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Trinidad and Tobago Dry/Wet Spell Monitor and Outlook by End of September 2017

Little or No Concern for Short Term (3-month) Impactful Dryness by End of September

3-Month Outlook (short-term):

- The Dry Spell Outlook for the three-month period ending September 2017 shows no concern for impactful dryness in Trinidad; however concerns for Tobago are not as favourable as there is still a slight concern for impactful dryness across the island.

- Rainfall surpluses during June has eased deficiencies in both islands, but more so in Trinidad. Taking into account the observed rainfall from April to June 2017, when 3-month SPIs were mostly positive, along with the SPI outlook for the three months ending September 2017, the Dry Spell Outlook indicates no short-term dry-spell or drought concerns developing for Trinidad and Tobago by the end of September; however slightly negative SPIs are still likely in Tobago (see figure 1).

- The trend towards enhanced concern for impactful dryness is largest in parts of eastern Trinidad and southwest Tobago, where negative SPIs are likely to be smallest (see figure 1).

- Although the highest trend is towards positive SPIs in Trinidad, there is still a very slight chance (5-12%) for excessive dryness (i.e. SPIs values less than -1.5) as indicated by below normal probabilities (see figure 2). Tobago on the other hand has a relatively reasonable chance (close to 20%) for excessive dryness by the end of September 2017 (see figure 2).

Standardized Precipitation Index

The Standardized Precipitation Index (SPI) is used by Trinidad and Tobago Meteorological Service (TTMS) to monitor and estimate dryness and wetness on different timescales. It is a measure of relative dryness and wetness compared to the long term average rainfall for a particular timescale. A negative SPI reflects a rainfall shortfall and hence relative dryness. In general, dryness impacts are expected locally, when the value of the 3-month SPI lies near -1.0. As the SPI value becomes less than -1.0, the severity of impacts increases. For Trinidad and Tobago, extreme or unusual dryness is taken to occur when negative SPIs is lower than -1.25 in the dry season and near -1.5 in the wet season. Negative SPIs are used to characterise the severity of the dryness and as such, dry spells and drought categories. A positive SPI reflects a rainfall surplus and hence relative wetness.

Figure 1

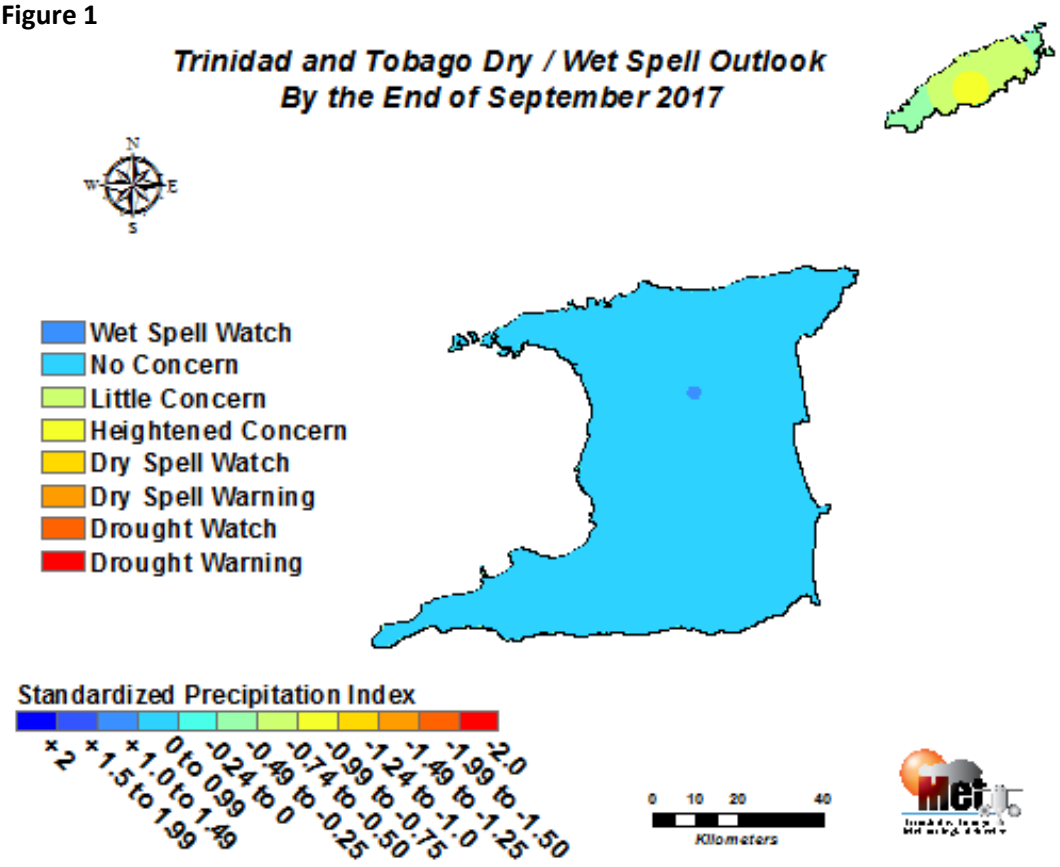
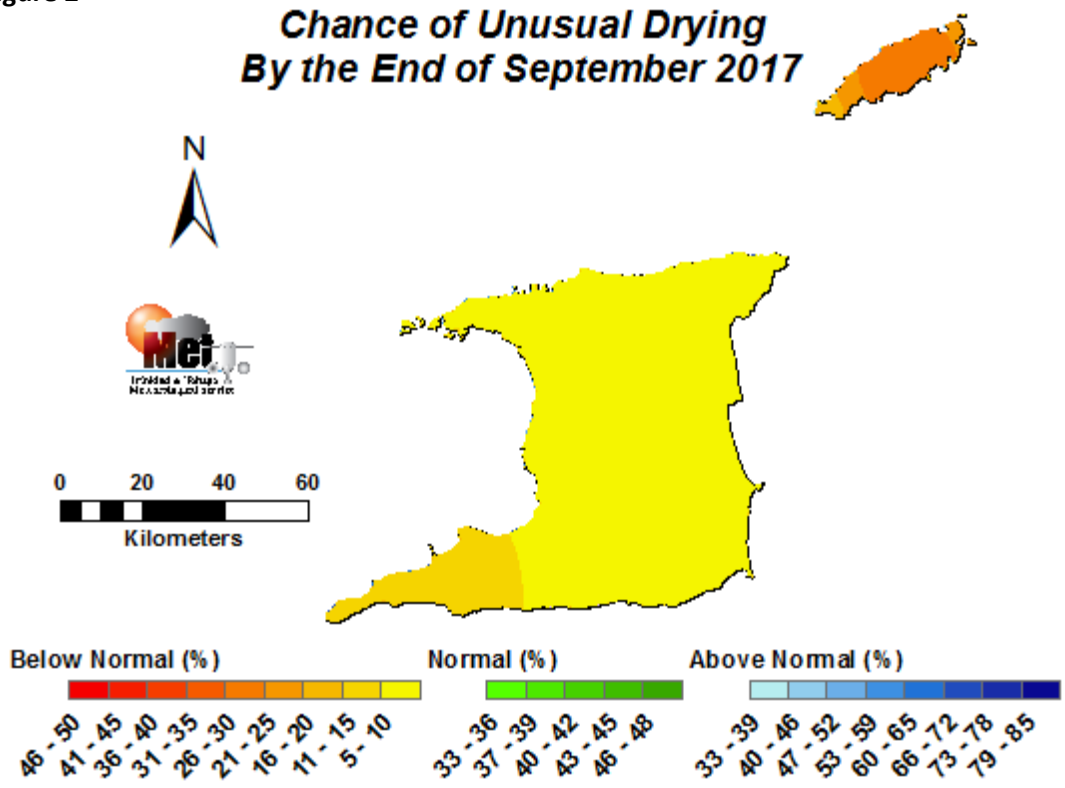


Figure 2



Longer-term (12-Month) Dryness Assessment:

- When the rainfall is characterised as SPIs, the longer-term (12-month) dryness assessment for the period July 2016 to June 2017 shows Tobago and some areas of western Trinidad received deficit rainfall amounts during the period, while the rest of Trinidad received surplus rainfall. In Tobago concerns for longer-term dryness are very much enhanced, as 12-month SPIs are in the dry spell watch category. As such, longer-term impactful dryness concerns are heightened for Tobago and northwestern areas of Trinidad (see Figure 3). In general, dryness impacts are expected if the 12-month SPI is less than -1.0 (very dry or worse). Dryness impacts based on 12-month SPIs may include less than usual stream-flows, reservoir levels, groundwater flows and recharge.

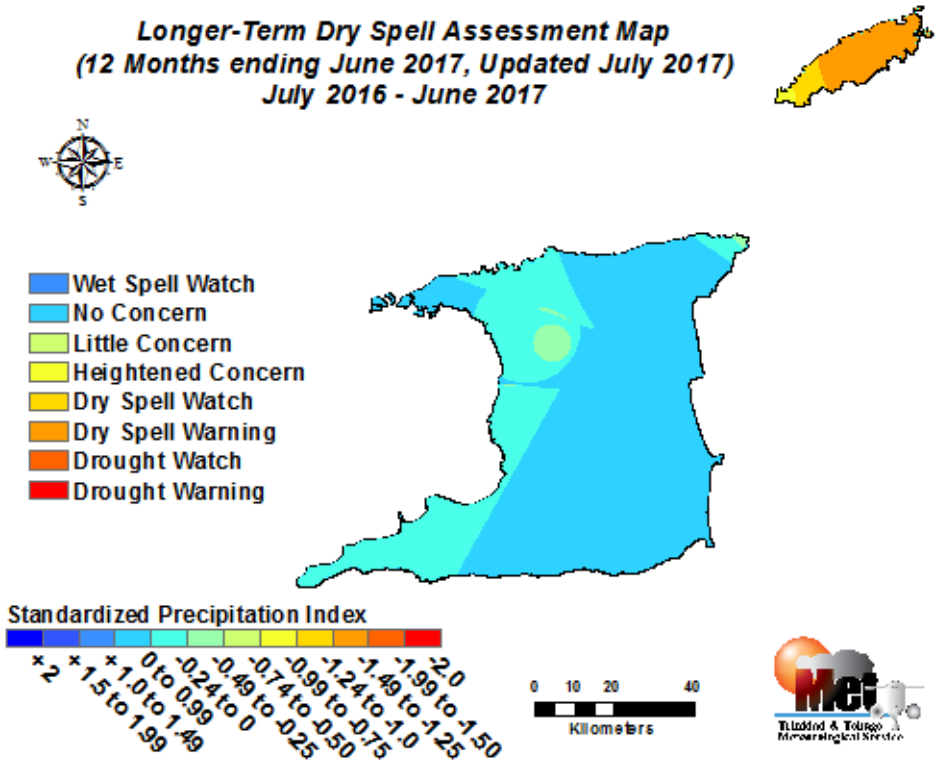


Figure 3