

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) 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 first Dekad (1<sup>st</sup> – 10<sup>th</sup>) of November 2019.

A mixture of relatively wet and wet days occurred during the first dekad of November in Trinidad and Tobago. The rainfall total maps for the period 1<sup>st</sup> to 10<sup>th</sup> of November are located below as figure 1 and figure 2.

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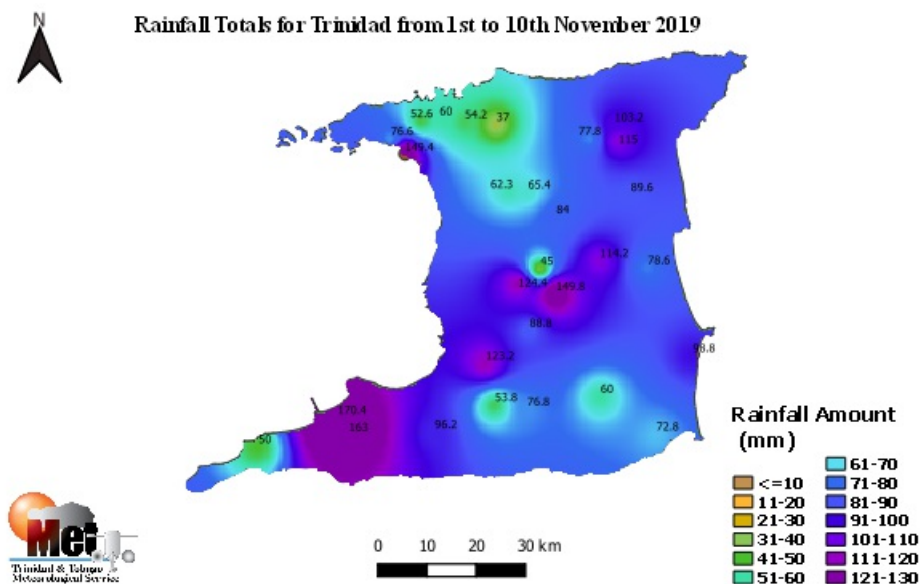


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 10<sup>th</sup> of November 2019.

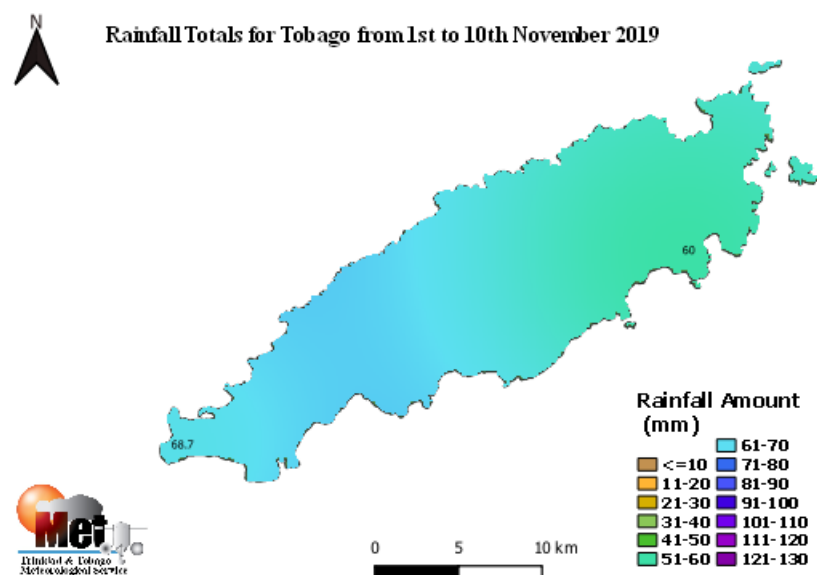


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 10<sup>th</sup> of November 2019.

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November 2019.

The observed Temperatures (maximum/minimum), Average Relative humidity (maximum/minimum) and Long term averages for locations: Piarco International airport and ANR Robinson International airport.

Location	Maximum Temperature °C/ Long term average °C	Minimum Temperature °C /Long term average °C	Average maximum Relative humidity (%)/ Long term average (%)	Average minimum Relative humidity (%)/Long term average (%)
Trinidad (Piarco International airport)	33.9/31.5 (1981-2010)	23.6/23.3 (1981-2010)	80/97 (1981-2010)	88/65 (1981-2010)
Tobago (ANR Robinson International airport)	32.6/30.1 (1971-2010)	23.9/23.4 (1971-2000)	71/94 (1971-2010)	86/72 (1971-2010)

The Expected Weather conditions for Second Dekad (11<sup>th</sup> – 20<sup>th</sup>) of November 2019 as seen in table 1.

Table 1.

Days:	Expected weather:
11 <sup>th</sup>	Intermittent cloudy periods, light to moderate rainfall and a high probability (80%) of isolated thundershowers along the western coast of Trinidad.
12 <sup>th</sup>	Mostly cloudy periods with scattered showers and thundershowers over Trinidad and Tobago.
13 <sup>th</sup>	Mostly cloudy periods with scattered showers and thundershowers over Trinidad and Tobago.
14 <sup>th</sup>	Few cloudy periods, light to moderate rainfall and a medium probability (55%) of an isolated thundershower along the western coast of Trinidad.
15 <sup>th</sup>	Few cloudy periods, light to moderate rainfall and a medium probability (40%) of an isolated thundershower along the western coast of Trinidad.
	Few cloudy periods, light to moderate rainfall and a medium probability (40%) of

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16 <sup>th</sup>	an isolated thundershower along the western coast of T rinidad.
17 <sup>th</sup>	Few cloudy periods, light to moderate rainfall and a medium probability (55%) of isolated thundershowers along the western coast of T rinidad.
18 <sup>th</sup>	Few cloudy periods, light to moderate rainfall and a medium probability (55%) of isolated thundershowers along the western coast of T rinidad.
19 <sup>th</sup>	Mostly cloudy periods with scattered showers and thundershowers over Trinidad and Tobago.
20 <sup>th</sup>	Few cloudy periods, light to moderate rainfall and a high probability (80%) of isolated thundershowers along the western areas of T rinidad and Tobago.

The expected Temperatures, Humidity and Dust haze days during the Second dekad for Piarco, Trinidad as seen in table 2.

**Table 2.**

Day	Maximum Temperature °C	Minimum Temperature °C	Average Relative humidity (%)	Dust Haze Yes/No
11 <sup>th</sup>	33.8	23.6	78	Yes
12 <sup>th</sup>	32.1	24.0	85	No
13 <sup>th</sup>	32.0	24.0	85	No
14 <sup>th</sup>	33.0	24.0	78	Yes
15 <sup>th</sup>	33.8	23.6	75	Yes
16 <sup>th</sup>	33.9	23.0	70	Yes
17 <sup>th</sup>	33.8	23.0	75	Yes
18 <sup>th</sup>	33.3	23.2	77	Yes
19 <sup>th</sup>	33.0	23.0	85	No
20 <sup>th</sup>	32.0	23.5	80	No

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The expected Temperatures, Humidity and Dust haze days during the Second dekad for Tobago as seen as table 3.

**Table3.**

Day	Maximum Temperature °C	Minimum Temperature °C	Average Relative humidity (%)	Dust Haze Yes/No
11 <sup>th</sup>	32.5	23.6	74	Yes
12 <sup>th</sup>	31.9	24.2	80	No
13 <sup>th</sup>	31.9	24.2	80	No
14 <sup>th</sup>	32.5	24.0	75	Yes
15 <sup>th</sup>	32.5	24.0	72	Yes
16 <sup>th</sup>	32.5	24.0	68	Yes
17 <sup>th</sup>	32.5	24.0	72	Yes
18 <sup>th</sup>	32.5	24.0	74	Yes
19 <sup>th</sup>	32.3	24.0	80	No
20 <sup>th</sup>	32.0	24.0	79	No

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

**Northern & Northwestern areas:**

Moderate chance (68%) of mean daily rainfall up to 6.6 mm.

**North-Eastern and Eastern areas:**

Moderate chance (68%) of mean daily rainfall up to 6.4 mm.

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

Moderate chance (65%) of mean daily rainfall up to 5.0 mm.

**South-Eastern areas:**

Moderate chance (67%) of mean daily rainfall up to 6.4 mm.

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**Southern areas:**

Moderate chance (65%) of mean daily rainfall up to 5.7 mm.

**South-Western areas:**

Moderate chance (65%) of mean daily rainfall up to 5.3 mm.

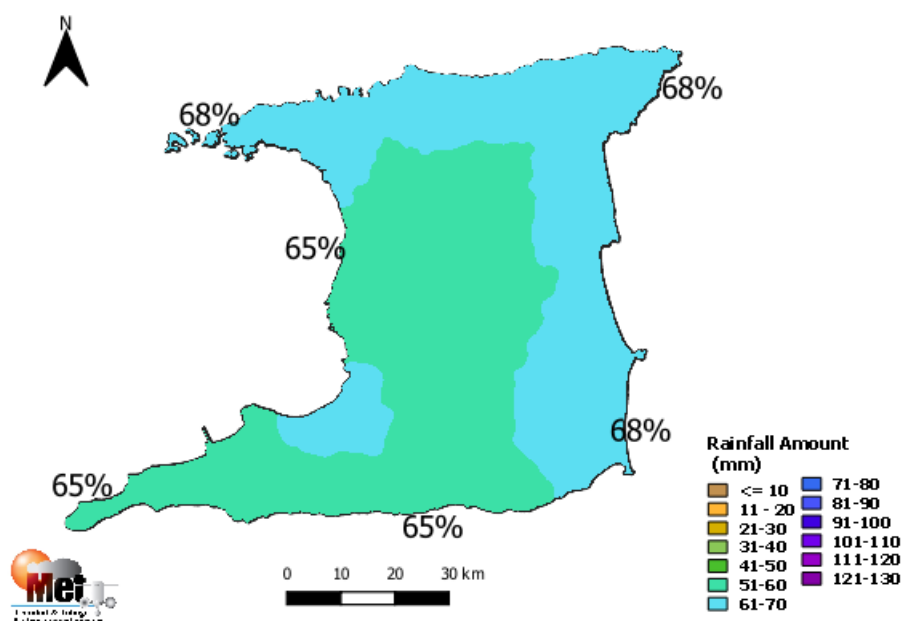


Figure 3. Rainfall map of Trinidad showing possible rainfall totals for varying districts during second dekad of November 2019 and percentage probability of occurrence.

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

**Northeastern areas:**

Moderate chance (68%) of mean daily rainfall up to 6.5 mm.

**South-Western areas:**

Moderate chance (68%) of mean daily rainfall up to 6.4 mm.

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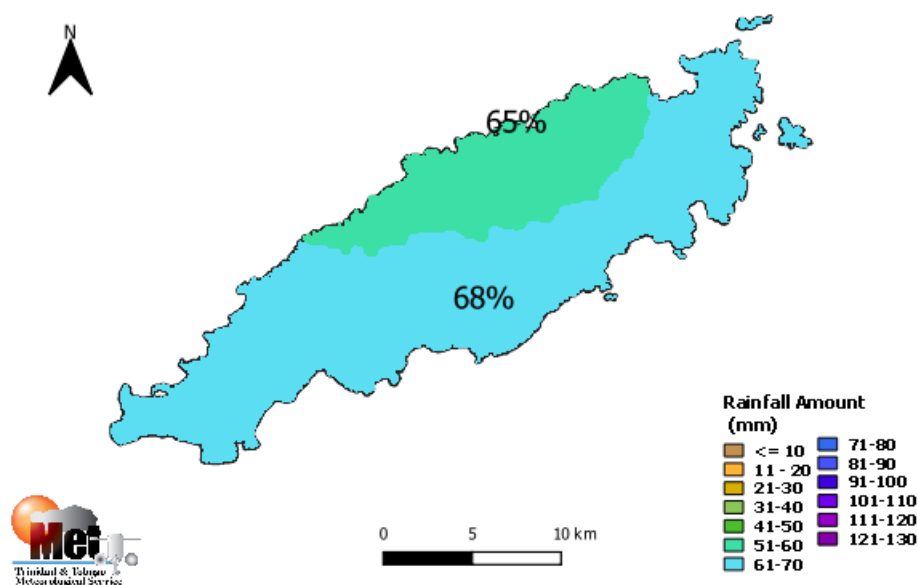


Figure 4. Rainfall map of Tobago showing possible rainfall totals for varying districts during second dekad of November 2019 and percentage probability of occurrence.

## Impacts on Agriculture:

As a result of the wetter conditions that occurred during the first dekad of November, the soils have returned to a moist state. Vegetation/foilage growth rates will increase once favourable conditions exist. During the second dekad of November, soils moisture will decrease particularly in southern and south-western areas, due to the diminish amount of rainfall expected. Rivers will slowly replenish their waters from ground water flow, while shrubs and grass growth will continue at a steady pace. The expected relatively wet-to-wet conditions of the second dekad of November may require some additional irrigation at times. 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 16.5 degrees south latitude, and with this position, the day length for this dekad will be 11.6 hours. A moderate probability (60%) of frequent episodes of intense solar radiation will occur during the second dekad of November when the sky is generally cloud free. There is moderate probability (60%) of heat stress on

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certain variety plant seedlings and young/sick/elderly animals from direct exposure to solar radiation and high temperatures. Additionally, the moon's full phase will be on the 12<sup>th</sup> and first quarter phase on the 19<sup>th</sup> as a result, there will be medium to high moon illumination over crop fields and livestock at night during the dekad.

### Summary

The forecast for the second dekad of November indicates that farmers can expect slightly drier conditions as compared to the first dekad of November 2019. Firstly, expect relatively wet days on days 11<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup> and 18<sup>th</sup>. Secondly wet days on days 12<sup>th</sup>, 13<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>. On relatively wet days, expect cloudy periods, light to moderate rainfall and a high probability of isolated thundershowers along the western coast of both islands, especially over urban areas of Trinidad during the dekad. On wet days, a possible 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.

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