

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of January, 2021

### 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 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 period (1<sup>st</sup>-9<sup>th</sup>) of January 2021.

During the period 1<sup>st</sup> to 9<sup>th</sup> of January, mostly relatively wet days occurred over Trinidad and Tobago, with the exception of the 1<sup>st</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup>; where few areas in Trinidad and Tobago 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 1<sup>st</sup> to 9<sup>th</sup> of January are located below as figure 1 and figure 2.

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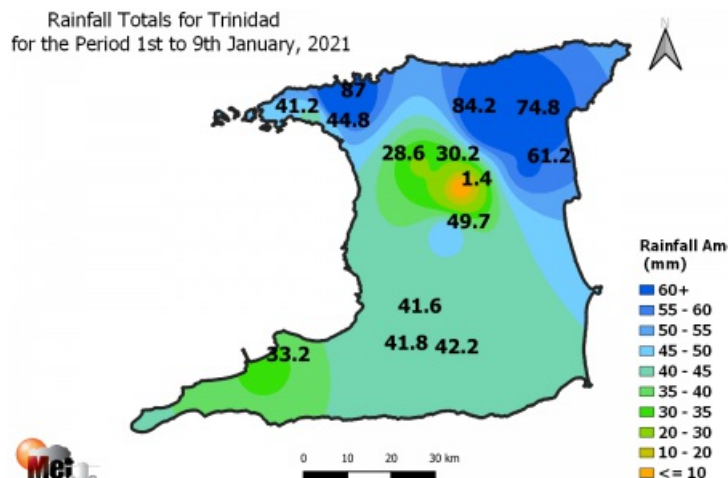


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 9<sup>th</sup> of January 2021.

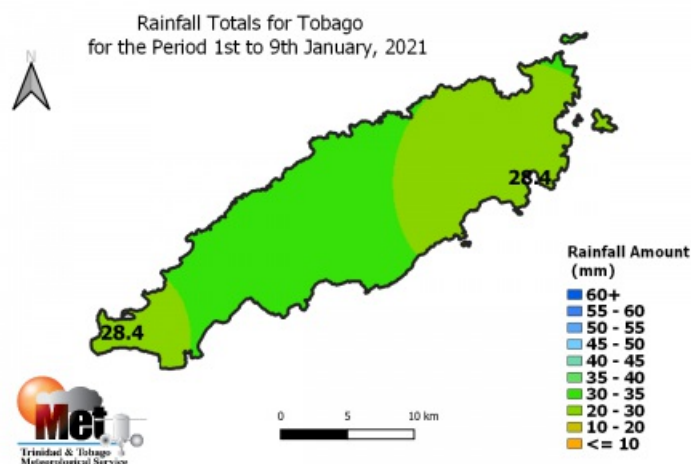


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 9<sup>th</sup> of January 2021.

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 first dekad of January 2021.

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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)	31.7/30.8 (1981-2010)	19.0/21.8 (1981-2010)	87/93 (1990-2010)	65/68 (1990-2010)
Tobago (ANR Robinson International airport)	31.3/29.9 (1981-2010)	21.4/23.0 (1981-2010)	90/89 (1990-2010)	64/64 (1990-2010)

Table 1 shows the expected weather conditions during the Second Dekad (11<sup>th</sup> -20<sup>th</sup>) of January 2021, for Trinidad and Tobago.

Table 1.

Days:	Expected weather:
11 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (55%) of showers.
12 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (25%) of showers.
13 <sup>th</sup>	Intermittent cloudy patches with a low probability (25%) of showers.
14 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (55%) of showers.
15 <sup>th</sup>	Intermittent cloudy patches with a low probability (25%) of showers.
16 <sup>th</sup>	Intermittent cloudy patches with a low probability (25%) of showers.
17 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (40%) of showers.

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18 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (25%) of showers.
19 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (55%) of showers.
20 <sup>th</sup>	Intermittent cloudy patches with a moderate probability (55%) of showers.

Table 2 shows the expected temperatures, humidity and dust haze days during the second Dekad of January 2021 for Piarco, Trinidad.

**Table 2.**

Day	Maximum Temperature °C	Minimum Temperature °C	Average Relative humidity (%)	Dust Haze Yes/No
11 <sup>th</sup>	31.7	22.0	78	Yes
12 <sup>th</sup>	31.7	22.0	72	Yes
13 <sup>th</sup>	32.0	21.0	75	Yes
14 <sup>th</sup>	31.5	22.5	75	Yes
15 <sup>th</sup>	32.0	20.5	72	Yes
16 <sup>th</sup>	32.0	21.0	72	Yes
17 <sup>th</sup>	31.5	22.5	76	Yes
18 <sup>th</sup>	31.7	22.0	78	Yes
19 <sup>th</sup>	31.7	22.0	78	Yes
20 <sup>th</sup>	31.7	22.0	78	Yes

Table 3 shows the expected temperatures, humidity and dust haze days during the second Dekad of January 2021 for the ANR Robinson, Tobago.

**Table 3**

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Day	Maximum Temperature °C	Minimum Temperature °C	Average Relative humidity (%)	Dust Haze Yes/No
11 <sup>th</sup>	30.0	23.0	78	Yes
12 <sup>th</sup>	31.0	23.0	75	Yes
13 <sup>th</sup>	31.0	22.0	72	Yes
14 <sup>th</sup>	31.5	22.0	75	Yes
15 <sup>th</sup>	31.0	22.0	72	Yes
16 <sup>th</sup>	31.0	22.0	72	Yes
17 <sup>th</sup>	30.7	23.0	76	Yes
18 <sup>th</sup>	30.7	23.0	78	Yes
19 <sup>th</sup>	31.0	23.0	78	Yes
20 <sup>th</sup>	31.0	23.0	78	Yes

**Trinidad's Mean Daily Rainfall Forecast for the second Dekad of January (11<sup>th</sup> -20<sup>th</sup>) 2021.**

**Northern & Northwestern areas:**

Moderate chance (60%) of mean daily rainfall up to 2.1 mm.

**North-Eastern and Eastern areas:**

Moderate chance (68%) of mean daily rainfall up to 2.9 mm.

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

Moderate chance (60%) of mean daily rainfall up to 1.8 mm.

**South-Eastern areas:**

Moderate chance (68%) of mean daily rainfall up to 3.0 mm.

**Southern areas:**

Moderate chance (60%) of mean daily rainfall up to 2.1 mm.

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## South-Western areas:

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

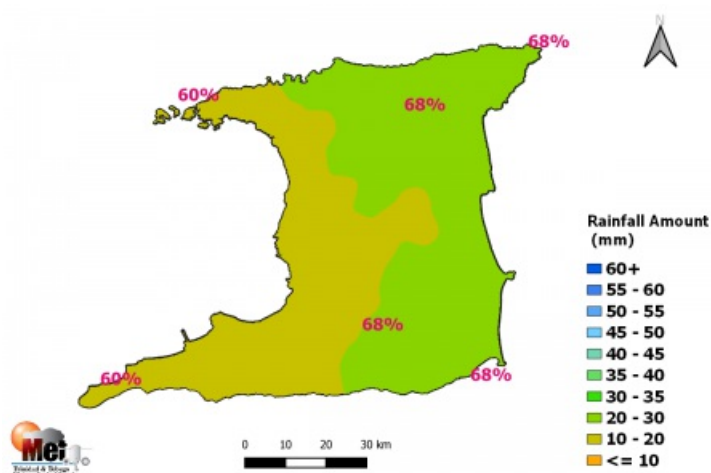


Figure 3. Rainfall map of Trinidad showing possible rainfall totals for varying districts during the second dekad of January 2021 and percentage probability of occurrence.

Tobago's Mean Daily Rainfall Forecast for the second Dekad of January (11<sup>th</sup> -20<sup>th</sup>) 2021.

## Northeastern areas:

Moderate chance (60%) of mean daily rainfall up to 1.5 mm.

## South-Western areas:

Moderate chance (68%) of mean daily rainfall up to 2.7 mm.

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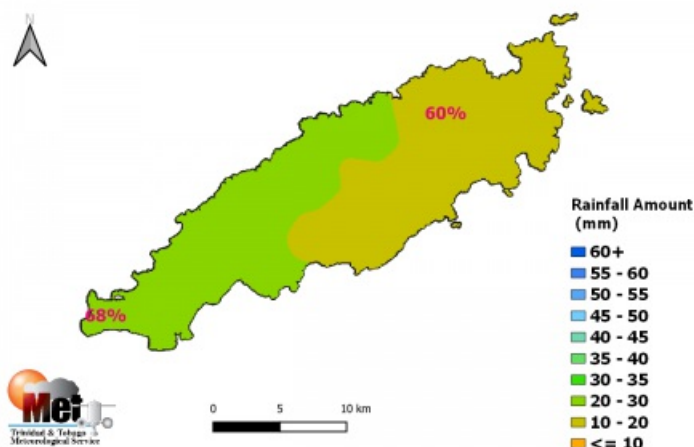


Figure 4. Rainfall map of Tobago showing possible rainfall totals for varying districts during the second dekad of January 2021 and percentage probability of occurrence.

## Impacts on Agriculture:

During the second dekad of January 2021, relatively dry days are expected on the 12<sup>th</sup>, 13<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, and 18<sup>th</sup>; while relatively wet days are expected on the 11<sup>th</sup>, 14<sup>th</sup>, 17<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>. There is a moderate (30%) probability that the anticipated rainfall will return sufficient soil moisture across Trinidad and Tobago. The expected rainfall events may result in rivers being at low levels. There is a moderate (30%) probability that some areas will become water-logged especially in low-lying areas during the dekad. Shrubs and grass-growth will continue at a medium pace. Additionally, with low average temperatures at this time and seldom-moist vegetation, there is a moderate (30%) 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 22 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 second dekad of January, when the sky is generally cloud free. There is also moderate probability (30%) 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 new moon phase will be on the 13<sup>th</sup> of January followed by first quarter phase on the 20<sup>th</sup>. As a result, there will be low to medium moon illumination over crop fields and livestock at night during the dekad.

## Summary

During the second dekad of January 2021, relatively dry days are expected on the 12<sup>th</sup>, 13<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, and 18<sup>th</sup>; while relatively wet days are expected on the 11<sup>th</sup>, 14<sup>th</sup>, 17<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>. On relatively dry days expect intermittent cloudy patches with a low probability (25%) of showers and on relatively wet days expect intermittent cloudy periods with a

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moderate probability range (40% to 55%) of showers.

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