

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First Dekad (1st - 10th) of July, 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 part of the Third Dekad (21st -27th) of June, 2019.

A Tropical Wave (TW) passed during the 22nd/23rd producing relatively wet days. As of the 27th June, 2019, the preliminary results of rainfall amounts for Trinidad, showed that north-eastern and eastern areas had rainfall totals as follows: North Oropouche (9.4 mm), Cumaca (5.2 mm) and Sangre Grande (17.4 mm) were generally below the forecasted range of 80.0 mm to 100.0 mm. Similarly, northern areas such as Piarco (4.7 mm), St. Barbara (3.1 mm) and St Anns (12.4 mm) had rainfall amounts below the range 40.0 mm to 80.0 mm. Additionally, north-western areas of Trinidad such as Moka (14.0 mm) and Diamond Vale (10.8 mm) were below forecasted amount of 40.0 mm.

Similarly, central areas had rainfall totals as follows: Arena (8.6 mm), Mamoral (1.0 mm), Flanagin Town (9.8 mm), Tamana (13.5 mm), which were below the range forecasted of 40.0 mm to 80.0 mm. Likewise, southern-western areas had the

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following rainfall amounts: Point Fortin (4.2 mm), Granville (0.8 mm) and Barrackpore (3.4 mm) were below the range forecasted amount of 40.0 mm. Similarly, south-eastern areas had the following rainfall amounts: CatsHill (2.4 mm) and Guayaguayare (7.0 mm) and Mayaro (18.5 mm) were below the range forecasted of 80.0 mm to 100.0 mm.

Tobago experienced some rainfall, western areas such as Crown Point had rainfall totals of 3.3 mm, which was below the forecasted amount of 50.0 mm for south-western Tobago.

Trinidad's temperature was within the expected range, the maximum temperature went up to 32.4 °C, which was within the expected high range of 31.3 °C to 32.6 °C. At the same time Tobago's maximum got up to 31.7 °C, within the expected high range of 30.6 °C to 31.7 °C. Conversely, lowest temperatures recorded were 23.3 °C in Trinidad and 24.0 °C in Tobago. In Trinidad's case, the minimum temperature was within the expected minimum range of 24.0 °C to 22.8 °C. Similarly, the minimum temperature was within the expected minimum range of 24.6 °C to 23.3 °C for Tobago. The average humidity for Trinidad range between 69% to 87% while Tobago range between 68% to 81% throughout the dekad.

Expected Weather for First Dekad (1st-10th) of July 2019 and Likely Impact on Agriculture.

Relatively dry days on the 2nd, 3rd and 10th; Relatively wet days on the 6th, 7th, 8th and 9th; while wet days on: 1st, 4th and 5th. A Tropical Wave (TW) will pass over the islands on the 1st followed by a second Tropical Wave (TW) and also a visit from the Inter Tropical Convergence Zone (ITCZ) on days: 4th and 5th. During relatively dry days, expect partly cloudy skies and possible light shower; during relatively wet days, expect patchy cloudy to cloudy conditions, with light/moderate rainfall over some areas; while during wet days, expect cloudy to overcast skies with light to moderate rainfall occasionally heavy/Thundershowers over some areas. Trinidad's ten-day period rainfall totals, forecast to range between 40.0 mm and 100.0 mm, while Tobago's ten-day period rainfall totals, forecast to range between 60.0 mm and 80.0 mm.

The average daily temperatures across Trinidad and Tobago are likely to range between 27.0 °C and 27.5 °C. Expect the highest maximum temperature over the dekad to peak near 32.8 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip to 22.1 °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 to 23.1 °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 85% to 100%. At the same time, wind speeds are expected to range between 20 km/h and 28 km/h but can gust to 60 km/h especially during heavy downpours. In addition, evaporation rates are expected to range between 2.0 mm/day and 6.0 mm/day.

There is also a moderate (70%) probability of visitation of Saharan dust/haze that will occasionally reduce visibility to less than 10.0 km, particularly during days: 2nd, 3rd and 10th.

Impacts on Agriculture:

As a result of the past rainfall episodes that occurred during the last dekad, the soils are moist and vegetation/foliage are growing rapidly. During this dekad, soils will continue to retain a high moisture content as a result of additional rainfall and

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this will encourage increase vegetative growth. Crop cultivation will become less tedious. Signs of ponding water and water-logged soils mostly in south eastern and eastern parts of Trinidad and Tobago will continue. Rivers have and will continue to replenish their waters from surface/soil runoff, while scrub and grass growth will continue at a fast pace. Possible flash flooding in low-lying areas so prone. The need to engage in frequent irrigation of crops will become less or at times unnecessary as the rainy season progress.

Sun and Moon positions in the sky:

The sun is presently at latitude of 23.3 degrees' north latitude, and with this position, the day length for this dekad will be 12.6 hours. Less frequent episodes of intense solar radiation will occur during this dekad when the sky is generally cloud free. There is moderate probability (50%) of heat stress on certain variety plant seedlings and young animals from direct exposure to solar radiation and high temperatures. Additionally, the moon's new moon phase will be on the 2nd and first quarter phase will be on the 9th, as a result, there will be mostly low moon illumination over crops fields and livestock at night during the dekad.

Trinidad's Mean Daily Rainfall Forecast for the First Dekad of July (1st-10th) 2019.

Northern & Northwestern areas:

Moderate chance (60%) of mean daily rainfall up to 6.2 mm.

North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 9.7 mm.

Central, West-Central and inland areas:

Moderate chance (60%) of mean daily rainfall up to 5.5 mm.

South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 9.9 mm.

Southern areas:

Moderate chance (64%) of mean daily rainfall up to 7.6 mm.

South-Western areas:

Moderate chance (60%) of mean daily rainfall up to 6.3 mm.

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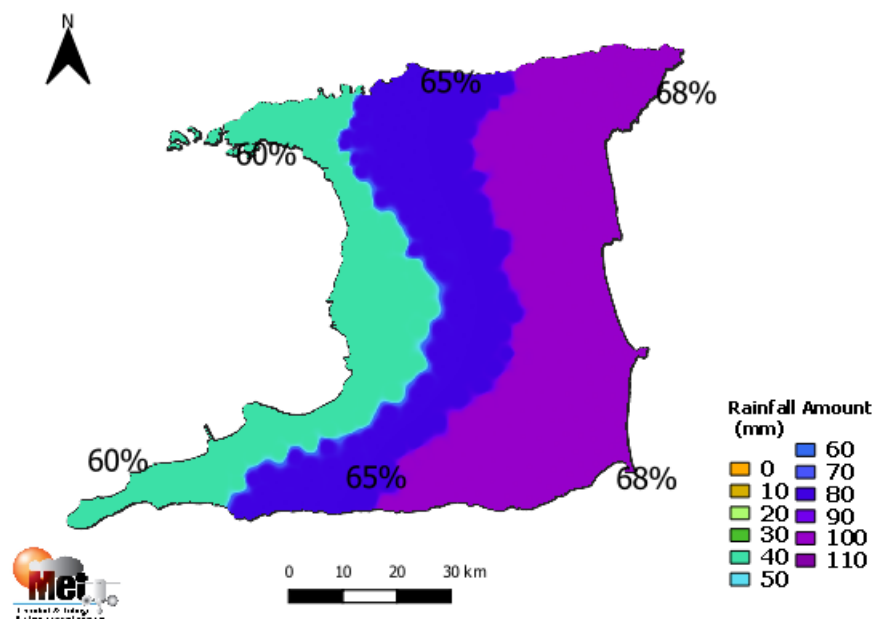


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during first dekad of July 2019 and percentage probability of occurrence.

Tobago's Mean Daily Rainfall Forecast for the First Dekad of July (1st-10th) 2019.

Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 8.0 mm.

South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 6.3 mm.

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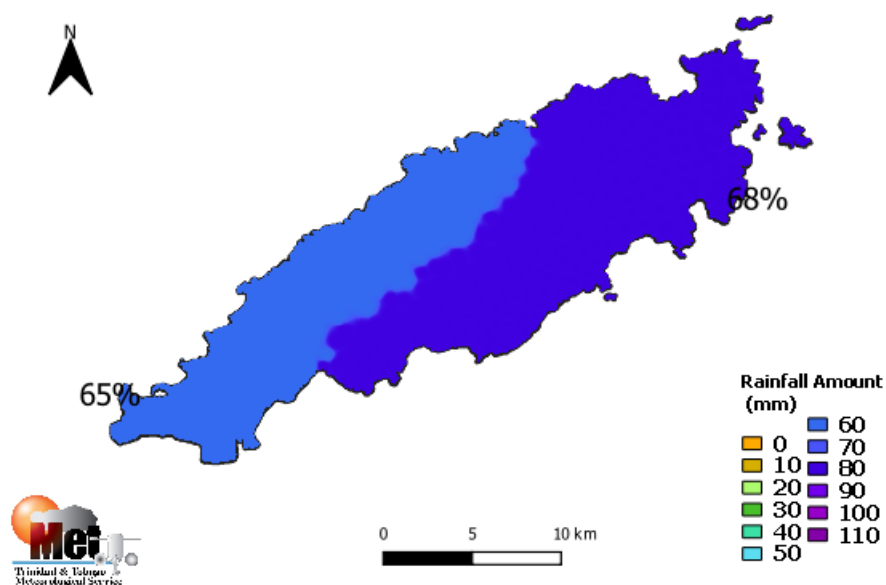


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during first dekad of July 2019 and percentage probability of occurrence.

Temperatures:

Trinidad's Temperature Forecast for the First Dekad of July (1st-10th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 31.5 °C, peaking near 32.8 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.3 °C, dropping as low as 22.1 °C.

Tobago's Temperature Forecast for the First Dekad of July (1st-10th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 30.5 °C, peaking near 31.5 °C.

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Summary:

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