

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th -20th) of January 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 of 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 (1st-10th) of January, 2019.

For the first ten (10) days of January 2019 (the first dekad), mostly dry conditions dominated the country. There were some odd, light rainfall activity with patchy cloudy conditions, but more so over the first three (3) days.

Preliminary results of rainfall amounts over various quarters of Trinidad and Tobago over the first ten-day period are as follows:

- Northeastern and eastern areas of Trinidad between 10.0 – 20.0mm. This includes 4.2mm in Piarco, 9.2mm in Cumaca and 7.8mm in Sangre Grande;

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- Central locations of Trinidad also ranged between 10.0 – 23.0mm with 8.1mm in Chaguanas, 15.4mm in Flanagin Town, 10.2mm in Navet and 22.4mm in Tamana;
- Southern districts produced in the ranges 0.0 – 10.0mm with 4.8mm in Point Fortin, 2.2mm in Barrackpore, 4.4mm in Penal, 5.8mm in CatsHill and 8.4mm in Guayaguayare;
- Northwestern areas also produced ranges in the 0.0 – 10.0mm category. This includes 2.2mm in Moka and 5.4mm in Diamond Vale;
- 2.0mm in Mt. Pleasant along the central areas of Tobago to 1.7mm in the western districts of Crown Point.

In terms of temperature records, the ranges were well within the general expected ranges for both maxima and minima in Trinidad (30.7 °C to 31.7 °C and 29.5 °C to 30.7 °C respectively) and Tobago (22.0 °C to 19.0 °C and 23.0 °C to 21.5 °C respectively). In Trinidad, a maximum of 31.3 °C and a minimum of 20.2 °C were measured. In Tobago, the maximum and minimum of 29.9 °C and 21.8 °C respectively were obtained over the first 10-day period.

The average humidity for both islands was in the mid-sixties.

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

The forecast for the Second dekad or the next ten-day period from 11th – 20th January, 2019, shows that similarly dry conditions can be expected except in the case for three (3) days – 11th, 15th and 19th. The rainfall anticipated amounts for those days ranged from a rainy day (5.0mm in Trinidad and Tobago) to a wet day (20.0mm in Trinidad and 15.0mm in Tobago).

The average daily temperatures across Trinidad and Tobago are likely to range between 25.3 °C and 25.9 °C. Expect the highest maximum temperature over the dekad to peak at 31.7 °C in **Trinidad**, with the lowest night-time minimum temperature around 18.5 °C. These low temperatures can be observed particularly along the foothills and valleys of the Northern Range during relatively cloud-free nights.

Similarly, in **Tobago** anticipated highest maximum temperature are expected to be around 30.7 °C and the lowest minimum temperature about 21.1 °C especially during relatively cloud-free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 55% and 67%. However, this can elevate to 68 – 92% on any of the three (3) rain to wet days forecast.

Wind speeds are expected to range between 28 km/h and 46 km/h with gusts up to 60 km/h in certain areas during the day.

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Evaporation rates will range from 4.0 mm/day to 8.0 mm/day, with the higher ranges particularly during hot and windy days.

Impacts on Agriculture:

During the forecast rainy to wet days on the 11th, 15th and 19th, there is a low chance (10%) lightning strikes, heavy downpours, waterlogged soils, flash or riverine flooding as a result of relatively low rainfall accumulations. There is moderate (70%) chance however of Saharan dust/haze visitation with occasionally reduced visibility to less than 12.0 km, particularly during days: 12th, 13th, 14th, 16th, 17th, 18th and 20th. The possibilities for agricultural insects, pests, fungi and diseases are low (10%). There is also a small wind impact possibility with the strong winds directly affecting seed dispersion and seedling breakage.

Sun, Moon and bright objects in the sky:

The sun is at approximately 22.2 degrees south latitude overhead at crest this time of the year. As such, the day length for this dekad will increase from 11.4 to 11.5 hours. In spite of this, indicative heat stress on plants remains low even when the skies are cloud free.

The moon is expected to be in its first quarter around 14th January, 2019.

Expect to see Neptune and Mars in the evening skies as you look towards the west and Venus before dawn as you star gazed to the east.

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Trinidad's Mean Daily Rainfall Forecast for the Second Dekad of January (11th–20th) 2019.

Northern & Northwestern areas:

Moderate chance (60%) of mean daily rainfall up to 0.5 mm.

North-Eastern and Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 1.9 mm.

Central, West-Central and inland areas:

Moderate chance (61%) of mean daily rainfall up to 0.6 mm.

South-Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 1.8 mm.

Southern areas:

Moderate chance (62%) of mean daily rainfall up to 1.0 mm.

South-Western areas:

Moderate chance (60%) of mean daily rainfall up to 0.5 mm.

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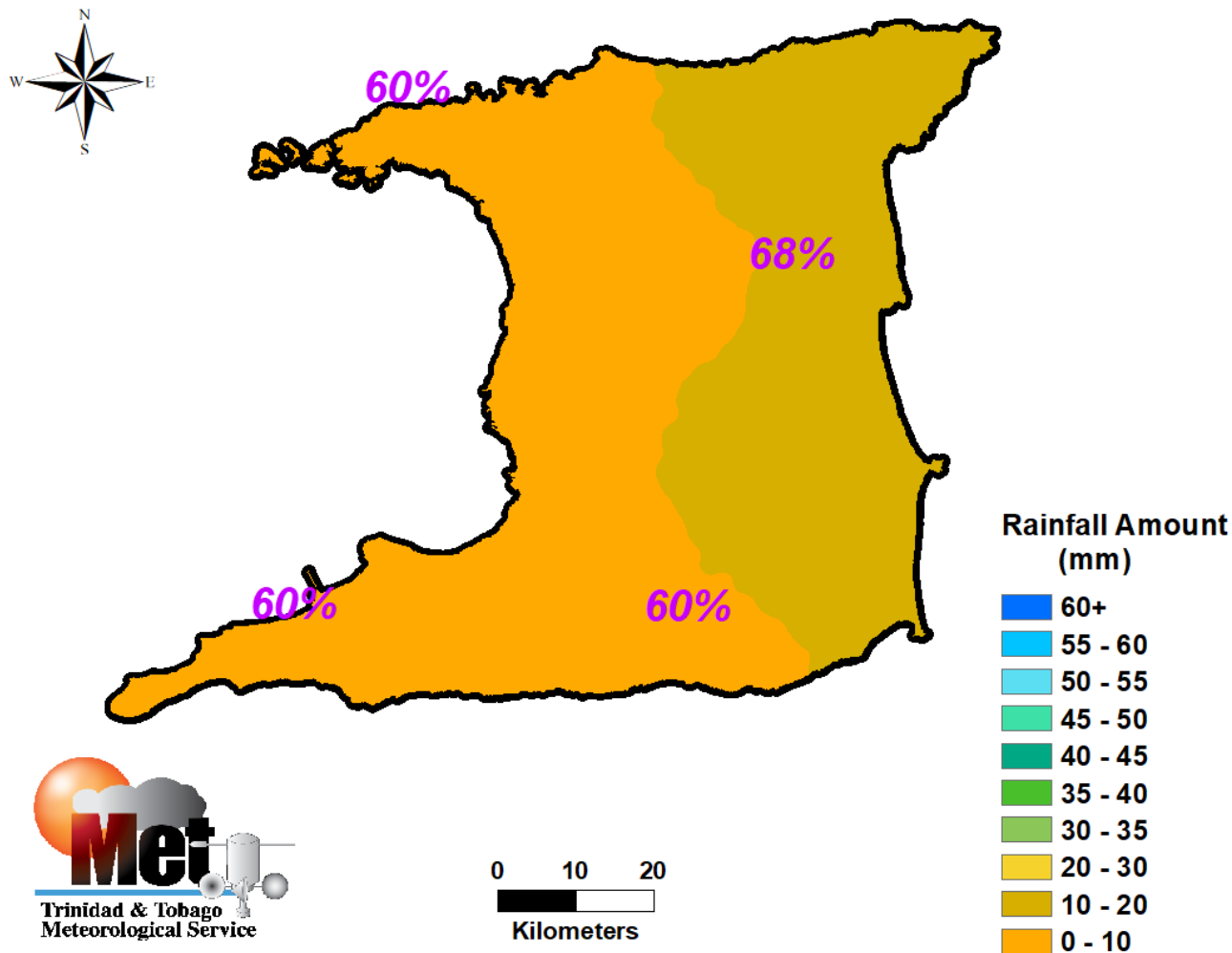


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during second dekad of January 2019 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the Second Dekad of January (11th–20th) 2019.

Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 1.5 mm.

South-Western areas:

Moderate chance (63%) of mean daily rainfall up to 0.9 mm.

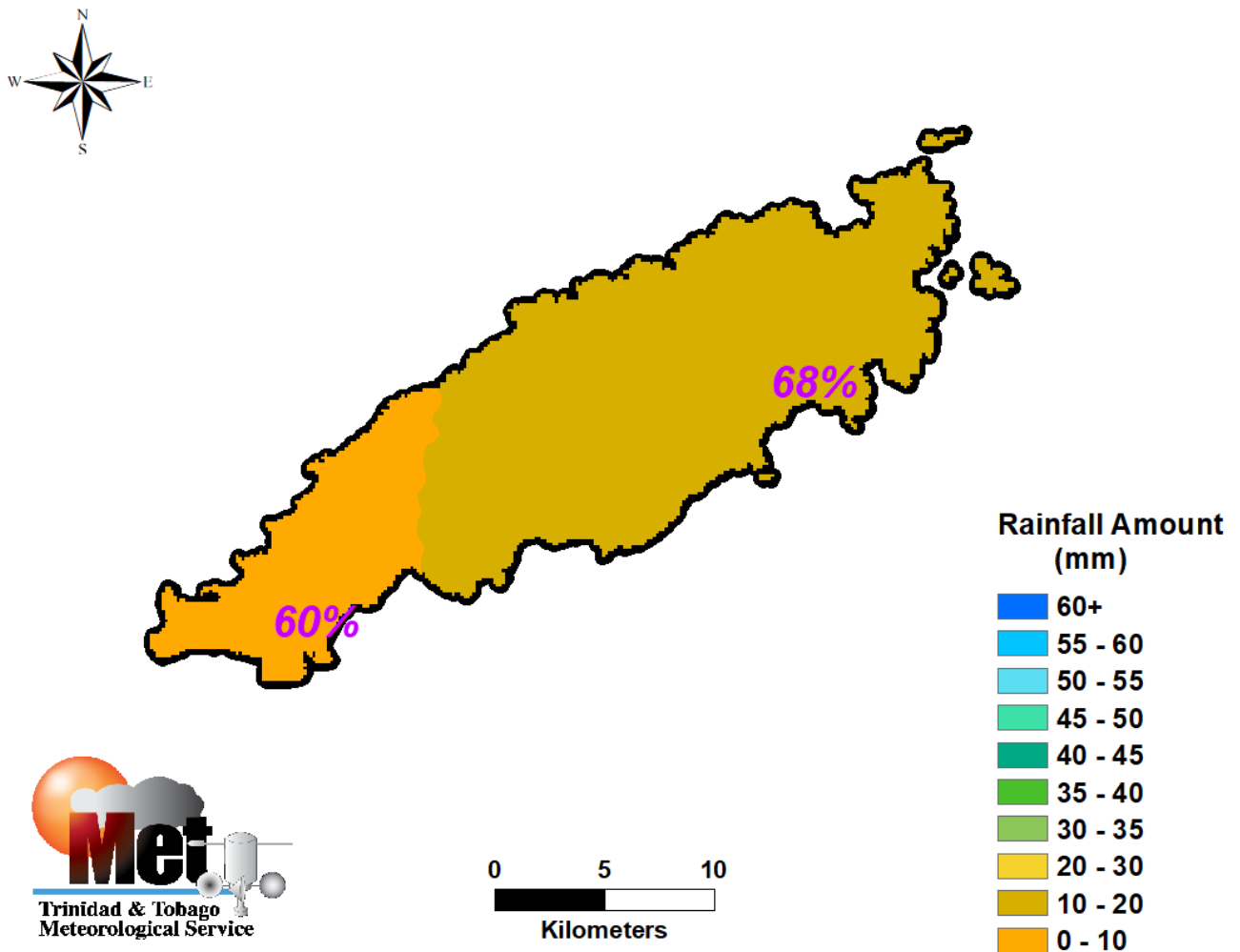


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during second dekad of January 2019 and percentage probability of occurrence.

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Temperatures:

Trinidad's Temperature Forecast for the Second Dekad of January (11th–20th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 30.7 °C, peaking near 31.7 °C.

Moderate chance (70%) of daily minimum temperatures to be below 22.0 °C, dropping as low as 19.0 °C.

Tobago's Temperature Forecast for the Second Dekad of January (11th–20th) 2019.

Moderate chance (70%) of daily maximum temperatures to exceed 29.5 °C, peaking near 30.7 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.0 °C, dropping as low as 21.5 °C.

Summary:

The forecast for the Second dekad or the next ten-day period from 11th – 20th January, 2019, shows that similarly dry conditions can be expected except in the case for three (3) days – 11th, 15th and 19th. The rainfall anticipated amounts for those days ranged from a rainy day (5.0mm in Trinidad and Tobago) to a wet day (20.0mm in Trinidad and 15.0mm in Tobago).

The average daily temperatures across Trinidad and Tobago are likely to range between 25.3 °C and 25.9 °C. Expect the highest maximum temperature over the dekad to peak at 31.7 °C in **Trinidad**, with the lowest night-time minimum temperature around 18.5 °C. These low temperatures can be observed particularly along the foothills and valleys of the Northern Range during relatively cloud-free nights.

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