

## Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First Dekad (1st - 10th) 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 (1<sup>st</sup> – 15<sup>th</sup>) of January 2022

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

### Disclaimer
















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Issue date: 2022-01-01

1 <sup>st</sup>	 40% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two showers	<b>Warm</b>  Max Temp 31.5°C	Feels like 33-35°C	51-58%	 Moderate north-easterly 20 km/h Gust 30 km/h
2 <sup>nd</sup>	 60% chance of showers	1.0 to 8.0 mm of rainfall is possible	Intermittent cloudy periods with showers	<b>Warm</b>  Max Temp 30.0°C	Feels like 33-36°C	58-66%	 Moderate north-easterly 20 km/h Gust 30 km/h
3 <sup>rd</sup>	 70% chance of showers	10.0 to 15.0 mm of rainfall with higher amounts on the eastern and southern-western coast of Trinidad/Tobago	Intermittent cloudy periods with showers	<b>Warm</b>  Max Temp 30.0°C	Feels like 32-36°C	73-87%	 Weak easterly 10 km/h Gust 20 km/h
4 <sup>th</sup>	 60% chance of showers	1.0 to 8.0 mm of rainfall is possible	Intermittent cloudy periods with showers	<b>Warm</b>  Max Temp 30.0°C	Feels like 32-36°C	68-78%	 Weak easterly 10 km/h Gust 20 km/h
5 <sup>th</sup>	 25% chance of showers	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower	<b>Warm</b>  Max Temp 31.0°C	Feels like 32-36°C	67-74%	 Weak easterly 10 km/h Gust 20 km/h

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6 <sup>th</sup>	 20% chance of showers	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower	Warm  Max Temp 31.5°C	Feels like 32-36°C	48-56%	 Weak easterly 10 km/h Gust 20 km/h
7 <sup>th</sup>	 20% chance of showers	Less than 1.0 mm of rainfall is possible	Patchy cloudy skies with a light shower	Warm  Max Temp 31.5°C	Feels like 32-36°C	41-60%	 Weak easterly 10 km/h Gust 20 km/h
8 <sup>th</sup>	 45% chance of showers	1.0 to 3.0 mm of rainfall is possible	Partly cloudy with one or two light showers	Warm  Max Temp 31.0°C	Feels like 32-36°C	71-83%	 Weak easterly 10 km/h Gust 20 km/h
9 <sup>th</sup>	 30% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two light showers	Warm  Max Temp 31.5°C	Feels like 32-36°C	59-72%	 Weak easterly 10 km/h Gust 20 km/h
10 <sup>th</sup>	 30% chance of showers	1.0 to 2.0 mm of rainfall is possible	Partly cloudy with one or two light showers	Warm  Max Temp 31.0°C	Feels like 32-36°C	58-66%	 Weak easterly 10 km/h Gust 20 km/h

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11 <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 Temp 31.0°C	Feels like 33-36°C	62-73%	 Weak easterly 10 km/h Gust 20 km/h
12 <sup>th</sup>	 60% chance of showers	1.0 to 8.0 mm of rainfall is possible	Partly cloudy with showers	<b>Warm</b>  Max Temp 30.0°C	Feels like 33-36°C	58-66%	 Moderate north-easterly 20 km/h Gust 30 km/h
13 <sup>th</sup>	 60% chance of showers	1.0 to 8.0 mm of rainfall is possible	Partly cloudy with showers	<b>Warm</b>  Max Temp 30.0°C	Feels like 33-36°C	58-66%	 Moderate north-easterly 20 km/h Gust 30 km/h
14 <sup>th</sup>	 40% 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 Temp 31.0°C	Feels like 33-36°C	72-78%	 Weak easterly 10 km/h Gust 20 km/h
15 <sup>th</sup>	 40% 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 Temp 31.0°C	Feels like 33-36°C	72-78%	 Weak easterly 10 km/h Gust 20 km/h

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## Trinidad Rainfall Forecast for the 15-Day period of January (1<sup>st</sup>–15<sup>th</sup>) 2022

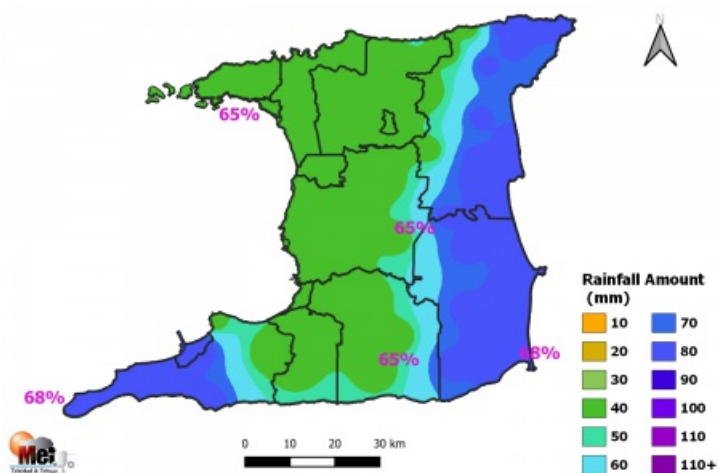


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day

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period (1<sup>st</sup>-15<sup>th</sup>) January 2022 and percentage probability of occurrence.

## Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 6.6 mm.

## South-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 7.5 mm.

## Southern areas

Moderate chance (65%) of mean daily rainfall up to 6.3 mm.

## South-Western areas

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

## Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 4.0 mm.

## Northern, North-Western areas

Moderate chance (65%) of mean daily rainfall up to 4.0 mm.

## Tobago Rainfall Forecast for the 15-Day period of January (1<sup>st</sup>-15<sup>th</sup>) 2022

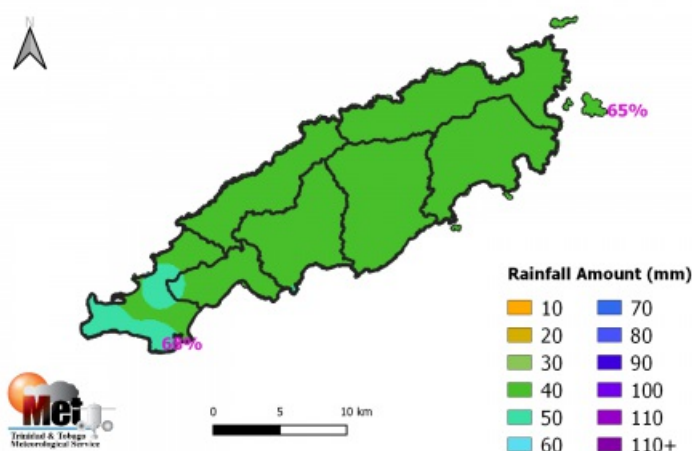


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Trinidad during the 15-day period (1<sup>st</sup>-15<sup>th</sup>) January 2022 and percentage probability of occurrence.

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### **North-Eastern areas**

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

### **South-Western areas**

Moderate chance (68%) of mean daily rainfall up to 3.8 mm.

### **Sun and Moon Positions in the Sky January (1<sup>st</sup>–15<sup>th</sup>) 2022**

The sun is presently at 23.1 degrees South latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from January 1<sup>st</sup> will be 11 hours and 31 minutes, increasing slowly to 11 hours and 34 minutes by 15<sup>th</sup> January 2022. According to the moon phases 2<sup>nd</sup> (New Moon Phase), 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 15<sup>th</sup> of January are good days for planting aboveground crops, while only 1<sup>st</sup> of January 2022 is a good day for planting belowground crops. However, the 3<sup>rd</sup>, 4<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> (First Quarter Phase) 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 moderate to high amounts of rainfall during the third dekad (21<sup>st</sup>-30<sup>th</sup>) of December. During this first fifteen-day forecast period of (1<sup>st</sup> to 15<sup>th</sup>) January 2022, expect lesser rainfall amounts to occur as compared to the third 15-day (21<sup>st</sup> to 4<sup>th</sup>) December/January forecast period. Cloudy patches or cloudy periods with few showers will interrupt mostly sunny days. Wetter conditions are most likely on the northeastern, southeastern and southwestern parts of Trinidad and southwestern Tobago.

There is a moderate probability (40%) chance for crop irrigation measures at this time due to the low to moderate rainfall amounts and moderate soil moisture content. However, livestock should be provided with fresh cool water particularly on warmer drier 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 rainfall amounts. River levels will move from low to moderate levels at times, particularly on January 3, 2022.

### **Weather Assessment for the period December (21<sup>st</sup> -30<sup>th</sup>) 2021.**

A mixture of wet and dry conditions occurred across Trinidad and Tobago during the period 21<sup>st</sup> to 30<sup>th</sup> of December. Wet days occurred on the 21<sup>st</sup>, 22<sup>nd</sup>, 23<sup>rd</sup> and 24<sup>th</sup> of December over Trinidad and Tobago, otherwise mostly sunny conditions with few showers. Few warm days, warm winds, moderate to low river levels and moderate to low moisture content in soils may have assisted in crop growth and development in general on agricultural lands and vegetation growth in pastures. The rainfall totals maps for the period 21<sup>st</sup> to 30<sup>th</sup> of December for Trinidad and Tobago are located below as figure 1 and figure 2.

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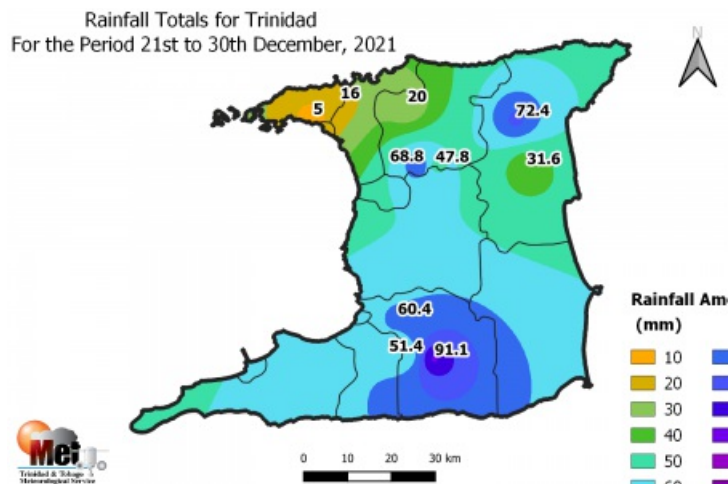


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 21<sup>st</sup> to 30<sup>th</sup> December.

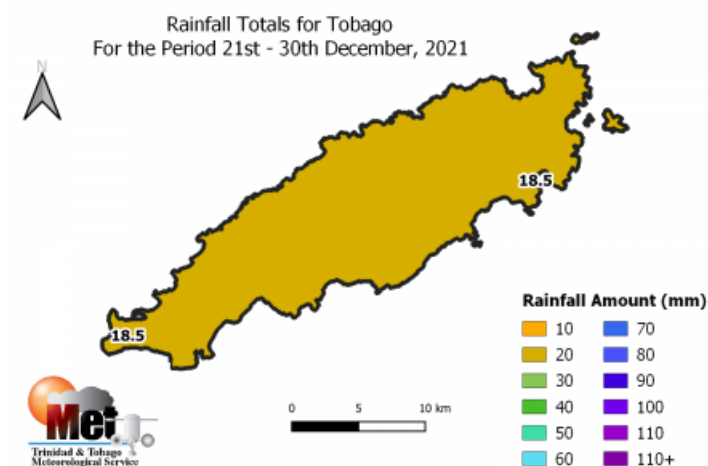


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 21<sup>st</sup> to 30<sup>th</sup> December.

## Temperatures:

Temperatures were warm during the period as maximum daytime temperatures ranged between 28.2 °C and 31.4 °C, in Trinidad.

In Tobago, temperatures were warm, with maximum daytime temperatures ranging between 30.0 °C and 31.5 °C.

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## Summary

Summary of Expected Weather: Moderate rainfall amounts are expected on one of the fifteen days. A wet day (rainfall amounts greater than 10.0 mm), is expected on the 3rd of January, with higher amounts in northeastern, southeastern and southwestern parts of Trinidad. However, eleven relatively wet days with rainfall amounts of 1.0 mm to 8.0 mm are expected from the 1st, 2nd, 4th, 8th, 9th, 10th, 11th, 12th, 13th, 14th and 15th and three relatively dry days with rainfall amounts less than 1.0 mm are expected on the 5th, 6th and 7th of January 2022. Trinidad: Partly cloudy to cloudy periods are expected only on the 3rd of January, which is likely to bring light to moderate rainfall across farmlands across in northeastern, southeastern and southwestern parts of Trinidad. The daily rainfall totals are forecast to be greater than 10.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 40.0 mm and 75.0 mm. The heaviest and most long-lasting rains are expected over farmlands in the northeastern areas of Sangre Grande, Fishing Pond, Plum Mitán; southeastern areas of Mayaro, Guayaguayare and Moruga; and southwestern areas of Point Fortin, La Brea, Palo Seco, Granville and Cedros. However, eleven relatively wet days with rainfall amounts of 1.0 mm to 8.0 mm are expected from the 1st, 2nd, 4th, 8th, 9th, 10th, 11th, 12th, 13th, 14th and 15th and three relatively dry days with rainfall amounts less than 1.0 mm are expected on the 5th, 6th and 7th of January 2022. Tobago: Similarly, to Trinidad, Tobago will experience partly cloudy to cloudy conditions on the 3rd of January 2022, which will likely bring light to moderate/heavy rainfall across farmlands mostly across southwestern parts of Tobago. The daily rainfall totals are forecast to be greater than 10.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 30.0 mm and 50.0 mm. However, eleven relatively wet days with rainfall amounts of 1.0 mm to 8.0 mm are expected from the 1st, 2nd, 4th, 8th, 9th, 10th, 11th, 12th, 13th, 14th and 15th and three relatively dry days with rainfall amounts less than 1.0 mm are expected on the 5th, 6th and 7th of January 2022. Temperatures & Winds: The cool season is upon us; therefore, 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 32.0°C to 36.0°C on most days. The minimum temperatures will range between 18.0°C to 23.5°C 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. Mostly weak northeasterly to easterly winds of an average speed ranging between 10 km/h and 20 km/h are expected, with gusts ranging between 20 km/h to 30 km/h at times. Low to moderate 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 to 7.0 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 low-40s to upper-70s, in terms of percentage. While during possible rainy day 3rd of January, average daytime relative humidity values will be in the low-70s to upper-80s, in terms of percentage.

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