

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st - 31st) 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 Second Dekad (11th-20th) of March, 2019.

Mostly dry weather, dominated Trinidad and Tobago during the dekad, except on days 11th, 12th and 13th, which experienced patchy cloudy to cloudy skies and light rainfall over most areas of Trinidad. Tobago had light rainfall on days 11th and 13th. Preliminary results of rainfall amounts are as follows, North-eastern and eastern areas such as Piarco (24.3 mm) and Sangre Grande (21.2 mm) were above the forecasted range of 15.0 mm. Similarly, central areas such as Chaguanas (2.3 mm), Mamoral (16.9 mm), Flanagin Town (17.0 mm), Navet (26.0 mm) and Tamana (29.6 mm) were mostly above the range forecasted of 10.0 mm to 15.0 mm.

Southern areas such as Point Fortin (7.4 mm), Barrackpore (14.2 mm), Penal (12.8 mm), CatsHill (11.6 mm) and Guayaguayare (8.1 mm), were within the range forecasted of 10.0 mm to 15.0 mm. Conversely, northern areas such as

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Caura (26.4 mm), and St Anns (14.2 mm) had rainfall amounts mostly above the forecasted amount of 10.0 mm.

Furthermore, north-western areas of Trinidad such as Moka (2.2 mm) and Diamond Vale (18.8 mm) were mostly above the forecast amount of 10.0 mm.

Tobago had experienced some rainfall, central areas for instance Mt. Pleasant had 5.1 mm while western areas for example Crown Point had rainfall totals of 5.7 mm, and were within the forecasted amount of less than 10.0 mm.

Trinidad's temperature was generally within expected range, maximum temperature went up to 32.4 °C, which was slightly above the expected range of 31.9 °C to 32.2 °C. At the same time Tobago's maximum got up to 31.4 °C, slightly above the range expected of 30.5 °C to 31.3 °C. Similarly, lowest temperatures recorded were 20.9 °C in Trinidad and 23.0 °C in Tobago. In Trinidad's case, the minimum temperature was within the expected range of 23.3 °C to 20.6 °C. Similarly, the minimum temperature was within the range of 23.2 °C to 21.8 °C for Tobago. The average humidity for Trinidad was in the low seventies to low eighties, while Tobago's average humidity was in the range mid-sixties to low seventies, since mostly relatively dry days occurred during the dekad, frequent irrigation may have been necessary.

Expected Weather for Third Dekad (21st– 31st) of March 2019 and Likely Impact on Agriculture.

The forecast for the third dekad of March indicates that farmers can expect similarly dry conditions as compared to the second dekad of March 2019. Expect relatively wet conditions on days: 21st, 22nd, 27th and 30th; with relatively dry conditions on days: 23rd, 24th, 25th, 26th, 28th and 31st. During relatively wet days, expect early morning or late afternoon patchy cloudiness with light rainfall over some areas; while during relatively dry days, expect sunny and breezy and at times hazy conditions. The ten-day period rainfall totals are expected to range between 0.0 mm to 10.0 mm in both Trinidad Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 26.0 °C and 27.0 °C. Expect the highest maximum temperature over the dekad to peak near 33.3 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 21.0 °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 31.5 °C, while the lowest minimum temperature will dip below 22.2 °C, mostly during relatively cloud-free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 62% and 68%. However, during relatively wet days, RH percentage values will range around 68% to 80%. At the same time, wind speeds are expected to range between 28 km/h and 46 km/h but can gust to 60 km/h. In addition, evaporation rates are expected to range between 8.0 mm/day and 12.0mm per day. The mostly dry days during the dekad, may warrant more frequent irrigation.

Impacts on Agriculture:

There is also a moderate (80%) probability of visitation of Saharan dust haze or haze that will occasionally reduce visibility to less than 10.0 km, particularly during days: 23rd, 24th, 25th, 26th, 28th and 31st. Additionally, during the dekad, there is a low (10%) probability of some agricultural insects, pests, fungi and diseases to get a foot in and possibly develop and thrive. Moreover, the expected daytime northeast trade wind speeds and funnelling effect of wind along narrow paths and

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undulating landscapes, may affect some seedlings negatively by causing seedlings' stems and leaves to be damaged.

Sun, Moon and bright objects in the sky:

The sun is presently at a latitude approximately 0.0 degrees in latitude (at the equator), The vernal or spring equinox will be on the 20th of March, and because of its position, the day length for this dekad will increase from 12.0 hours to 12.1 hours. The intense solar irradiance episodes will become moderate during this dekad when the sky is generally cloud free. There is medium probability (60%) of heat stress on certain variety plant seedlings and animals from direct exposure to solar radiation and hot temperatures. Additionally, the moon's phase (full moon) will be on the 20th March resulting in illumination over livestock and fields, followed by the moon's third quarter phase on the 28th. As the sun sets in the west, planets: Venus, Mars, Jupiter and Saturn will be seen in the evening sky during this dekad.

Trinidad's Mean Daily Rainfall Forecast for the Third Dekad of March (21st-31st) 2019.

Northern & Northwestern areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

Central, West-Central and inland areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

Southern areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

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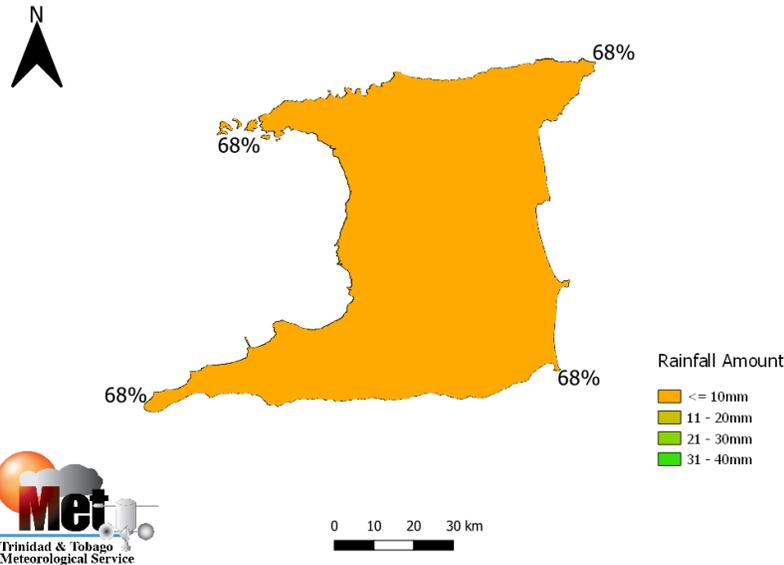


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during third dekad of March 2019 and percentage probability of occurrence.

Tobago's Mean Daily Rainfall Forecast for the Third Dekad of March (21st-31st) 2019.

Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 1.0 mm.

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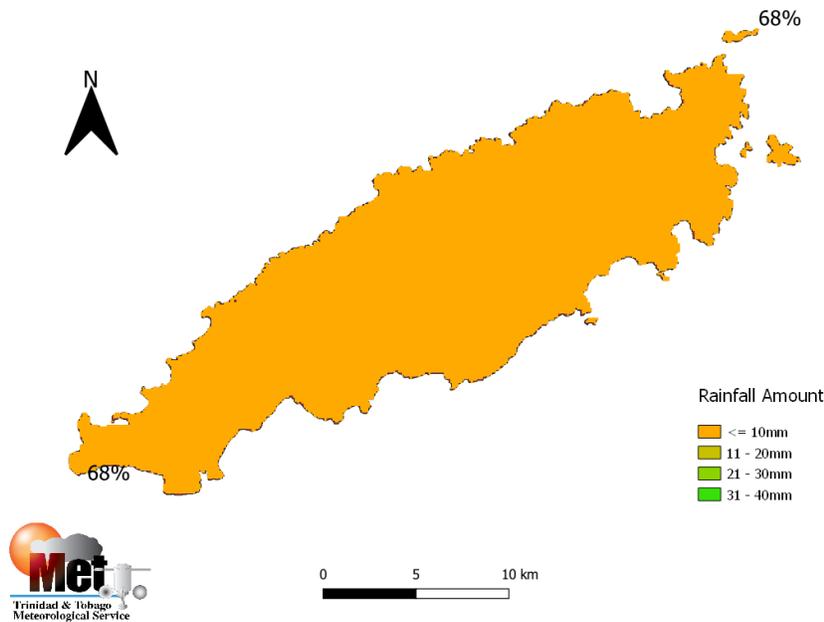


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during third dekad of March 2019 and percentage probability of occurrence.

Temperatures:

Trinidad’s Temperature Forecast for the Third Dekad of March (21st-31st) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 32.2 °C, peaking near 33.3 °C.

Moderate chance (70%) of daily minimum temperatures to be below 22.6 °C, dropping as low as 21.0 °C.

Tobago’s Temperature Forecast for the Third Dekad of March (21st-31st) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 30.7 °C, peaking near 31.5 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.5 °C, dropping as low as 22.2 °C.

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Summary:

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