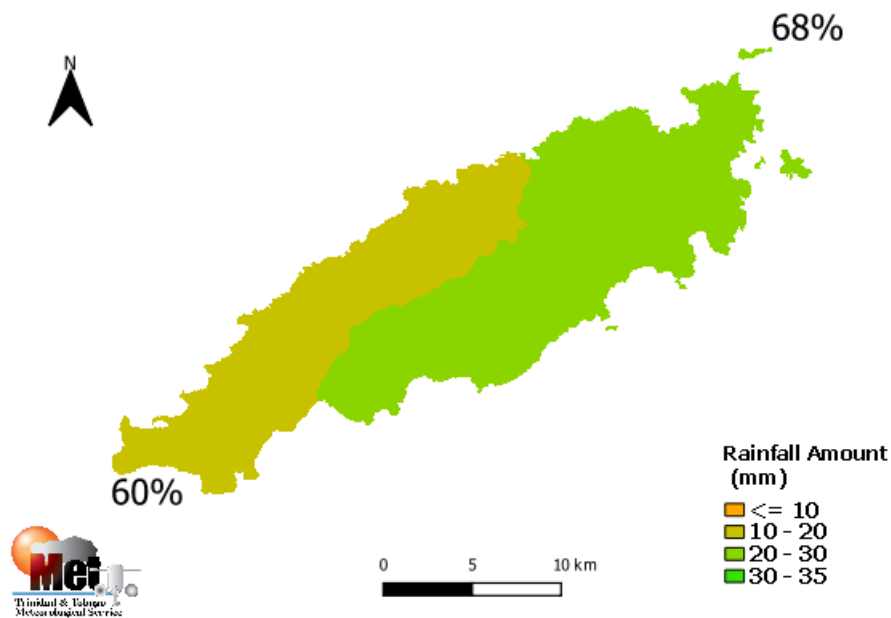


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during the third dekad of April 2019 and percentage probability of occurrence.

Temperatures:

Trinidad's Temperature Forecast for the Third Dekad of April (21st–30th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 32.6 °C, peaking near 33.7 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.4 °C, dropping as low as 21.9 °C.

Tobago's Temperature Forecast for the Third Dekad of April (21st–30th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 31.0 °C, peaking near 31.9 °C.

Moderate chance (70%) of daily minimum temperatures to be below 24.3 °C, dropping as low as 22.7 °C.

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Summary:

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