

Climate Outlook

North Australian Fire Managers Forum

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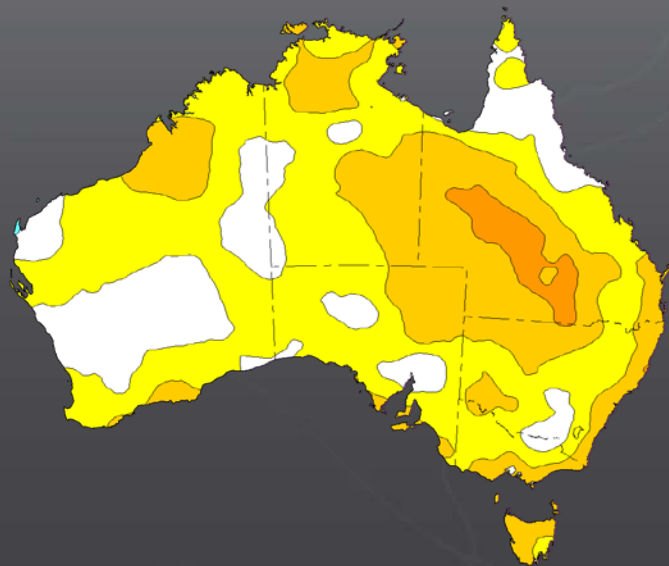
Overview

1. Recent Conditions
2. Seasonal Climate Outlook
3. Potential for developing El Niño—longer-term outlook guidance

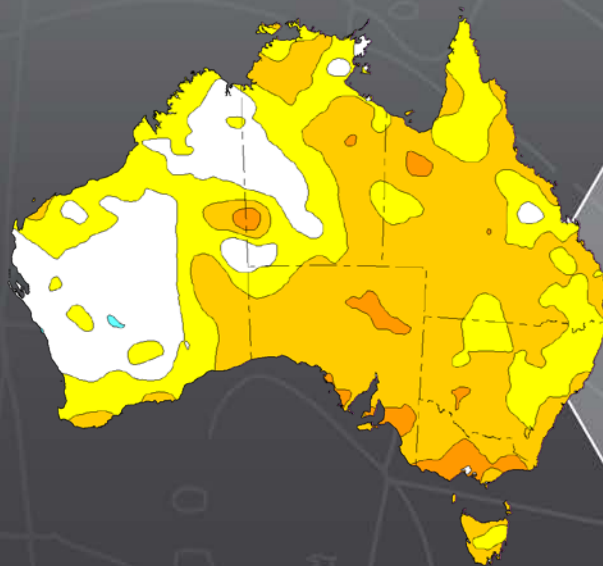




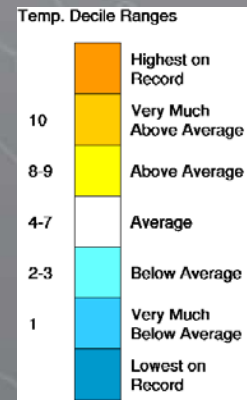
Recent Temperature



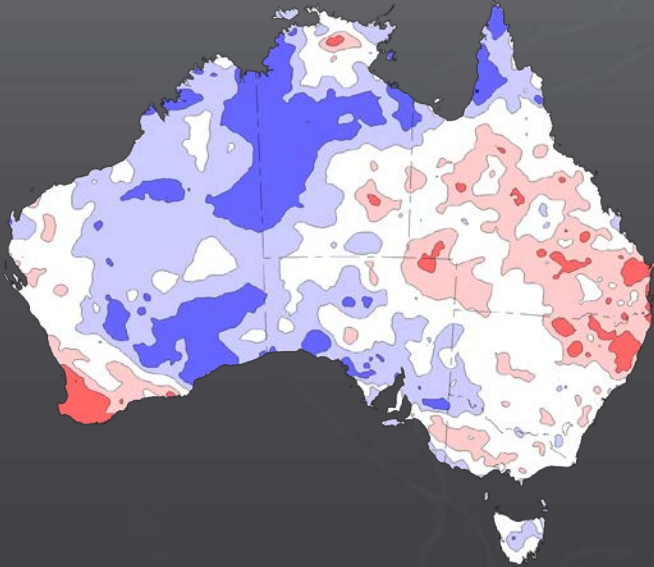
Maximum
temperature
deciles April - June



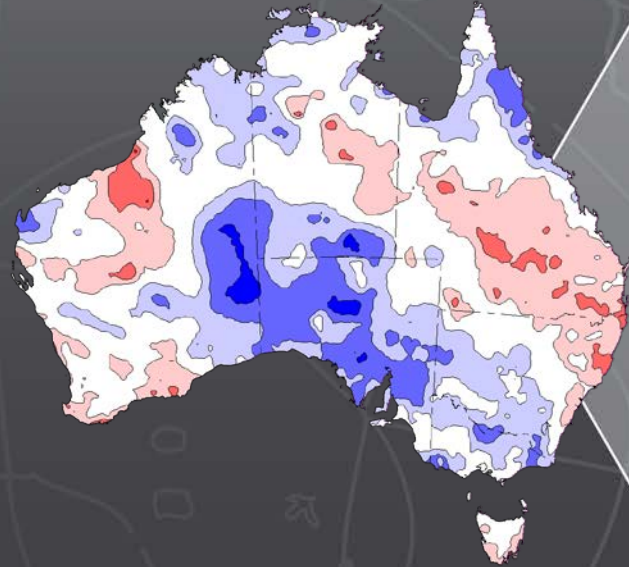
Minimum
temperature
deciles April - June



Recent Rainfall

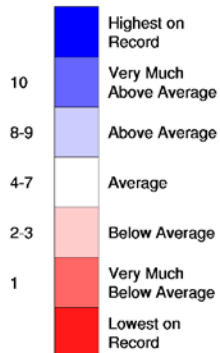


Rainfall deciles
Northern wet season
Oct 2013 – April 2014

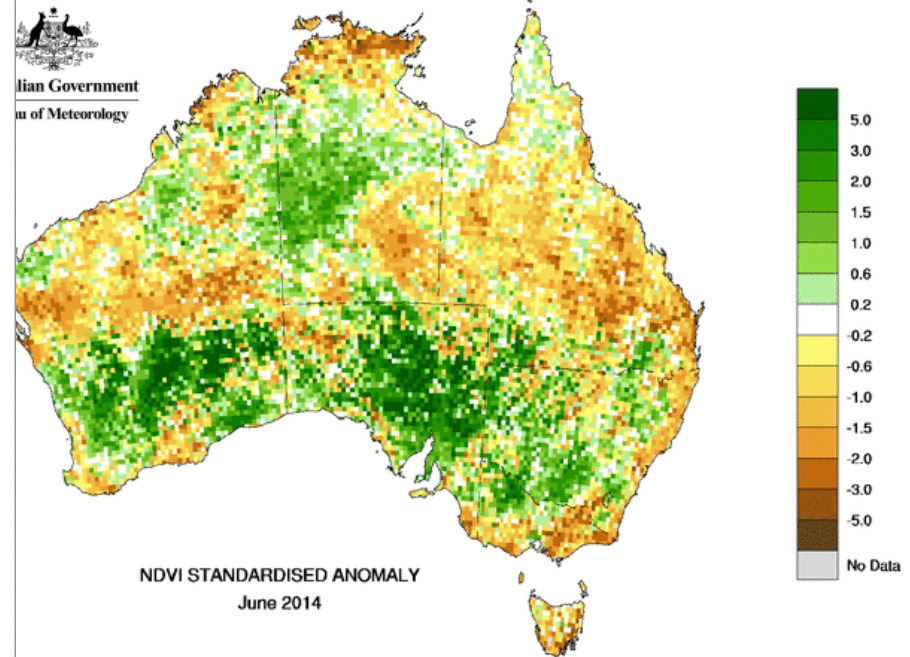
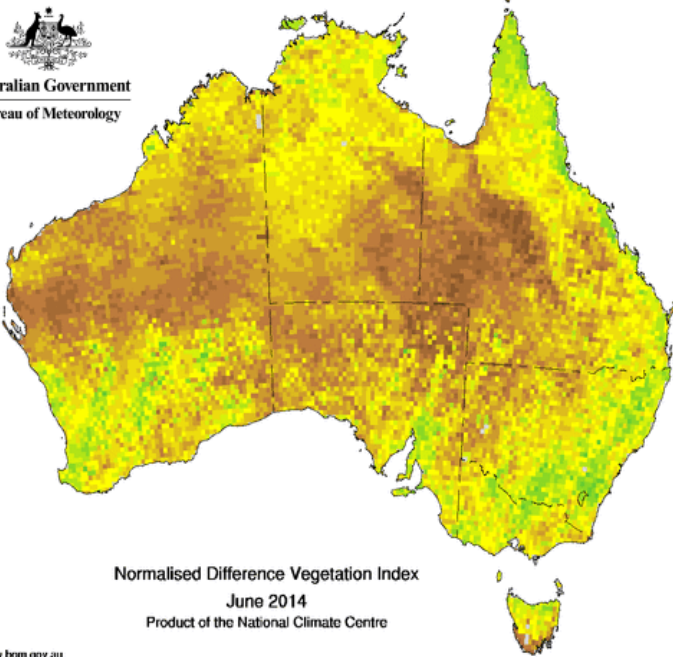


Rainfall deciles
April – June 2014

Rainfall Decile Ranges



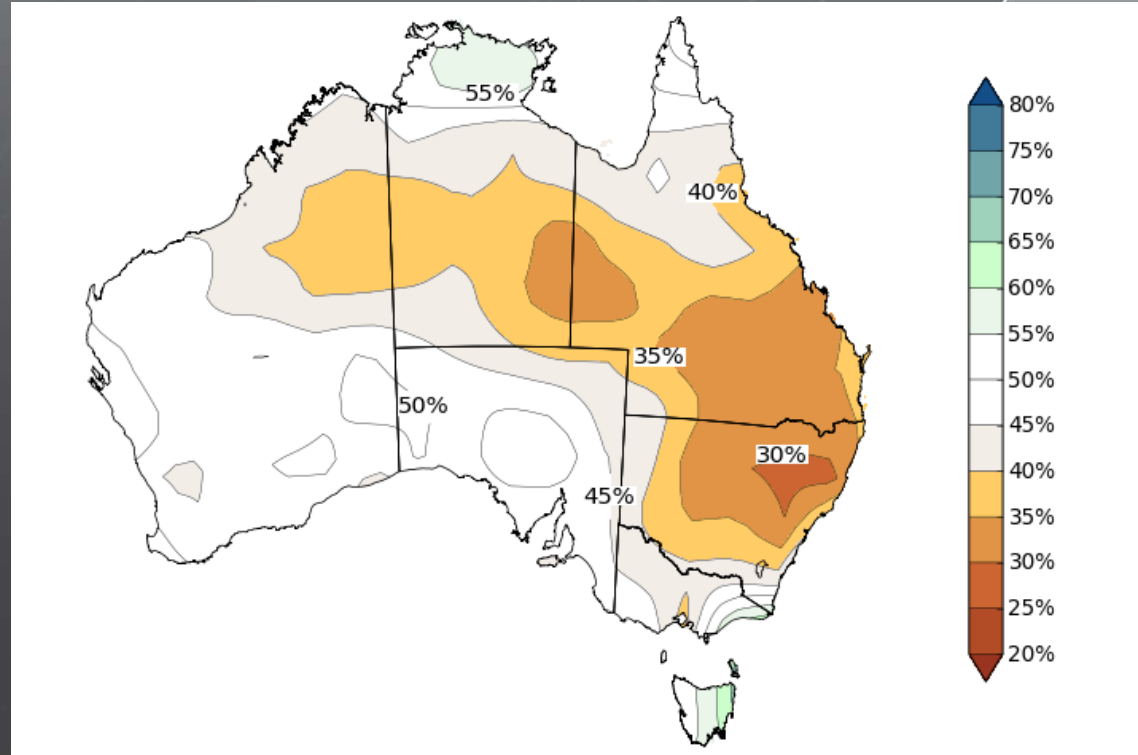
Recent NVDI



Rainfall outlook for July - September

Increased chance of below normal rainfall for much of New South Wales and Queensland

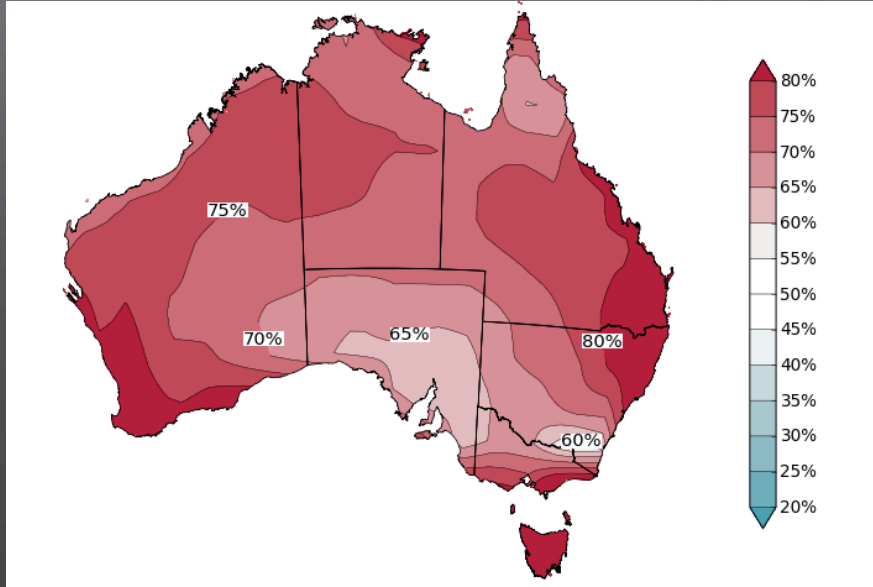
Tropical regions currently in dry season



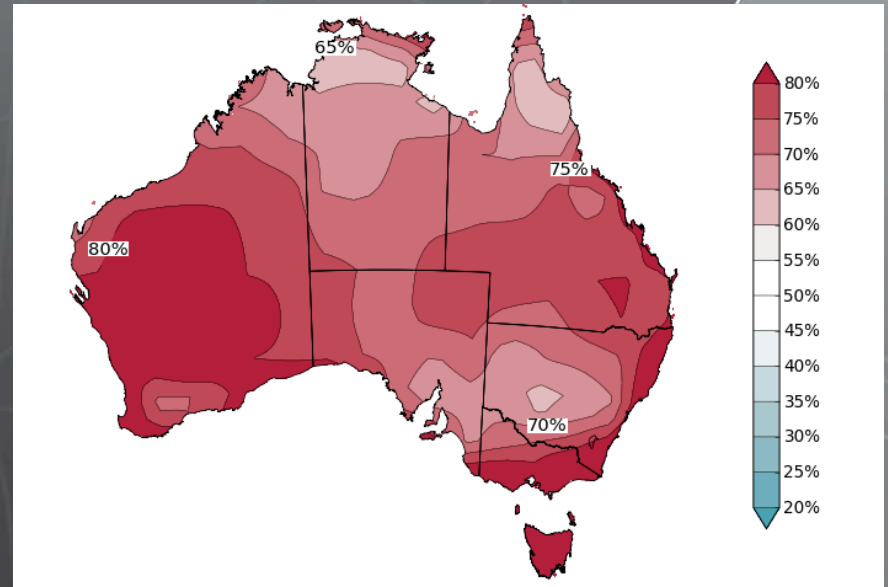
Chance of exceeding median rainfall July – September*

* moderate confidence at this time of year

Temperature outlook for July – September*



Chance of exceeding median maximum temperature

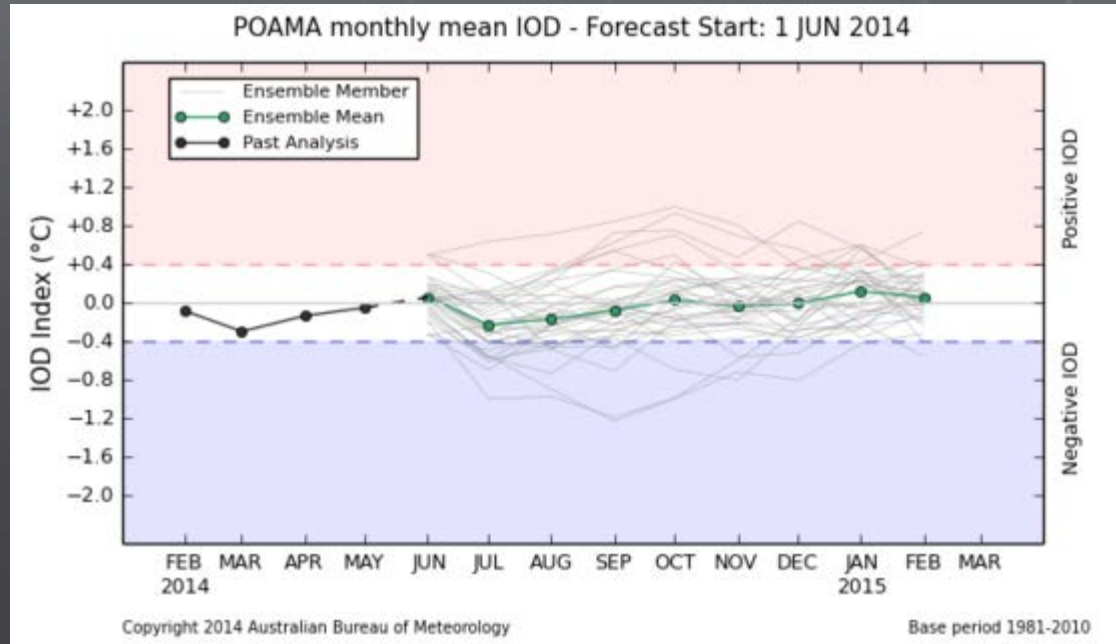


Chance of exceeding median minimum temperature

- Warmer than normal days and nights likely over most of the country

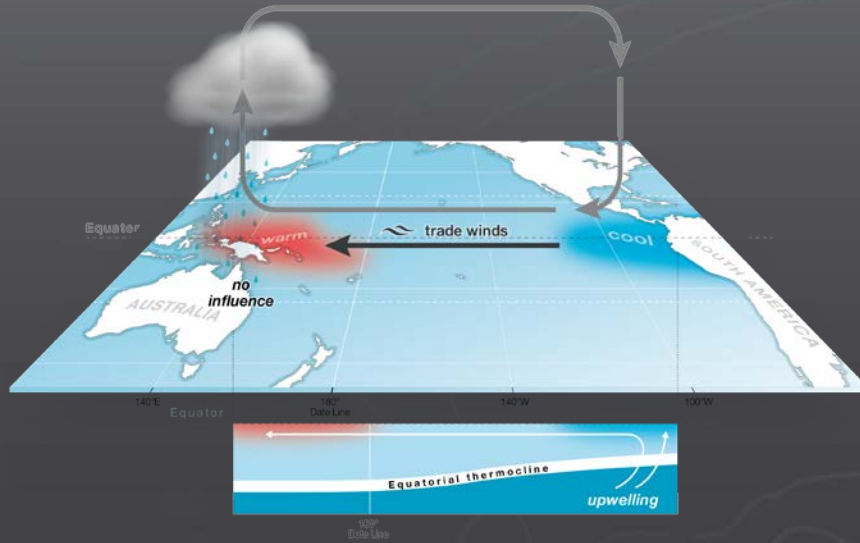
* moderate confidence at this time of year

Indian Ocean dipole is currently forecast to remain neutral for coming season

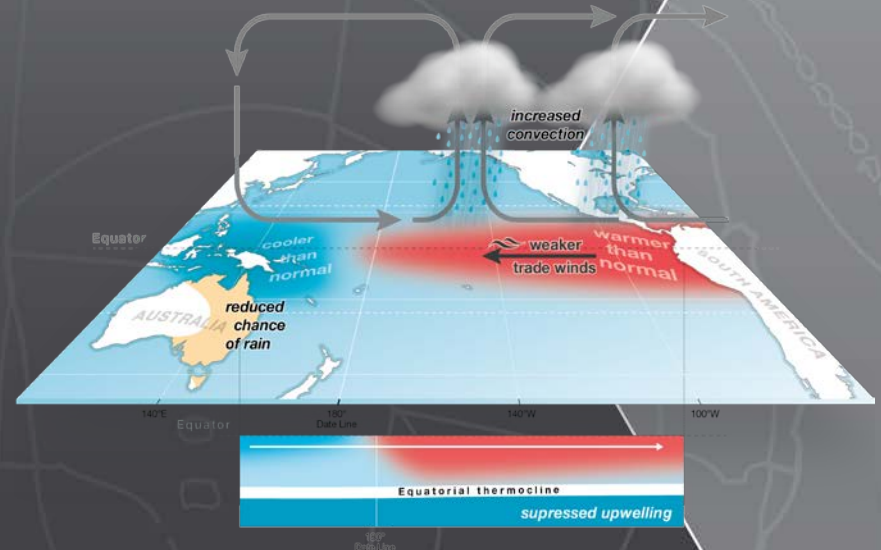




El Niño—Southern Oscillation Neutral pattern

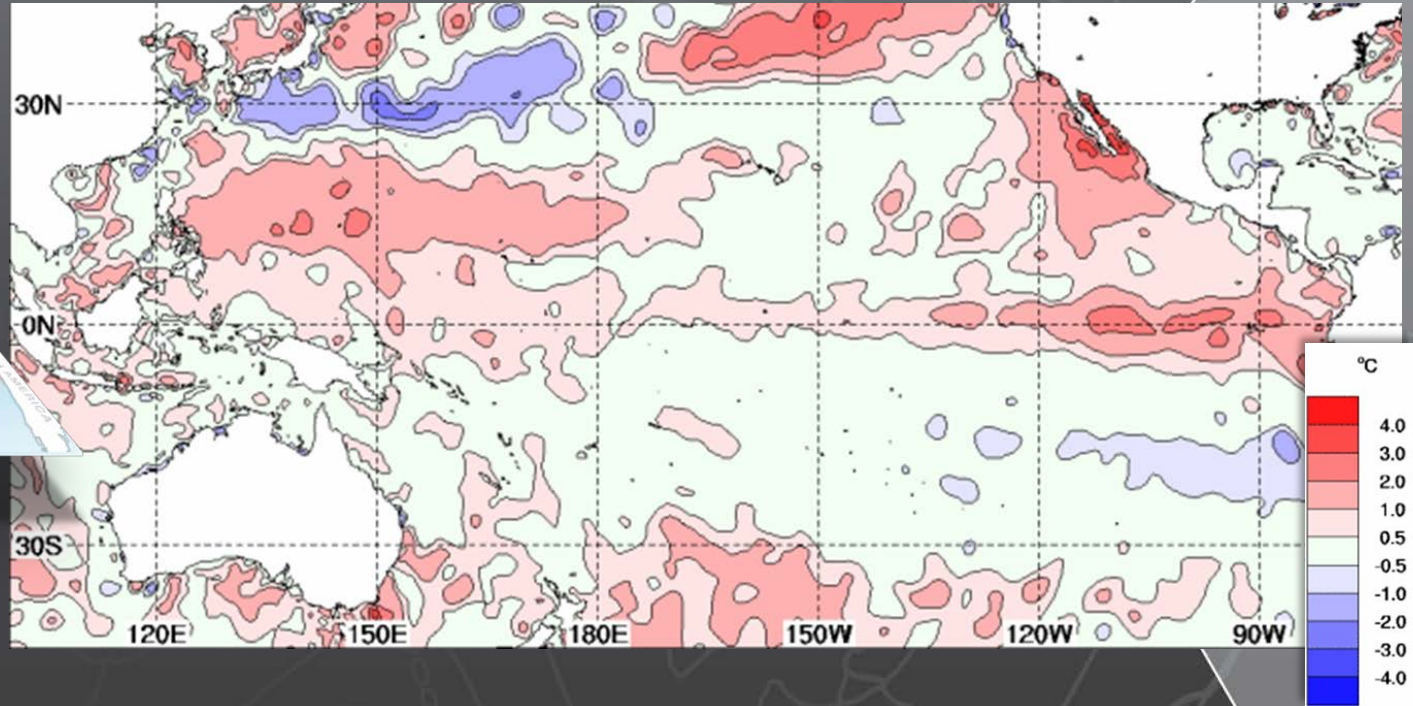
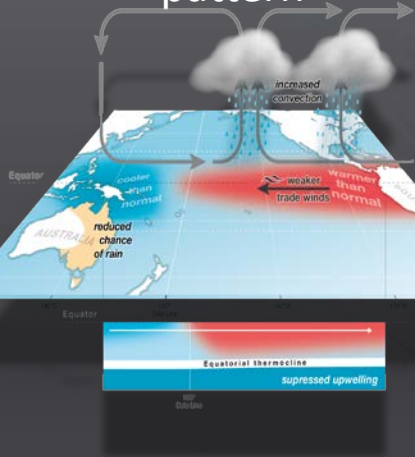


El Niño—Southern Oscillation Typical El Niño pattern



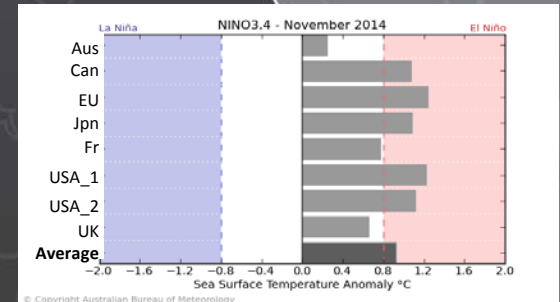
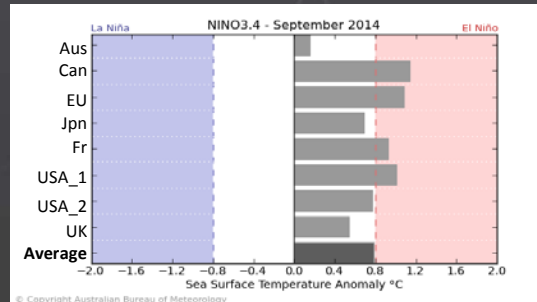
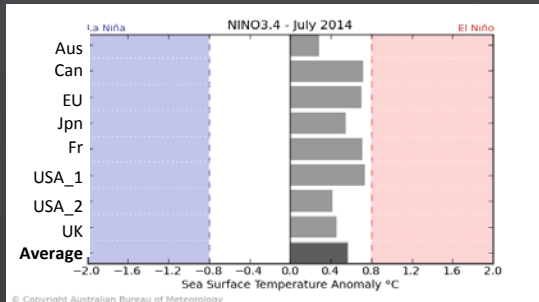
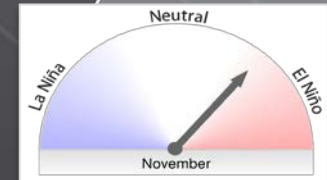
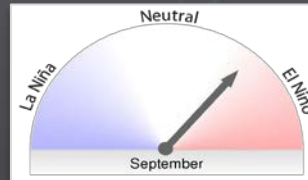
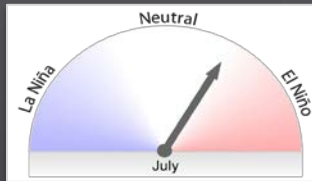
Weekly sea surface temperature anomalies (to 29 June 2014)

Typical El Niño
pattern



Climate model forecasts for Pacific Ocean

- The Bureau's model (POAMA) is now indicating El Niño thresholds will not be exceeded
- However, a majority of international models indicate El Niño thresholds will be exceeded by September

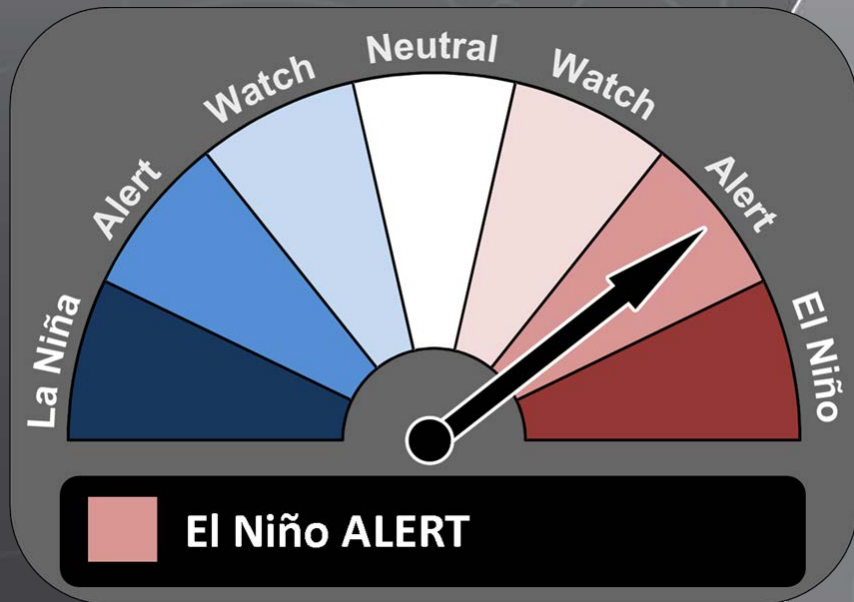


Average NINO3.4 forecast from eight international climate models (Australia, Canada, EU, Japan, France, US (NASA and NOAA) and UK)

ENSO Tracker remains at ALERT

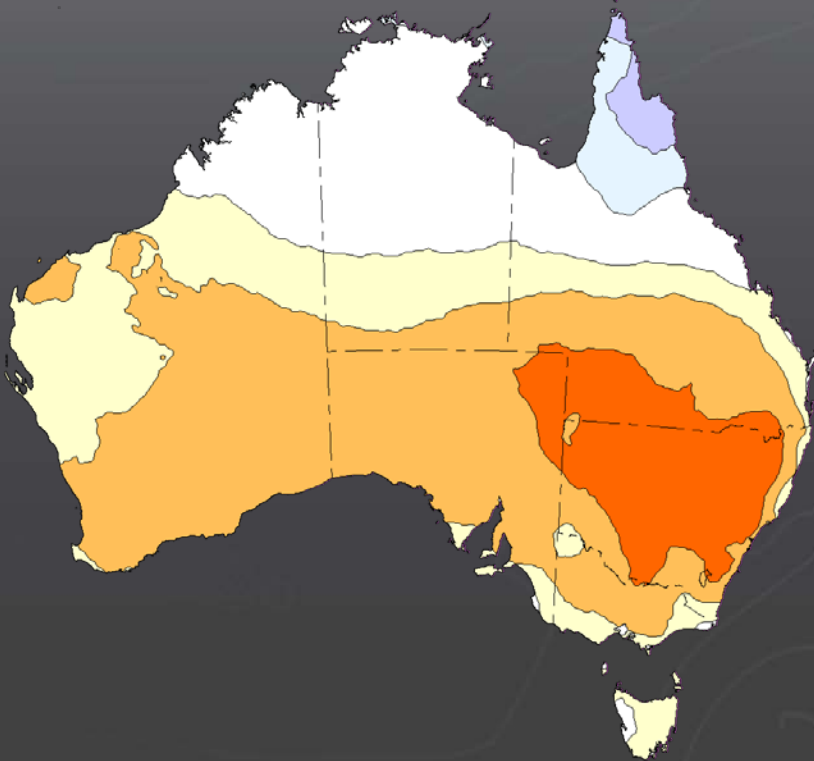
- >70% likelihood of an El Niño developing in 2014

ENSO Tracker Criteria	Alert
Air pressure patterns	
Central pacific ocean temperature pattern	✓
Weakening trade winds	✓
Model consensus	✓

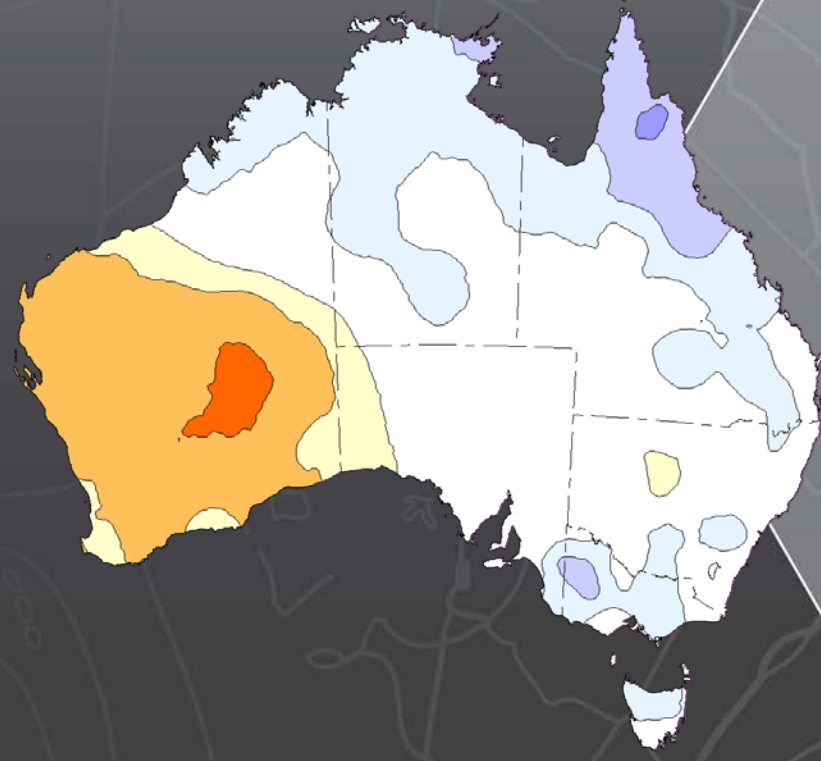


Typical El Niño impacts-Temperatures

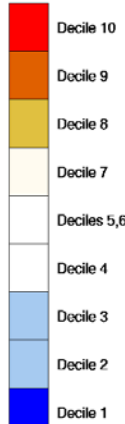
Winter and spring maximum temperature deciles for 12 classical El Niños



Winter and spring minimum temperature deciles for 12 classical El Niños



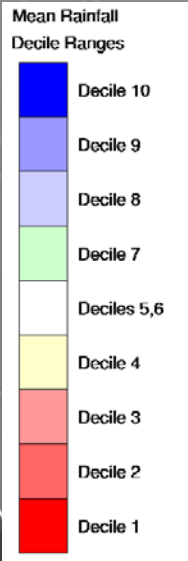
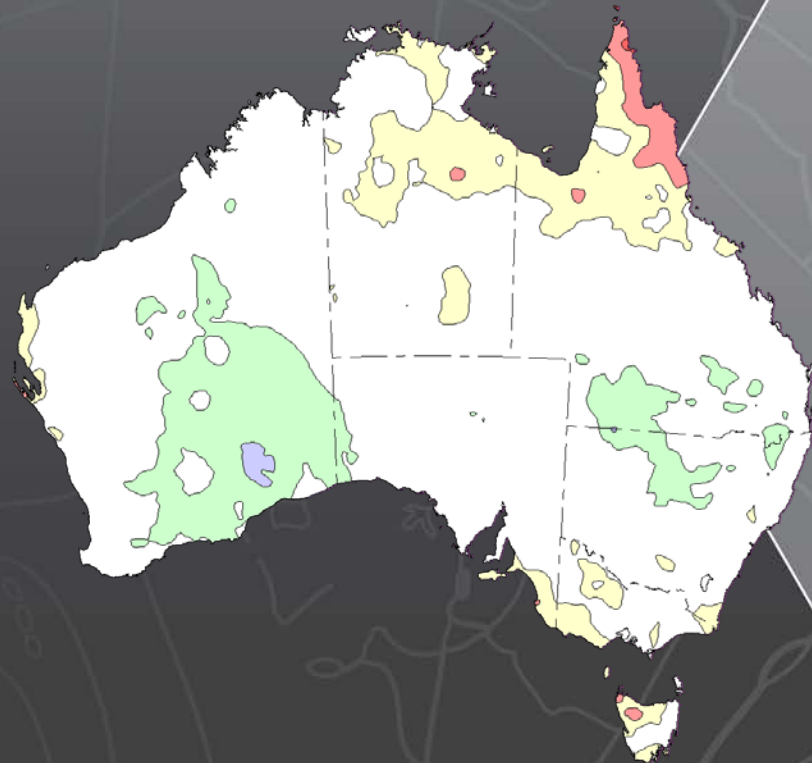
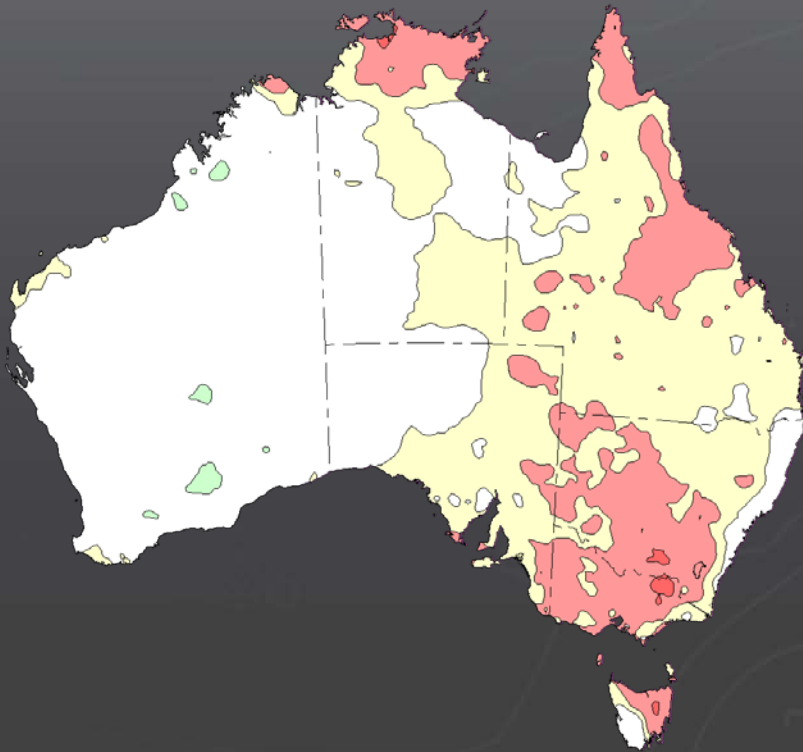
Temperature Decile Ranges



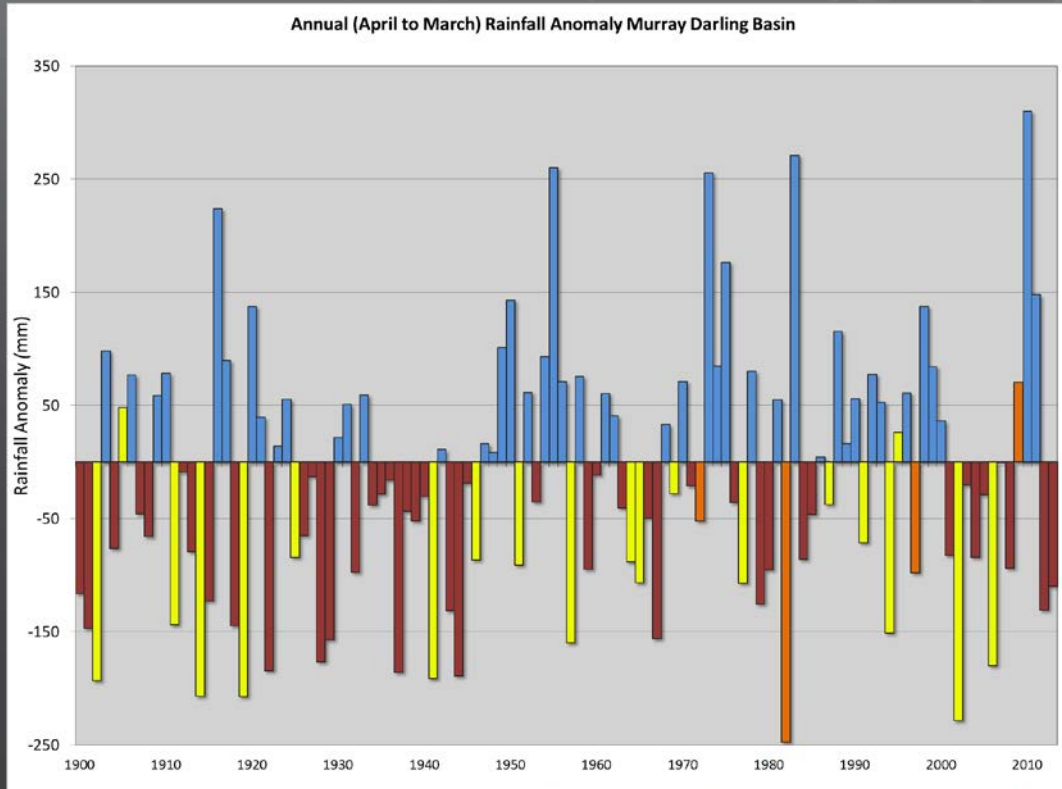
Typical El Niño impacts-Rainfall

Spring rainfall deciles for 12 classical El Niños

Summer rainfall deciles for 12 classical El Niños



Variation in rainfall impacts of El Niño

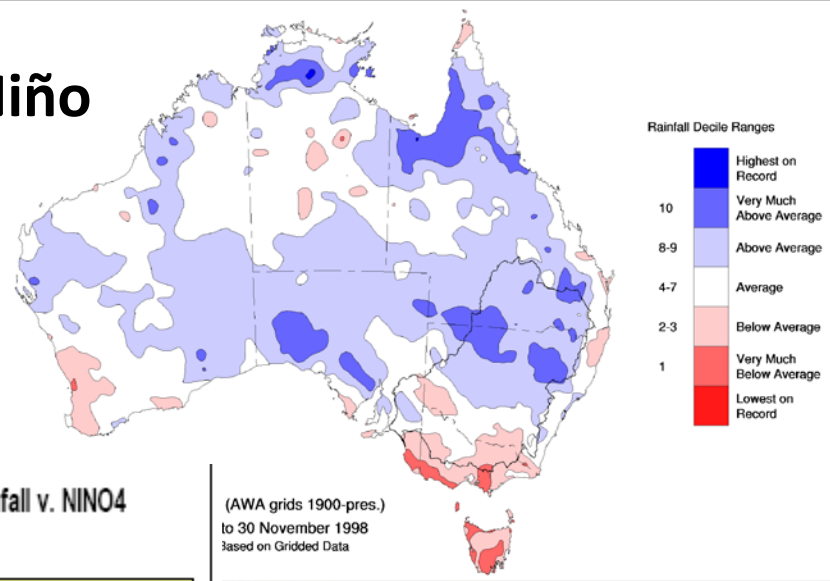


El Niño events

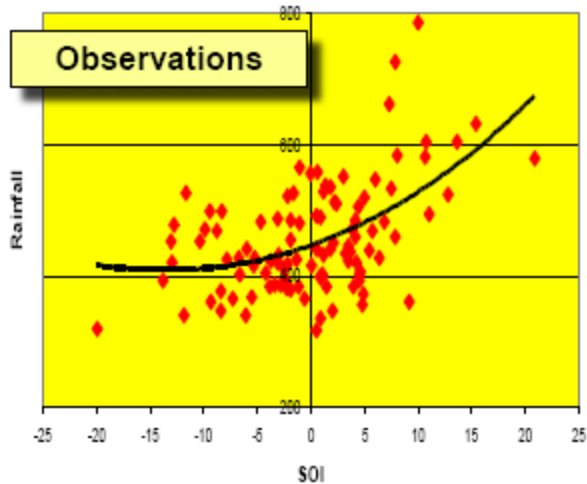
El Niño years where NINO3.4 anomaly reached 1.8°C

Variation in rainfall impacts of El Niño

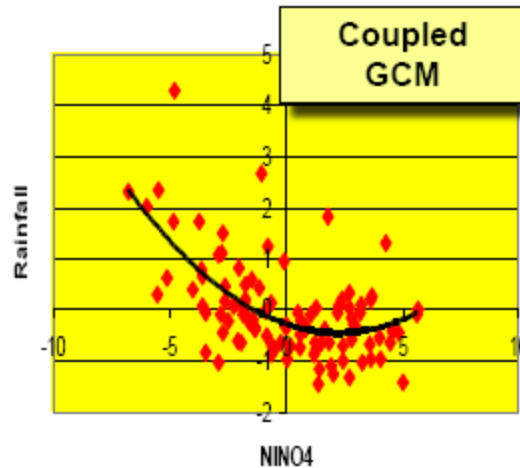
- 1997-98 El Niño was one of the strongest in recorded history yet Australian impacts were small



All-Australia Rainfall v. SOI, 1900-2004, Annual Data



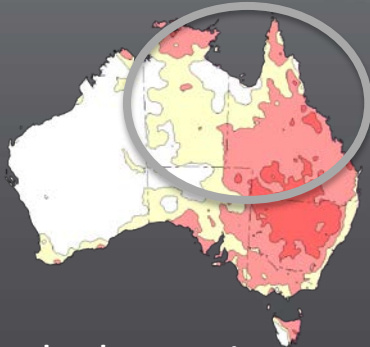
CGCM: All-Australia Rainfall v. NINO4 (JJASOND)



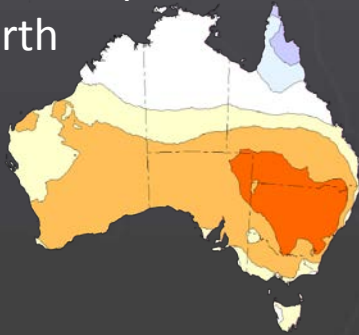
Some evidence that the position of sea surface temperature anomalies in the tropical Pacific is more important for rainfall anomalies in Australia

Potentially increased fire danger in eastern Australia

Low rainfall in the east



Not much change in daytime temperatures in the north



FIRE DANGER RATING
Category
CATASTROPHIC (CODE RED)
EXTREME
SEVERE
VERY HIGH
HIGH
LOW – MODERATE

Thank you

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