

Trinidad and Tobago Dryness Monitor and Outlook by End of October 2023

Dryness/Drought Indicator and outlook

Dryness Indicator from August to October 2023 &

Issued: Nov 7, 2023

3-month Dryness Outlook for November 2023 to January 2024

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Key Message:

In August 2023, Trinidad received below normal rainfall amounts whereas Tobago received above normal rainfall amounts. Below normal rainfall amounts fell over Trinidad and Tobago during the ensuing months of September to October. Piarco's monthly totals for August-September-October rainfall range from 134.4 mm, 88.8 mm, and 116.5 mm respectively, while Crown Point, Tobago's monthly totals for August-September-October rainfall range from 224.9 mm, 96.5 mm and 44.9 mm respectively. The outlook for the next three months, November-December-January 2023/4 shows that at the end of January 2024 there will be little to no concern for dryness.

Dryness Indicator for August-September-October 2023

The month of August had a mixture of below normal and above normal rainfall amounts in Trinidad and Tobago. Trinidad had thirteen relatively wet days (1.0-10.0 mm) and four wet days (>10.0 mm) with a monthly total of 134.4 mm, while Tobago had eight relatively wet days (1.0-10.0 mm) and three wet days (>10.0 mm) and one excessively wet day (> 50.0 mm) with a monthly total of 224.9 mm.

The month of September had a drastic reduction in rainfall across Trinidad and Tobago. Trinidad had eight relatively wet days (1.0-10.0 mm) and three wet days (>10.0 mm) with a monthly total of 88.8 mm, while Tobago had six relatively wet days (1.0-10.0 mm) and three wet days (>10.0 mm) which gave a monthly total of 96.5 mm.

Similar to September, the month of October had a significant reduction in rainfall across Trinidad and Tobago. Trinidad had three relatively wet days (1.0-10.0 mm) and five wet days (>10.0 mm) with a monthly total of 116.5 mm, while Tobago had five relatively wet days (1.0-10.0 mm) and two wet days (>10.0 mm) with a monthly total of 44.9 mm.

The 3-month dryness indicator for August-September-October shows dryness indicator values that ranged from -2.4 to -1.2, which range between extremely dry to moderately dry categories (see Figure 1).

The colour-coded dryness indicator map showing the observed level of dryness is based solely on rainfall and can be used for decision-making or for heightening awareness of dryness.

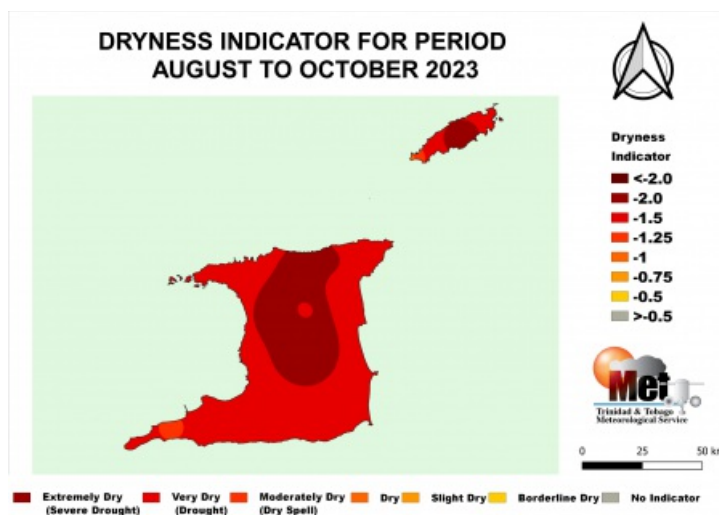


Figure 1. The colours on this map show observed dryness levels based on the rainfall differences from average, which have been standardized and expressed as the number of standard deviations less than average. The period used to compute the dryness is the 3-month period August to October 2023 compared to the historical average for the same 3-month period. The yellow to red colours indicate borderline dry to extremely dry levels of dryness. The grey colour indicates areas where there is no significant dryness concerns.

Dryness Outlook for November to January 2024:

The accumulated rainfall received nationwide, during the months of August to October 2023, together with the projected volume of rainfall for the months of November to January 2024 will show borderline dryness at the end of January 2024. Near normal rainfall is expected during the month of November, and being a wet season month, moderate to heavy rainfall events are expected to occur. Frequent rainfall events are expected to continue in December and January 2024. The Dryness Outlook shows dryness indicator values between -0.269 to -0.021 are likely to develop across all of Trinidad and Tobago by the end of January 2024 (see Figure 2). The outlook is based solely on rainfall and should be used only as a guidance tool.

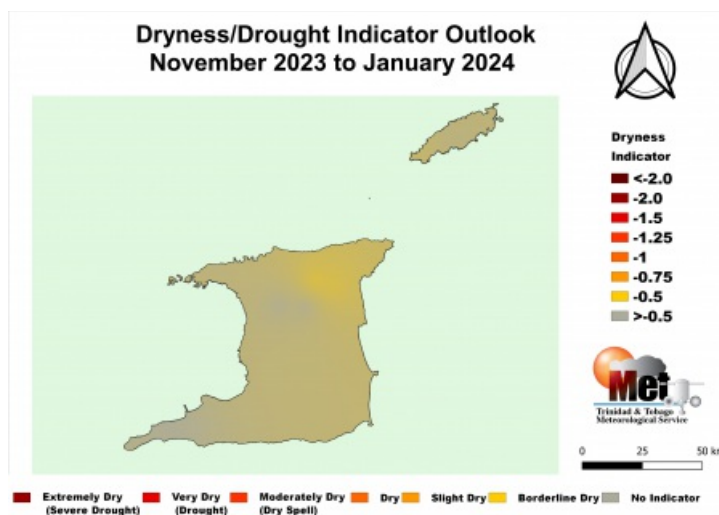


Figure 2. The colours on this map show the predicted levels of dryness for the period November to January 2023_4. It is based on the difference between standardized accumulated rainfall (observed and predicted) from November 2023 to January 2024 and the historical average rainfall for the same period. The yellow to red colours indicate borderline dry to extremely dry levels of dryness. The grey colour indicates areas where there is no significant dryness concerns.

Standardized Precipitation Index

The Standardized Precipitation Index (SPI) is an index showing the severity and rarity of dryness or wetness of an area. Negative values of SPI indicate less than median rainfall and drier conditions; positive values indicate greater than median rainfall and wetter conditions. In general, dryness impacts are expected when the value of the 3-month SPI lies near -1.0. As the negative SPI value becomes larger in amount than -1.0, the severity of impacts increases. For Trinidad and Tobago, extreme dryness occurs in the dry season when negative SPIs are larger than -1.25.