

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First Dekad (1st -10th) 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 Third Dekad (21st – 31st) of May 2018.

Mostly dry start followed by relative wet to wet conditions dominated Trinidad and Tobago over the dekad, where both islands experienced some patchy cloudy to cloudy conditions at times on days 23rd, 26th, 27th, 30th, and 31st with light to moderate rainfall over most areas. Specifically, there was surprising less than expected rainfall amount from a Tropical Wave that passed over on 26th. It produced mostly light to moderate rainfall amounts over most of Trinidad and Tobago. Northeastern and eastern areas had rainfall totals similar to Piarco of 21.5 mm and were well within the forecasted range of 20.0 mm to 30.0 mm. Similarly, central areas had rainfall totals as follows: Chaguanas (14.0 mm), Preysal (15.3 mm) and Couva (5.1 mm) again which was mostly well within the range forecasted of 10.0 mm to 20.0 mm. Additionally, southern areas had the following rainfall amounts:

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San Fernando (12.4 mm), Princess Town (21.4 mm) and Golconda (12.0 mm) which was again well within the range forecasted of 10.0 mm to 20.0 mm.

Likewise, northern and northwestern areas had rainfall totals as follows: Tunapuna (7.9 mm), Port of Spain (0.8 mm) and Carenage (7.6 mm), where again below the expected amount of 10.0 mm to 20.0 mm.

In the same way, Tobago had experience some rainfall, central areas of Mount Moriah and Castara had rainfall totals ranging between 5.0 mm to 9.1 mm which was well within the range 0.0 mm to 10.0 mm; while western areas such as Crown Point and Buccoo had rainfall totals ranging between 11.2 mm to 21.5 mm again; well within the forecasted amount of 20.0 mm to 30.0 mm.

Trinidad's temperature was generally within expected range, maximum temperature went up to 32.0 °C, which was within the expected range of 32.0 °C to 33.0 °C. At the same time Tobago's maximum got up to 31.5 °C, within the range expected of 31.3 °C to 32.2 °C. Similarly, lowest temperatures recorded were 22.7 °C in Trinidad and 23.4 °C in Tobago. In Trinidad's case, the minimum temperature was just below the expected range, of 22.8 °C to 24.2 °C. On the other hand, the minimum temperature was within the range of 23.4 °C to 24.9 °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.

Expected Weather for First Dekad (1st – 10th) of June 2018 and Likely Impact on Agriculture.

With start of the rainy season, the forecast for the first dekad of June indicates that farmers can expect higher rainfall amounts as compared to the last dekad of May. During the first dekad, farmers will experience relatively wet to wet days during days 3rd, 4th, 5th and 10th 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 26.2 °C and 28.6 °C. Expect the highest maximum temperature over the dekad to peak near 32.5 °C in **Trinidad**, while the lowest night to early morning minimum temperature could dip below 22.9 °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 23.5 °C, mostly during relatively cloud free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 54% and 78%. However, during relatively wet days, RH percentage values will range around 79% to 96%. At the same time, wind speeds are expected to range between 20 km/h and 36 km/h. In addition, evaporation rates are expected to range between 3.5 mm/day and 8.1 mm/day, but can be slightly more during warmer and windier periods and slightly less during relatively wet days.

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The initial relatively dry start to the dekad, will definitely increase the need for frequent irrigation. However, during the dekad, on days 3rd, 4th, 5th and 10th, expect relatively wet to wet conditions with the possible decrease in the frequency of irrigation.

The northern hemisphere summer is here with early sunrise, late sunset, longer days, shorter nights and warmer temperatures. There is medium (63%) probability of heat stress on certain variety plant seedlings and young animals from excessive exposure to solar radiation and warm temperatures. There is also a moderate (68%) chance of frequent visitation of Saharan dust that will occasionally reduce visibility to minimum of 7.5 km.

Additionally, owing to the possible mostly dry conditions during the first part followed by possible relative wet to wet days, there is a moderate (60%) 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, 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 First Dekad of June (1st–10th) 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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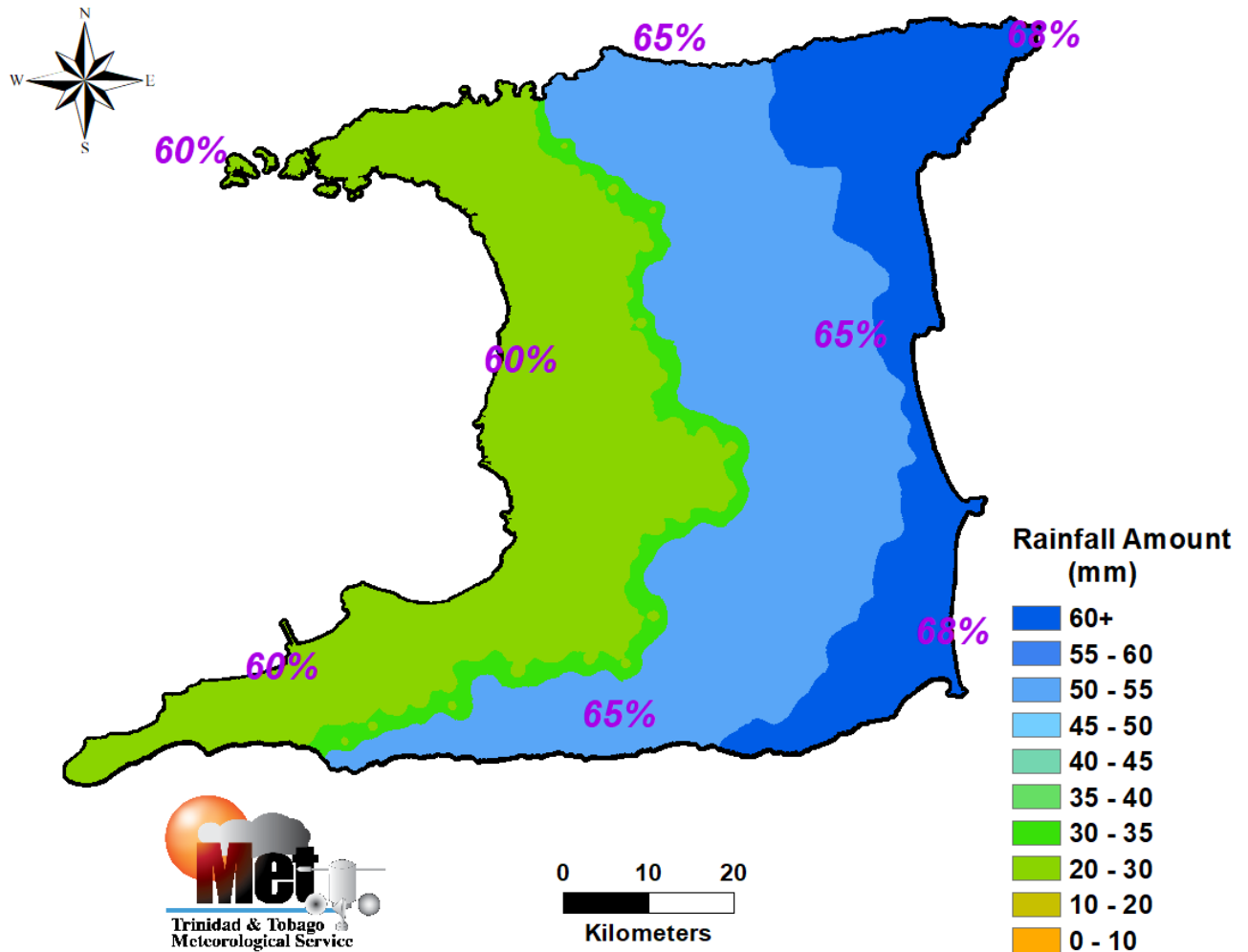


Figure 1. Rainfall Map of Trinidad showing possible rainfall totals for varying districts during first dekad of June 2018 and percentage probability of occurrence.

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Tobago's Mean Daily Rainfall Forecast for the First Dekad of June (1st- 10th) 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.

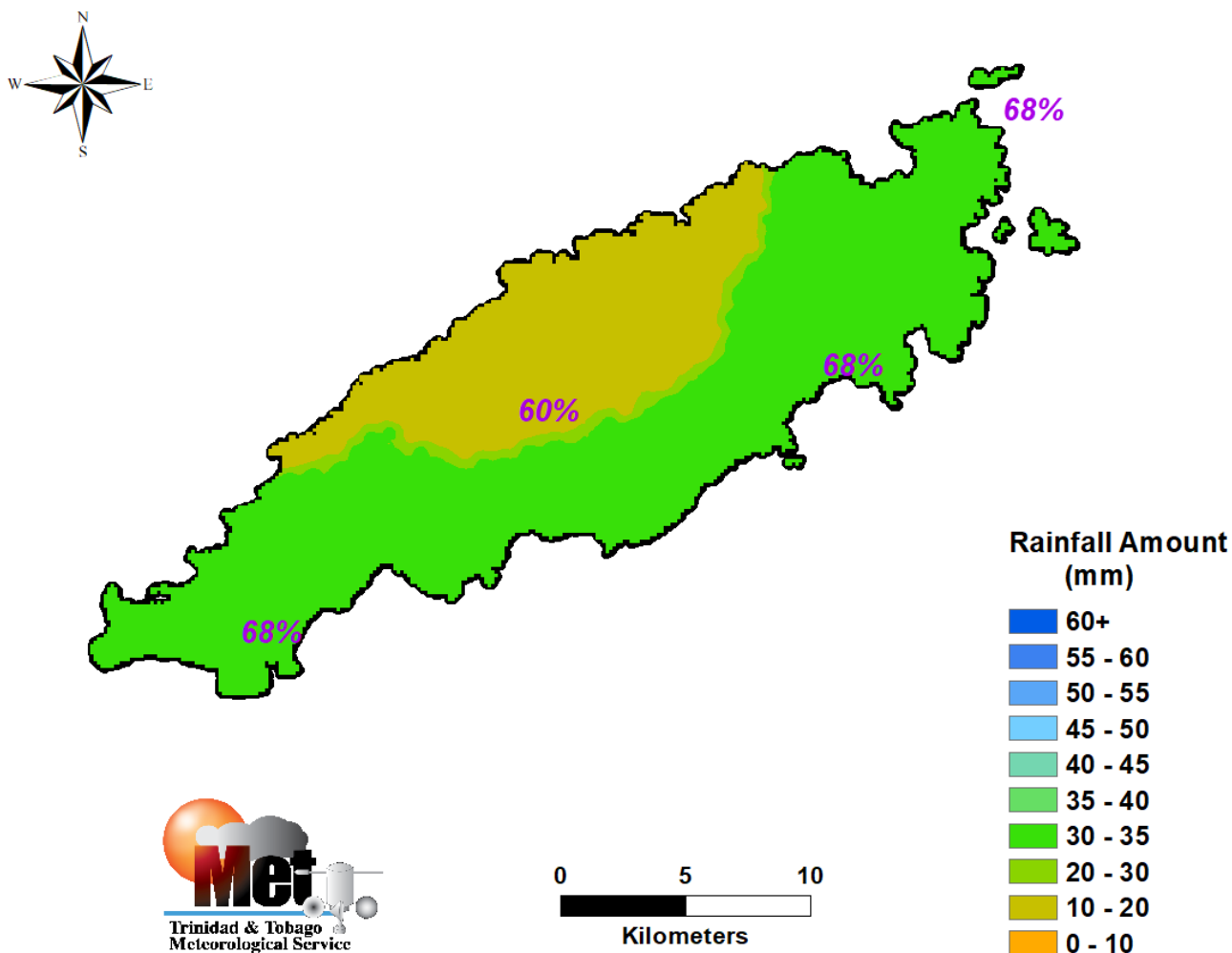


Figure 2. Rainfall Map of Tobago showing possible rainfall totals for varying districts during first dekad of June 2018 and percentage probability of occurrence.

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Temperatures:

Trinidad's Temperature Forecast for the First Dekad of June (1st-10th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 31.5⁰C, peaking near 32.5⁰C.

Moderate chance (70%) of daily minimum temperatures to be below 24.1⁰C, dropping as low as 22.9⁰C.

Tobago's Temperature Forecast for the First Dekad of June (1st-10th) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 31.1⁰C, peaking near 32.0⁰C.

Moderate chance (70%) of daily minimum temperatures to be below 24.8⁰C, dropping as low as 23.5⁰C.

Summary:

The outlook for the First dekad of June calls for relatively wet to wet days during: 3rd, 4th, 5th and 10th and relatively dry days during: 1st, 2nd, 6th, 7th, 8th and 9th of the dekad. Overall, temperatures are warming with **average** temperatures ranging between 26.2⁰C and 28.6⁰C in both islands over the full dekad. The highest maximum temperature is likely to reach 32.5⁰C in Trinidad and 32.0⁰C in Tobago. While, the lowest minimum temperatures are likely to reach 22.9⁰C in Trinidad and 23.5⁰C in Tobago. The rainy season is upon us and having said that, opportunities for water harvesting will increase during the relatively wet to wet days, any opportunity to harvest and store rainwater should be undertaken, while irrigation processes continue.

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