

# Monthly Climate Statement – January 2020

## Key messages

- Rainfall over the last six months has been extremely low across nearly all of Queensland.
- Climate modelling undertaken by the Bureau of Meteorology currently indicates a near-normal probability of exceeding median rainfall for much of Queensland for the February to April period.
- However, for parts of south-eastern Queensland, the Bureau of Meteorology considers that the probability of exceeding median rainfall is lower than normal for this period.

agencies currently classify conditions as being 'ENSO-neutral'.

As noted, Queensland has experienced an extremely dry spring and dry start to the summer. The following map, for example, shows that rainfall has been extremely low across nearly all of Queensland over the last six-month period. Whilst, up until recently, the Bureau of Meteorology has forecast a lower than normal probability of exceeding median rainfall for the remainder of summer, the most recent modelling from the Bureau indicates a near-normal probability of exceeding median rainfall for much of Queensland over the February to April period. However, for parts of south-eastern Queensland the Bureau considers that the probability of exceeding median rainfall is lower than normal over this period.

## Summary as at 13 January 2020

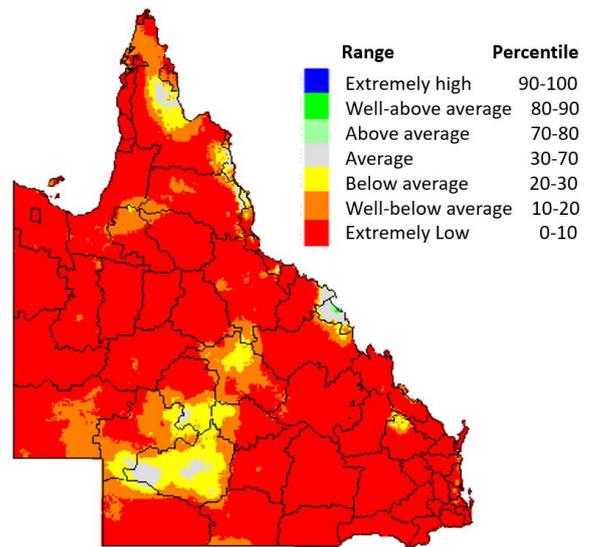
The Department of Environment and Science (DES) monitors sea-surface temperature (SST) anomalies in key regions of the Pacific Ocean over autumn, winter and spring, and provides objective outlooks for summer (November to March) rainfall on this basis. Leading up to summer, the Science and Technology Division of DES considered that the probability of exceeding median summer rainfall was near-normal for much of Queensland. Following a dry spring, there has been an extremely dry start to summer across most of Queensland. Until most recently, forecasts from the Bureau of Meteorology, based on climate modelling, have been indicating a higher than normal probability of below median rainfall over the remainder of summer for most of the state. The [most recent modelling from the Bureau](#) now indicates a near-normal probability of exceeding median rainfall for much of Queensland over the February to April period.

The most closely monitored driver of Queensland rainfall is the El Niño-Southern Oscillation (ENSO) phenomenon. Climate scientists monitor several ENSO indices, including the atmospheric Southern Oscillation Index (SOI) and SST anomalies in the central equatorial Pacific Ocean. The SST anomaly in the Niño 3.4 region of the central Pacific has been warmer than average over the last three months (+0.6°C for October to December). Furthermore, the SOI has been quite negative over the last three- and six-month periods (averaging -6.8 for October to December and -7.1 for July to December).

Based on the above negative values of the SOI alone, DES would classify current conditions as being in an 'El Niño' state (see [Australia's Variable Rainfall poster](#) for the DES criteria, and the Long Paddock website for [outlooks based on the SOI](#)). However, based on a range of other criteria, the Bureau of Meteorology and international

### Queensland rainfall percentiles

July to December 2019



Readers should note that seasonal outlooks are stated in terms of probabilities. For example, an outlook may be stated as 'a 60 to 70 per cent probability of above median rainfall'. Such a statement should be interpreted as also meaning a 30 to 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.

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