

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First Dekad (1st - 10th) of November, 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 Third Dekad (21st– 31st) of October 2019.

Lower than expected rainfall totals for the third dekad of October occurred over both islands. The rainfall totals for Trinidad and Tobago as of the 31st October, 2019, can be seen on the rainfall maps below:

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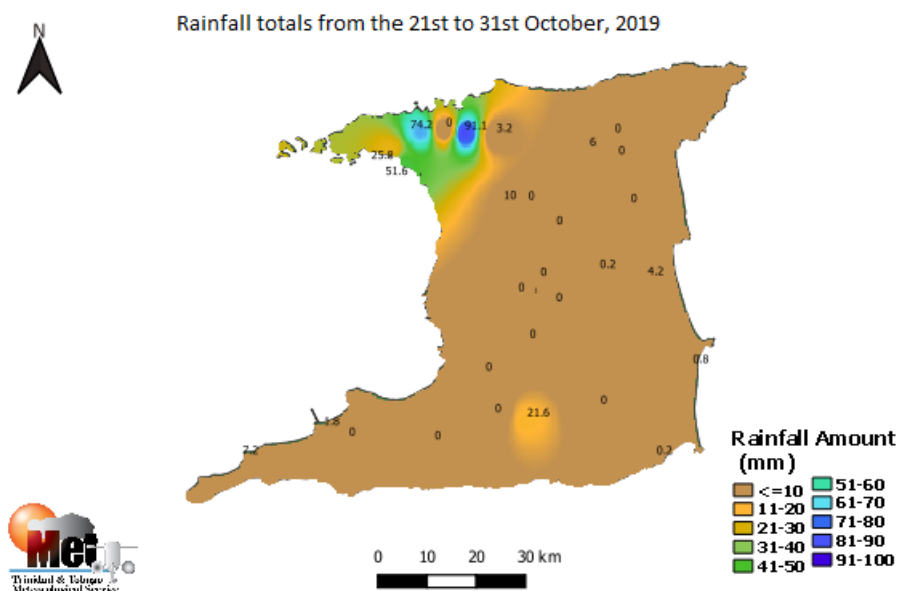


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 21st to 31st of October 2019.

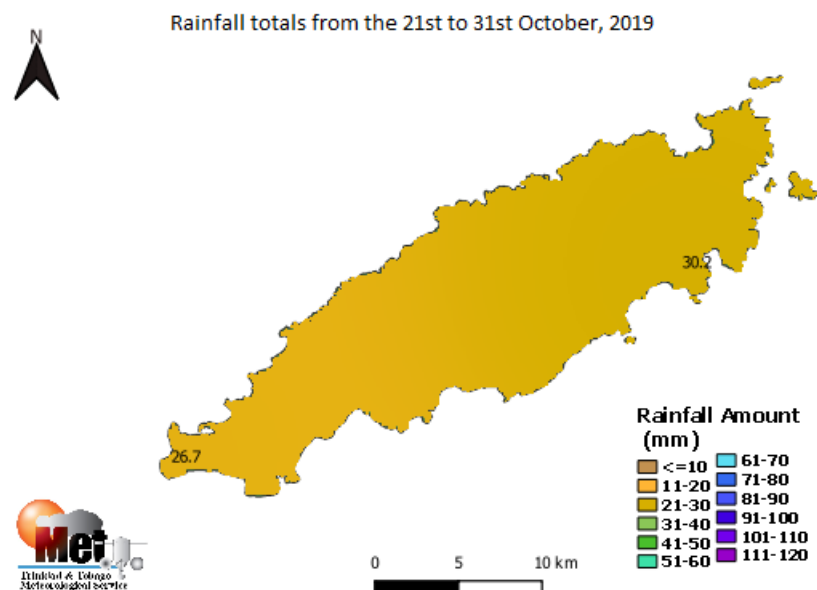


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 21st to 31st

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of October 2019.

Trinidad's temperature was within expected range, maximum temperature went up to 33.5 °C, which was within the expected range of 32.2 °C to 34.3 °C. While Tobago's maximum got up to 32.8 °C, within the range expected of 30.9 °C to 32.8 °C. Similarly, lowest temperatures of 21.3 °C were recorded in Trinidad which was within the expected range of 23.5 °C to 21.0 °C. While Tobago's minimum temperature got down to 24.0 °C and within the expected range of 24.3 °C to 23.6 °C. The average humidity for Trinidad ranged between 72% to 85% while Tobago's average humidity range between 68% to 82%.

Expected Weather for First Dekad (1st–10th of November 2019 and Likely Impact on Agriculture.

The forecast for the first dekad of November indicates that farmers can expect wetter conditions as compared to the third dekad of October. Firstly, expect relatively wet days on the 1st, 2nd, 3rd, 8th, 9th and 10th; secondly wet days on days 4th, 5th, 6th and 7th. On relatively wet days, expect cloudy periods, light to moderate rainfall and a high probability of isolated thundershowers along the western northwestern coast of both islands, especially over urban areas of Trinidad during the dekad. On wet days, a visitation of an active Tropical wave (TW) in conjunction with the Inter Tropical Convergence Zone (ITCZ) will produce widespread cloudy periods with scattered showers and thundershowers over Trinidad and Tobago. The forecasted ten-day period rainfall totals to range between 70.0 mm to 120.0 mm in Trinidad and 120.0 mm in Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 26.5 °C and 29.0 °C. Expect the highest maximum temperature over the third dekad to peak near 34.0 °C in **Trinidad**, while the lowest night to early morning minimum temperature could fall below 21.0 °C. Similarly, during the first dekad in **Tobago**, the highest maximum temperature will peak near 32.9 °C, while the lowest minimum temperature will fall below 23.0 °C.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 62% and 78%. However, during wet days, RH percentage values will range around 79% to 87%. At the same time, expect wind speeds to range between 16 km/h and 28 km/h but can gust to 45 km/h in heavy showers or thundershowers. In addition, expect evaporation rates to range between 5.0 mm/day and 11.0 mm/day. There is also a moderate (60%) probability of frequent visitation of Saharan dust that will occasionally reduce visibility to less than 11.0 km, particularly during the 1st, 2nd, 3rd, 8th, 9th and 10th.

Impacts on Agriculture:

As a result of the drier conditions that occurred during the third dekad of October, the soils have dried a bit. Vegetation/foilage growth rates had decrease due to unfavourable soil moisture content. During the first dekad of November, soils moisture will gradually become high, with possible water logged soils. Rivers will replenish their waters from flooding and ground water runoff, while shrubs and grass growth will continue at a steady pace. The expected relatively wet-to-wet conditions of the first dekad of November may decrease the need for irrigation during wet days of the dekad.

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Additionally, with the expected high mean temperatures and high relative humidity, there is a high (70%) probability of some agricultural insects, pests, fungi and diseases get a foot in and possibly develop and thrive.

Sun and Moon positions in the sky:

The sun is presently at latitude of approximately 13.8 degrees' south latitude, and with this position, the day length for this dekad will be 11.6 hours. A moderate probability (55%) of frequent episodes of intense solar radiation will occur during the first dekad of November when the sky is generally cloud free. There is moderate probability (55%) of heat stress on certain variety plant seedlings and young/sick/elderly animals from direct exposure to solar radiation and high temperatures. Additionally, the moon's first quarter moon phase will be on the 4th and as a result, there will be low to medium moon illumination over crop fields and livestock at night during the dekad.

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

Northern & Northwestern areas:

Moderate chance (68%) of mean daily rainfall up to 11.8 mm.

North-Eastern and Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 11.1 mm.

Central, West-Central and inland areas:

Moderate chance (68%) of mean daily rainfall up to 9.0 mm.

South-Eastern areas:

Moderate chance (65%) of mean daily rainfall up to 7.0 mm.

Southern areas:

Moderate chance (65%) of mean daily rainfall up to 7.5 mm.

South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 7.8 mm.

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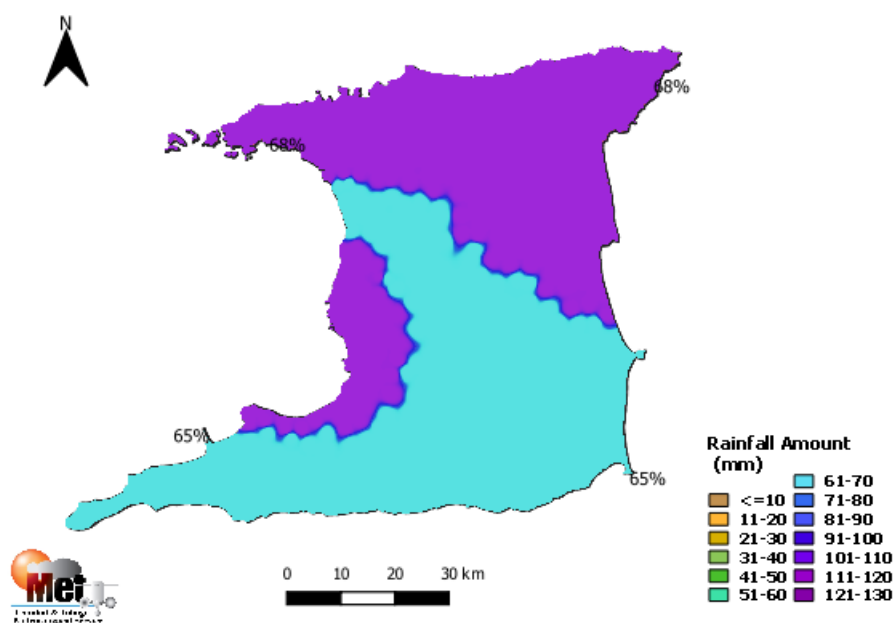


Figure 3. Rainfall map of Trinidad showing possible rainfall totals for varying districts during first dekad of November 2019 and percentage probability of occurrence.

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

Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 12.0 mm.

South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 12.0 mm.

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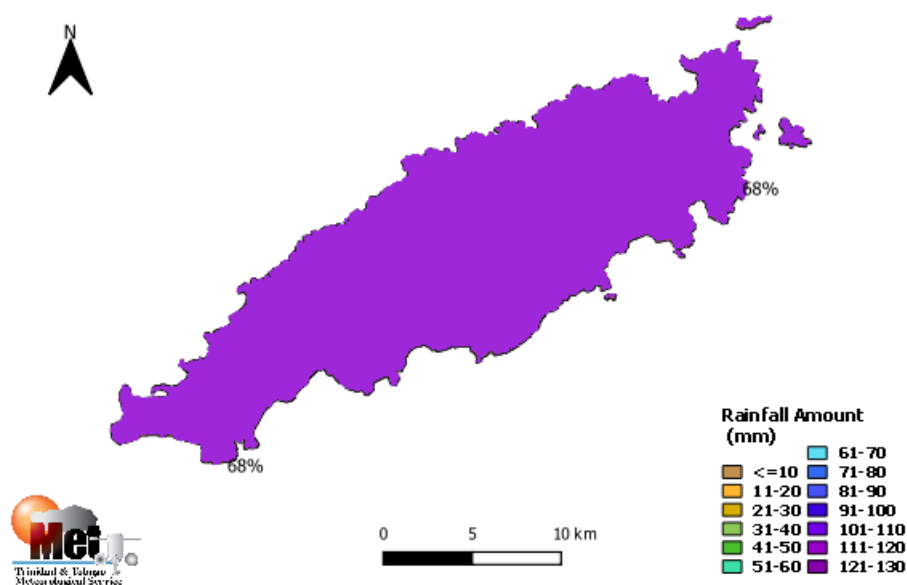


Figure 4. Rainfall map of Tobago showing possible rainfall totals for varying districts during first dekad of November 2019 and percentage probability of occurrence.

Temperatures:

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

Moderate chance (70%) of daily maximum temperatures to exceed 32.2 °C, peaking near 34.3 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.5 °C, dropping as low as 21.0 °C.

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

Moderate chance (70%) of daily maximum temperatures to exceed 30.9 °C, peaking near 32.8 °C.

Moderate chance (70%) of daily minimum temperatures to be below 24.3 °C, dropping as low as 23.6 °C.

Summary

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