

Monthly Climate Statement – July 2017

Security classification: PUBLIC

Key messages

- The probability of exceeding median summer (November to March) rainfall is currently slightly lower than normal for much of Queensland.
- This outlook is based on tropical and extra-tropical sea-surface temperature anomalies in the Pacific Ocean.
- The outlook for summer rainfall factors in sea-surface temperatures related to the current state of the El Niño-Southern Oscillation (ENSO).
- Updated rainfall probabilities for summer will be provided each month from August to November.

Summary as at 15 July 2017

The Department of Science, Information Technology and Innovation (DSITI) monitors sea-surface temperature (SST) anomalies in key regions of the Pacific Ocean over autumn, winter and spring, and provides objective outlooks for summer (November to March) rainfall on this basis. **The Science Division of DSITI considers that, for much of Queensland, the probability of exceeding median summer (November to March) rainfall is currently slightly lower than normal.**

DSITI provides outlooks for summer rainfall in Queensland. These outlooks are based on SST anomalies in key regions of the Pacific Ocean which have the most relevance for summer rainfall in Queensland. The current outlook is based on SST anomalies in the extra-tropical Pacific Ocean in March, as well as SST anomalies in tropical and extra-tropical regions of the Southwest Pacific Ocean in June. The SST anomalies in the Southwest Pacific are strongly related to the El Niño-Southern Oscillation (ENSO) phenomenon.

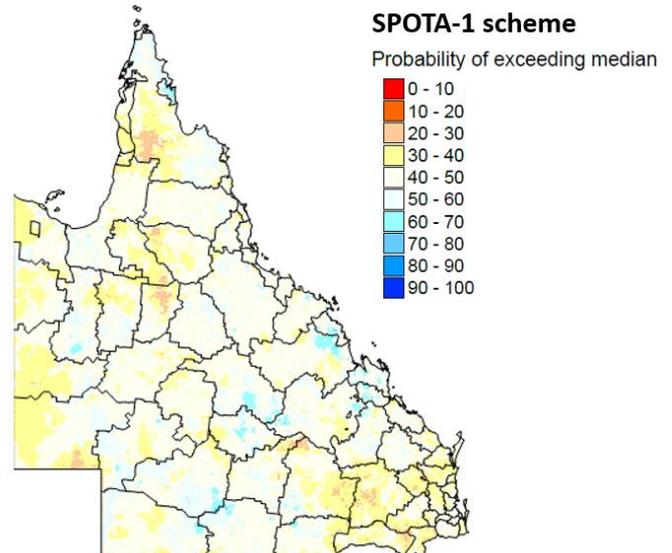
The most recent SST anomalies in the Niño 3.4 region of the central equatorial Pacific Ocean have been warmer than normal and the Southern Oscillation Index (SOI) has been quite negative. However, the three-month (April to June) values of these key ENSO indices have remained within ENSO Neutral thresholds. In particular, the June value of the Niño 3.4 region SST anomaly was +0.6°C and the three-month average was +0.4°C. The June value of the SOI was -9.5 and the three-month average value of the SOI was -5.0.

The relationship between ENSO-related SST indices and Queensland summer rainfall begins to strengthen over winter, and becomes strongest in spring. DSITI will closely monitor these and other ENSO-related indices over the coming months.

DSITI will provide updated outlooks for summer rainfall, each month from August to November, which will take into account any developments in the ENSO-related SST pattern during that period. The outlooks, which are targeted for summer, are produced by DSITI's Seasonal Pacific Ocean Temperature Analysis version 1 (SPOTA-1) system.

Probability of Exceeding Median Summer Rainfall

November 2017 – March 2018
based on the SPOTA-1 Index
as at July 1, 2017



It should be noted that seasonal outlooks are probabilistic, rather than deterministic, in nature. For example, if an outlook is described as having a 60 per cent probability of exceeding-median rainfall, then there will also be a 40 per cent probability of below-median rainfall. Furthermore, in cases where there are high probabilities of a specified outcome, it does not mean that less probable events will not occur.

As indicated, DSITI will provide the next updated outlook for summer rainfall in August, to factor in the ENSO-related SST pattern at that time. For more information, please visit: www.longpaddock.qld.gov.au/seasonalclimateoutlook, or contact Stuart Burgess at: stuart.burgess@dsiti.qld.gov.au.

