

# Monthly Climate Statement — April 2017

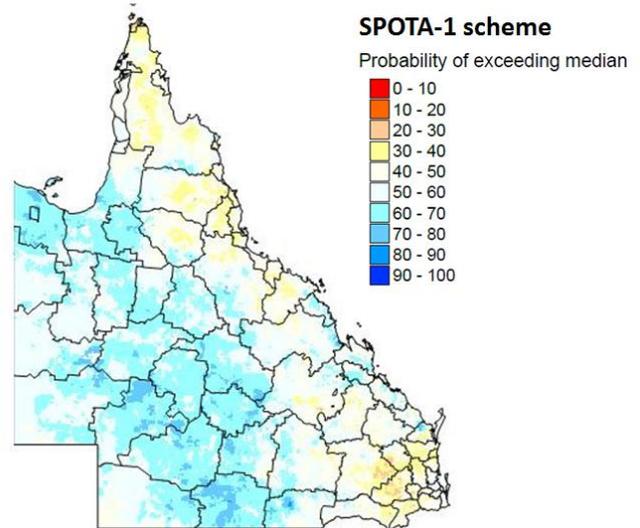
## Key messages

- At this time of year, extra-tropical sea-surface temperature anomalies in the Pacific Ocean provide initial guidance as to rainfall probabilities over Queensland for next summer.
- On this basis, rainfall probabilities for next summer are currently near normal for much of Queensland.
- The current outlook for summer rainfall does not factor in the state of the El Niño-Southern Oscillation (ENSO), which tends to be in transition at this time of year.
- The outlook for summer rainfall will be updated each month from June to November, factoring in the evolving ENSO-related SST pattern during this period.

At this time of year the ENSO phenomenon tends to be in a state of transition. For this reason, ENSO indices such as the SOI and SST anomalies in the equatorial Pacific do not provide a useful indicator of summer rainfall. The weak La Niña pattern which locked in over last spring and summer has now broken down, with values of key ENSO indices being close to neutral over the last three-month period (January to March). In particular the average three-month Niño 3.4 SST anomaly was 0.0°C and the three-month average value of the SOI was -0.7. DSITI will provide an updated outlook for summer rainfall in June, taking into account the ENSO related SST pattern in May. Further updates will be provided each month until November and these updates will take into account the evolving ENSO-related SST pattern during this period.

## Probability of Exceeding Median Summer Rainfall

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



## Summary as at 15 April 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 next summer (November to March), rainfall probabilities are currently near normal for much of Queensland.**

DSITI provides seasonal outlooks for summer rainfall in Queensland based on SST anomalies in key regions of the Pacific Ocean. The current outlook is based on SST anomalies in the extra-tropical Pacific Ocean. Unlike SST anomalies in the equatorial Pacific, which are strongly related to El Niño-Southern Oscillation (ENSO) phenomenon, SST anomalies in the extra-tropical Pacific at this time of year tend to persist through to summer and provide a useful basis for providing an initial long-lead outlook of summer rainfall in Queensland.

### The 'autumn predictability gap'

El Niño and La Niña events tend to form in winter or spring, persist through summer, and break down in autumn. Seasonal outlooks are based on the persistence of these events and their associated rainfall and climate patterns. Seasonal outlooks based on ENSO are therefore least reliable in autumn hence and this period has become known as the 'autumn predictability gap.'

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 above median rainfall, there is also a 40 per cent probability of below median rainfall. In cases where outcomes with a high probability may be more likely, this does not mean that less probable events will not occur in any given year.

As noted, DSITI will provide an updated outlook for summer rainfall in June. This outlook will begin to factor in the developing ENSO-related SST pattern at that time. For more information, please visit: [www.longpaddock.qld.gov.au/seasonalclimateoutlook](http://www.longpaddock.qld.gov.au/seasonalclimateoutlook) or contact Stuart Burgess at: [stuart.burgess@dsiti.qld.gov.au](mailto:stuart.burgess@dsiti.qld.gov.au)