

**Agro-meteorological Bulletin and Assessment for Farmers and Livestock
Producers of Trinidad and Tobago for the Second Dekad (11th -20th) of
August, 2018.**

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 August, 2018.

Mostly mixed conditions dominated Trinidad and Tobago during the dekad, where both islands experienced some patchy cloudy to cloudy conditions at times with light to moderate/occasionally heavy rainfall over some areas. The occasional influx of warm dry Saharan air, together with little moisture advection gave little support to consecutive Tropical Waves (TW) during their passage across the islands. Also there were less frequent short visitation from the Inter Tropical Convergence Zone (ITCZ); which mostly affect southeastern and southern Trinidad. Northeastern and eastern areas had rainfall totals more than Piarco (85.5 mm) and were well within the forecasted range of 80.0 mm to 100.0 mm. Similarly, central areas had rainfall totals as follows: Chaguanas (48.5 mm), Freeport (36.6 mm), Carapichama (41.9 mm) and Couva (40.9 mm) which were within the range forecasted of 30.0 mm to 50.0 mm. Furthermore, southern areas had the following rainfall amounts: San Fernando

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(20.6 mm), Princess Town (51.3 mm) and Golconda (72.1 mm) which were again, mostly within the range forecasted of 30.0 mm to 80.0 mm. Likewise, northern and northwestern areas had rainfall totals as follows: Tunapuna (41.9 mm) where just below the expected amount of 30.0 mm to 50.0 mm. Similarly, northwestern areas of Trinidad such as Port of Spain and Carenage had rainfall amounts of 7.4 mm and 2.8 mm respectfully, and again below expected range of 30.0 mm to 50.0 mm.

Tobago had experienced adequate rainfall, central areas such as Mt Moriah had 25.9 mm while western areas such as Crown Point and Buccoo had rainfall totals around 38.5 mm, well within the forecasted amount of 10.0 mm to 40.0 mm.

Trinidad's temperature was generally within expected range, maximum temperature went up to 33.1 °C, which was within the expected range of 32.1 °C to 33.6 °C. At the same time Tobago's maximum got up to 32.3 °C, well above the range expected of 30.9 °C to 31.8 °C. Similarly, lowest temperatures recorded were 22.4 °C in Trinidad and 24.2 °C in Tobago. In Trinidad's case, the minimum temperature was below the expected range of 23.7 °C to 22.6 °C. Conversely, the minimum temperature was within the range of 24.5 °C to 23.3 °C for Tobago. The average humidity for both islands remained in the lower-seventies, falling lower during hot and breezy conditions and raising during cloudy, cool and relatively wet periods. Since mixture of relatively dry and relatively wet days occurred during the dekad, frequent irrigation may have been necessary.

Expected Weather for Second Dekad (11th – 20th) of August 2018 and Likely Impact on Agriculture.

The forecast for the Second dekad of August indicates that farmers can expect drier conditions with less rainfall amounts as compared to the first dekad of August. Relatively wet to wet days are expected on days: 11th, 13th, 14th, 18th and 19th but particularly on days 13th, 14th and 18th light to moderate rainfall with thundershowers are possible. The ten-day period rainfall totals, forecast to range between 25.0 mm and 70.0 mm in Trinidad and between 19.0 mm to 30.0 mm in Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 26.8 °C and 28.4 °C. Expect the highest maximum temperature over the dekad to peak near 33.6 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 22.2 °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 32.8 °C, while the lowest minimum temperature will be dip below 24.0 °C, mostly during relatively cloud-free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 56% and 80%. 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 18 km/h and 32 km/h but can gust to 50 km/h. In addition, evaporation rates are expected to range between 2.5 mm/day and 10.4 mm/day, but can be slightly more during warmer and windier periods and slightly less during

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relatively wet days. The mix conditions of (relatively wet to wet) and relatively dry days of the dekad, will definitely decrease the need for frequent irrigation the during the dekad.

In consequence of the expected weather conditions during the dekad, there is a moderate (60%) probability of heat stress on certain variety plant seedlings and young animals from exposure to solar radiation and warm temperatures. On the other hand, there is a moderate chance (60%) of lightning strikes, heavy down-pours, water logged soils and flash flooding in some areas, particularly on days 13th, 14th, 18th and 19th. There is also a moderate (60%) probability chance of frequent visitation of Saharan dust that will occasionally reduce visibility to less than 10.0 km, particularly during days: 12th, 15th, 16th, 17th and 20th.

Additionally, during the dekad, there is a moderate (70%) probability of some agricultural insects, pests, fungi and diseases to get a foot in and possibly develop and thrive. Moreover, the expected daytime wind speeds and specifically during down drafts from cloud clusters, together with the funneling effect of wind along narrow paths and undulating landscapes, may affect some seedlings negatively by causing seedlings' stems and leaves to be damaged. In addition, possible strong winds and high intensity rainfall may hamper some types of fertilizer, fungicide and insecticide application and retention.

Trinidad's Mean Daily Rainfall Forecast for the Second Dekad of August (11th–20th) 2018.

Northern & Northwestern areas:

Moderate chance (62%) of mean daily rainfall up to 3.7 mm.

North-Eastern and Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 6.5 mm.

Central, West-Central and inland areas:

Moderate chance (62%) of mean daily rainfall up to 3.3 mm.

South-Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 6.5 mm.

Southern areas:

Moderate chance (64%) of mean daily rainfall up to 4.6 mm.

South-Western areas:

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Moderate chance (62%) of mean daily rainfall up to 3.4 mm.

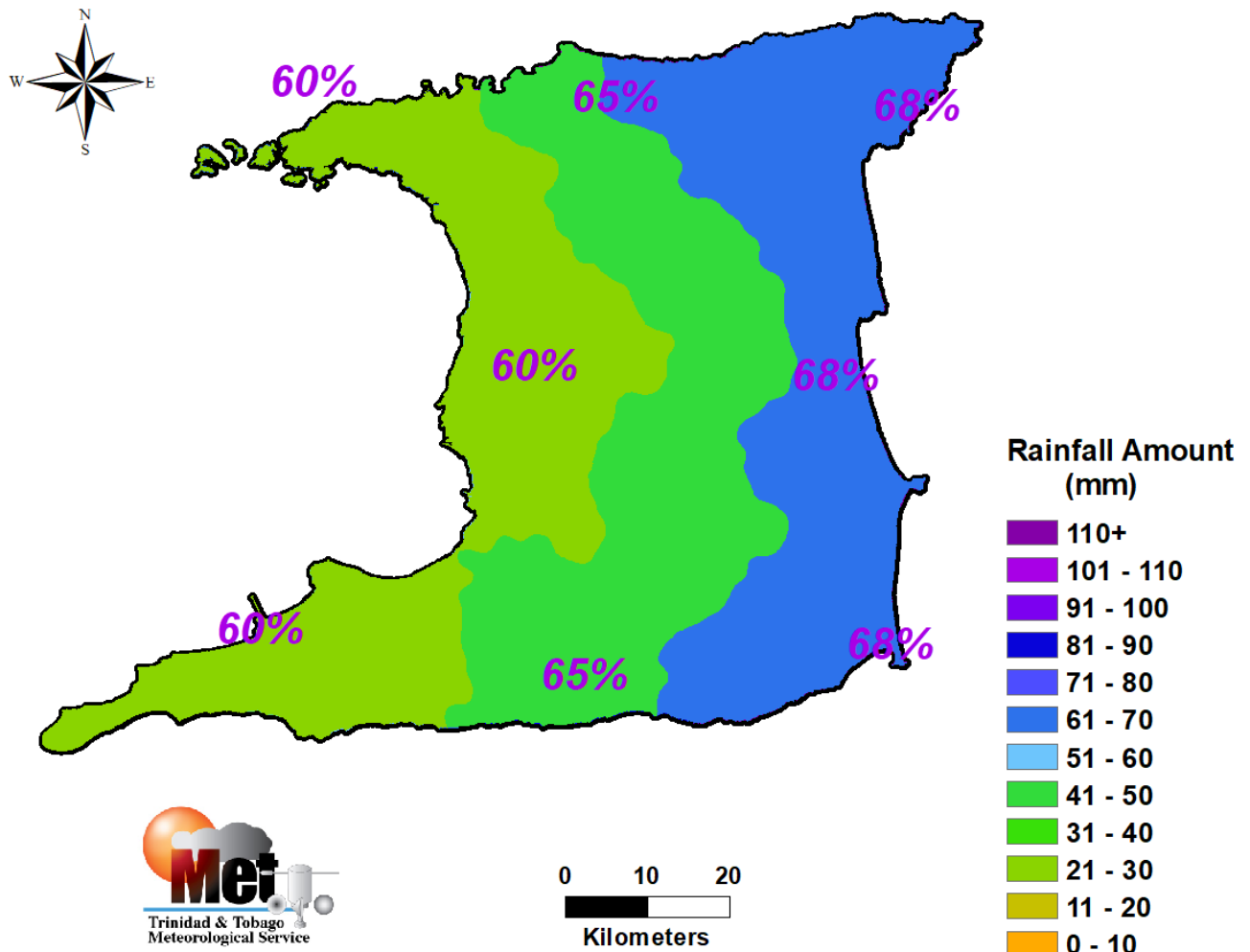


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during second dekad of August 2018 and percentage probability of occurrence.

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Tobago’s Mean Daily Rainfall Forecast for the Second Dekad of August (11th–20th) 2018.

Northeastern areas:

Moderate chance (67%) of mean daily rainfall up to 2.9 mm.

South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 2.6 mm.

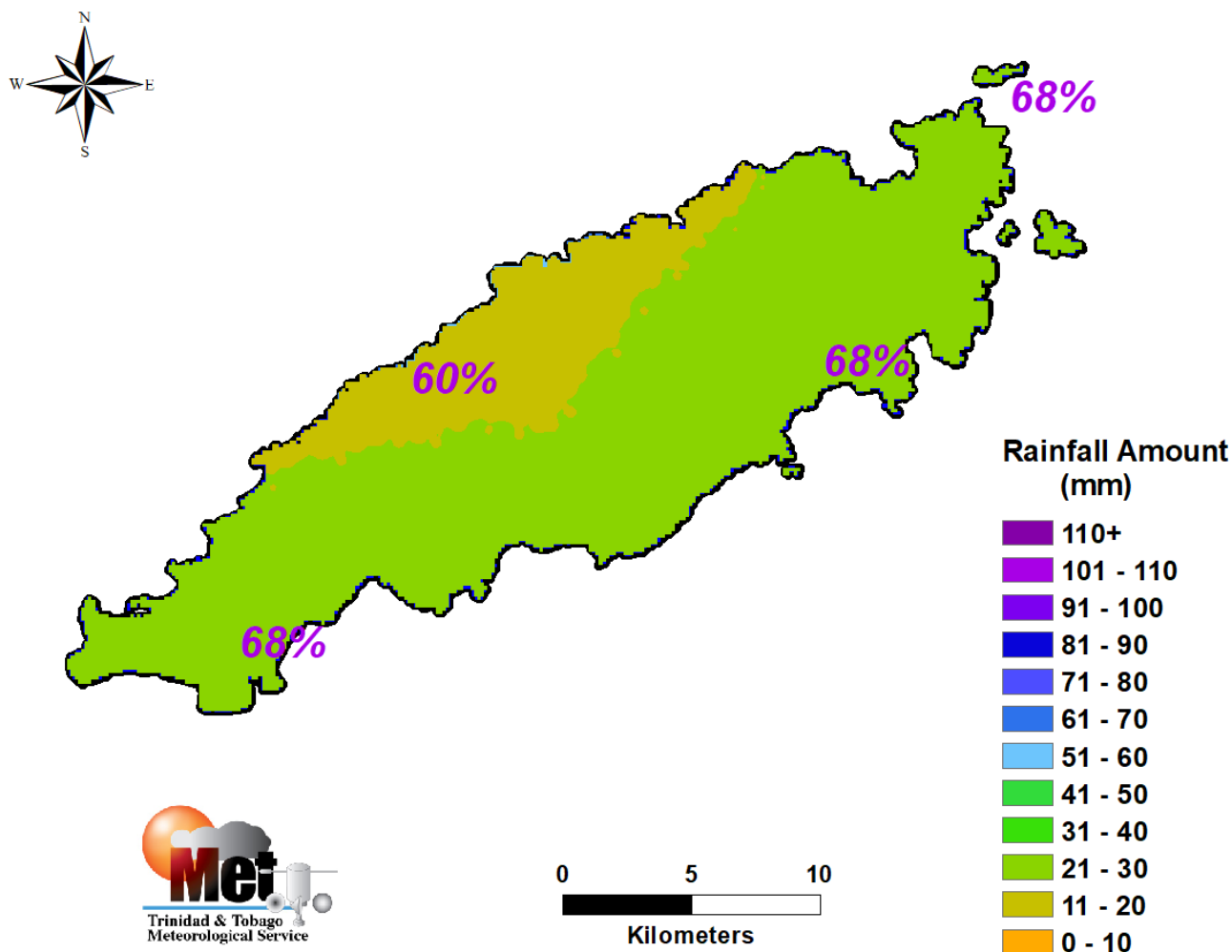


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during second dekad of August 2018 and percentage probability of occurrence.

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Temperatures:

Trinidad's Temperature Forecast for the Second Dekad of August (11th-20th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 32.3 °C, peaking near 33.6 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.6 °C, dropping as low as 22.2 °C.

Tobago's Temperature Forecast for the second Dekad of August (11th-20th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 31.1 °C, peaking near 32.8 °C.

Moderate chance (70%) of daily minimum temperatures to be below 24.4°C, dropping as low as 24.0 °C.

Summary:

The outlook for the second dekad of August calls for drier conditions as compared to first dekad of August. Expect relatively wet day to wet days, particularly, on days 11th, 13th, 14th, 18th and 19th of the dekad with mostly moderate to heavy showers, possible thundershowers. The ten-day period rainfall totals, forecast to range between 25.0 mm and 70.0 mm in Trinidad and between 19.0 mm to 30.0 mm in Tobago.

Overall, **average** temperatures ranging between 26.8 °C and 28.4°C in both islands over the full dekad. The maximum temperature is likely to reach 33.6 °C in Trinidad and 32.8 °C in Tobago. While, the lowest minimum temperatures are likely to reach 22.2 °C in Trinidad and 24.0 °C in Tobago. Opportunities for water harvesting will decrease during dekad.

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