

## 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 January 2021.

### 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>-30<sup>th</sup>) of December 2020.

During the period 21<sup>st</sup> to 30<sup>th</sup> of December, mostly relatively wet days occurred over Trinidad and Tobago, with the exception of the 21<sup>st</sup>, 29<sup>th</sup> and 30<sup>th</sup>; where few areas in Trinidad had experience wet days. These wet days were due to cloudiness and rainfall associated with a low-level trough and localize effects. Rainfall totals' maps for the period 21<sup>st</sup> to 30<sup>th</sup> of December are located below as figure 1 and figure 2.

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Rainfall Totals for Trinidad  
for the Period 21st to 30th December, 2020

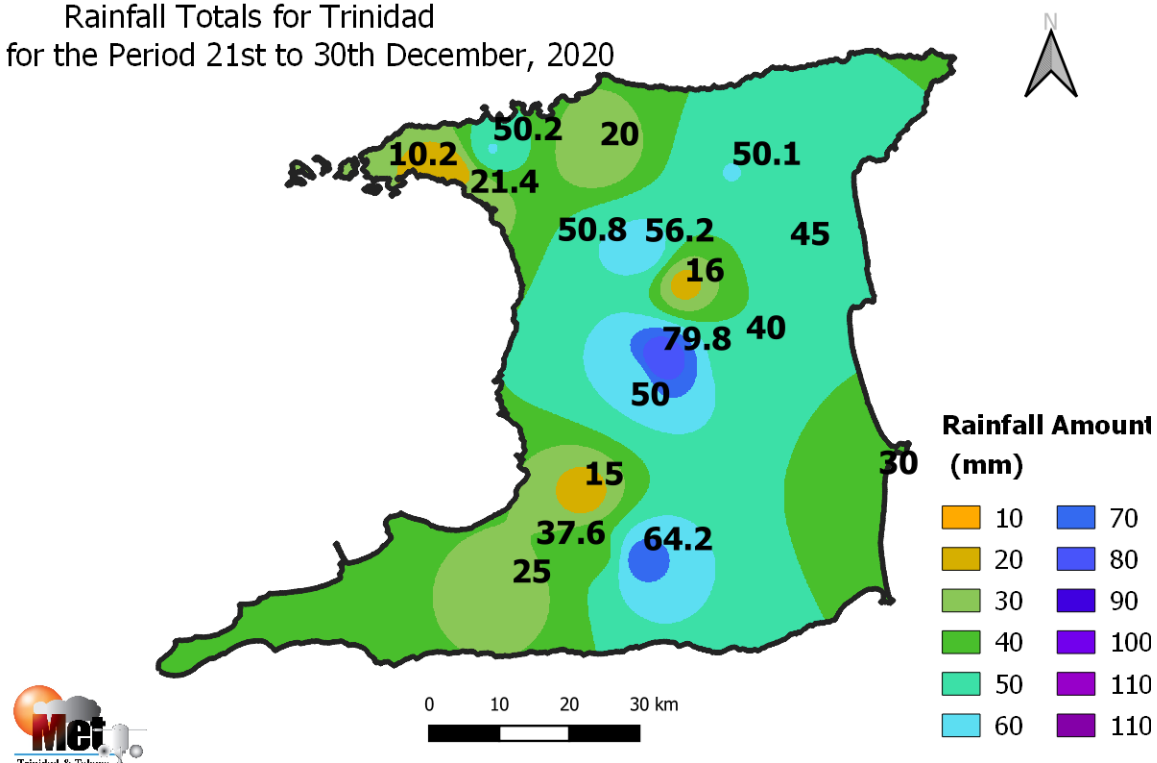
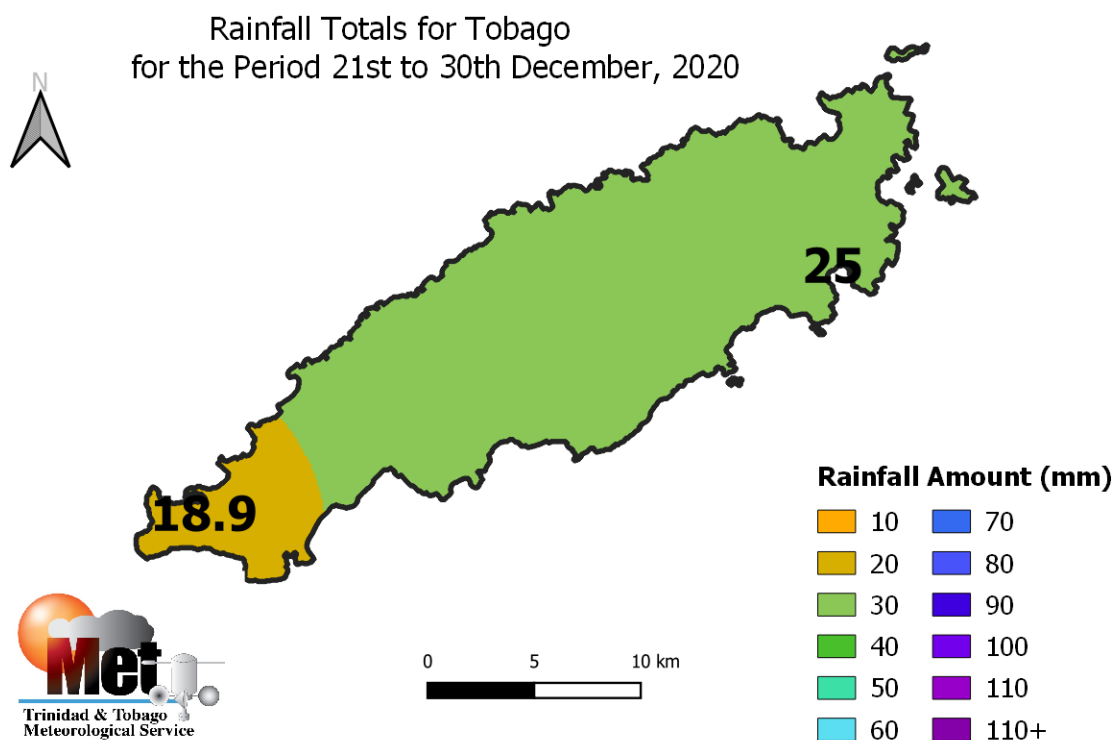


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 21<sup>st</sup> to 30<sup>th</sup> of December 2020.

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**Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 21<sup>st</sup> to 30<sup>th</sup> of December 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 December 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)	32.0/30.8  (1981-2010)	20.9/22.2  (1981-2010)	86/92  (1990-2010)	74/66  (1990-2010)
Tobago (ANR Robinson International airport)	31.8/30.0  (1981-2010)	22.9/23.2  (1981-2010)	83/93  (1990-2010)	73/63  (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 January 2021, 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 showers.
<b>3<sup>rd</sup></b>	Intermittent cloudy patches with a moderate probability (45%) of showers.
<b>4<sup>th</sup></b>	Intermittent cloudy patches with a moderate probability (40%) of 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 showers.
<b>9<sup>th</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of showers.
<b>10<sup>th</sup></b>	Intermittent cloudy patches with a moderate probability (55%) of showers.

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**Table 2 shows the expected temperatures, humidity and dust haze days during the first Dekad of January 2021 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	22.0	83	No
2 <sup>nd</sup>	32.0	22.5	78	Yes
3 <sup>rd</sup>	32.0	22.5	78	Yes
4 <sup>th</sup>	32.0	22.5	78	Yes
5 <sup>th</sup>	31.5	22.0	83	No
6 <sup>th</sup>	31.5	22.0	83	No
7 <sup>th</sup>	31.5	22.0	83	No
8 <sup>th</sup>	32.0	21.0	76	Yes
9 <sup>th</sup>	32.0	21.0	76	Yes
10 <sup>th</sup>	32.0	21.0	76	Yes

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**Table 3 shows the expected temperatures, humidity and dust haze days during the first Dekad of January 2021 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	22.5	83	No
2 <sup>nd</sup>	32.0	22.8	78	Yes
3 <sup>rd</sup>	32.0	22.8	78	Yes
4 <sup>th</sup>	32.0	22.8	78	Yes
5 <sup>th</sup>	31.5	22.0	83	No
6 <sup>th</sup>	31.5	22.8	83	No
7 <sup>th</sup>	31.5	22.8	83	No
8 <sup>th</sup>	32.0	23.0	76	Yes
9 <sup>th</sup>	32.0	23.0	76	Yes
10 <sup>th</sup>	32.0	23.0	76	Yes

### **Trinidad's Mean Daily Rainfall Forecast for the first Dekad of January (1<sup>st</sup> -10<sup>th</sup>) 2021.**

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

Moderate chance (65%) of mean daily rainfall up to 5.8 mm.

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

Moderate chance (68%) of mean daily rainfall up to 8.0 mm.

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

Moderate chance (65%) of mean daily rainfall up to 5.4 mm.

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

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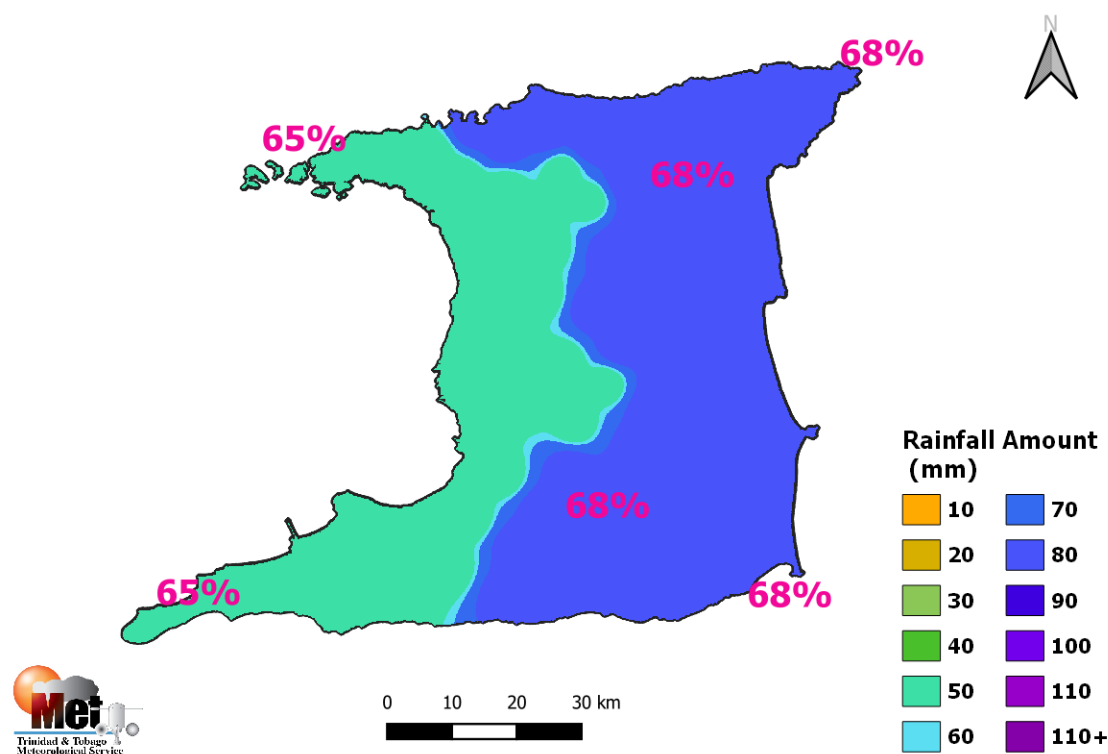
Moderate chance (68%) of mean daily rainfall up to 8.0 mm.

**Southern areas:**

Moderate chance (68%) of mean daily rainfall up to 6.4 mm.

**South-Western areas:**

Moderate chance (65%) of mean daily rainfall up to 5.7 mm.



**Figure 3. Rainfall map of Trinidad showing possible rainfall totals for varying districts during the first dekad of January 2021 and percentage probability of occurrence.**

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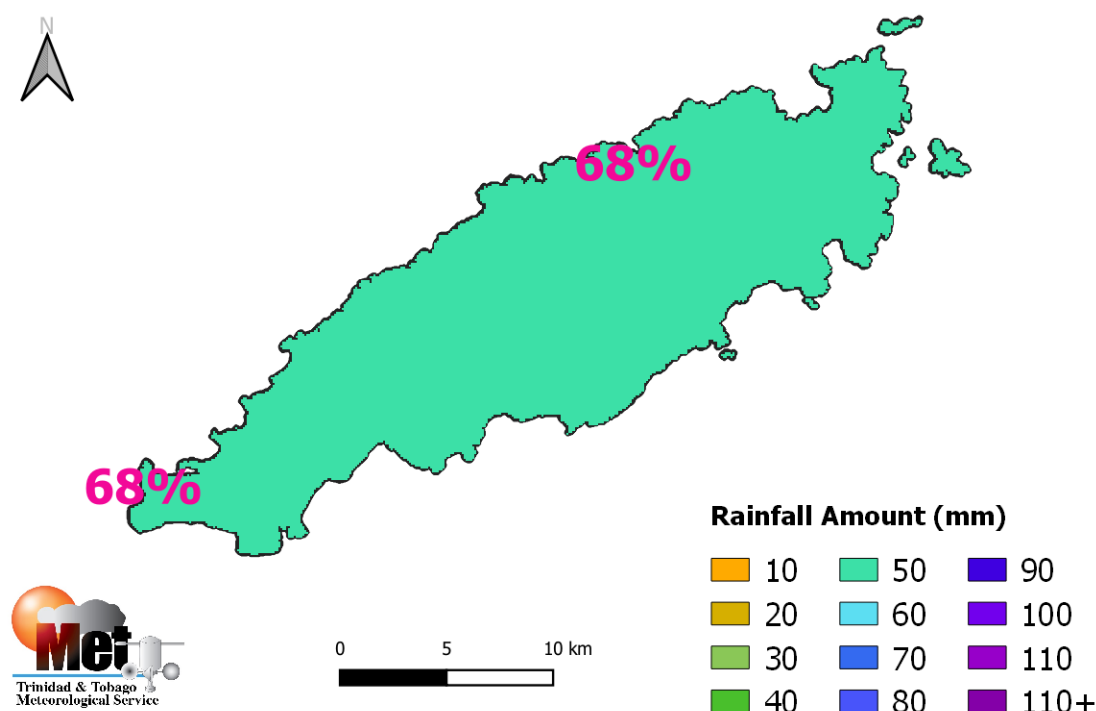
## Tobago's Mean Daily Rainfall Forecast for the first Dekad of January (1<sup>st</sup> -10<sup>th</sup>) 2021.

### Northeastern areas:

Moderate chance (68%) of mean daily rainfall up to 5.0 mm.

### South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 5.0 mm.



**Figure 4. Rainfall map of Tobago showing possible rainfall totals for varying districts during the first dekad of January 2021 and percentage probability of occurrence.**

### **Impacts on Agriculture:**

During the first dekad of January 2021, relatively wet days are expected on the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup>; while wet days are expected on the 1<sup>st</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup>. There is a moderate (58%) probability that the anticipated rainfall will return sufficient soil moisture across Trinidad and Tobago. The expected rainfall events may maintain rivers at moderate levels. There is a moderate (50%) probability that some areas will become water-logged especially in low-lying areas during the dekad.

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Shrubs and grass-growth will continue at a fast pace. Additionally, with low average temperatures at this time and seldom-moist vegetation, there is a moderate (40%) probability for fungi spread, insect pests and warm weather diseases to develop.

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

The sun is presently at a latitude of approximately 23 degrees South, and with this position, the day-length will be 11.4 hours. There is moderate probability (40%) of intense solar radiation during this first dekad of January, when the sky is generally cloud free. There is also moderate probability (40%) of heat stress on a variety of plant seedlings and young/sick/elderly animals from direct exposure to solar radiation, high temperatures with occasional calm winds. Additionally, the moon's third quarter moon phase will be on the 6<sup>th</sup> of January. As a result, there will be medium to low moon illumination over crop fields and livestock at night during the dekad.

### **Summary:**

During the first dekad of January 2021, relatively wet days are expected on the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup>; while wet days are expected on the 1<sup>st</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup>. On relatively wet days expect intermittent cloudy patches with a moderate probability range (40% to 55%) of showers and on wet days expect cloudy periods with a moderate probability of 70% of light to moderate showers.

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