



The CottonInfo Moisture Manager

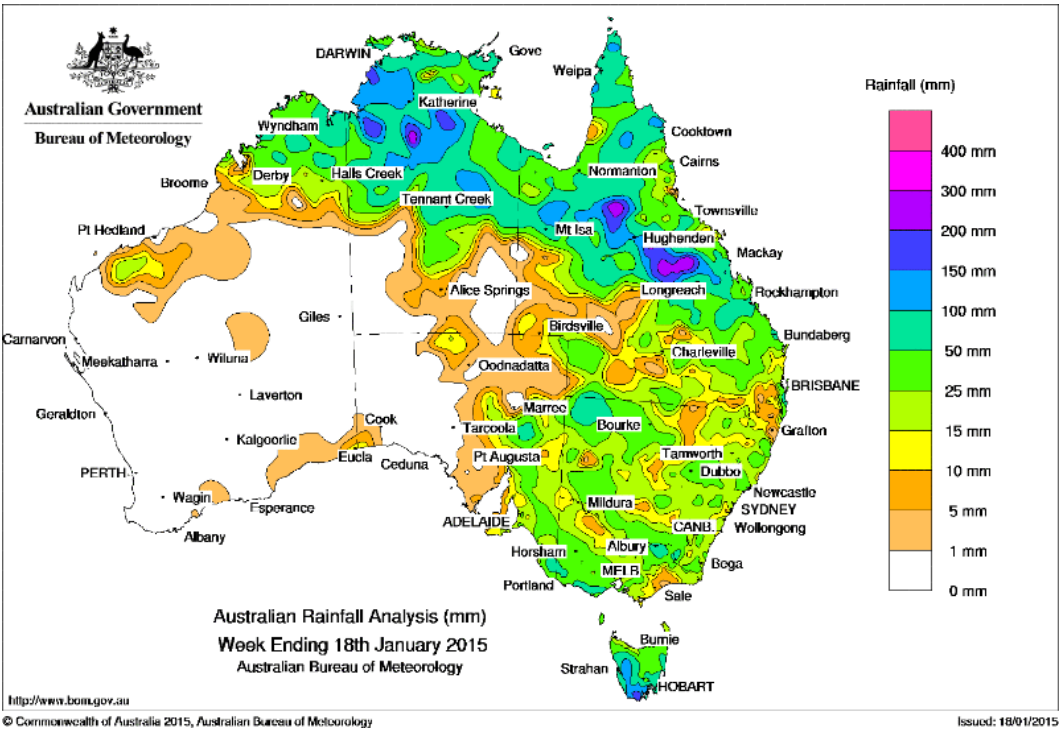
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Latest weather and climate news

- The Australian Bureau of Meteorology predicting an active MJO to return to eastern Australia in the first week of February.
- Sea surface temperatures continue to warm, assisting atmospheric moisture supply and **providing further optimism for more frequent storm rain events.**
- Critical atmospheric indicators hindering general rainfall events, with the SOI in neutral/negative phase and the Tasman Sea blocking in a sustained period of negative values.
- Average to below average temperatures forecast for all cotton areas through to mid-February; **no extreme heat events predicted.**
- The latest AEGIC long range forecasts for 2015 showing similarities with neutral ENSO years: 1978 and 2003.

Observed rainfall analysis (week ending 18 Jan 2015)



Summary of climate indicators

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

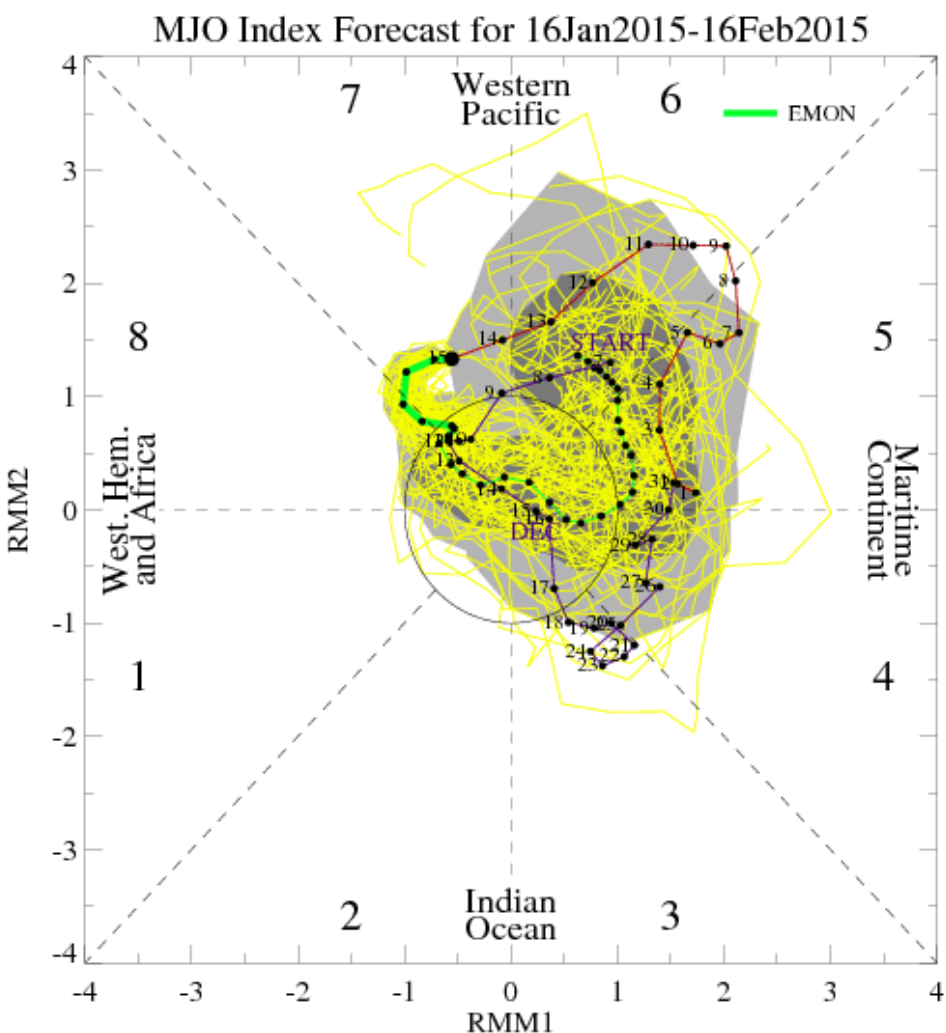
Measure	Indicator	Current Status		Forecast Trend
Sea Surface Temperature Indices 	Pacific Ocean – Niño 3.4	+0.5		Neutral
	Pacific Ocean – Composite Index	+0.2		Neutral
	Indian Ocean	0.0		Neutral
Mean Sea Level Air Pressure 	Southern Oscillation Index	-7		Dry
	Southern Annular Mode	-2		Neutral
Tasman Sea Upper Atmospheric Air Pressure 	Blocking	-40		Dry

Rainfall and temperature guidance summary

Source	Model Released	Temperature Forecast	Precipitation Outlook
BOM Extreme Heat Model	19 Jan	Reduced chance of heat waves to end Feb	N/A
POAMA Multi-week(BOM)	19 Jan	Average to below temps to 11 Feb: All areas	Above average rain to 11 Feb
Beijing Climate Centre	19 Jan	Average to cool to 15 Feb	Rain events up to 2 Feb Dry February
NCEP 16-Day	19 Jan	N/A	Rain event: 25/26 January most areas

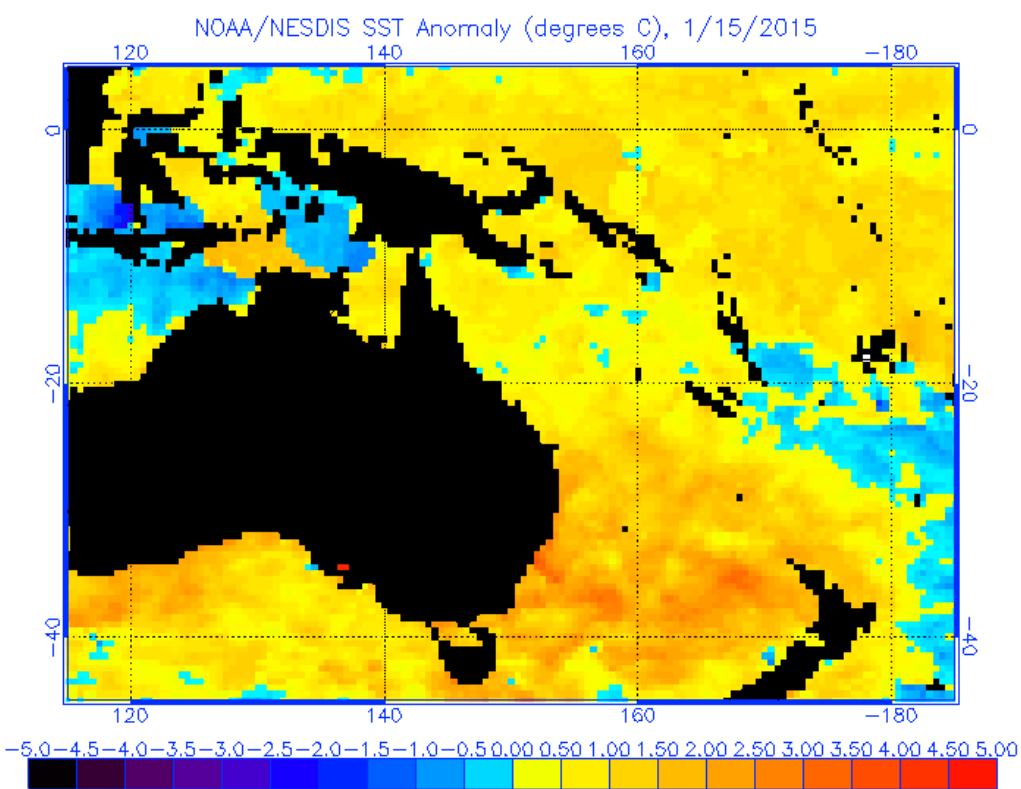
Madden-Julian Oscillation (MJO)

Tracking the path of the MJO can assist in timely changes in weather patterns during the Australian monsoon. The following chart from the European Centre for Medium Range Weather Forecasts shows the MJO forecast to move into phase 5 & 6 in early February. International models monitor the path of the next MJO wave and can be viewed [here](#).



Australian Sea Surface Temperatures

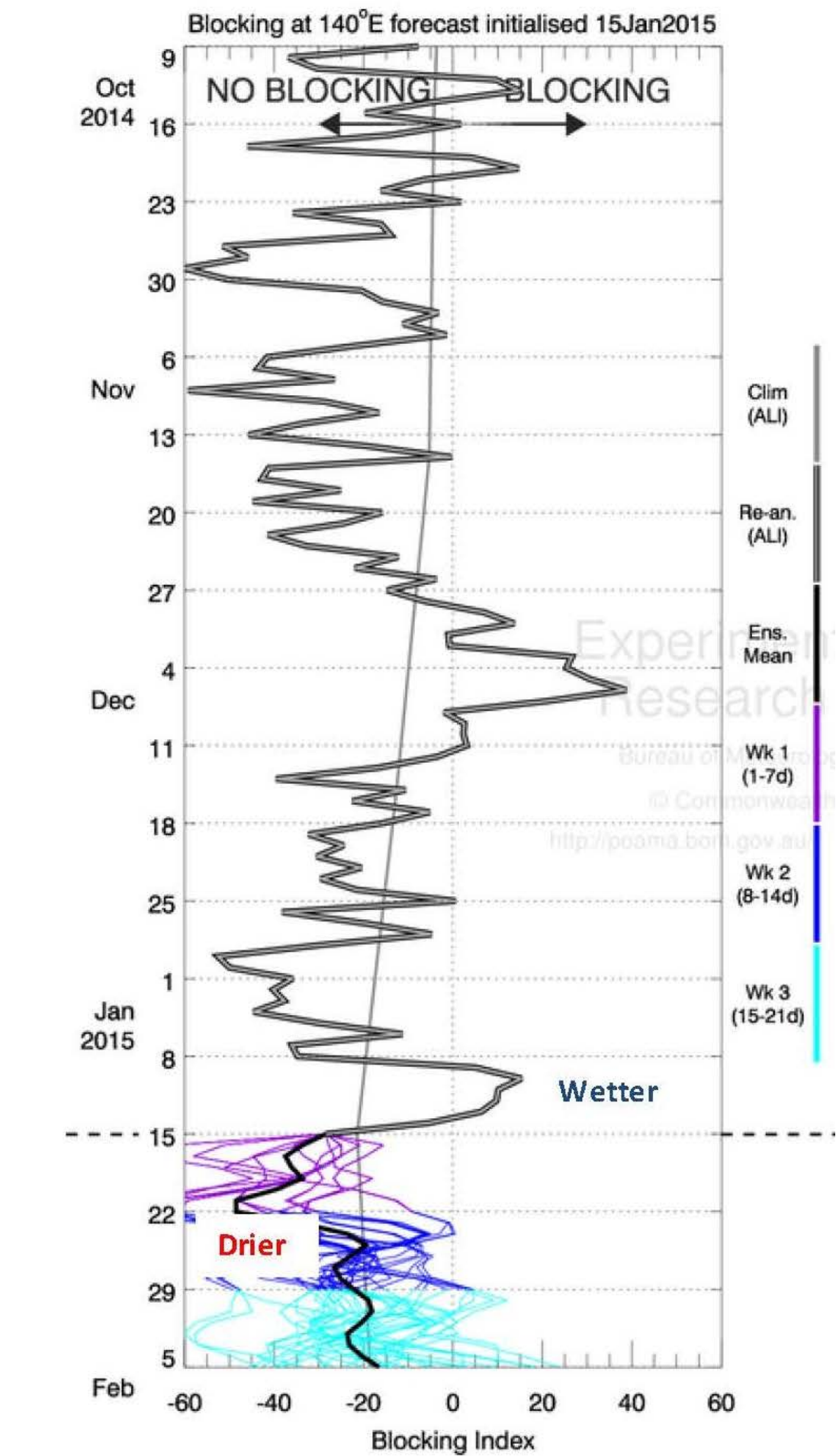
Local sea surface temperatures can have a significant influence on moisture feeding into cut-off lows, troughs and fronts. The latest sea surface temperatures from the National Oceanic and Atmospheric Administration (US) show anomalously warm water in key areas in the Tasman and Coral Seas for eastern Australian moisture supply.



Tasman Sea Atmospheric Blocking (140 E)

- Tasman Sea Atmospheric Blocking is a key ingredient for rainfall in most cotton growing areas.
- 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 currently in negative phase with following a brief stint in positive territory during the 4 December MJO event.
- 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.

Tasman Sea Blocking Index (140 E) with observed values (grey line) and forecast values (black line).



Best Practice

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