

CottonInfo: Moisture Manager, 1 December

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## Welcome to summer (and the CottonInfo Moisture Manager)

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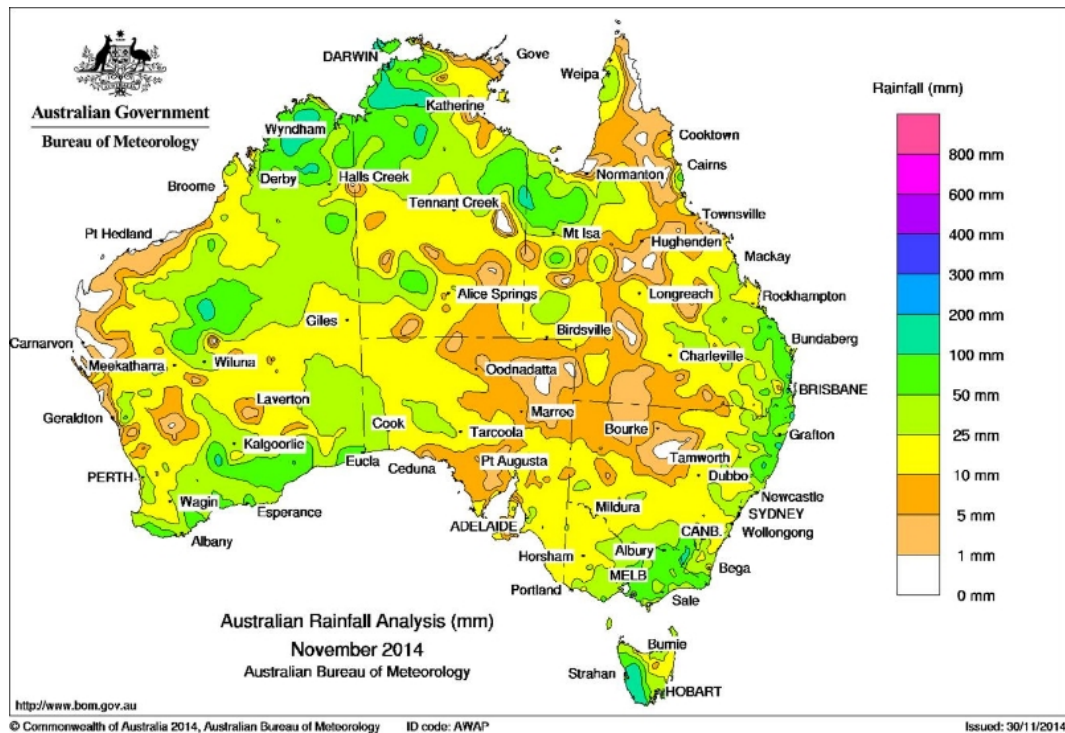
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### Latest weather news:

- The Southern Annular Mode and Tasman Sea blocking forecast to enter positive phases in early December, **boosting the chance of rainfall.**
- A generally cooler December forecast with all multi-week rainfall models showing **potential rainfall events throughout this month.**
- The medium strength Madden-Julian Oscillation (benign last summer) set to pass the Australian region in the next seven days increasing the supply of tropical atmospheric moisture.
- Local sea surface temperatures continuing to warm in waters north and east of Australia.
- Broader indicators in the Tropical Pacific continue to remain close to El

Niño thresholds for the remainder of the year.

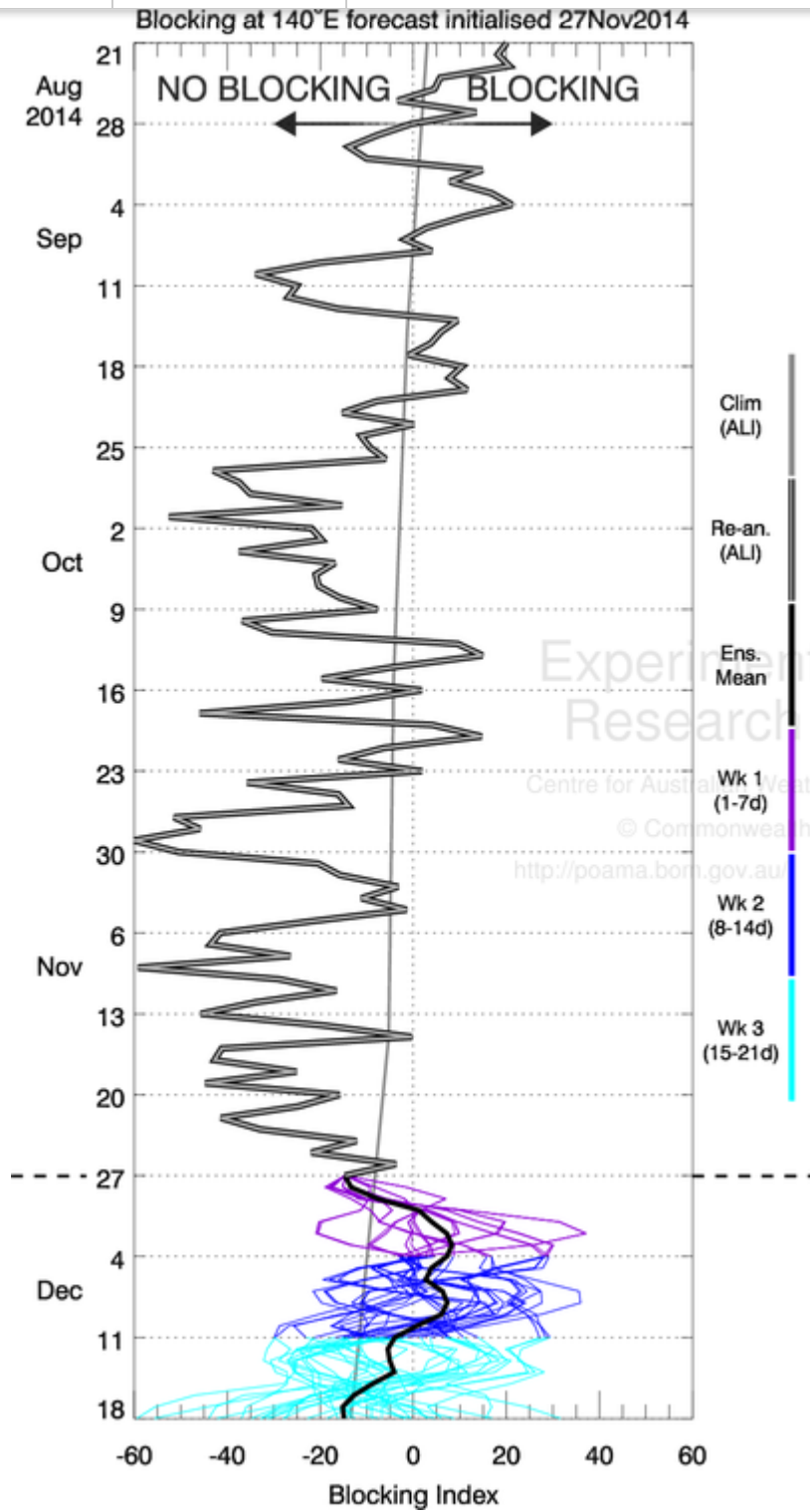
## Rainfall analysis (for the month of November):



## Tasman Sea Atmospheric Blocking (140°E)

- Tasman Sea Atmospheric Blocking is a key ingredient for rainfall in eastern Australia.
- The Blocking Index describes the degree of splitting in the mid-level westerly jet stream that influence synoptic systems over much of the continent.
- A **positive blocking index** can create a cut-off low pressure system which is a major contributor to rainfall in cotton areas from the Darling Downs southwards.
- The chart shows blocking moving out of negative phase through spring months towards a more neutral/positive phase in the first week of December.
- Scientists at the Bureau of Meteorology are currently working on improving predictability of atmospheric blocking. Currently predictability is reduced beyond a lead time of 7-10 days.

Pictured: Tasman Sea Blocking Index (140°E) with observed values (grey line) and forecast values (black line). Source: [POAMA \(BOM\)](#)



### Summary of climate indicators

For more information on what the climatic indicators mean, [click here](#).

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Summary of climate indicators:

Measure	Indicator	Current Status	Forecast Trend
<b>Sea Surface Temperature Indices</b> 	Pacific Ocean – Niño 3.4	+0.7 	Dry
	Pacific Ocean – Composite Index	+0.3 	Dry
	Indian Ocean	0.0 	Neutral
<b>Mean Sea Level Air Pressure</b> 	Southern Oscillation Index	-8 	Dry
	Southern Annular Mode	0.0 	Wet
<b>Tasman Sea Upper Atmospheric Air Pressure</b> 	Blocking	0.0 	Wet

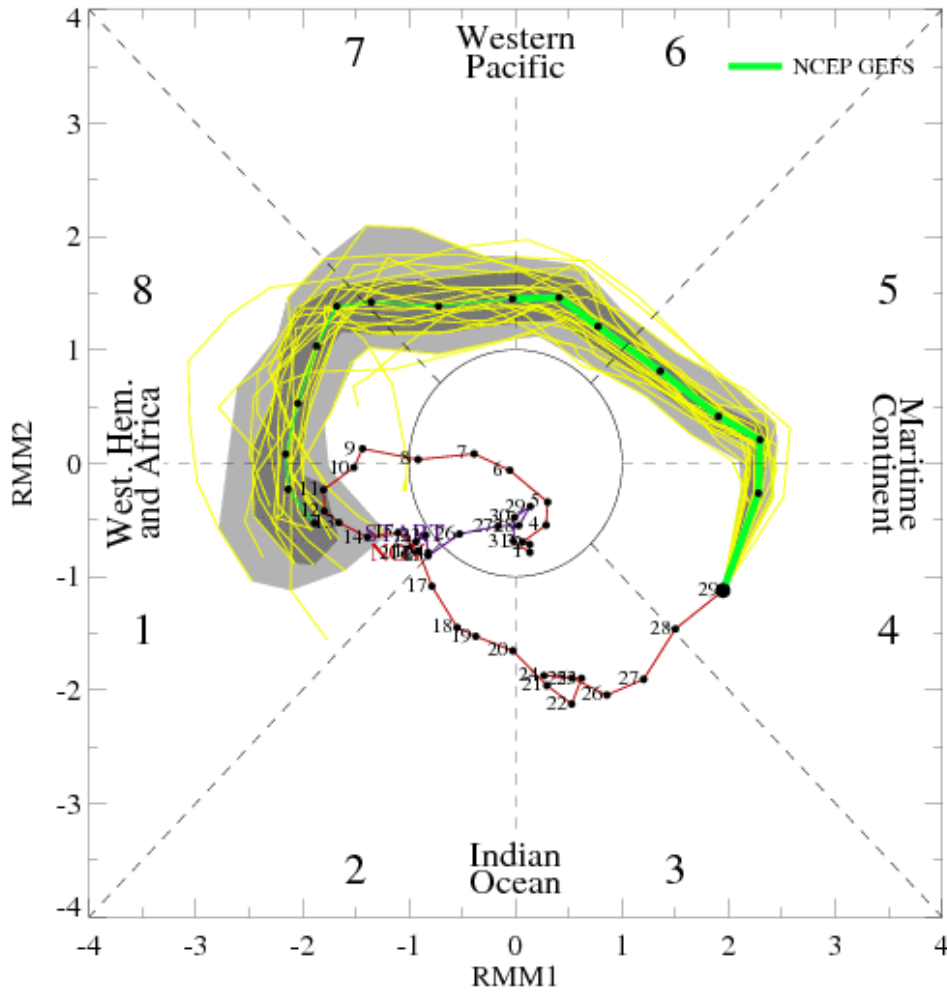
### Rainfall and temperature guidance summary

Source	Model Released	Temperature Forecast	Precipitation Outlook
<a href="#">BOM Extreme Heat Model</a>	30 Nov	Dec week 3&4: heat for CQ	N/A
<a href="#">POAMA Multi-week</a>	30 Nov	Average/cool all areas south of CQ	above average December
<a href="#">NCEP 16-Day</a>	1 Dec	N/A	Regular rainfall events through to 16 Dec
<a href="#">JMA (JPN)</a>	28 Nov	Average temps through Dec	Light rain events throughout December

### Madden-Julian Oscillation (MJO)

Tracking the path of the MJO can assist in timely changes in weather patterns during the Australian monsoon. The following chart shows the MJO currently in the eastern Indian Ocean into phase 4. Phase 5 and 6 represent the eastern Australian region.

MJO Index Forecast for 30Nov2014-14Dec2014



### Australian Sea Surface Temperatures

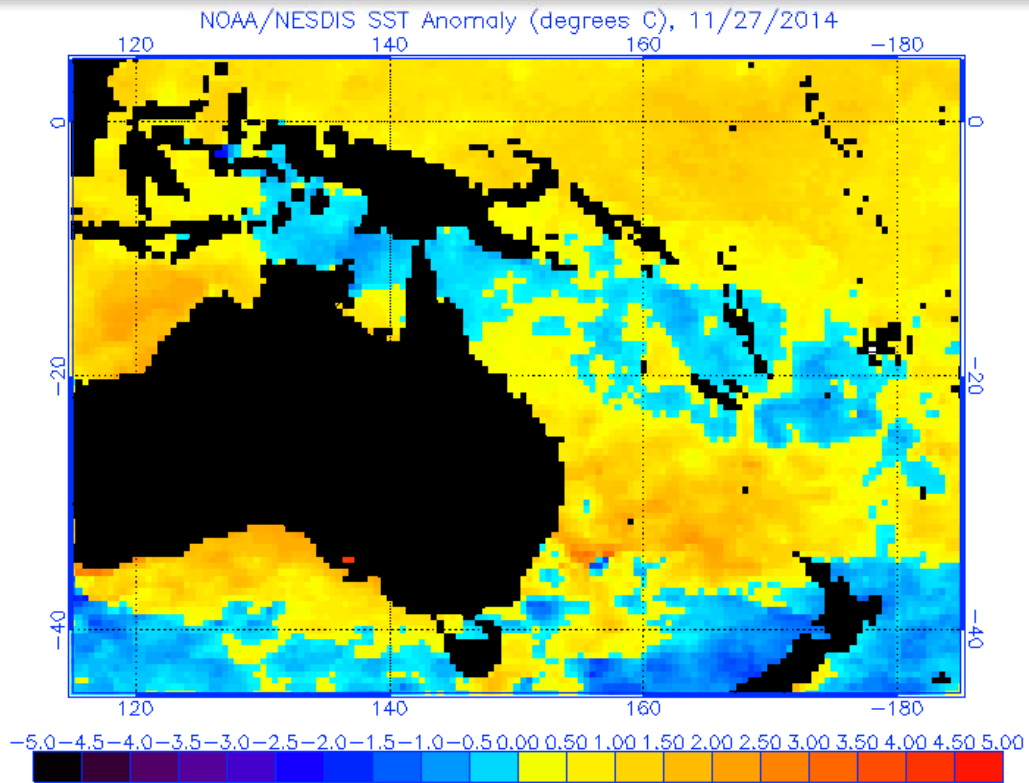
Local Sea surface temperatures can have a significant influence on moisture feeding into cut-off lows, troughs and fronts. The Tropical Convergence Zone north of Papua New Guinea is anomalously warm which is a positive sign. The latest map shows warming in the Gulf and the Coral Sea region over the last fortnight.

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