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September 2020 Preliminary Climate Overview

September Temperature

Typically, in Trinidad and Tobago, September is the warmest month in the wet season and has been the warmest month in the last 30 years (1990-2019). During 2020, above-, to much-above-average September temperatures were observed across Trinidad and Tobago. Record warm average daily and average monthly temperatures occurred in the twin-island republic with both average temperatures and average maximum temperatures being in the top 10 warmest Septembers on record. At Piarco, Trinidad, in terms of average temperature, September 2020, with an average temperature of 28.6°C, was 0.5°C above the 1981-2010 average and at the same time was 1.4°C above the 20th century (1961-1990) average; while tying with the September of 1990, 1995, 2002, 2003 and 2014 as the 7th warmest average September temperature on record, in 75 years. The warmest September on record in terms of average temperatures occurred in 2015 and 2008 and was 0.6°C warmer than in 2020.

At Piarco, September 2020 average maximum temperature (daytime highs) of 33.3°C, was 0.7°C above the 1981-1990 average, and 1.8°C above the 20th century (1961-1990) average. It also ranks as the 7th warmest September in the 62-year maximum temperature record at Piarco. Not only was September 2020 the warmest month of the year to date, it was also the month with the greatest rise above the 20th century average maximum temperatures for any month in 2020, to date, being warmer by 1.8°C (1961-1990 average is 31.5 °C). September 2012 and 1999 with average maximum temperatures of 34.0°C remain the warmest Septembers on record with a 1.4°C departure from the most recent climate average (1981-2010) and a 2.5°C departure from the 20th century (1961-1990) average.

Record warmth was also observed in Tobago during September 2020. At Crown Point, an average temperature of 29.0°C was recorded, which was 1.3°C above the 1981-2010 average of 27.7°C, thus making September 2020, in terms of average temperature, the second warmest in 54 years since records began in 1967. Crown Point had an average maximum temperature of 32.3°C, which was 1.0°C above the long term average, which tied September 2020 with September 2019 as the warmest September on record.

It was not only September that experienced unusual warmth. To date, 2020 with an average temperature of 27.8°C is also the 6th warmest January through to September ever recorded at Piarco, alongside January through to September of 1999 and 1995. January through to September of 2010 remains the warmest on record at 28.7°C, which is 0.9°C warmer than September 2020.

Temperature Extremes

At Piarco, there were ten (10) hot days (i.e. days with maximum temperature greater than 33.9°C, the 95th percentile) during September 2020. The warmest temperature of 34.8°C first occurred on the 14th and again on the 22nd. On the first occasion, it was the start of a three-day spell of daily maximum temperatures above 34.3°C and on the second occasion it was part of a six-day hot spell with maximum temperatures warmer than 33.9°C. With an extreme temperature of 34.8°C, September 2020 ranked 12th among September's most extreme daily maximum temperatures in the 62-year record. The warmest September maximum temperature and the overall warmest temperature on record occurred in 1990 on September 25 with a maximum temperature of 36.5°C, which was 1.7°C warmer than September 2020. September 16, 1999 and September 27, 2012 with maximum temperatures of 36.3°C and 36.2°C respectively are the 2nd and 3rd warmest September maximum temperatures on record.

At Crown Point, the highest maximum temperature during September 2020 was 34.0°C, which occurred on September 17th and was the second warmest September maximum temperature on record at the location. Only September 1989 with 34.2°C was warmer.

September Precipitation

September 2020 produced above-, to much-above average rainfall across most parts of Trinidad and continued the wetter than usual conditions observed in August. At Piarco, September 2020 rainfall total recorded was 279.7mm, which was 91.2mm or 48 % above the 1981-2010 average of 188.5mm, ranking in the upper 5% of the 75-year period of record. It was the wettest September in the last decade, the 2nd wettest September in the last 50 years, and the 4th wettest September in the 75-year record. Only the Septembers of 1970 with 326.4mm, 2010 with 310.5mm, and 1966 with 283.8mm were wetter.

The wettest day of the month at Piarco produced 63.7mm on September 1st, and was one of two heavy rainfall days (days with 50mm or greater rainfall in 24 hours) during the month. Another significant heavy rainfall day occurred on September 19th with 56.1mm. There were other notable rainfall days, which occurred on the 3rd (33.9 mm), 8th (36.8 mm) and 10th (25.9 mm). Overall at Piarco, the accumulated rainfall for the 3-month season July to September stood at 805.5mm which represents 103.2 mm or 14.7 % above-average (702.3 mm) rainfall for the period.

In contrast, most of Tobago recorded below-average rainfall during September 2020. At Crown Point, a rainfall total of 110.1 mm was recorded, which is 45.7mm or 29.3% below the average. September 2020 rainfall at Crown Point ranks among the 20 driest Septembers on record at the station and was actually the 18th driest September of the 54-year period of rainfall record. September 2020, was also the 9th September in the last decade (2011-2020) in which less than average (155.8 mm) rainfall was recorded at the Crown Point station. The wettest day at Crown Point occurred on the 14th with 35.3mm of rainfall recorded, which was followed by 23.8mm on the 16th. Overall at Crown Point, 476.3mm of rainfall was recorded over the three months of July to September, which represents 29.9mm or 5.9% below average (506.3 mm) rainfall for the period.