

NSW Climate Summary - May 2016

Summary

Seasonal Outlook	Current outlook
Rainfall (quarter)	Wetter
Max Temperature (quarter)	Warmer (eastern and southern NSW, central tablelands, Hunter valley, eastern central west and areas of the northern tablelands and northern slopes)
Min Temperature (quarter)	Near neutral (far west, south west, west of the central west, most of the north west)
ENSO	Current outlook
ENSO (overall)	El Niño (rapidly declining), trending to neutral this month, La Niña possible in winter/spring
ENSO Outlook Status	La Niña watch
SOI	Variable, currently moderately-strongly negative
Pacific Ocean (NINO3.4)	Borderline with neutral, trending to neutral (likely to be cool in winter/spring)
Indian Ocean (IOD)	Neutral (negative IOD possible in winter/spring) Warm Indian Ocean sea surface temperatures
Southern Annular Mode (SAM/AO)	Near neutral, possibly trending to moderately to strongly negative

Source: Derived from information provided by the [Australian Bureau of Meteorology](#) and the [US National Oceanic & Atmospheric Administration](#).

Seasonal outlook

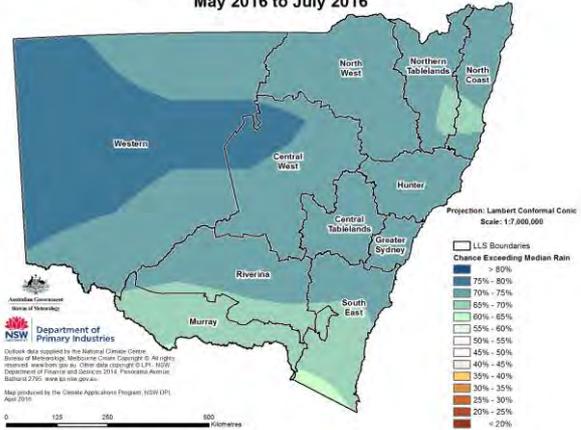
(Source: [Bureau of Meteorology](#))

Between May and July, wetter than normal conditions are likely across NSW.

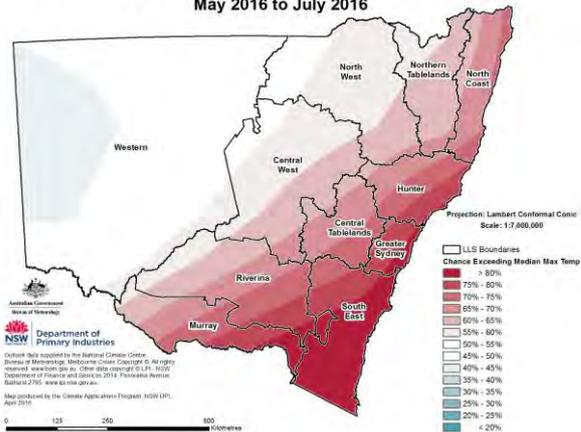
Warmer than normal daytime temperatures are likely across most of eastern and southern NSW, as well as the central tablelands, most of the northern tablelands, areas of the northern slopes and Liverpool Plains and eastern areas of the central west. There a near-neutral outlook for daytime temperatures across areas of the far west, far south west and the western areas of both the north west and the central west.

Overnight temperatures are likely to be warmer than normal across NSW.

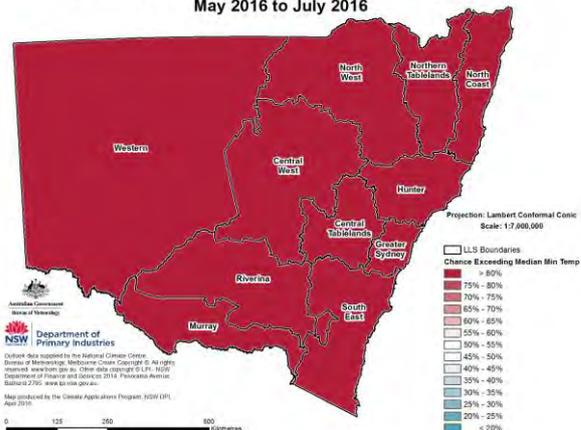
Chance of Exceeding Median Rainfall May 2016 to July 2016



Chance of Exceeding the Median Maximum Temperature May 2016 to July 2016



Chance of Exceeding the Median Minimum Temperature May 2016 to July 2016

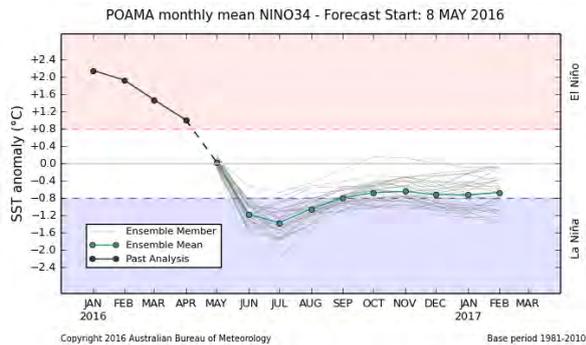


The seasonal outlooks presented in this report are obtained from the Australian Bureau of Meteorology & other sources. These outlooks are general statements about the likelihood (chance) of (for example) exceeding the median rainfall or minimum or maximum temperatures. Such probability outlooks should not be used as categorical or definitive forecasts, but should be regarded as tools to assist in risk management & decision making. Changes in seasonal outlooks may have occurred since this report was released. Outlook information was up to date as at 11 May 2016.

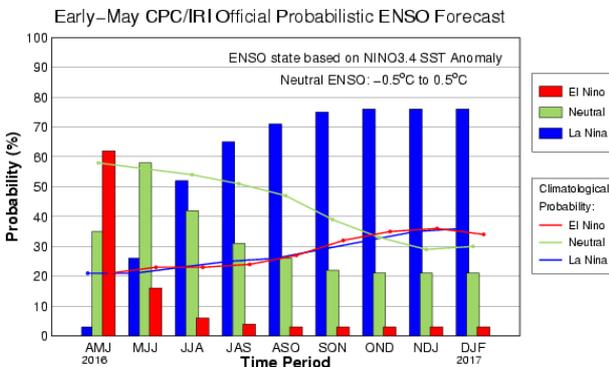
ENSO

(Source: Bureau of Meteorology & International Research Institute for Climate and Society)

The El Niño event has declined to a very weak level in April and is now on the borderline with neutral. The NINO 3.4 sea surface temperature is now slightly below the El Niño threshold. The event is likely to end this month, followed by neutral conditions. A La Niña event is possible in winter/spring, with the odds being around 50-60%. However, model accuracy tends to be low until early winter. The ENSO outlook status from both the Bureau of Meteorology and the CPC/IRI is 'La Niña watch'.



The Bureau of Meteorology's latest POAMA outlook (as at 8 May) suggests that the sea surface temperatures in the NINO3.4 region will reach neutral levels this month and borderline La Niña levels by June. The current CPC/IRI ENSO forecast probabilities suggest a similar pattern.



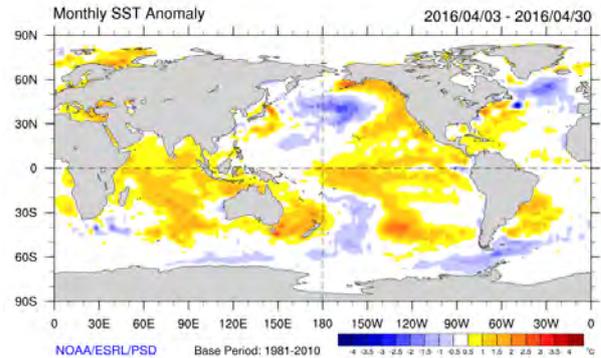
Of the eight climate models surveyed by the Bureau (as at 18 April), all indicate NINO3.4 sea surface temperatures are likely to be near-neutral in May. Six suggest La Niña conditions during July and seven by September.

Sea Surface Temperatures

(Source: NOAA & Bureau of Meteorology)

Warm sea surface temperature anomalies extended across most of the equatorial Pacific during April, but weakened substantially across the central to eastern areas. Temperatures are now neutral in the NINO 1, 2 and 3 regions, just below the El Niño threshold in the key NINO 3.4 region and just above in the NINO 4 region.

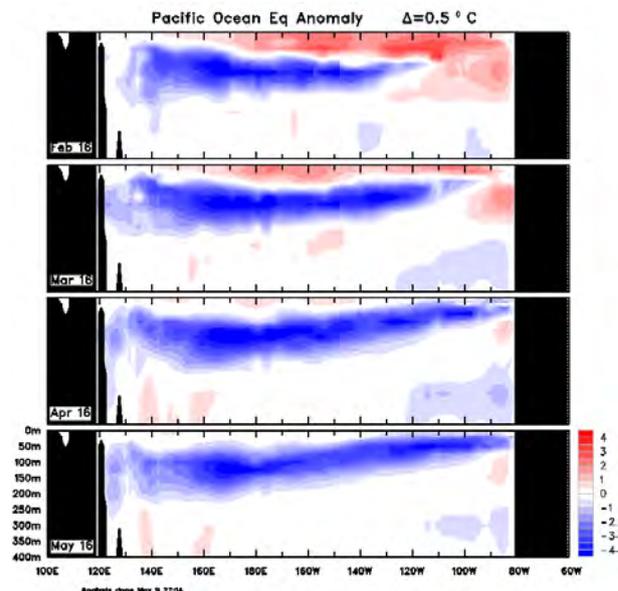
The most recent weekly temperature anomaly value in the key NINO3.4 region was +0.78°C to 8 May, down from +1.15°C in the week to 10 April and from a peak of +2.48°C in the week to 22 November.



Monthly Sub-surface Temperatures

(Source: Bureau of Meteorology)

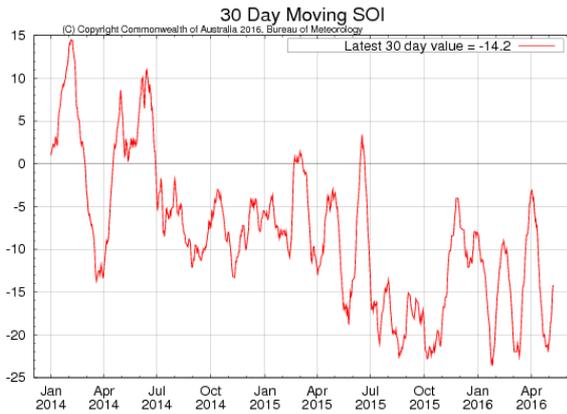
The sub-surface sea temperatures show the El Niño warm anomaly in the central and eastern equatorial Pacific has virtually disappeared. The cool anomaly at depth has continued to strengthen and has reached the surface in the east. This (with other indicators) indicates the El Niño event has almost ended, and the possibility of a La Niña event developing.



Southern Oscillation Index (SOI)

(Source: Bureau of Meteorology & Queensland DSITI)

The Southern Oscillation Index (SOI) has been variable over the last few months and is currently moderately to strongly negative. On 9 May, the 30-day SOI value was -14.2 (Bureau of Meteorology) and the 90-day SOI was -13.96 (QDSITI). The trend in the SOI is towards a neutral level.



Values between -7 and +7 indicate neutral conditions, sustained values above +7 may indicate a La Niña event, and sustained values below -7 may indicate an El Niño event.

Indian Ocean Dipole (IOD)

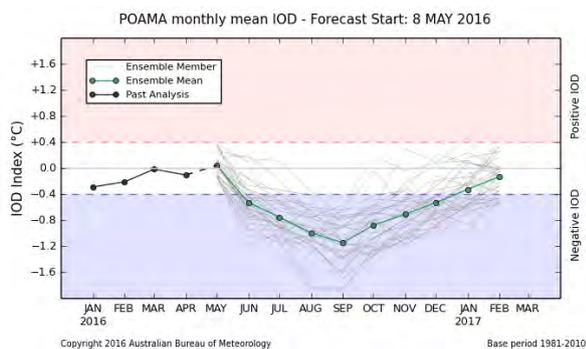
(Source: Bureau of Meteorology)

The Indian Ocean Dipole (IOD) is neutral. The current value is -0.01 for the week to 8 May.

The warm sea surface temperatures across the Indian Ocean are likely to provide sources of moisture for eastern Australia.

All climate models surveyed by the Bureau of Meteorology on 18 April indicate the likelihood of a negative IOD event occurring in July and continuing into September.

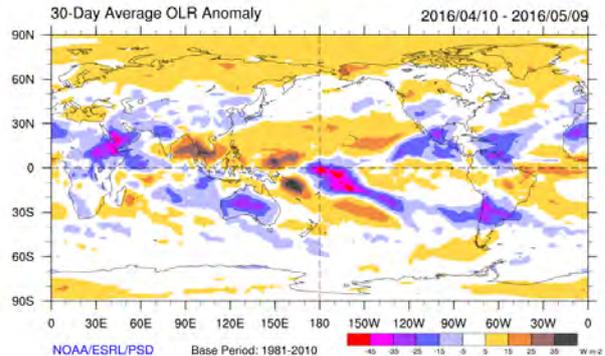
A positive IOD increases the chances of below normal rainfall and may exacerbate the effect of an El Niño event over south eastern Australia. A negative IOD increases the chances of above normal winter and spring rainfall across southern and much of western and central NSW.



Cloudiness and trade winds

(Source: Bureau of Meteorology & NOAA)

Levels of cloud at the junction of the International Date Line (IDL) and equator remained above average during most of April, but they have recently declined to near normal. Cloud levels remained low across areas of Indonesia, Malaysia and the Philippines.



Trade winds were near-normal across the equatorial Pacific during April and early May.

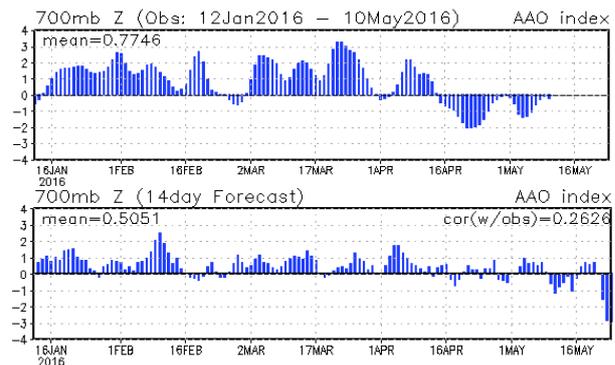
Southern Annular Mode (SAM)

(Source: NOAA)

The experimental Southern Annular Mode or Antarctic Oscillation (AAO) index is currently neutral at 10 May, after being weakly-moderately negative in late April and early May.

The outlook is for a near-neutral SAM during mid-May, with the possibility of a moderately to strongly negative SAM later in the month. A negative SAM is a positive indicator for rainfall.

AAO: Observed & GFS forecasts



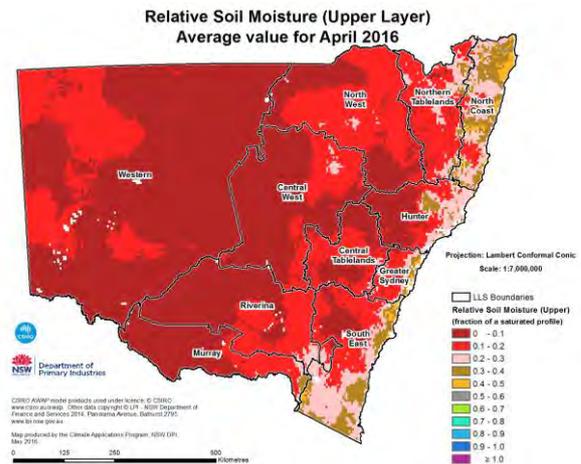
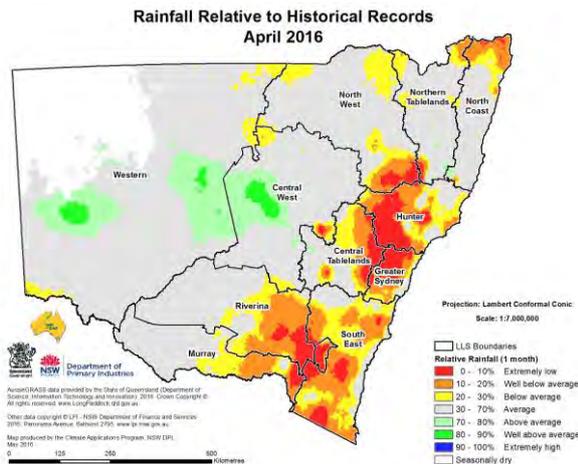
A negative SAM indicates expansion of the belt of strong westerly winds towards the equator, resulting in more or stronger low pressure systems across southern Australia and potentially increased rainfall. A positive SAM indicates the contraction of the belt of westerly winds towards Antarctica and higher pressures over southern Australia, and can result in stable, drier conditions. A strongly positive SAM in spring-summer can mean southern Australia is influenced by the northern half of high pressure systems, leading to a slightly higher likelihood of increased rainfall over south eastern and central NSW.

Conditions during April

Rainfall

(Source: Queensland DSITI)

Rainfall across NSW ranged from 0-109 mm during April, with most of the state receiving 10-25 mm. Relative to historical records, most of the state received slightly below average to near-average rainfall. Below average rainfall occurred across areas of the eastern Riverina, south, south east, Sydney basin, Hunter valley, Liverpool plains and areas of the far north east. Above average rainfall was limited to areas of the central west and far west.

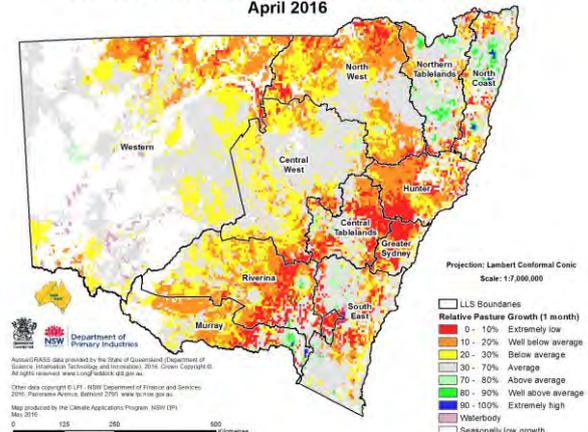


Pasture growth

(Source: Queensland DSITI)

During April relative pasture growth was below average across much of the far north west, north west, northern central west, Hunter valley, Sydney basin, mid-north to north coast, central tablelands, Riverina, far south and areas of the south coast and southern tablelands. Growth across the remainder of NSW was near-average. Other pasture growth models suggested a similar pattern, with additional areas of below average growth across the north coast and far south west.

Pasture Growth Relative to Historical Records from 1957 April 2016



Soil moisture

(Source: CSIRO)

Modelled topsoil moisture remained at low levels across most of NSW during April, but improved at the end of the month in some areas of far western, central, southern and north eastern NSW. Relative to historical records, topsoil moisture was below average across most of the far north west, southern, central and eastern areas of NSW. Modelled subsoil moisture levels declined slightly during April, with the eastern areas of NSW showing the greatest decline. Relative to historical records, subsoil moisture remained near-average across most of NSW, but low in areas of the north east, north west, central tablelands and far south.

More information

For more information, contact the NSW Department of Primary Industries on 02 6391 3100 or Local Land Services on 1300 795 299. Additional and more detailed information on seasonal conditions can be found in the NSW Seasonal Conditions Summary and Report, available at <http://www.dpi.nsw.gov.au/agriculture/emergency/seasonal-conditions/regional-seasonal-conditions-reports>, and the LLS On-ground Seasonal Conditions Reports available at <http://www.lls.nsw.gov.au/agriculture/seasonal-conditions>.

Acknowledgements

Information used in this report was sourced from the Australian Bureau of Meteorology, CSIRO, Queensland Department of Science, Information Technology and Innovation, the US National Oceanic and Atmospheric Administration, the International Research Institute for Climate and Society (Columbia University) and NSW Department of Primary Industries.

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Published by the Department of Primary Industries. ISSN 2203-5060 (Online) PUB16/242 Volume 3/Number 5