

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st -31st) of December, 2017.

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 Second Dekad (11th - 20th) of December, 2017.

The second ten days of December turned out to be particularly dry in both Trinidad and Tobago. The ten-day rainfall total recorded at Piarco Trinidad, preliminary amount was 15.9 mm. Some central districts, had slightly less rainfall than Piarco, such as Longdenville, Carapichiamia, Couva, Preysal and Brasso Vernado. Also, similar amounts as Piarco, were recorded in southern districts of San Fernando, Golconda, Penal, and Siparia. In addition, Northwestern districts of West Moorings, Port of Spain and Carenage had similar amounts as Piarco. On the other hand, El Reposo and other northeastern districts had rainfall amounts around 44.5mm, which was close to the forecasted amounts of 50.0 mm over the ten-day period.

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Similarly, Tobago had less than expected rainfall amounts. ANR Robinson airport had preliminary rainfall amount of 13.2 mm. Neighboring districts' such as Bethel, Mount Pleasant and Buccoo had similar rainfall amounts as well. However, significantly less rainfall fell, in areas of Mount Moriah and in sheltered areas west of, the main ridge such Arnos Vale and Les Coteaux.

Temperatures continue to be cooler in Trinidad and Tobago. Trinidad's maximum temperature went up to 31.7°C. Conversely, lowest temperatures recorded were 19.8 °C in Trinidad and 22.4 °C in Tobago. The average humidity for both islands remained in the mid-seventies.

All together, the observed conditions would not have been ideal for agriculture, with less than expected rainfall over the last dekad. This may have aided in drying of soils, but the regular early morning and day time rainfall may have arrested drying of soils somewhat.

Expected Weather for Third Dekad (21st-31st) of December, 2017 and Likely Impact on Agriculture.

The forecast for the last dekad of December indicates that farmers can expect similar amounts of rainfall as in the past two dekads in Trinidad and Tobago. Farmers can expect mostly dry weather during the first half of the dekad, with increasing rainfall occurrences from day 26th; with days 27th, 28th, 29th and 30th being the wettest days of the period. The ten-day period totals are forecast to range between 20.0 mm and 40.0 mm, with the chance that northeastern and eastern districts of Trinidad such as El Reposo and Brasso Vernado will receive slightly more rainfall amounts. However, northwestern, western and southwestern areas of Trinidad such as Carenage, Carapichama and Chatham will receive slightly less rainfall amounts.

Eastern areas of Tobago such as Speyside, Roxborough and environs may experience slightly more rainfall than 40.0 mm. While the leeward side of Tobago, preferably, along the main ridge such as Mount Moriah and Arnos Vale and Les Coteaux will receive slightly less than 20.0 mm of rainfall.

The average daily temperatures across Trinidad and Tobago are likely to range between 25.9 °C and 26.4 °C. Expect the maximum temperatures over the dekad to peak near 31.8 °C in Trinidad while the lowest night to early morning minimum temperatures could dip below 20.0 °C in Trinidad. Especially along the foothills and valleys during relatively cloud free nights. During the dekad, in Tobago, the maximum temperature will peak near 31.4 °C, while the minimum temperatures will be dip below 23.5 °C, mostly during relatively cloud free nights.

For both Trinidad and Tobago, the day time relative humidity (RH) is likely to range between 60% to 69%, but during wetter days, RH percentage values will range around 70% to 80%. At the same time, winds speeds are expected to increase to be mostly moderate at 16-28km/h or 4-8m/s. Also,

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evaporation rates are expected to be in the range from 3.0 mm/day to 6.0 mm/day but can be more during warmer and windier periods.

The anticipated mixed but relatively drier conditions will likely increase the need for irrigation during the first half of the dekad. Drier conditions early in the period, may increase the risk of leaf and flower drops in mature and developing plants. Warm conditions, following episodes of rainfall, will be favourable for agricultural insect pests, fungi and diseases to develop and thrive. Moreover, the expected increase in winds could hamper some types of fertilizer application.

Trinidad's Mean Daily Rainfall Forecast for the Third Dekad of December (21st-31st) 2017.

Northern & Northwestern areas:

Moderate chance (66%) of mean daily rainfall up to 3.6 mm.

North-Eastern and Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 4.0 mm.

Central, West-Central and inland areas:

Moderate chance (64%) of mean daily rainfall up to 2.8 mm.

South-Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 4.0 mm.

Southern areas:

Moderate chance (66%) of mean daily rainfall up to 3.6 mm.

South-Western areas:

Moderate chance (66%) of mean daily rainfall up to 3.4 mm.

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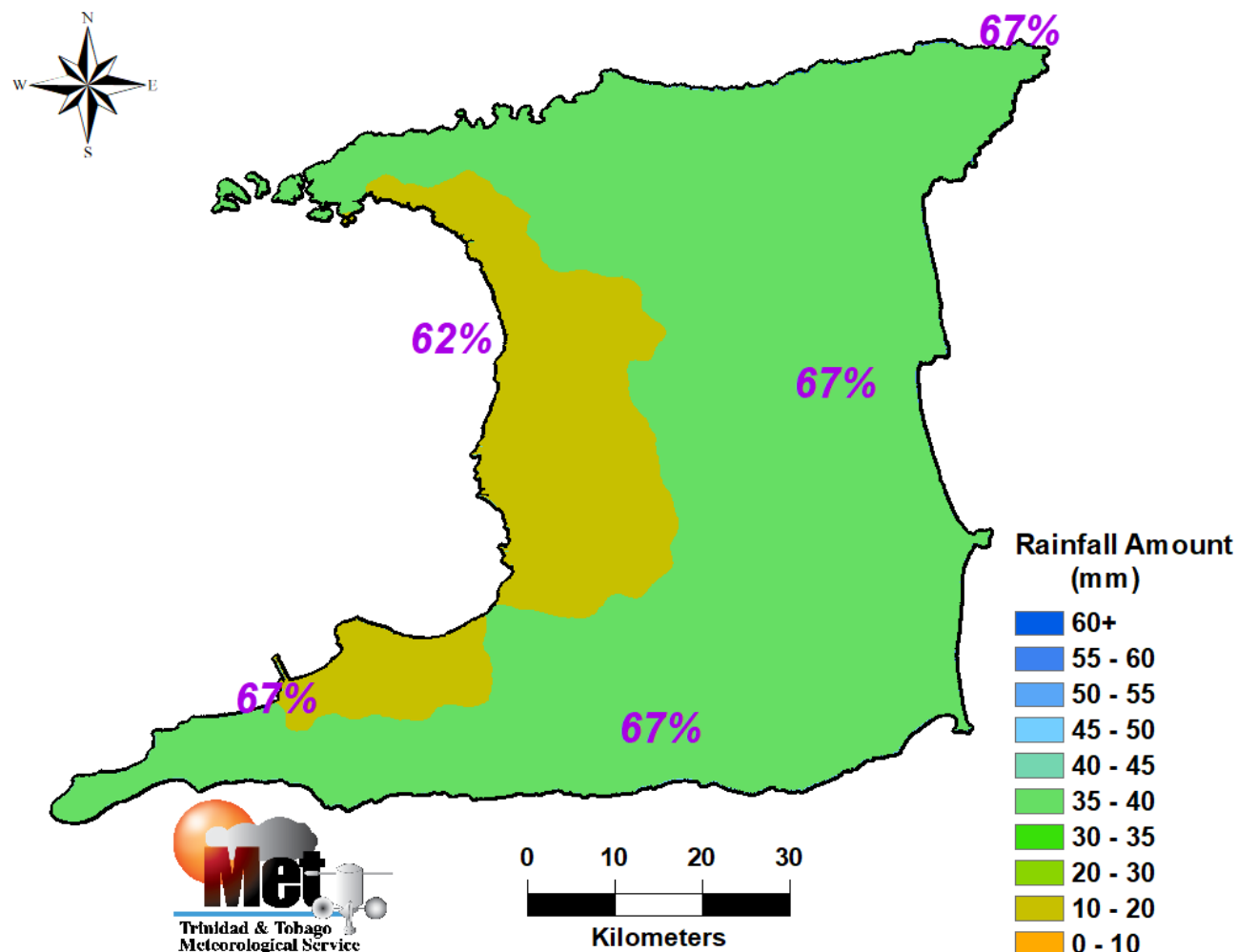


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during Third dekad of December, 2017 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the Third Dekad of December (21st-31st) 2017.

Northeastern areas:

Moderate chance (65%) of mean daily rainfall up to 3.9 mm.

South-Western areas:

Moderate chance (64%) of mean daily rainfall up to 3.4 mm.

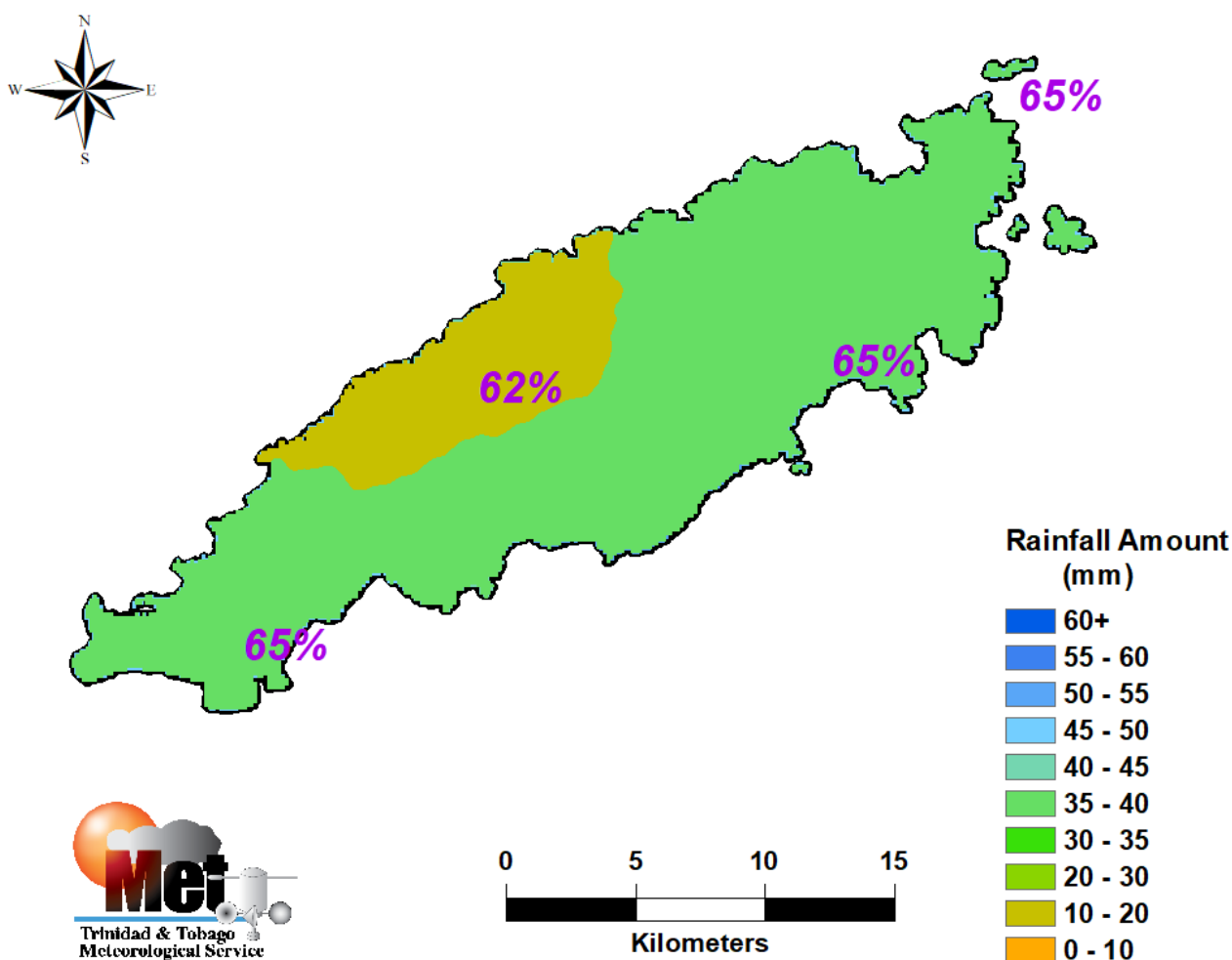


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during third dekad of December, 2017 and percentage probability of occurrence.

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Temperatures:

Trinidad's Temperature Forecast for the Third Dekad of December (21st-31st) 2017.

Moderate chance (70%) of daily maximum temperatures to exceed 31.1 °C, peaking near 31.8 °C.

Moderate chance (70%) of daily minimum temperatures to be below 22.4 °C, dropping as low as 20.0 °C.

Tobago's Temperature Forecast for the Third Dekad of December (21st -31st) 2017.

Moderate chance (70%) of daily maximum temperatures to exceed 30.1 °C, peaking near 31.4 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.5 °C, dropping as low as 21.4 °C.

Summary:

The outlook for the last dekad of December calls for mostly dry weather during the first five days. An increase in cloudiness and episodes of rainfall are expected to occur on each successive day from the 26th until the end of the period. This would indicate that, days 26th until the 30th, being the wettest days. Overall, temperatures are expected to be cooler with average temperatures ranging between 25.9 °C and 26.4 °C in both islands. The highest maximum temperatures are likely to reach 31.8 °C in Trinidad and 31.4 °C in Tobago. While, the lowest minimum temperatures are likely reach 20.0 °C in Trinidad and 21.4 °C in Tobago. As the season transitions to drier conditions, opportunities for water harvesting are likely to become less, hence any opportunities to harvest and store rainwater should be undertaken, while irrigation processes continue.

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