

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First Dekad (1<sup>st</sup> -10<sup>th</sup>) of July 2020.

### 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

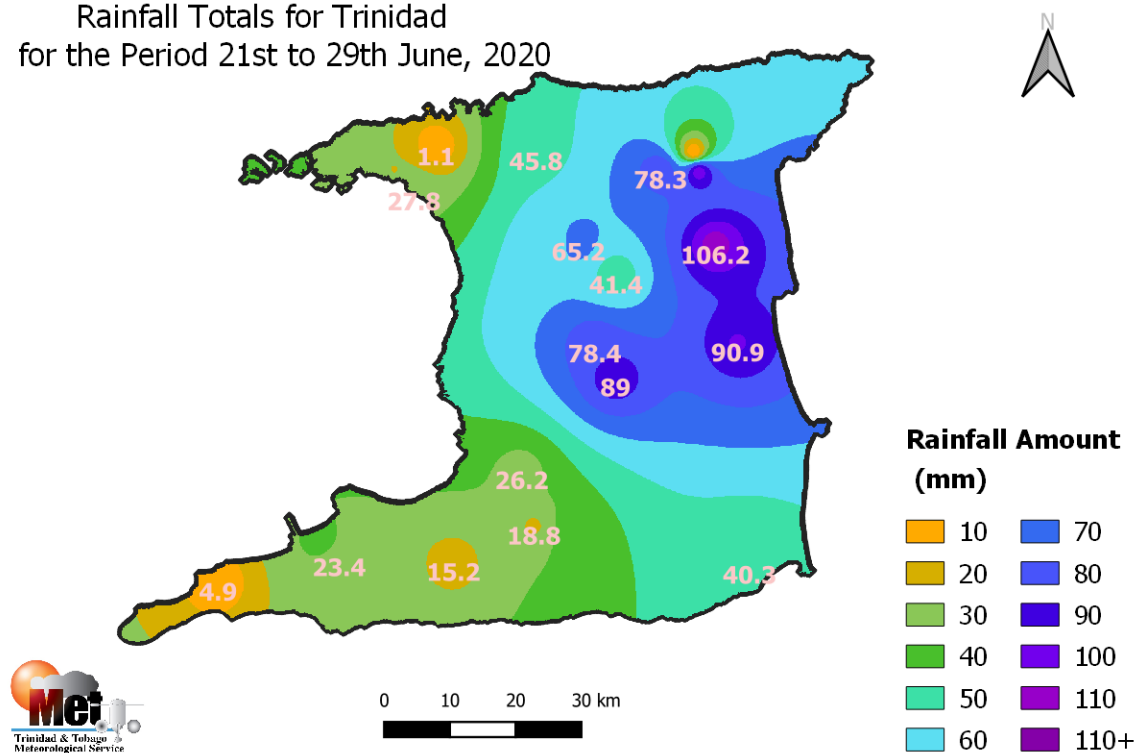
### Weather Assessment for the period (21<sup>st</sup>–29<sup>th</sup>) of June 2020.

During the period 21<sup>st</sup> to 29<sup>th</sup> of June, a wet day occurred on the 27<sup>th</sup> in Trinidad, while wet days occurred on the 27<sup>th</sup> and 28<sup>th</sup> in Tobago. These wet days were due to the passage of tropical waves (TW) and a visitation of the Inter tropical Convergence Zone (ITCZ). Otherwise, mostly relatively wet days occurred over Trinidad and Tobago. Rainfall totals' maps for the period 21<sup>st</sup> to 29<sup>th</sup> of June are located below as figure 1 and figure 2.

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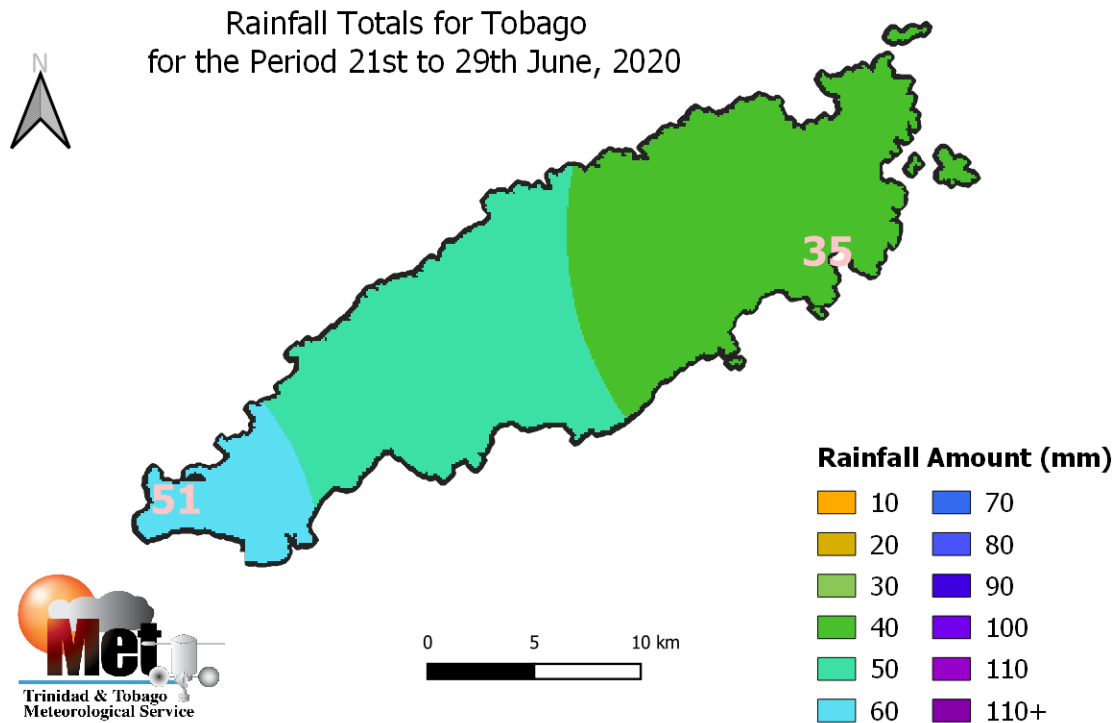
Rainfall Totals for Trinidad  
for the Period 21st to 29th June, 2020



**Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 21<sup>st</sup> to 29<sup>th</sup> of June 2020.**

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**Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 21<sup>st</sup> to 29<sup>th</sup> of June 2020.**

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**The observed temperatures (maximum/minimum), average relative humidity (maximum/minimum) and long-term 10-day (10dys) averages for Piarco International Airport and ANR Robinson International Airport during Third dekad of June 2020.**

Location	Maximum Temperature  °C/ Long term 10 dys average °C	Minimum Temperature  °C /Long term 10 dys average °C	Average maximum Relative humidity  (%)/ Long term 10 dys average (%)	Average minimum Relative humidity  (%)/Long term 10 dys average (%)
Trinidad (Piarco International airport)	32.9/31.2  (1981-2010)	22.8/23.9  (1981-2010)	88/93  (1990-2010)	72/67  (1990-2010)
Tobago (ANR Robinson International airport)	32.6/30.4  (1981-2010)	22.9/24.5  (1981-2010)	85/92  (1990-2010)	72/68  (1990-2010)

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**Table 1 shows the expected weather conditions during the First Dekad (1<sup>st</sup> –10<sup>th</sup>) of July 2020, for Trinidad and Tobago.**

**Table 1.**

<b>Days:</b>	<b>Expected weather:</b>
<b>1<sup>st</sup></b>	Cloudy periods with a moderate probability (70%) of light to moderate showers.
<b>2<sup>nd</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of brief showers.
<b>3<sup>rd</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of brief showers.
<b>4<sup>th</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of brief showers.
<b>5<sup>th</sup></b>	Cloudy periods with a moderate probability (70%) of light to moderate showers.
<b>6<sup>th</sup></b>	Cloudy periods with a moderate probability (70%) of light to moderate showers.
<b>7<sup>th</sup></b>	Cloudy periods with a moderate probability (70%) of light to moderate showers.
<b>8<sup>th</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of brief showers.
<b>9<sup>th</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of brief showers.
<b>10<sup>th</sup></b>	Cloudy periods with a moderate probability (70%) of light to moderate showers.

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**Table 2 shows the expected temperatures, humidity and dust haze days during the First dekad of July for Piarco, Trinidad.**

**Table 2.**

Day	Maximum Temperature °C	Minimum Temperature °C	Average Relative humidity (%)	Dust Haze Yes/No
1 <sup>st</sup>	31.5	22.8	90	No
2 <sup>nd</sup>	32.5	24.0	70	Yes
3 <sup>rd</sup>	32.9	24.0	70	Yes
4 <sup>th</sup>	32.5	24.0	80	Yes
5 <sup>th</sup>	30.0	22.5	90	No
6 <sup>th</sup>	30.0	22.5	90	No
7 <sup>th</sup>	31.0	23.0	90	No
8 <sup>th</sup>	32.9	23.0	75	Yes
9 <sup>th</sup>	32.5	23.0	75	Yes
10 <sup>th</sup>	31.0	22.8	90	No

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**Table 3 shows the expected temperatures, humidity and dust haze days during the First dekad of July for the ANR Robinson, Tobago.**

**Table 3**

Day	Maximum Temperature °C	Minimum Temperature °C	Average Relative humidity (%)	Dust Haze Yes/No
1 <sup>st</sup>	31.5	22.9	90	No
2 <sup>nd</sup>	32.5	24.0	70	Yes
3 <sup>rd</sup>	32.6	24.0	70	Yes
4 <sup>th</sup>	32.5	24.0	80	Yes
5 <sup>th</sup>	30.0	22.9	90	No
6 <sup>th</sup>	30.0	22.9	90	No
7 <sup>th</sup>	31.5	23.0	88	No
8 <sup>th</sup>	32.6	23.0	75	Yes
9 <sup>th</sup>	32.5	23.0	75	Yes
10 <sup>th</sup>	31.0	22.9	90	No

### **Trinidad's Mean Daily Rainfall Forecast for the First Dekad of July (1<sup>st</sup>-10<sup>th</sup>) 2020.**

#### **Northern & Northwestern areas:**

Moderate chance (65%) of mean daily rainfall up to 7.2 mm.

#### **North-Eastern and Eastern areas:**

Moderate chance (68%) of mean daily rainfall up to 9.7 mm.

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

Moderate chance (60%) of mean daily rainfall up to 6.2 mm.

#### **South-Eastern areas:**

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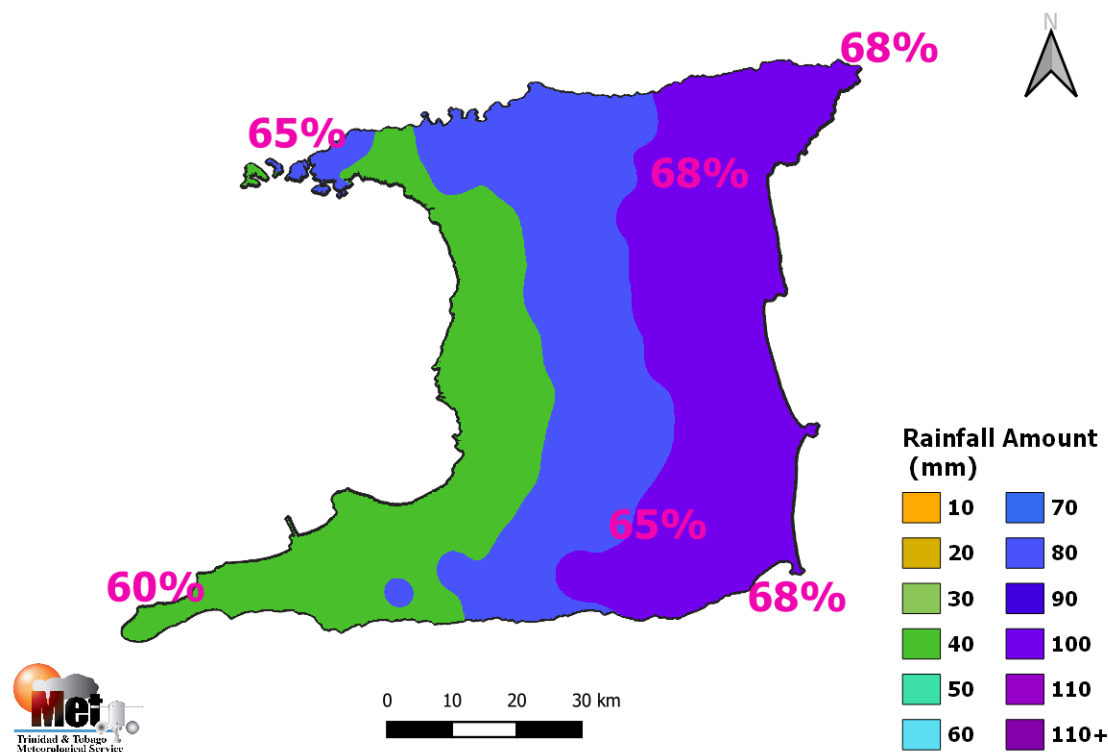
Moderate chance (68%) of mean daily rainfall up to 9.8 mm.

**Southern areas:**

Moderate chance (65%) of mean daily rainfall up to 6.8 mm.

**South-Western areas:**

Moderate chance (60%) of mean daily rainfall up to 5.4 mm.



**Figure 3. Rainfall map of Trinidad showing possible rainfall totals for varying districts during first dekad of July 2020 and percentage probability of occurrence.**

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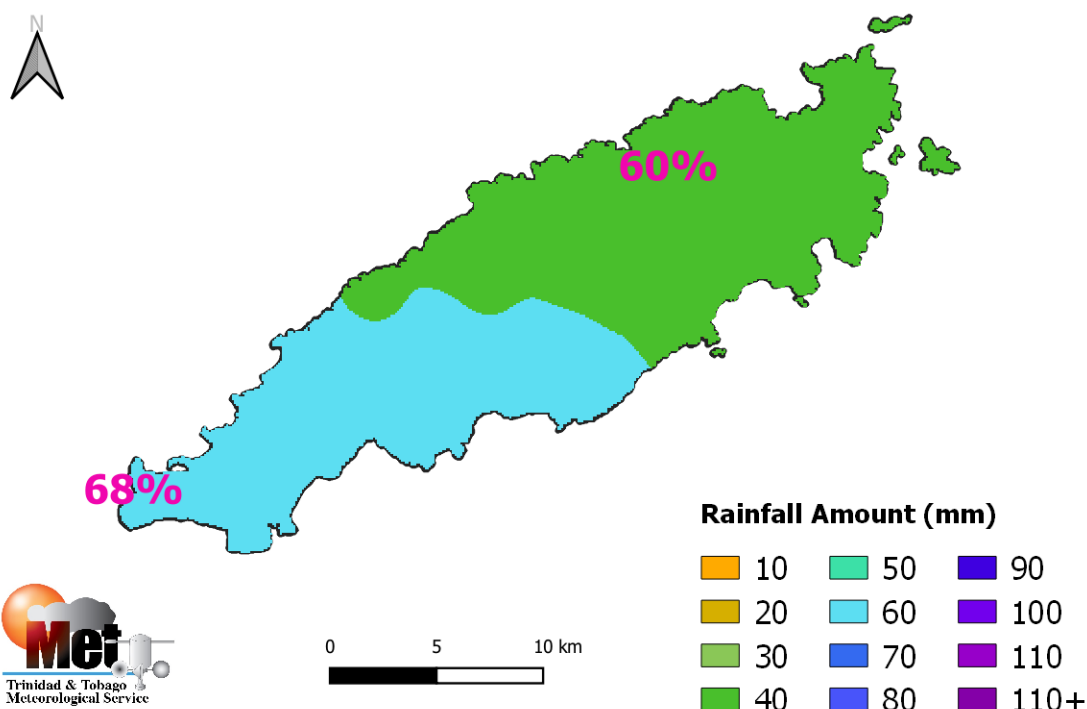
## Tobago's Mean Daily Rainfall Forecast for the First Dekad of July (1<sup>st</sup>-10<sup>th</sup>) 2020.

### Northeastern areas:

Moderate chance (60%) of mean daily rainfall up to 4.3 mm.

### South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 5.4 mm.



**Figure 4. Rainfall map of Tobago showing possible rainfall totals for varying districts during first dekad of July 2020 and percentage probability of occurrence.**

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### **Impacts on Agriculture:**

During the first dekad of July 2020, relatively wet days are expected on the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> while wet days are expected on the 1<sup>st</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 10<sup>th</sup>. There is a high (80%) probability that the anticipated rainfall will return significant soil moisture across Trinidad and Tobago. Rivers levels are likely to increase as the rainy season progresses, while shrubs and grass-growth will continue at a faster pace. Additionally, with warm temperatures and routinely moist vegetation, there is a moderate (65%) probability for fungi spread, insects, pests and warm weather diseases to develop.

### **Sun and Moon positions in the sky:**

The sun is presently at a latitude of approximately 23.1 degrees North, and with this position, the day-length will 12.6 hours. As Trinidad and Tobago is in the heat and rainy seasons, regular cloud cover is possible, there is a moderate probability (65%) of intense solar radiation occurring during the first dekad of July 2020, when the sky is generally cloud free. There is also moderate probability (65%) of heat stress on a variety of plant seedlings and young/sick/elderly animals from direct exposure to solar radiation and warm temperatures. Additionally, the full moon phase will be on the 5<sup>th</sup> of July 2020. As a result, there will be medium to high moon illumination over crop fields and livestock at night during the dekad.

### **Summary:**

During the first dekad of July 2020, relatively wet days are expected on the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> while wet days are expected on the 1<sup>st</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 10<sup>th</sup>. On relatively wet days expect intermittent cloudy patches with a moderate probability (55%) of brief showers and on wet days expect cloudy periods with a moderate probability (70%) of light to moderate showers.

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