

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of January, 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 (11<sup>th</sup> – 25<sup>th</sup>) of January 2022

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













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11 <sup>th</sup>	 20% chance of showers	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower	<b>Warm</b>  Max/Min Temperatures 31.5/20.0°C	Feels like 32-37°C	56-64%	 Weak easterly 10 km/h Gust 20 km/h
12 <sup>th</sup>	 40% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.0/20.0°C	Feels like 36-36°C	65-74%	 Weak easterly 10 km/h Gust 20 km/h
13 <sup>th</sup>	 40% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.5/20.0°C	Feels like 34-36°C	59-66%	 Weak easterly 10 km/h Gust 20 km/h
14 <sup>th</sup>	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy periods with showers	<b>Warm</b>  Max/Min Temperatures 31.5/20.5°C	Feels like 34-38°C	61-75%	 Weak easterly 10 km/h Gust 20 km/h
15 <sup>th</sup>	 60% chance	1.0 to 5.0 mm of rainfall is possible	Partly cloudy periods with	<b>Warm</b> 	Feels like		 Weak easterly 10 km/h
















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	of showers		showers	Max/Min Temperatures 31.5/21.0°C	34- 38°C	61-75%	Gust 20 km/h
16 <sup>th</sup>	 60% chance of showers	1.0 to 8.0 mm of rainfall is possible	Partly cloudy periods with showers	<b>Warm</b>  Max/Min Temperatures 31.0/22.0°C	Feels like 32- 39°C	75-84%	 Weak easterly 10 km/h Gust 20 km/h
17 <sup>th</sup>	 60% chance of showers	1.0 to 8.0 mm of rainfall is possible	Partly cloudy periods with showers	<b>Warm</b>  Max/Min Temperatures 31.5/22.0°C	Feels like 34- 39°C	71-82%	 Weak easterly 10 km/h Gust 20 km/h
18 <sup>th</sup>	 35% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.5/22.0°C	Feels like 32- 39°C	61-65%	 Weak easterly 10 km/h Gust 20 km/h
19 <sup>th</sup>	 35% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.5/22.0°C	Feels like 34- 39°C	64-75%	 Weak easterly 10 km/h Gust 20 km/h
				<b>Warm</b>			




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20 <sup>th</sup>	 35% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two light showers	 Max/Min Temperatures 31.5/22.0°C	Feels like 32-39°C	69-76%	 Moderate north-easterly 20 km/h Gust 40 km/h
21 <sup>st</sup>	 35% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.5/22.0°C	Feels like 32-39°C	63-67%	 Moderate north-easterly 20 km/h Gust 40 km/h
22 <sup>nd</sup>	 35% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.5/21.0°C	Feels like 32-36°C	55-66%	 Moderate north-easterly 20 km/h Gust 40 km/h
23 <sup>rd</sup>	 35% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two light showers	<b>Warm</b>  Max/Min Temperatures 31.5/21.0°C	Feels like 32-38°C	58-74%	 Moderate north-easterly 20 km/h Gust 40 km/h
24 <sup>th</sup>	 60% chance	1.0 to 3.0 mm of rainfall is possible	Partly cloudy periods with	<b>Warm</b> 	Feels like		 Weak easterly 10 km/h

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	of showers		showers	Max/Min Temperatures 31.0/22.0°C	34- 40°C	65-71%	Gust 20 km/h
25 <sup>th</sup>	 60% chance of showers	1.0 to 5.0 mm of rainfall is possible	Partly cloudy periods with showers	<b>Warm</b>  Max/Min Temperatures 31.0/21.0°C	Feels like 34- 40°C	65-70%	 Weak easterly 10 km/h Gust 20 km/h

Trinidad Rainfall Forecast for the 15-Day period of January (11<sup>th</sup>-25<sup>th</sup>) 2022

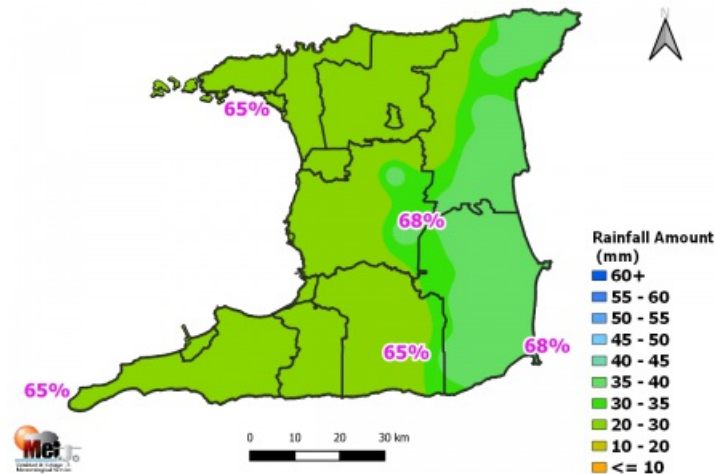


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day

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period (11<sup>th</sup>-25<sup>th</sup>) January 2022 and percentage probability of occurrence.

**Eastern, and North-Eastern areas**

Moderate chance (68%) of mean daily rainfall up to 3.6 mm.

**South-Eastern areas**

Moderate chance (68%) of mean daily rainfall up to 4.0 mm.

**Southern areas**

Moderate chance (65%) of mean daily rainfall up to 2.6 mm.

**South-Western areas**

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

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

Moderate chance (65%) of mean daily rainfall up to 2.4 mm.

**Northern, North-Western areas**

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

**Tobago Rainfall Forecast for the 15-Day period of January (11<sup>th</sup>-25<sup>th</sup>) 2022**

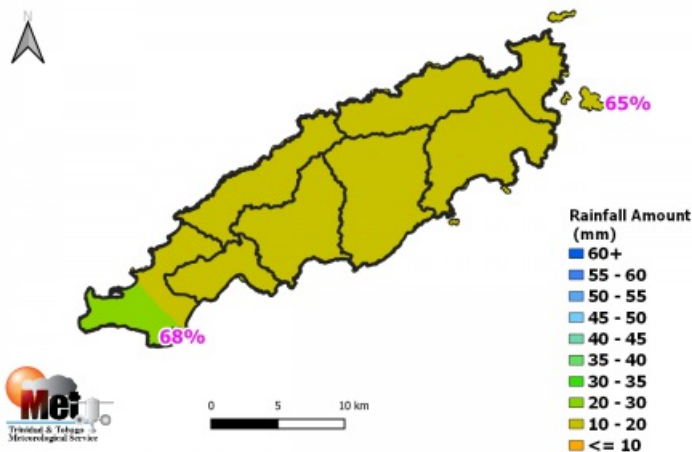


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11<sup>th</sup>-25<sup>th</sup>) January 2022 and percentage probability of occurrence.

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### North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 1.6 mm.

### South-Western areas

Moderate chance (68%) of mean daily rainfall up to 1.8 mm.

### **Sun and Moon Positions in the Sky January (11<sup>th</sup>-25<sup>th</sup>) 2022.**

The sun is presently at 22.0 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from January 11<sup>th</sup> will be 11 hours and 33 minutes, increasing slowly to 11 hours and 38 minutes by 25<sup>th</sup> January 2022. According to the moon phases 11<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> of January are good days for planting aboveground crops, while 22<sup>nd</sup>-25<sup>th</sup> (Third Quarter Phase) of January 2022 are good days for planting belowground crops. However, 12<sup>th</sup>-14<sup>th</sup> and 17<sup>th</sup> (Full Moon Phase) - 21<sup>st</sup> of January 2022, are poor planting days. These days should be used for removing weeds, clearing land and ploughing fields.

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

Farmlands in Trinidad and Tobago received low amounts of rainfall during the first dekad (1<sup>st</sup>-9<sup>th</sup>) of January. During this second fifteen-day forecast period of (11<sup>th</sup> to 25<sup>th</sup>) January 2022, expect similar rainfall amounts to occur as compared to the first 15-day forecast period (1<sup>st</sup> to 15<sup>th</sup>) January 2022. Cloudy patches at times or partly cloudy periods with few light to moderate showers will interrupt sunny days and clear cool nights. There is a moderate probability (68%) chance for crop irrigation measures at this time due to the low rainfall amounts and low soil moisture content.

However, livestock should be provided with fresh cool water particularly on warmer periods to rehydrate. There is a low probability (10%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is also a low probability (10%) chance for fungi spread, insect pests and warm weather diseases to develop in crop beds. There is also a low probability (10%) chance of root rot and fruit rot on crops due to the expected low rainfall amounts. River levels will remain at low levels throughout the forecast period.

### **Weather Assessment for the period December (1<sup>st</sup> -9<sup>th</sup>) 2021.**

Mostly dry conditions occurred across Trinidad and Tobago during the 1<sup>st</sup> to 9<sup>th</sup> of January. A wet day occurred on December 2<sup>nd</sup> over eastern and southern Trinidad, otherwise, there were mostly sunny conditions with one or two showers. Few warm days, warm winds, low river levels and low moisture content in soils may have hindered crop growth and development in general on agricultural lands and vegetation growth in pastures. The rainfall totals maps for the period 1<sup>st</sup> to 9<sup>th</sup> of January for Trinidad and Tobago are located below as figure 1 and figure 2.

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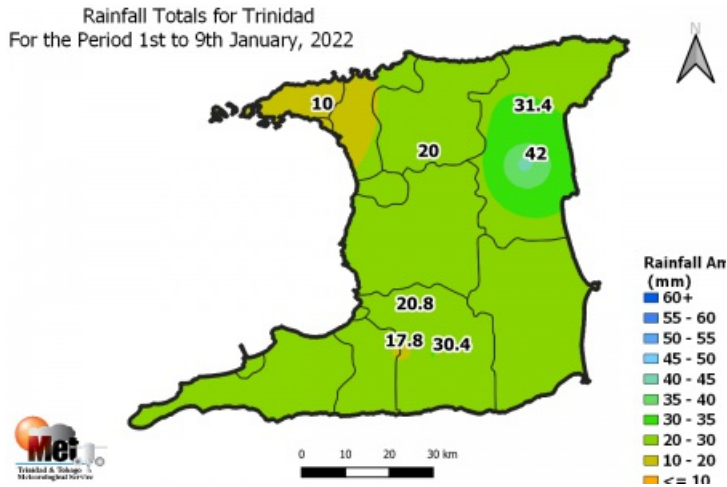


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 9<sup>th</sup> January.

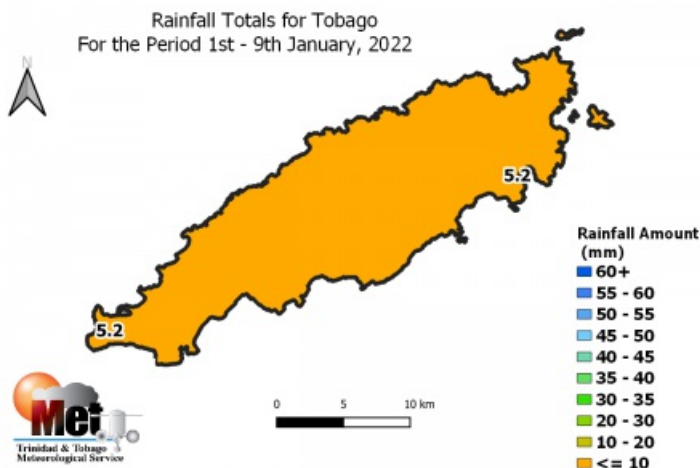


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1<sup>st</sup> to 9<sup>th</sup> January.

## Temperatures:

Temperatures were cool to warm during the period as minimum daytime temperatures of 19.0 °C and maximum temperature of 31.1 °C, in Trinidad.

In Tobago, temperatures were cool to warm, with minimum daytime temperatures of 21.6 °C and maximum temperature of 30.6 °C

## Summary

Summary of Expected Weather: Relatively wet days are expected on fourteen of the fifteen days. Relatively wet days

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(rainfall amounts less than 10.0 mm), are expected on the 12th to 25th of January, with higher amounts likely in northeastern, southeastern parts of Trinidad and southwestern Tobago. However, one relatively dry day with rainfall amounts less than 1.0 mm is expected on the 11th of January 2022. Trinidad: Patchy cloudy to partly cloudy skies are expected on the 12th to 25th of January, which will likely bring light to occasionally moderate rainfall across Trinidad. The daily rainfall totals are forecast to range between 1.0 mm and 8.0 mm with greater amounts occurring over northeastern and southeastern Trinidad, with fifteen-day rainfall totals ranging between 20.0 mm and 40.0 mm. The heaviest and most long-lasting rains are expected over farmlands in the northeastern areas of Sangre Grande, Fishing Pond, Plum Mitan; southeastern areas of Mayaro, Guayaguayare and Moruga. However, one relatively dry day with rainfall amounts of less than 1.0 mm is expected on the 11th of January 2022. Tobago: Similar to Trinidad, Tobago will experience patchy cloudy to partly cloudy skies from the 12th to 25th of January 2022, which will likely bring light occasional moderate rainfall across farmlands mostly across southwestern parts of Tobago. The daily rainfall totals are forecast to be less than 8.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 15.0 mm and 20.0 mm. However, one relatively dry day with rainfall amounts of less than 1.0 mm is expected on January 11, 2022. Temperatures & Winds: The maximum temperatures are expected to remain warm, with temperatures ranging between 31.0oC to 31.5oC throughout the period. However, temperatures are expected to have a real-feel or feels-like between 34.0oC to 40.0oC on most days. The minimum temperatures will range between 20.0oC to 22.0oC during most nights/early mornings, dropping lower in rural areas and valleys. There is a high probability (80%) chance of thick mist or fog in patches in valleys, low-lying spaces, crop fields, pastures and savannahs. Moderate northeasterly and weak easterly winds of an average speed ranging between 15 km/h and 30 km/h are expected, with gusts ranging between 40 km/h and 50 km/h at times. Low rainfall totals, mostly average wind speeds, warm days and low feels-like temperatures will sustain average evapo-transpiration rates in crops ranging between 4.0 and 8.0 millimeters per day. Moisture levels: Over the fifteen-day period across Trinidad and Tobago, moisture levels are expected to be moderate to low, with average daytime relative humidity values in the mid-50s to mid-80s, in terms of percentage.

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