

Date: 23/08/2018

Issue  
Number: 37

## Concerns Remain Heightened For The Development Of A 3-month Dry Spell By October Month End

### Key Messages

Accumulated rainfall totals for the 12-month period from August 2017 to July 2018 exceeded the average at selected sites across the country.

July 2018 rainfall has been mixed, with less than average rainfall totals at five of the selected stations and higher than average totals at the remaining two stations.

At Piarco, measured rainfall totalled 237.8 mm or 95.3% of the 249.5 mm July climate normal (1981-2010).

At Crown Point, measured rainfall totalled 91.5 mm or 49% of the 185.9 mm July climate normal (1981-2010).

The 3-month dry spell outlook for the period ending October 2018 shows heightened concerns for impactful dry conditions. This has implications for water stress as the year progresses.

### Drought/Dry-Spell Monitor

The 12-month Standardized Precipitation Index (SPI) shows that over the 12 months ending July 2018, accumulated rainfall totals were in the wet to extremely wet categories at selected locations across the country (see Figure 1).

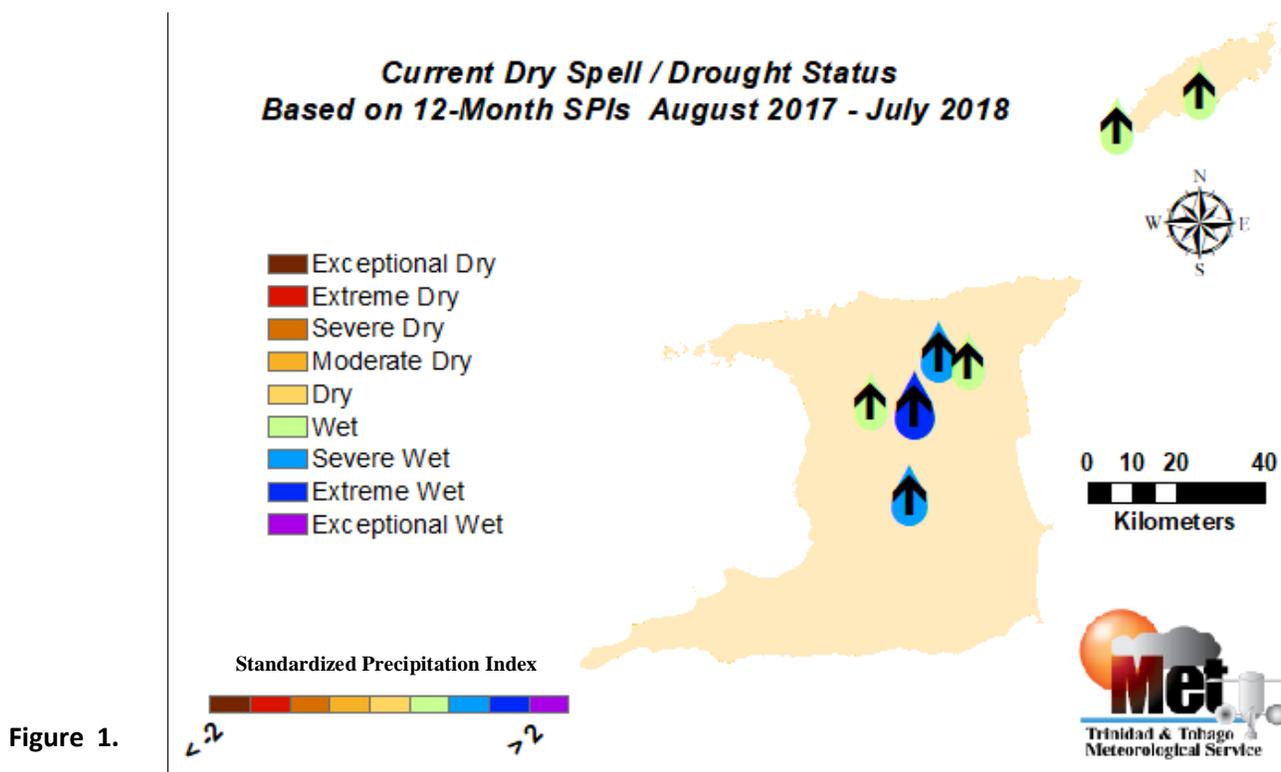
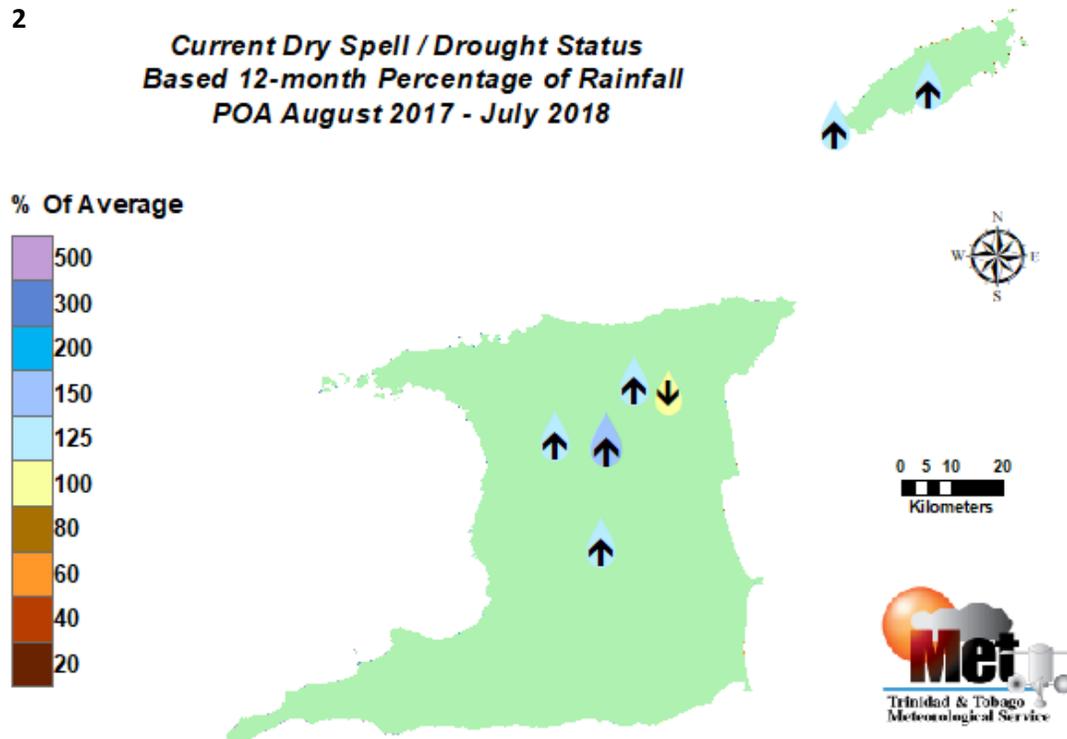
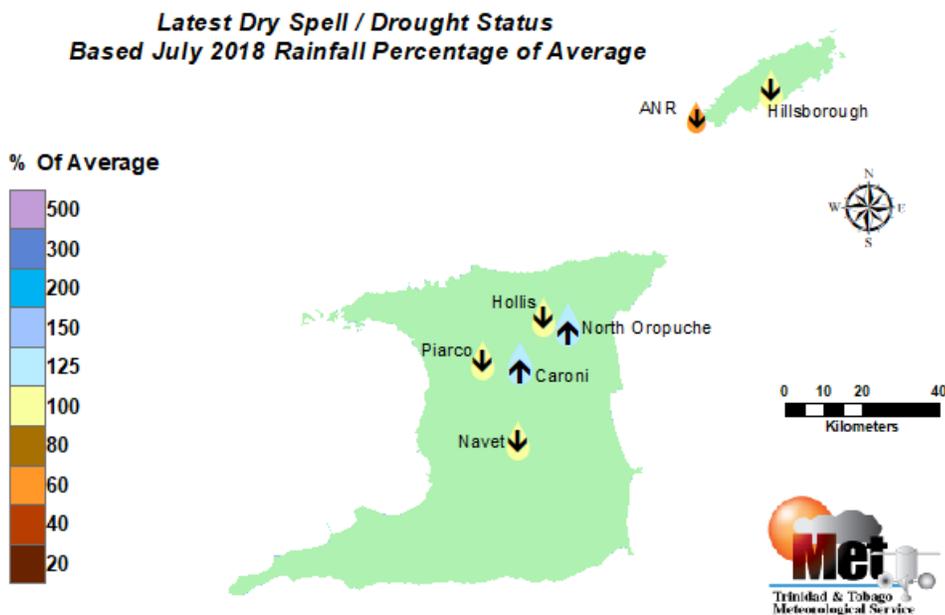


Figure 2



Percent of average 12-month accumulated rainfall totals exceeded the 1981-2010 average at all, except one of the selected stations. The largest surplus occurred at the Arena reservoir station, near Talparo (see Figure 2).

Figure 3

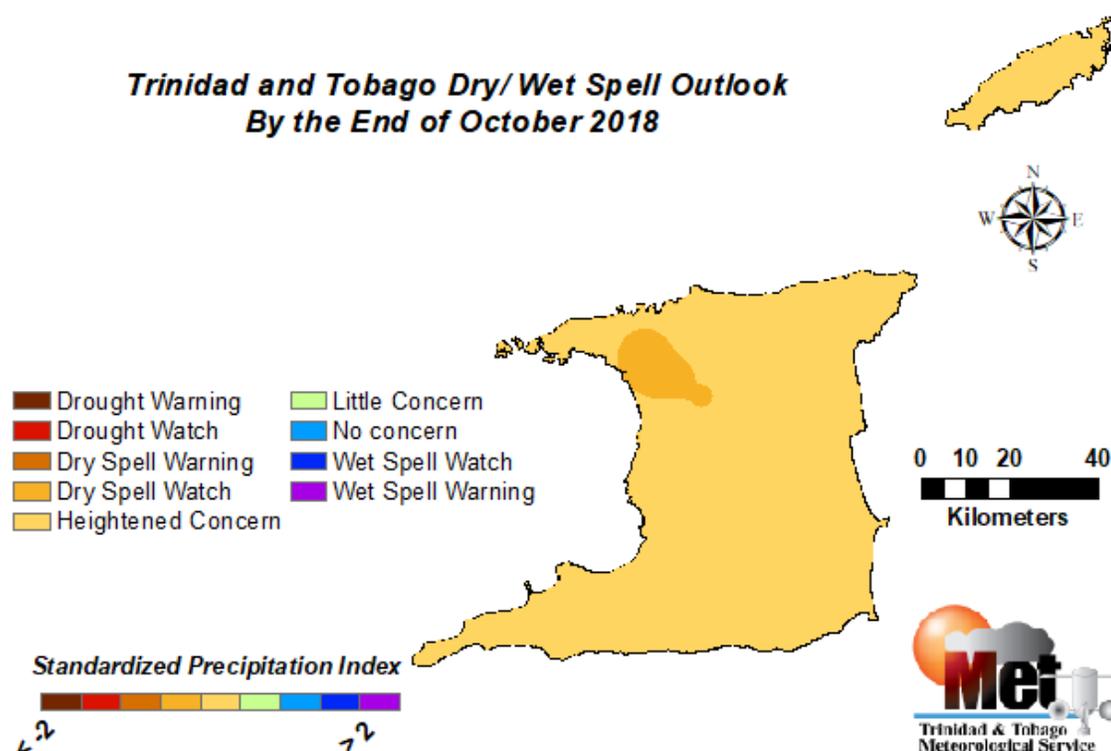


At the same time, July 2018 rainfall maintained the drier than usual trend for the third consecutive month at Piarco, Navet, Hollis, Crown Point and Hillsborough stations, with below average totals observed. The deficits were smaller in July, except at Crown Point (see Figure 3).

### Drought Indicator Outlook:

- ❖ The 3-monthly SPI based drought indicator for the period ending October 2018 shows a drying trend with 3-month negative SPIs leading likely. This maintains the status of the drought indicator in the heightened concern category with outlook SPIs ranging between - 0.10 to -0.80 (see Figure 4).
- ❖ In general, dryness impacts are expected if the 3-month SPI during the wet season is lower than - 1.5 (very dry or worse). Dryness impacts may include less than usual stream-flows, reservoir levels, groundwater flows and recharge.

Figure 4



### Standardized Precipitation Index

The Standardized Precipitation Index (SPI) is used 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. Negative values of SPI indicate less than median rainfall and drier conditions; positive values indicate greater than median rainfall and wetter conditions. The SPI values can be interpreted as the number of standard deviations by which the observed rainfall deviates from the long-term mean. In general, dryness impacts are expected 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 dryness is considered to occur when negative SPIs are lower than -1.25 in the dry season and near -1.5 or lower in the wet season.