

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11<sup>th</sup> -20<sup>th</sup>) of March 2018.

Definitions used in the forecast and bulletin:

<b>Term</b>	<b>Meaning</b>	
<b>Dekad</b>	10 day rainfall measuring period	
<b>Rain Day</b>	A day with 1.0 mm or more of rainfall amount	
<b>Wet Day</b>	A day with 10.0 mm or more of rainfall amount	
<b>Extremely Wet Day</b>	A day with 25.0 mm or more of rainfall amount	
<b>Normal Rainfall</b>	Between 75% and 125 % of the average	
<b>Below Normal Rainfall</b>	Rainfall below 75% of the average	
<b>Above Normal Rainfall</b>	Rainfall in excess of 125 % of the average	
<b>Much below Normal Rainfall</b>	Rainfall below 50% of the average	
<b>Much above Normal Rainfall</b>	Rainfall above 150% of the average	
<b>Scanty Rainfall</b>	Less than 1 mm	
<b>Moderate Rainfall</b>	1-10 mm	
<b>Heavy Rainfall</b>	10-50 mm	
<b>Very heavy Rainfall</b>	Greater than 50 mm	
<b>Probability of 1-30 %</b>	Low Chance	
<b>Probability of 30-70 %</b>	Moderate Chance	
<b>Probability greater than 70%</b>	High Chance	
<b>Term</b>	<b>Amount of Rain</b>	<b>Type of day</b>
<b>Scanty Rainfall</b>	Less than 1 mm	Relatively dry day
<b>Moderate Rainfall</b>	1-10 mm	Relatively wet day
<b>Heavy Rainfall</b>	10-50 mm	Wet day
<b>Very heavy Rainfall</b>	Greater than 50 mm	Excessively wet day

### Weather Assessment for the First Dekad (1<sup>st</sup> – 10<sup>th</sup>) of March 2018.

Days 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> of the dekad turned out to be relatively wet days over most of the country. Specifically, day 4<sup>th</sup> where torrential rain fell over mostly northern, northeastern and central areas. This resulted in flash flooding in Tunapuna, Piarco, Chaguanas and other neighboring districts. The ten-day rainfall total recorded at Piarco Trinidad, was 135.2 mm, well above the expected range of 20.0 mm to 30.0 mm. El Reposo and other northeastern districts had experienced similar rainfall amounts as Piarco. Likewise, northern districts such as Tunapuna had 94.0 mm of rainfall again higher than the expected rainfall amount of 20.0 mm to 30.0 mm. Also, central districts such as Cunupia and Chaguanas had similar rainfall amounts as Longdenville of 68.6 mm. However, northwestern districts such as Port of Spain and Carenage had 19.0 mm and 1.8 mm, below the 20.0 mm to 30.0 mm range forecasted.

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Similarly, Tobago had the rainfall amounts expected. ANR Robinson airport had a rainfall amount of 27.3 mm, which was well within the forecasted range of 20.0 mm to 30.0 mm. Neighboring districts such as Bethel, Mount Pleasant and Buccoo experienced similar rainfall amounts as well. On the other hand, Mount Moriah had rainfall totals of 9.9 mm and was well below the expected amount forecasted.

Temperatures continued to be cool in Trinidad and Tobago. Trinidad's maximum temperature went up to 31.7 °C, which was less than the expected maximum temperature of 31.4 °C. At the same time Tobago's maximum got up to 30.7 °C, well within the range expected. Conversely, lowest temperatures recorded were 19.6 °C in Trinidad and 22.4 °C in Tobago. In both cases they were close to the expected 19.8 °C and 21.0 °C forecasted. The average humidity for both islands remained in the mid-sixties but went up to the upper nineties during heavy rainfall events. The mostly sunny and relatively dry conditions must have warranted frequent irrigation of crops. While the relatively wet to wet days on the 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> may not have needed frequent irrigation.

### **Expected Weather for Second Dekad (11<sup>th</sup> – 20<sup>th</sup>) of March 2018 and Likely Impact on Agriculture.**

The forecast for the second dekad of March indicates that farmers can expect lesser amounts of rainfall as compared to the first dekad of March. During the second dekad farmers will experience relatively dry days, except for days 16<sup>th</sup> and 17<sup>th</sup>, where there is a moderate probability of being relatively wet days. The ten-day period totals forecast to range between 15.0 mm and 25.0 mm in Trinidad and Tobago.

The average daily temperatures across Trinidad and Tobago are likely to range between 25.4 °C and 27.0 °C. Expect the highest maximum temperature over the dekad to peak near 32.0 °C in Trinidad, while the lowest night to early morning minimum temperature could dip below 19.8 °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 31.4 °C, while the lowest minimum temperature will be dip below 21.8 °C, mostly during relatively cloud free nights.

For both Trinidad and Tobago, the daytime relative humidity (RH) is likely to range between 48% and 69%. However, during relatively wet to wet days, RH percentage values will range around 70% to 95%. 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 3.6 mm/day and 9.4 mm/day, but can be slightly more during warmer and windier periods, but slightly less during wet days.

Mostly relatively dry conditions over this dekad, will definitely increase the need for frequent irrigation. But during days: 16<sup>th</sup> and 17<sup>th</sup> of the dekad, relatively wet to wet conditions are likely, resulting in the possible significant reduction in the frequency of irrigation. The expected mostly relatively dry and windy conditions will be unfavourable for some agricultural insect pests, fungi and diseases to develop and thrive. Moreover, the expected daytime wind speeds, together with the

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funneling effect of wind along narrow paths and undulating landscapes, may affect seedlings negatively by causing seedlings' stems and leaves to be damaged. In addition, strong winds may hamper some types of fertilizer application and crops' ability to retain flowers.

## Trinidad's Mean Daily Rainfall Forecast for the Second Dekad of March (11<sup>th</sup> –20<sup>th</sup>) 2018.

### Northern & Northwestern areas:

Moderate chance (63%) of mean daily rainfall up to 1.8 mm.

### North-Eastern and Eastern areas:

Moderate chance (67%) of mean daily rainfall up to 2.4 mm.

### Central, West-Central and inland areas:

Moderate chance (60%) of mean daily rainfall up to 1.6 mm.

### South-Eastern areas:

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

### Southern areas:

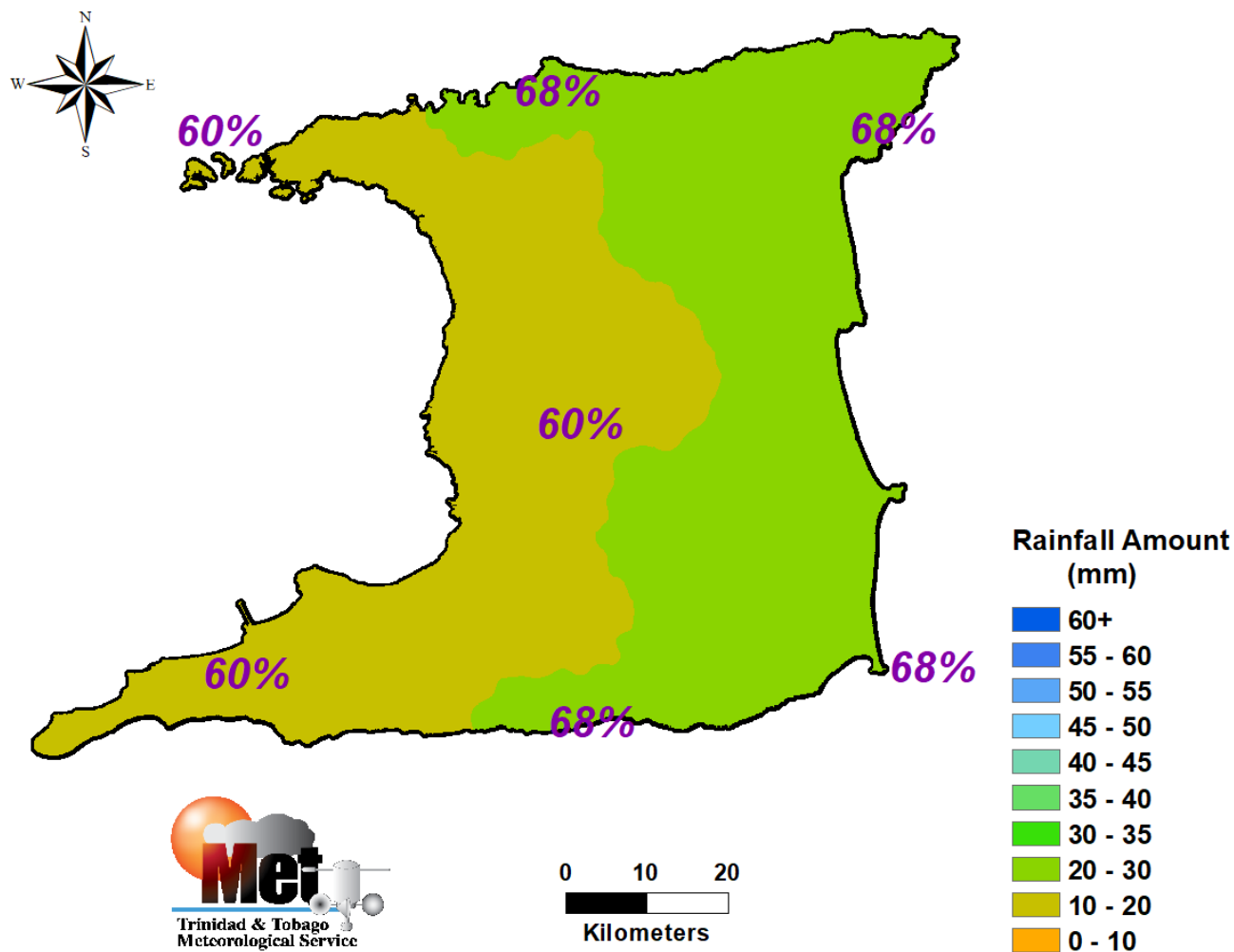
Moderate chance (64%) of mean daily rainfall up to 2.0 mm.

### South-Western areas:

Moderate chance (61%) of mean daily rainfall up to 1.7 mm.

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

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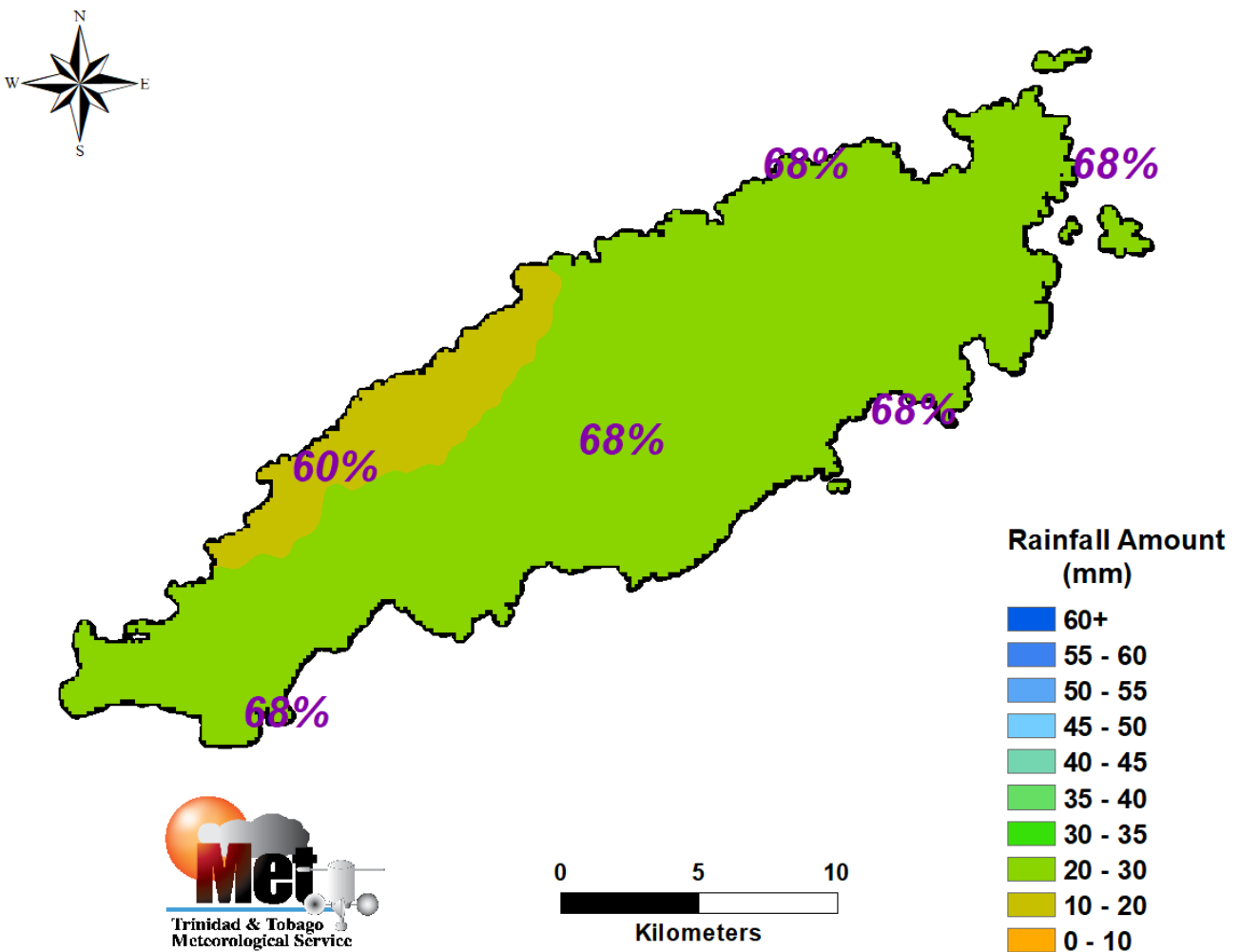
## Tobago’s Mean Daily Rainfall Forecast for the Second Dekad of March (11<sup>th</sup>-20<sup>th</sup>) 2018.

### Northeastern areas:

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

### South-Western areas:

Moderate chance (66%) of mean daily rainfall up to 2.3 mm.



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

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### Temperatures:

#### Trinidad's Temperature Forecast for the Second Dekad of March (11<sup>th</sup>-20<sup>th</sup>) 2018.

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

Moderate chance (70%) of daily minimum temperatures to be below 21.6 °C, dropping as low as 19.8 °C.

#### Tobago's Temperature Forecast for the Second Dekad of March (11<sup>th</sup> -20<sup>th</sup>) 2018.

Moderate chance (70%) of daily maximum temperatures to exceed 30.4 °C, peaking near 31.4 °C.

Moderate chance (70%) of daily minimum temperatures to be below 23.1 °C, dropping as low as 21.8 °C.

### Summary:

The outlook for the second dekad of March calls for relatively dry and windy conditions, except for days 16<sup>th</sup> and 17<sup>th</sup> of dekad, where farmers can expect relatively wet to wet days. Overall, temperatures are expected to be cool with average temperatures ranging between 25.8 °C and 27.0 °C in both islands. The highest maximum temperatures are likely to reach 32.0 °C in Trinidad and 31.4 °C in Tobago. While, the lowest minimum temperatures are likely reach 19.8 °C in Trinidad and 21.8 °C in Tobago. Dry conditions are expected to continue into the months of April and first part of May. Opportunities for water harvesting have diminished significantly, hence any opportunity to harvest and store rainwater should be undertaken, while irrigation processes continue.

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