

Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the Second Dekad (11th - 20th) of July, 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 (11th – 25th) of July 2022.

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













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| | | | | | | | |
|------------------|---|---|--|---|-----------------------|--------|---|
| 11 th |  65% chance of showers | 1.0 to 3.0 mm of rainfall is possible | Partly cloudy with few showers | Warm  Max/Min Temperatures °C 32.0/24.0 | Feels like 36-38°C | 80-87% |  Moderate easterly 20 km/h Gust 30 km/h |
| 12 th |  80% chance of showers | 10.0 to 25.0 mm of rainfall is possible | Cloudy with light/mod occasional heavy showers | Warm  Max/Min Temperatures °C 30.5/24.5 | Feels like 30-35°C | 87-88% |  Weak north-easterly 15 km/h Gust 25 km/h |
| 13 th |  65% chance of showers | 1.0 to 5.0 mm of rainfall is possible | Partly cloudy with few showers | Warm  Max/Min Temperatures °C 32.0/24.0 | Feels like 34-38°C | 62-74% |  Weak easterly 10 km/h Gust 15 km/h |
| 14 th |  68% chance of showers | 5.0 to 9.0 mm of rainfall is possible | Partly cloudy with few showers | Warm  Max/Min Temperatures °C 32.0/23.5 | Feels like 34-38°C | 55-67% |  Weak south-easterly 15 km/h Gust 25 km/h |
| 15 th |  80% chance of rainfall | 10.0 to 25.0 mm of rainfall | Cloudy with light/mod occasional | Warm  | Feels like | |  Weak south-easterly 15 km/h |















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|------------------|--|---|--|---|-----------------------|--------|--|
| | of showers | is possible | heavy showers | Max/Min Temperatures °C 29.0/23.5 | 30-33°C | 84-90% | Gust 25 km/h |
| 16 th |  65% chance of showers | 1.0 to 5.0 mm of rainfall is possible | Partly cloudy with few showers | Warm  Max/Min Temperatures °C 32.0/23.5 | Feels like 34-38°C | 71-82% |  Weak south-easterly 15 km/h Gust 25 km/h |
| 17 th |  80% chance of showers | 10.0 to 25.0 mm of rainfall is possible | Partly cloudy/Cloudy with light/mod occasional heavy showers | Warm  Max/Min Temperatures °C 32.0/23.5 | Feels like 32-38°C | 65-77% |  Weak south-easterly 15 km/h Gust 25 km/h |
| 18 th |  80% chance of showers | 10.0 to 35.0 mm of rainfall is possible | Cloudy with light/mod occasional heavy showers | Warm  Max/Min Temperatures °C 31.0/24.0 | Feels like 32-38°C | 64-79% |  Weak south-easterly 15 km/h Gust 25 km/h |
| 19 th |  65% chance of showers | 1.0 to 5.0 mm of rainfall is possible | Partly cloudy with few showers | Warm  Max/Min Temperatures °C 31.5/24.5 | Feels like 32-40°C | 72-82% |  Moderate south-easterly 20 km/h Gust 30 km/h |





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|------------------|--|---|--|---|-----------------------|--------|--|
| 20 th |  60% 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 32.0/24.0 | Feels like 33-40°C | 59-63% |  Moderate easterly 20 km/h Gust 30 km/h |
| 21 st |  80% chance of showers | 10.0 to 25.0 mm of rainfall is possible | Cloudy with light/mod occasional heavy showers | Warm  Max/Min Temperatures °C 29.0/23.0 | Feels like 30-33°C | 80-87% |  Weak easterly 10 km/h Gust 15 km/h |
| 22 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 31.0/23.5 | Feels like 33-38°C | 57-66% |  Moderate north-easterly 20 km/h Gust 30 km/h |
| 23 rd |  68% chance of showers | 1.0 to 9.0 mm of rainfall is possible | Partly cloudy with few showers | Warm  Max/Min Temperatures °C 31.0/22.5 | Feels like 37-40°C | 73-80% |  Weak easterly 10 km/h Gust 15 km/h |
| |  1.0 to 5.0 mm of | Partly cloudy | | Warm | | |  Moderate south- |

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|------------------|--|---------------------------------------|---------------------------------------|--|-----------------------|--------|--|
| 24 th | 65% chance of showers | rainfall is possible | with few showers |  Max/Min Temperatures °C | Feels like 32-40°C | 62-73% | easterly 20 km/h Gust 30 km/h |
| 25 th |  60% chance of showers | 1.0 to 3.0 mm of rainfall is possible | Partly cloudy with one or two showers | 31.0/23.0 Warm  Max/Min Temperatures °C 31.0/23.0 | Feels like 32-40°C | 70-91% |  Moderate easterly 20 km/h Gust 30 km/h |

Trinidad Rainfall Forecast for the 15-Day period of July (11th –25th) 2022.

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Issue date: 2022-07-11

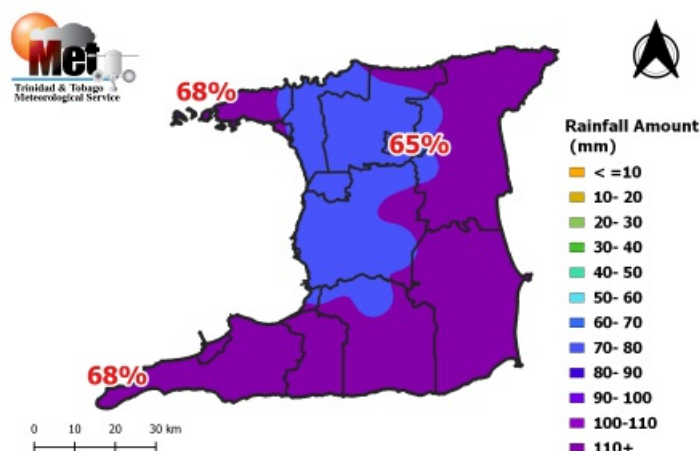


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period (11th-25th) July 2022 and percentage probability of occurrence.

Eastern, and North-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 11.6 mm.

South-Eastern areas

Moderate chance (68%) of mean daily rainfall up to 12.5 mm.

Southern areas

Moderate chance (68%) of mean daily rainfall up to 12.2 mm.

South-Western areas

Moderate chance (68%) of mean daily rainfall up to 12.1 mm.

Central, West-Central, and inland areas

Moderate chance (65%) of mean daily rainfall up to 7.5 mm.

Northern, North-Western areas

Moderate chance (68%) of mean daily rainfall up to 9.5 mm.

Tobago Rainfall Forecast for the 15-Day period of July (11th –25th) 2022

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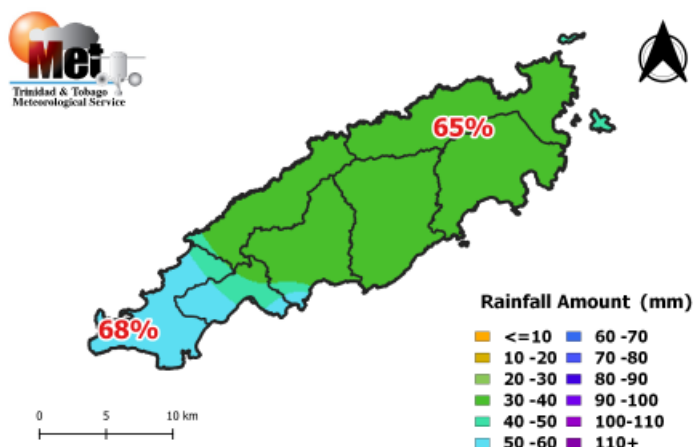


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period (11-25th) July 2022 and percentage probability of occurrence.

North-Eastern areas

Moderate chance (65%) of mean daily rainfall up to 3.5 mm.

South-Western areas

Moderate chance (68%) of mean daily rainfall up to 4.5 mm.

Sun and Moon Positions in the Sky July (11th-25th) 2022.

The sun is presently at 22.0 degrees North latitude and with this position, the day-length or number of sunlight hours in Trinidad and Tobago from July 11th will be 12 hours and 42 minutes, decreasing slightly to 12 hours and 38 minutes by 25th July 2022. According to the moon's phases, the 12th and 25th of July are good days for planting aboveground crops while the 13th (Full Moon Phase), 16th-17th, 20th (Third Quarter Phase) -22nd and 25th are good days for planting belowground crops. However, the 10th-11th, 14th-15th, 18th-19th and 23rd-24th of July 2022, are poor planting days. These days should be used for removing weeds, clearing land and ploughing fields.

Highlighted Possible Impacts on Agriculture:

During this second 15-day forecast period of (11th to 25th) July 2022, again expect similarly wet conditions to occur as compared to the last three consecutive 15-day forecast periods. There is a low probability (28%) chance for crop irrigation measures to take place owing to already heavily moist soils and expected rains during this forecast period. However, livestock should be provided with fresh cool water during this forecast period to rehydrate particularly during warmer and drier periods. On drier days, there is a low probability (20%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields due to frequent cloud cover. However, there is a moderate probability (68%) chance for strong wind events that may cause damage to crops and farm infrastructure. There is also a high probability (85%)

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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 generally low/moderate levels during this forecast period but will become high at times during the 12th, 15th, 17th, 18th and 21st of July. There is always a high risk of flooding events, especially during the wet season. Farmers should be proactive and store seeds, animals and machinery in elevated locations to minimize losses in the event of flooding.

Weather Assessment for the period July (1st-10th) 2022

Wet days occurred on the 1st, 2nd, 5th, 6th and 9th of July over Trinidad and Tobago. The moderate to high rainfall amounts that occurred across the islands allowed for moderate to high moisture content in soils, moderate to high river levels and flash/riverine flooding events. Crop growth and development rates in general across agricultural lands and vegetation growth in pastures had increased significantly. The rainfall totals maps for the period, 1st to 10th of July for Trinidad and Tobago are located below in figure 1 and figure 2.

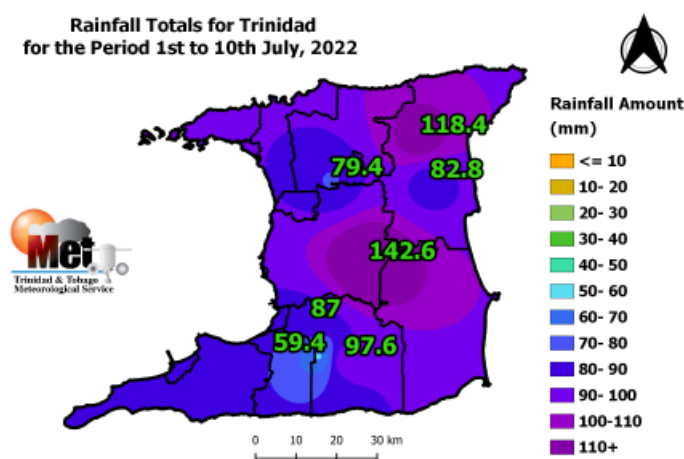


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during period 1st to 10th July 2022.

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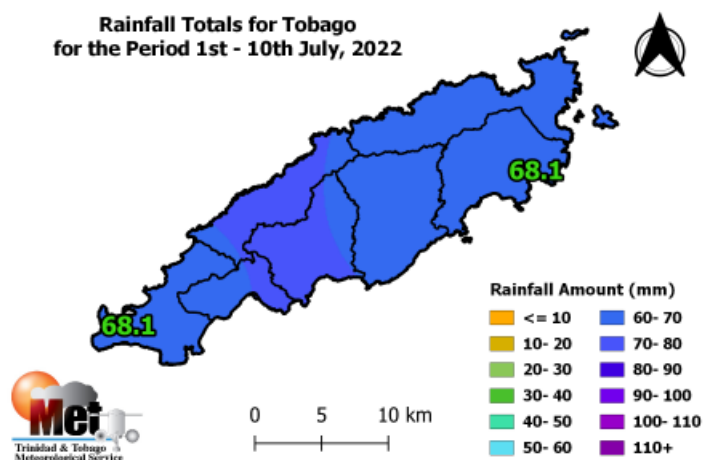


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during period 1st to 10th July 2022.

Temperatures:

Temperatures were cool to warm during the period 1st to 10th July, as the minimum nighttime temperature fell to 22.9 °C and the maximum daytime temperature rose to 32.2 °C, in Trinidad.

Similarly, Tobago temperatures were cool to warm during the period 1st to 10th July, with the minimum nighttime temperature falling to 23.1 °C and the maximum daytime temperature rising to 31.5 °C.

Summary

Summary of Expected Weather:

Moderate to high rainfall amounts are expected on five of the fifteen days.

Five wet days with rainfall amounts ranging between 10.0 mm and 35.0 mm are expected on the 12th, 15th, 17th, 18th and 21st of July while, ten relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 11th, 13th, 14th, 16th, 19th, 20th, 22nd, 23rd, 24th and 25th of July 2022.

Trinidad:

Five wet days with rainfall amounts ranging between 10.0 mm and 35.0 mm are expected on the 12th, 15th, 17th, 18th and 21st of July while, ten relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 11th, 13th, 14th, 16th, 19th, 20th, 22nd, 23rd, 24th and 25th of July 2022. The daily rainfall totals are forecast to range between 1.0 mm to 35.0 mm across different farmlands, with fifteen-day rainfall totals ranging between 75.0 mm and 125.0 mm. The impactful rainfall events will mostly occur across the northeastern, eastern, southeastern, southwestern and northwestern parts of Trinidad. There is a high (90%) probability that flash and riverine flooding will occur

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during/after heavy rainfall events.

Tobago:

Tobago will experience less rainfall than Trinidad. Wet days with rainfall amounts ranging between 10.0 mm and 35.0 mm are expected on the 12th, 15th, 17th, 18th and 21st of July while, ten relatively wet days with rainfall amounts ranging between 1.0 mm and 9.0 mm are expected on the 11th, 13th, 14th, 16th, 19th, 20th, 22nd, 23rd, 24th and 25th of July 2022. The daily rainfall totals are forecast to range between 1.0 mm to 35.0 mm across different farmlands particularly southwestern areas, with fifteen-day rainfall totals ranging between 35.0 mm and 50.0 mm.

Temperatures & Winds:

The maximum temperatures are expected to remain warm, with temperatures ranging between 29.0°C to 32.0°C throughout the period. However, temperatures are expected to have a real-feel or feels-like between 30.0°C to 40.0°C on most days. The minimum temperatures will range between 22.5°C to 24.5 °C during most nights/early mornings, dropping lower in rural areas and valleys.

A mixture of moderate easterly and weak south-easterly winds of average speeds of 20 km/h and 10 km/h are expected, with gusts of 25-50 km/h at times. Moderate to high rainfall totals, mostly low to moderate wind speeds, warm days and warm feels-like temperatures will sustain average evapotranspiration rates in crops ranging between 1.4 to 8.0 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 in the lower-55s to lower-90s, in terms of percentage.

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