

Monthly Climate Statement – August 2017

Key messages

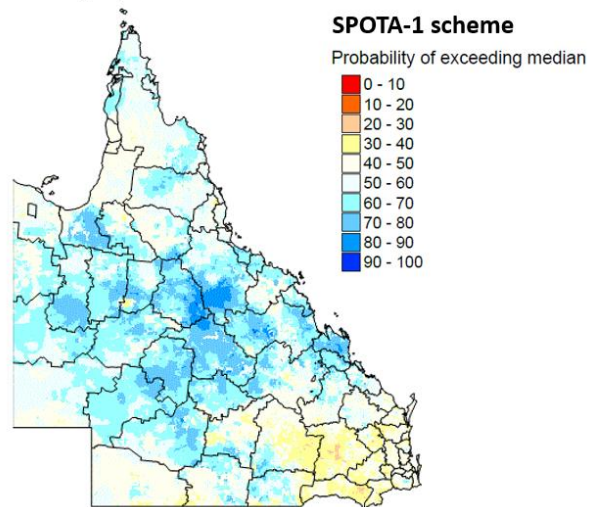
- The probability of exceeding median summer rainfall is slightly higher than normal for much of Queensland, and there is a lower than normal probability of a 'dry' summer.
- However, for some south-eastern parts of the state, the probability of exceeding median summer rainfall is lower than normal.
- This outlook for summer rainfall factors in sea-surface temperatures related to the current state of the El Niño-Southern Oscillation (ENSO).
- Rainfall probabilities for summer will be updated each month until November, to factor in any changes in the ENSO-related sea-surface temperature pattern.

Values of the SOI, the key atmospheric indicator of ENSO, have been quite variable over the last three-month period, rising sharply from June to July. In particular, monthly values of the SOI for May, June and July were +0.7, -9.5 and +6.5 respectively.

For Queensland, the relationship between ENSO indices and rainfall for the upcoming summer is strongest in spring. Therefore, DSITI will closely monitor ENSO-related climate indices over the coming months. For each month until November, DSITI will provide updated outlooks for summer rainfall, taking into account any developments in the ENSO-related SST pattern during this period. The summer rainfall outlooks 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 August 1, 2017



Summary as at 10 August 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 higher than normal and there is a lower than normal probability of a 'dry' summer. However, for some south-eastern parts of the state the probability of exceeding median summer rainfall is lower than normal.**

DSITI provides seasonal outlooks based on SST anomalies in key regions of the tropical and extra-tropical 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, which tend to persist through to summer. The outlook also considers SST anomalies in the tropical and extra-tropical Pacific Ocean in July, which are strongly related to the ENSO phenomenon.

SST anomalies in the Niño 3.4 region of the Pacific Ocean are a key oceanic indicator of ENSO. The average Niño 3.4 SST anomaly for the three-month May to July period was +0.5°C warmer than normal. However, as at 5 August, the weekly anomaly was only +0.2°C warmer than normal.

It should be noted that seasonal climate 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 for a specified outcome, it does not mean that a less probable event will not occur.

As indicated, DSITI will provide the next updated outlook for summer rainfall in September, 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.