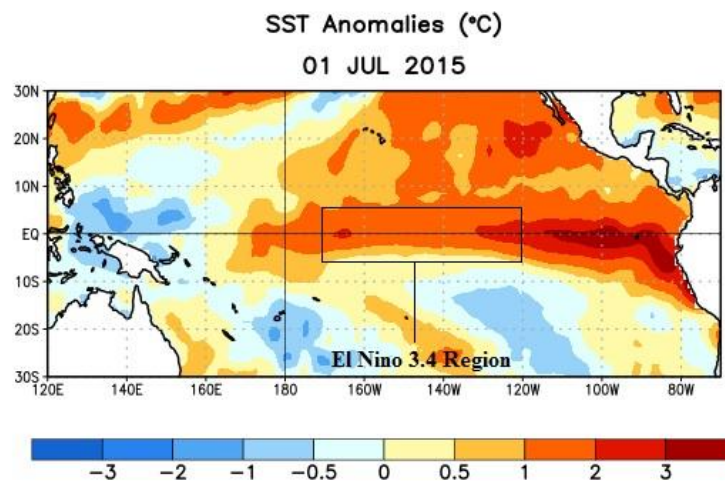


## El Niño–Southern Oscillation (ENSO) Update July 2015

**El Niño Conditions are present and there is a greater 90% chance it will continue for the remainder of 2015**

### Assessment of Current ENSO State:

Most of the indicators used to monitor the state of the El Niño–Southern Oscillation (ENSO) phenomenon show that the El Niño signal strengthened in the equatorial Pacific Ocean in the Niño 3.4 area (5S-5N; 170W-120W). Sea surface temperature (SST) anomalies averaged +0.6°C during March 2015 climbing steadily to +1.3°C at the end of June 2015 (Figure 1). SST anomalies above 0.5°C have continued to increase over the last three months indicating the strengthening of El Niño conditions.



**Figure 1: SST Anomalies in the Equatorial Pacific Ocean with the Niño 3.4 region highlighted.** Adopted from [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/ens0\\_advisory/ensodisc.pdf](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ens0_advisory/ensodisc.pdf)

During the last two months positive subsurface temperature anomalies were observed across most of the Equatorial Pacific, while in the atmosphere, equatorial low-level trade winds continued to be anomalous with westerly anomalies over the Western Equatorial Pacific (Figure 3). In the atmosphere, upper-level easterly anomalies continue over the Central Pacific Ocean and Niño 3.4 region.

Looking forward, almost all models indicate SST anomalies will remain greater than or equal to +0.5°C through the end of 2015. Models also suggest a strong El Niño, with SST anomalies exceeding +1.5°C.

### Current Influence of ENSO on Trinidad and Tobago's climate

Recent analyses show El Niño related weather patterns continue to exist over our region. During March 2015 to June 2015, SSTs east of Trinidad and Tobago have cooled and SST anomalies have decreased slightly. Negative anomalies in sea level pressures are present and low level wind speeds anomalies continue to be near to above average. In the upper levels velocity potential anomalies strengthened near Trinidad and Tobago which has led to strong vertical wind shear and suppression of deep cloud development in our region. Combined, these features are expected to continue exerting slightly negative influences on rainfall patterns and positive influences on temperatures over Trinidad and Tobago during the remainder of the Wet Season.

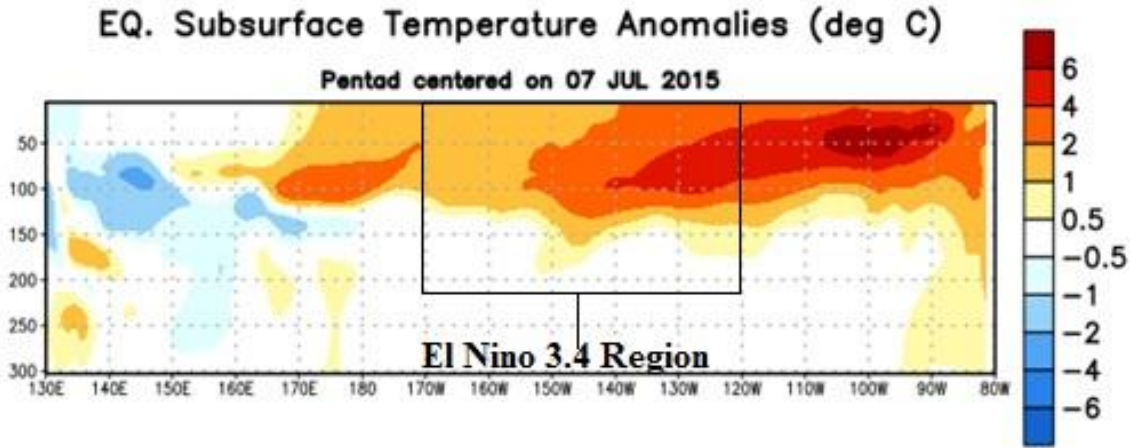


Figure 2: Positive subsurface temperature anomalies observed across most of the equatorial Pacific, during the last two months, including in the Niño 3.4 region. While negative anomalies at depth have weakened in the western Pacific. Adopted from [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/ensodisc.pdf](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf)

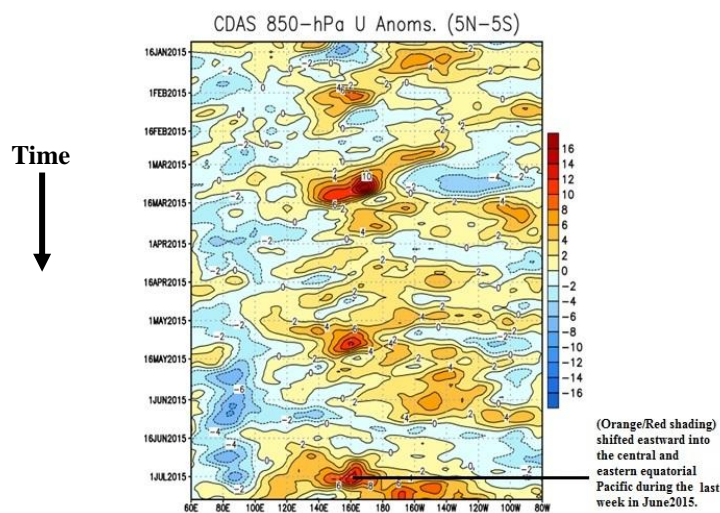


Figure 3: Westerly wind anomalies across the western equatorial Pacific. Adopted from [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/ensodisc.pdf](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf).

### Historical Influences of El Niño on Trinidad and Tobago Climate

The El Niño phenomenon is a major climatic feature that determines whether the local Wet or Dry Season will be wetter/drier or warmer/cooler than average. Trinidad and Tobago tends to experience a drier and warmer Wet Season when an El Niño is present, however, the exact impact of each El Niño event on the country's rainfall and temperature varies.