

# Monthly Climate Statement – December 2017

## Key messages

- DSITI considers that the probability of exceeding median summer rainfall is slightly higher than normal for much of Queensland.
- This outlook is based on sea-surface temperatures in the Pacific Ocean which are strongly related to ENSO and Queensland summer rainfall.
- Sea-surface temperatures in the equatorial Pacific Ocean are now indicative of La Niña conditions.
- The Southern Oscillation Index is also indicative of La Niña conditions.

## Summary as at 12 December 2017

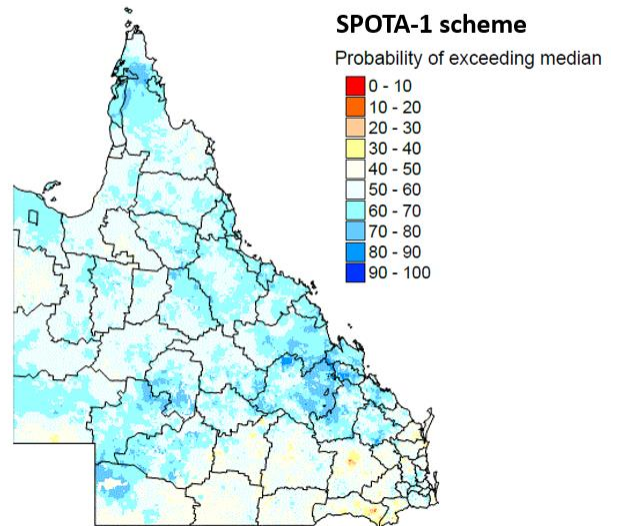
The Department of Science, Information Technology and Innovation (DSITI) monitors sea-surface temperature (SST) anomalies in key regions of the Pacific Ocean over autumn, winter and spring and provides objective outlooks for summer (November to March) rainfall on this basis. **The Science Division of DSITI considers that the probability of exceeding median summer rainfall is slightly higher than normal for much of Queensland. With respect to extreme conditions, for most of Queensland the probability of a dry summer (< decile 3 rainfall) is lower than normal and the probability of a wet summer (> decile 7 rainfall) is near-normal.**

Rainfall in Queensland over spring and summer is strongly influenced by the El Niño-Southern Oscillation (ENSO) — a coupled atmospheric and oceanic phenomenon which is strongly persistent at seasonal timescales. The key oceanic indicator of ENSO is the SST anomaly in the Niño 3.4 region of the Pacific Ocean. The November SST anomaly was  $-0.9^{\circ}\text{C}$ , a monthly value which is indicative of La Niña conditions. The Southern Oscillation Index (SOI) is the key atmospheric indicator of ENSO. The average value of the SOI for September to November was  $+9.1$ , a three-month value which is also indicative of La Niña conditions.

DSITI provides outlooks for summer rainfall based on an objective analysis of Pacific Ocean SSTs. The analysis for the current summer indicates a slightly higher than normal probability of exceeding median rainfall across much of Queensland (see map below). This outlook for summer rainfall has taken into account SSTs leading up to summer in selected regions across the Pacific Ocean.

### Probability of Exceeding Median Summer Rainfall

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



When interpreting seasonal climate outlook information it should be appreciated that seasonal climate outlooks are probabilistic, rather than deterministic, in nature. For example, if an outlook is described as having a 70 per cent probability of exceeding median rainfall, then there will also be a 30 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.

For more information please visit the Queensland Government Long Paddock website at:  
[www.longpaddock.qld.gov.au/seasonalclimateoutlook](http://www.longpaddock.qld.gov.au/seasonalclimateoutlook).  
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