

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

A mostly dry start followed by relative wet conditions over Trinidad and Tobago during the latter part of the dekad, where both islands experienced some patchy cloudy to cloudy conditions on days 7th, 9th and 10th with light to moderate rainfall over most areas. This rainfall on days 9th and 10th was associated with the passage of a Tropical Wave. Northeastern and eastern areas had rainfall totals slightly more than Piarco's (6.6 mm) and were well below the forecasted range of 20.0 mm to 30.0 mm. Similarly, central areas had rainfall totals as follows: Chaguanas (6.3 mm), Freeport (2.0 mm) and Couva (6.9 mm) again which was well below the range forecasted of 20.0 mm to 30.0 mm. Additionally, southern areas had the following rainfall amounts: San Fernando (7.1 mm), Princess Town (6.9 mm) and Golconda (4.6 mm) which was again well below the range forecasted of 20.0 mm to 30.0 mm.

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Likewise, northern and northwestern areas had rainfall totals as follows: Tunapuna (9.4 mm), Port of Spain (1.8 mm) and Carenage (5.8 mm), where again below the expected amount of 20.0 mm to 30.0 mm.

In the same way, Tobago had experienced some rainfall, central areas of Mount Moriah and Castara had rainfall totals ranging between 0.0 mm to 1.3 mm which were well below the range 10.0 mm to 20.0 mm; while western areas such as Crown Point and Buccoo had rainfall totals ranging between 5.0 mm to 7.7 mm again; well below the forecasted amount of 20.0 mm to 30.0 mm.

Trinidad's temperature was generally within expected range, maximum temperature went up to 33.0 °C, which was above the expected range of 31.5 °C to 32.5 °C. At the same time Tobago's maximum got up to 31.6 °C, within the range expected of 31.1 °C to 32.0 °C. Similarly, lowest temperatures recorded were 22.4 °C in Trinidad and 24.1 °C in Tobago. In Trinidad's case, the minimum temperature was just below the expected range, of 22.9 °C to 24.1 °C. On the other hand, the minimum temperature was within the range of 23.5 °C to 24.8 °C for Tobago. The average humidity for both islands remained in the mid-sixties, falling lower during hot and breezy conditions and raising during cloudy, cool and relatively wet periods. During relatively dry days during the dekad may not have supported crops survival and must have warranted more frequent irrigation. Whereas during the last two days of dekad may have warranted less frequent irrigation.

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

The forecast for the second dekad of June indicates that farmers can expect higher rainfall amounts as compared to the first dekad of June. During the second dekad, farmers will experience relatively wet-to-wet days during days 11th, 12th, 13th, 17th, 18th 19th and 20th dekad, while relatively dry conditions during the other days of the dekad. The ten-day period rainfall totals, forecast to range between 30.0 mm and 75.0 mm in Trinidad and between 20.0 mm to 35.0 mm in Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 26.0 °C and 27.8 °C. Expect the highest maximum temperature over the dekad to peak near 33.0 °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 32.0 °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 60% and 84%. However, during relatively wet days, RH percentage values will range around 79% to 100%. At the same time, the wind speeds are expected to range between 20 km/h and 36 km/h. In addition, evaporation rates are expected to range between 4.0 mm/day and 9.5 mm/day, but can be slightly more during warmer and windier periods and slightly less during relatively wet days.

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The mostly relative wet-to-wet days during the dekad, will definitely decrease the need for frequent irrigation. However, during the dekad, on days 14th, 15th and 16th, expect relatively dry conditions with the possible increase in the frequency of irrigation.

Owing to the expected weather conditions during the dekad, there is a low (30%) probability of heat stress on certain variety plant seedlings and young animals from exposure to solar radiation and warm temperatures. There is also a low (30%) probability chance of frequent visitation of Saharan dust that will occasionally reduce visibility to minimum of 7.5 km.

Additionally, owing to the possible mostly mixed conditions during the dekad, there is a moderate (65%) probability of some agricultural insect pests, fungi and diseases to get a foot in and possibly develop and thrive. Moreover, the expected daytime wind speeds and specifically down draft 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 crops' ability to retain flowers.

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

Northern & Northwestern areas:

Moderate chance (62%) of mean daily rainfall up to 4.0 mm.

North-Eastern and Eastern areas:

Moderate chance (66%) of mean daily rainfall up to 6.4 mm.

Central, West-Central and inland areas:

Moderate chance (61%) of mean daily rainfall up to 3.4 mm.

South-Eastern areas:

Moderate chance (68%) of mean daily rainfall up to 2.5 mm.

Southern areas:

Moderate chance (63%) of mean daily rainfall up to 4.8 mm.

South-Western areas:

Moderate chance (62%) of mean daily rainfall up to 3.8 mm.

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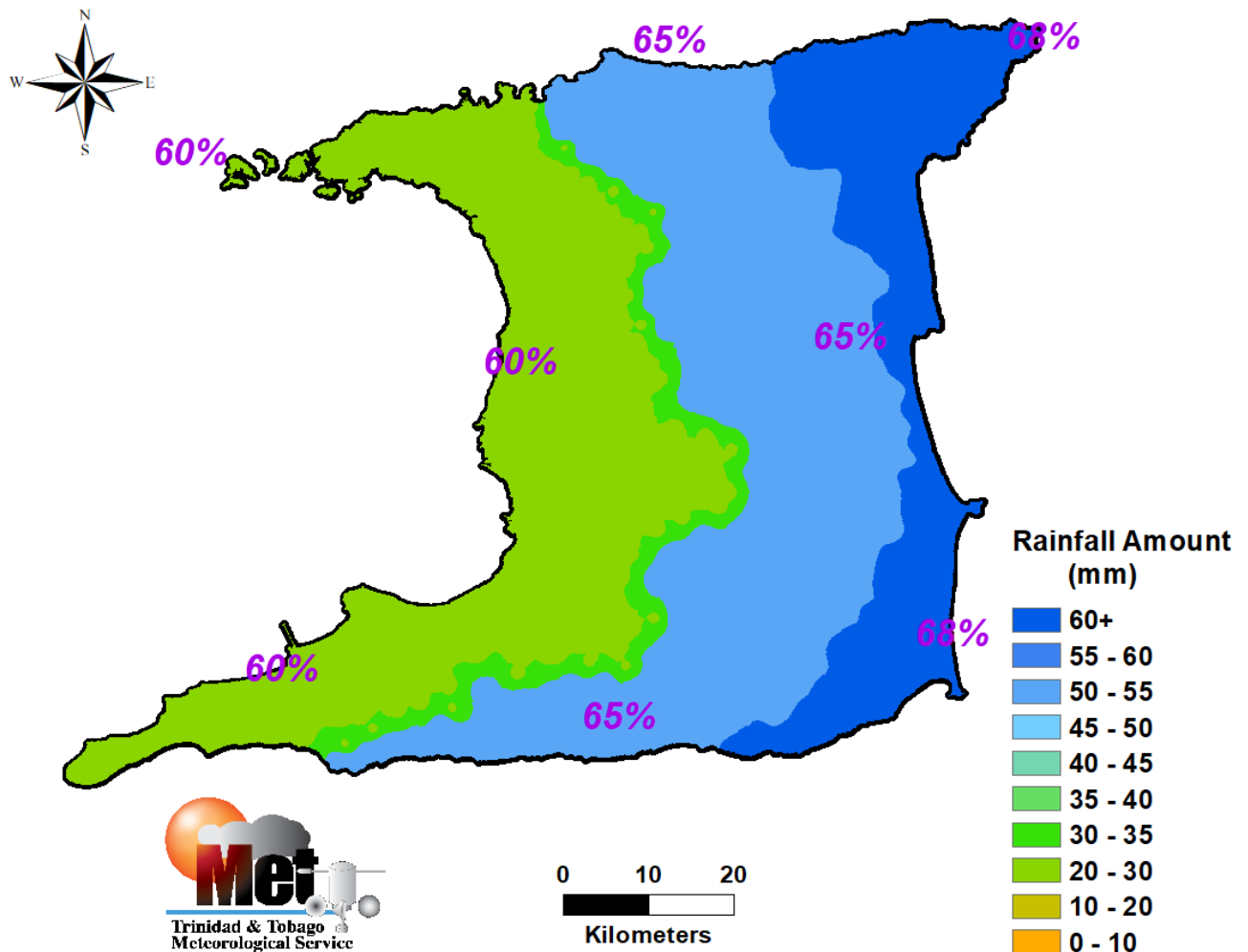


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during second dekad of June 2018 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the Second Dekad of June (11th-20th) 2018.

Northeastern areas:

Moderate chance (66%) of mean daily rainfall up to 3.2 mm.

South-Western areas:

Moderate chance (65%) of mean daily rainfall up to 3.0 mm.

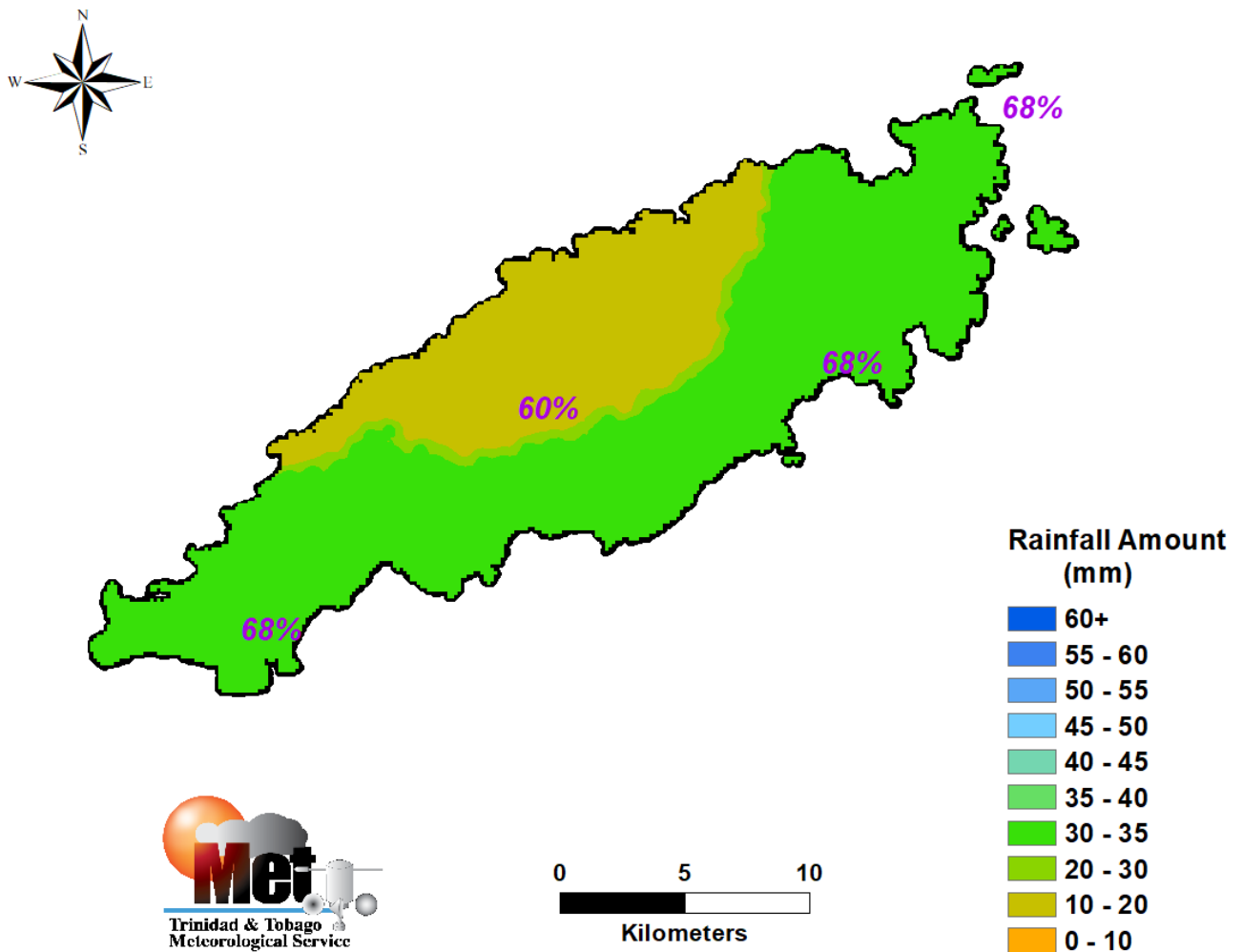


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during second dekad of June 2018 and percentage probability of occurrence.

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Temperatures:

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

Moderate chance (70%) of daily maximum temperatures to exceed 32.5⁰C, peaking near 33.0 ⁰C.

Moderate chance (70%) of daily minimum temperatures to be below 24.0 ⁰C, dropping as low as 22.2 ⁰C.

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

Moderate chance (70%) of daily maximum temperatures to exceed 31.5 ⁰C, peaking near 32.0 ⁰C.

Moderate chance (70%) of daily minimum temperatures to be below 24.8 ⁰C, dropping as low as 24.0 ⁰C.

Summary:

The outlook for the Second dekad of June calls for mixed conditions. Expect relatively wet-to-wet days during 11th, 12th, 13th, 17th, 18th 19th and 20th dekad while relatively dry days during: 14th, 15th and 16th of the dekad. Overall, temperatures are warming with **average** temperatures ranging between 26.0 ⁰C and 27.8 ⁰C in both islands over the full dekad. The highest maximum temperature is likely to reach 33.0 ⁰C in Trinidad and 32.0 ⁰C in Tobago. While, the lowest minimum temperatures are likely to reach 22.2 ⁰C in Trinidad and 24.0 ⁰C in Tobago. Opportunities for water harvesting will increase during the relatively wet-to-wet days. As such, any opportunity to harvest and store rainwater should be undertaken, while irrigation processes continue.

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