

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st - 31st) of January, 2023

### 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 Bulletin for Farmers and Livestock Producers of Trinidad and Tobago for the 15-day period 21<sup>st</sup> January – 04<sup>th</sup> February 2023.

Date	Weather	Temperature	Heat Real Feel	Day Moisture (Relative)	Wind













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					(Humidity)		
21 <sup>st</sup>	 25% chance of showers	Less than 10.0 mm of rainfall is possible	Partly cloudy with few showers	<p>Warm</p>  Max/Min Temperatures °C 32.0/22.0	Feels like 33-35°C	55-90%	 Moderate easterly 15 km/h Gust 25 km/h
22 <sup>nd</sup>	 25% chance of showers	Less than 10.0 mm of rainfall is possible	Partly cloudy with few showers	<p>Warm</p>  Max/Min Temperatures °C 31.0/22.0	Feels like 33-35°C	50-85%	 Moderate easterly 15 km/h Gust 25 km/h
23 <sup>rd</sup>	 40% chance of showers	Less than 10.0 mm of rainfall is possible	Partly cloudy with few showers	<p>Warm</p>  Max/Min Temperatures °C 31.0/21.0	Feels like 32-34°C	50-90%	 Moderate easterly 15 km/h Gust 25 km/h
24 <sup>th</sup>	 30% chance of showers	Less than 5.0 mm of rainfall is possible	Patchy cloudiness with one or two showers	<p>Warm</p>  Max/Min Temperatures °C 31.0/22.0	Feels like 32-34°C	50-85%	 Moderate easterly 15 km/h Gust 25 km/h









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25 <sup>th</sup>	 30% chance of showers	Less than 5.0 mm of rainfall is possible	Patchy cloudiness with one or two showers	Warm  Max/Min Temperatures °C 32.0/22.0	Feels like 32-35°C	55-85%	 Moderate easterly 15 km/h Gust 25 km/h
26 <sup>th</sup>	 20% chance of showers	Less than 5.0 mm of rainfall is possible	Patchy cloudiness with one or two showers	Warm  Max/Min Temperatures °C 31.0/21.0	Feels like 33-36°C	50-80%	 Moderate easterly 15 km/h Gust 25km/hr
27 <sup>th</sup>	 20% chance of showers	Less than 5.0 mm of rainfall is possible	Patchy cloudiness with one or two showers	Warm  Max/Min Temperatures °C 31.0/22.0	Feels like 33-36°C	45-80%	 Moderate north-easterly 10 km/h Gust 20 km/h
28 <sup>th</sup>	 40% chance of showers	Less than 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 31.0/21.0	Feels like 31-35°C	45-80%	 Moderate north-easterly 10 km/h Gust 20 km/h







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29 <sup>th</sup>	 30% chance of showers	Less than 5.0 mm of rainfall is possible	Mostly sunny	Warm  Max/Min Temperatures °C 31.0/21.0	Feels like 33-36°C	50-80%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h
30 <sup>th</sup>	 25% chance of showers	Less than 5.0 mm of rainfall is possible	Mostly sunny	Warm  Max/Min Temperatures °C 31.0/21.0	Feels like 33-36°C	45-80%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h
31 <sup>st</sup>	 30% chance of showers	Less than 5.0 mm of rainfall is possible	Mostly sunny	Warm  Max/Min Temperatures °C 32.0/22.0	Feels like 32-35°C	50-85%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h
01 <sup>st</sup>	 25% chance of showers	Less than 1.0 mm of rainfall is possible	Mostly sunny	Warm  Max/Min Temperatures °C 32.0/22.0	Feels like 32-36°C	45-80%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h

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02 <sup>nd</sup>	 25% chance of showers	Less than 1.0 mm of rainfall possible	Mostly sunny	Warm  Max/Min Temperatures °C 32.0/22.0	Feels like 32-36°C	45-80%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h
03 <sup>rd</sup>	 25% chance of showers	Less than 1.0 mm of rainfall possible	Mostly sunny	Warm  Max/Min Temperatures °C 32.0/21.0	Feels like 32-36°C	45-80%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h
04 <sup>th</sup>	 30% chance of showers	Less than 5.0 mm of rainfall possible	Patchy cloudiness with one or two showers	Warm  Max/Min Temperatures °C 31.0/21.0	Feels like 32-36°C	50-85%	☀☀☀ Moderate easterly 15 km/h Gust 25 km/h

Trinidad Rainfall Forecast for the 15-Day period of January 21<sup>st</sup> to February 04<sup>th</sup> 2023.

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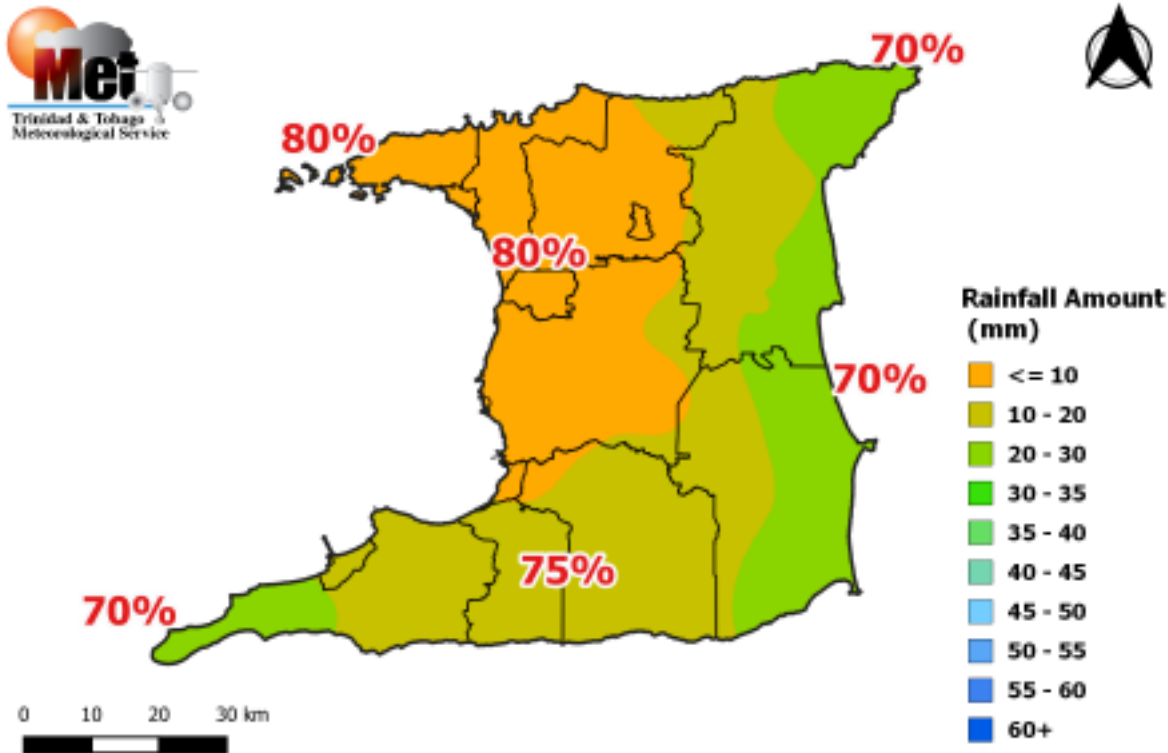


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period January 21<sup>st</sup> to February 04<sup>th</sup> 2023 and percentage probability of occurrence.

**Eastern, and North-Eastern areas**

Moderate chance (70%) of mean daily rainfall up to 2.2 mm.

**South-Eastern areas**

Moderate chance (70%) of mean daily rainfall up to 2.2 mm.

**Southern areas**

High chance (75%) of mean daily rainfall up to 2.3 mm.

**South-Western areas**

Moderate chance (70%) of mean daily rainfall up to 2.3 mm.

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

High chance (80%) of mean daily rainfall up to 1.0 mm.

**Northern, North-Western areas**

High chance (80%) of mean daily rainfall up to 1.0 mm.

**Tobago Rainfall Forecast for the 15-Day period of January 21<sup>st</sup> to February 04<sup>th</sup> 2023.**

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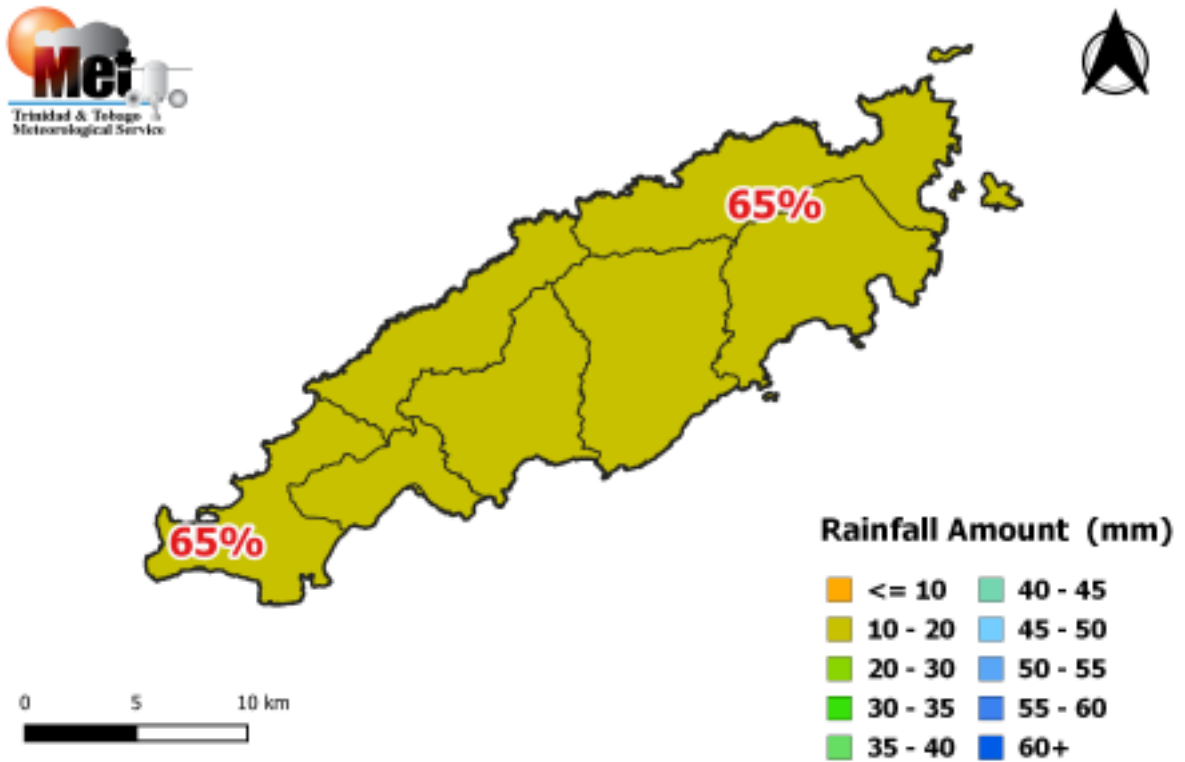


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period January 21<sup>st</sup> to February 04<sup>th</sup> 2023 and percentage probability of occurrence.

#### North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 2.0 mm.

#### South-Western areas

Moderate chance (65%) of mean daily rainfall up to 2.0 mm.

#### **Sun and Moon Positions in the Sky January 21<sup>st</sup> to February 04<sup>th</sup> 2023.**

The sun is presently at 19.2 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from January 21<sup>th</sup> will be 11 hours and 36 minutes, rising slightly to 11 hours and 42 minutes by 04<sup>th</sup> February 2023. According to the moon's phases, the last quarter is on 13<sup>th</sup> February 2023 at 12:00 hrs (12:00 p.m.), new moon on 21<sup>st</sup> January 2023 at 16:53 hrs (4:53 p.m.), first quarter 28<sup>th</sup> January 2023 at 11:18 hrs (11:18 a.m.), full moon on 05<sup>th</sup> February at 14:28 hrs (2:28 p.m.)

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### Summary of Expected Weather:

#### Low to moderate rainfall amounts are expected during the fifteen days.

Three relatively dry days with rainfall amounts 1.0mm or less are expected on the 01<sup>st</sup>, 02<sup>nd</sup> and 03<sup>rd</sup> of February. Nine relatively wet days with rainfall amounts 5.0mm or less on 24<sup>th</sup> to 31<sup>st</sup> January and on the 4<sup>th</sup> February. Three relatively wet days with rainfall amounts of 10mm or less on 21<sup>st</sup>, 22<sup>nd</sup> and 23<sup>rd</sup> January.

#### Trinidad and Tobago:

The daily rainfall totals are forecast general less than 10.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 10.0 mm and 45.0 mm. The impactful rainfall events will mostly occur across the eastern, southeastern and southern parts of Trinidad.

#### Temperatures & Winds:

The maximum temperatures are expected to remain warm, with temperatures ranging between 30.0°C to 32.0°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 32.0°C to 36.0°C on most days. The minimum temperatures will range between 21.0°C to 23.0°C during most nights/early mornings, dropping lower in rural areas and valleys.

Mostly moderate easterly to north-easterly winds of an average speed of 10-20 km/h are expected, with gusts of 25-30 km/h at times. Low rainfall totals, mostly low wind speeds, cool to warm days and warm feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 6.0 to 11.0 millimeters per day.

#### Moisture levels:

Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be moderate to high, with average daytime relative humidity values between 45% to 90%.

#### Highlighted Possible Impacts on Agriculture:

During this 15-day forecast period of (21<sup>st</sup> to 25<sup>th</sup>) January 2023, expect conditions to be mixed with periods of cloudiness interrupting the sunshine at times during the day. There is a moderate probability (50%) chance for crop irrigation measures to take place due to some moisture in the soils during the forecast period. There is a low probability (20%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is also a low probability (20%) chance for fungi spread, root and/or fruit rot, insect pests and warm weather diseases to develop in crop beds. River levels will remain at low levels during this forecast period.

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### **Weather Assessment for the period January 11<sup>th</sup> to January 20<sup>th</sup> 2023.**

One wet day of 17.7 mm of rainfall was recorded on 12<sup>th</sup> January at Piarco station, Trinidad and one relatively wet day of 6.0 mm of rainfall was recorded on the 20<sup>th</sup> January. At Crown Point Station, Tobago three relative wet days (between 1.9 mm and 4.5mm).

#### **Temperatures:**

Temperatures were cool to warm during the period 11<sup>th</sup> - 20<sup>th</sup> of January, with the minimum nighttime temperature falling to 22.0 °C and the maximum daytime temperature rising to 32.0 °C, in Trinidad.

Similarly, temperatures in Tobago were cool to warm during the period 11<sup>th</sup> - 20<sup>th</sup> of January, with the minimum nighttime temperature falling to 23.0 °C and the maximum daytime temperature rising to 31.0 °C.

#### **Summary**

##### **Summary of Expected Weather:**

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##### **Trinidad and Tobago:**

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### **Moisture levels:**

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### **Highlighted Possible Impacts on Agriculture:**

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