

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Third Dekad (21st - 31st) of December, 2022

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 (21st - 4th) of December/January 2022/23.

Date	Weather	Temperature	Heat Real Feel	Day Moisture (Relative)	Wind
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						(Humidity)	
21 st	 45% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.5/22.0	Feels like 31.5-36°C	55-62%	 Weak easterly 10 km/h Gust 15 km/h
22 nd	 55% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 30.5/22.0	Feels like 30.5-36°C	59-82%	 Weak north-easterly 15 km/h Gust 25 km/h
23 rd	 45% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.5/22.5	Feels like 31.5-36°C	59-70%	 Weak north-easterly 15 km/h Gust 25 km/h
24 th	 55% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.5/21.0	Feels like 31.5-36°C	55-84%	 Weak north-easterly 15 km/h Gust 25 km/h
25 th	 55% chance	1.0 to 3.0 mm of	Partly cloudy with one or	Warm	Feels		 Weak north-easterly
















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	of showers	rainfall is possible	two showers	 Max/Min	like 30-35°C	60-78%	15 km/h Gust 25 km/h
26 th	 45% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.5/20.0	Feels like 32-38°C	57-88%	 Weak north-easterly 15 km/h Gust 25 km/h
27 th	 68% chance of showers	10.0 to 15.0 mm of rainfall is possible	Partly cloudy with showers	Warm  Max/Min Temperatures °C 30.5/20.0	Feels like 30-36°C	57-88%	 Weak north-easterly 15 km/h Gust 25 km/h
28 th	 68% chance of showers	10.0 to 15.0 mm of rainfall is possible	Partly cloudy with showers	Warm  Max/Min Temperatures °C 30.5/20.0	Feels like 30-36°C	57-88%	 Weak north-easterly 15 km/h Gust 25 km/h
29 th	 45% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.0/21.5	Feels like 31-37°C	65-78%	 Weak easterly 10 km/h Gust 15 km/h




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30 th	 45% chance of showers	0.1 to 3.0 mm of rainfall is possible	Partly cloudy with one or two showers	Warm  Max/Min Temperatures °C 31.0/22.0	Feels like 31-36°C	71-75%	 Weak easterly 10 km/h Gust 15 km/h
31 st	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 31.0/22.0	Feels like 31-38°C	58-78%	 Weak north-easterly 15 km/h Gust 25 km/h
1 st	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 31.0/22.0	Feels like 31-38°C	70-75%	 Weak north-easterly 15 km/h Gust 25 km/h
2 nd	 65% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 31.0/22.5	Feels like 31-36°C	68-70%	 Weak easterly 10 km/h Gust 15 km/h
3 rd	 65% chance of showers	5.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 31.0/22.5	Feels like 31-36°C	47-80%	 Weak south-easterly 20 km/h

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		possible		Max/Min Temperatures °C 30.0/20.0	30- 35°C		Gust 25 km/h
4 th	 65% chance of showers	5.0 to 9.0 mm of rainfall is possible	Partly cloudy with few showers	Warm  Max/Min Temperatures °C 30.0/19.0	Feels like 30- 35°C	47-80%	 Weak south- easterly 20 km/h Gust 25 km/h

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Trinidad Rainfall Forecast for the 15-Day period of December/January (21st – 4th) 2022/23.

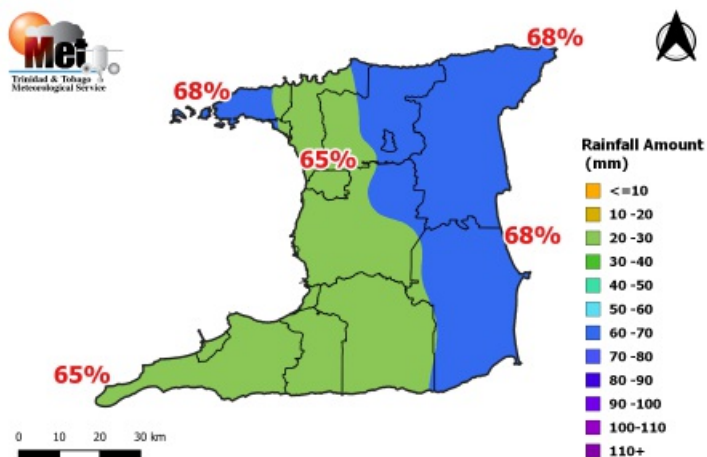


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day

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period (21st - 4th) December/January 2022/23 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 6.5 mm.

South-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 5.8 mm.

Southern areas

Moderate chance (65%) of mean daily rainfall up to 3.0 mm.

South-Western areas

Moderate chance (65%) of mean daily rainfall up to 2.5 mm.

Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 2.5 mm.

Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 4.3 mm.

Tobago Rainfall Forecast for the 15-Day period of December/January (21st - 04^h) 2022/23.

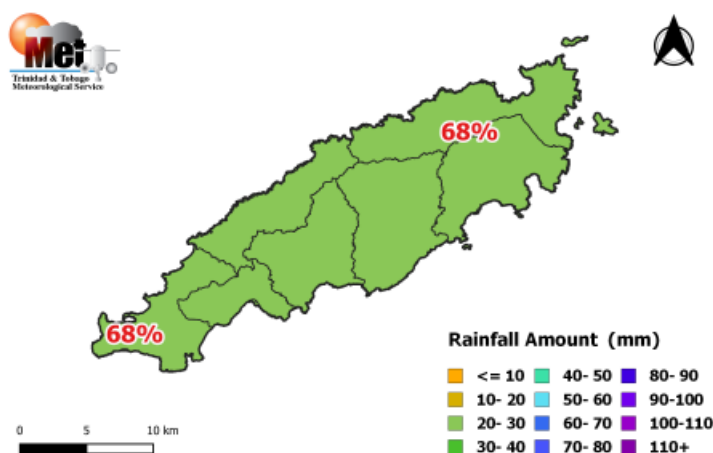


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (21st - 04th) December/January 2022/23 and percentage probability of occurrence.

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North-Eastern areas

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

South-Western areas

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

Sun and Moon Positions in the Sky December/January (21st – 4th) 2022/23.

The sun is presently at 23.3 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from December 21st will be 11 hours and 30 minutes, rising slightly to 11 hours and 32 minutes by 04th January 2023. According to the moon's phases, the 23rd (New Moon Phase)-24th; 27th-28th and 31st of December and 1st of January 2023 are good days for planting aboveground crops. While the 21st - 22nd; 25th-26th; 29th (First Quarter Phase) and 30th of December and 2nd-4th of January 2023 are poor planting days. These days should be used for removing weeds, clearing land and ploughing fields.

Highlighted Possible Impacts on Agriculture:

During this third 15-day forecast period of (21st to 4th) December/January 2022/23, expect similar conditions to occur as compared to the second 15-day (11th to 25th) December forecast period. There is a low probability (20%) chance for crop irrigation measures to take place owing to moist 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 but will become moderate at times during the 27th-28th of December 2022.

Weather Assessment for the period December (11th - 19th) 2022.

Three wet days occurred on the 13th, 15th and 17th of December over Trinidad and Tobago. Crop growth and development rates may have increased due to available moisture and many sunny days. The rainfall totals maps for the period, 11th - 19th of December for Trinidad and Tobago are located below as figure 1 and figure 2.

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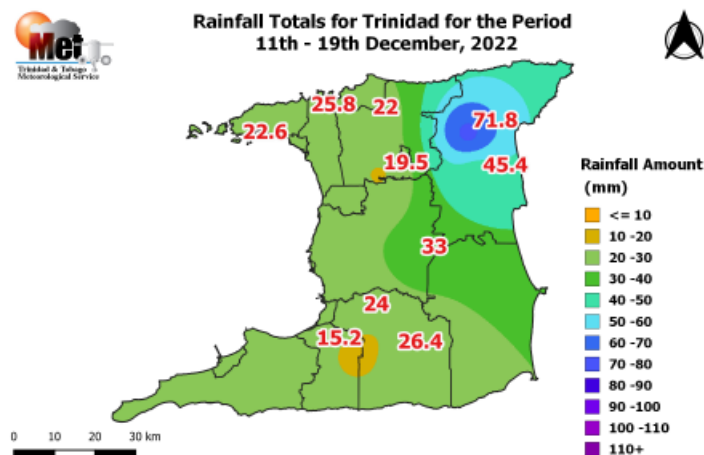


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 11th to 19th December 2022.

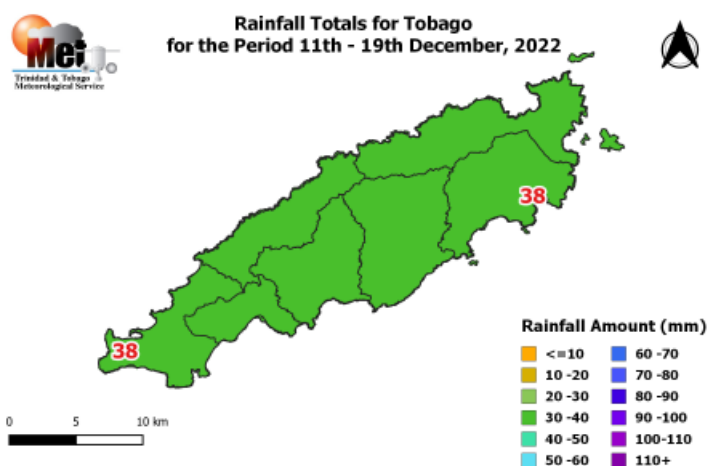


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 11th to 19th December 2022.

Temperatures:

Temperatures were cool to warm during the period 11th- 19th of December, with the minimum nighttime temperature falling to 19.5 °C and the maximum daytime temperature rising to 31.1 °C, in Trinidad.

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Similarly, temperatures in Tobago were cool to warm during the period 11th - 19th of December, with the minimum nighttime temperature falling to 22.4 °C and the maximum daytime temperature rising to 31.1 °C.

Summary

Summary of Expected Weather:

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

Two wet days with rainfall amounts ranging between 10.0 mm and 15.0 mm are expected on the 27th-28th of December while, thirteen relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on 21st-26th and the 29th-04th of December/January 2022/23.

Trinidad:

Two wet days with rainfall amounts ranging between 10.0 mm and 15.0 mm are expected on the 27th-28th of December while thirteen relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on 21st-26th and the 29th-04th of December/January 2022/23. The daily rainfall totals are forecast to range between 1.0 mm to 15.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 25.0 mm and 65.0 mm. The impactful rainfall events will mostly occur across the eastern, southeastern and northwestern parts of Trinidad. There is a moderate (30%) probability that flash and riverine flooding will occur during/after heavy rainfall events.

Tobago:

Similar to Trinidad, Tobago will experience two wet days, with rainfall amounts ranging between 10.0 mm and 15.0 mm are expected on the 27th-28th of December while, thirteen relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 21st-26th and the 29th-04th of December/January 2022/23. The daily rainfall totals are forecasted to range between 1.0 mm to 15.0 mm across different farmlands across the island, with fifteen-day rainfall totals averaging around 25.0 mm.

Temperatures & Winds:

The maximum temperatures are expected to remain warm, with temperatures ranging between 30.0°C to 31.5°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 30.0°C to 36.0°C on most days. The minimum temperatures will range between 19.0°C to 22.5°C during most nights/early mornings, dropping lower in rural areas and valleys.

Mostly weak easterly to south-easterly winds of an average speed of 10-20 km/h are expected, with gusts of 25-30 km/h at times. Low to moderate rainfall totals, mostly low wind speeds, cool to warm days and warm feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 4.0 to 8.0 millimeters per day.

Moisture levels:

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Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be moderate to high, with average daytime relative humidity values in the upper-50s to lower-80s, in terms of percentage.

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