

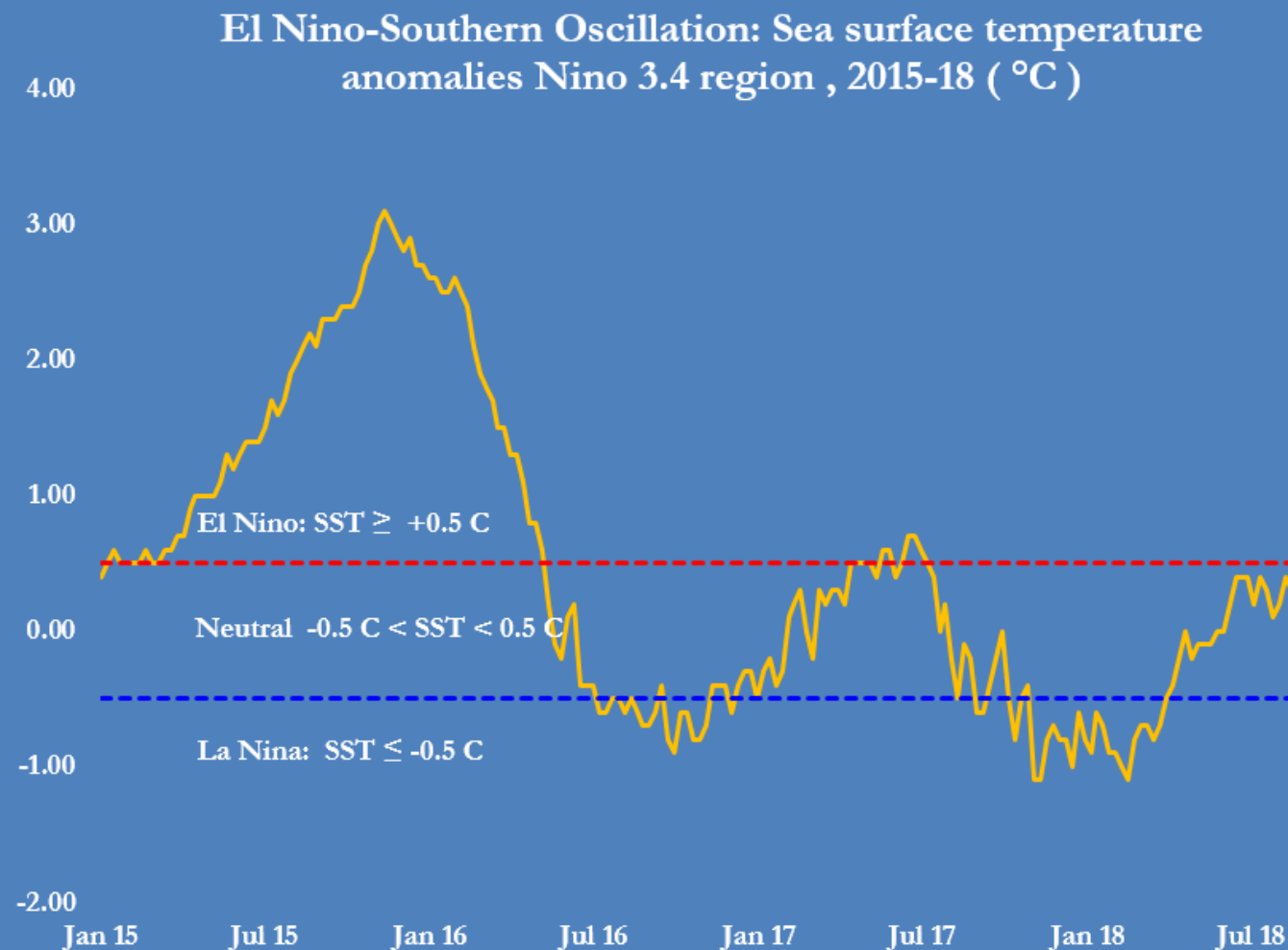
El Nino-Southern Oscillation

Selected indicators

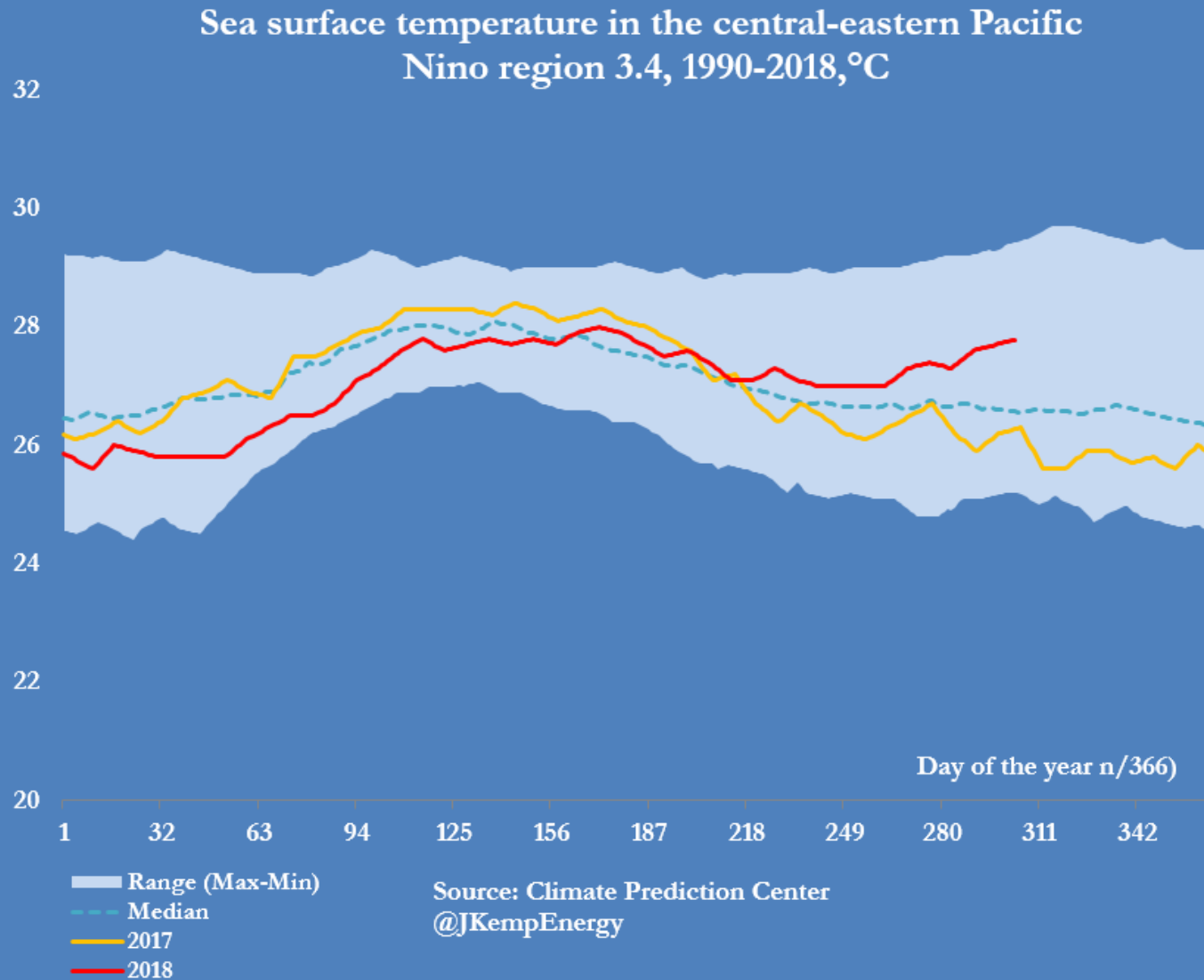
JOHN KEMP
REUTERS

Data for the week centred on 31 Oct 2018

El Niño signal strengthened with sea surface temps in central-eastern Pacific +1.2C above long-term average



Sea surface temperatures in central-eastern Pacific are warming counter-seasonally

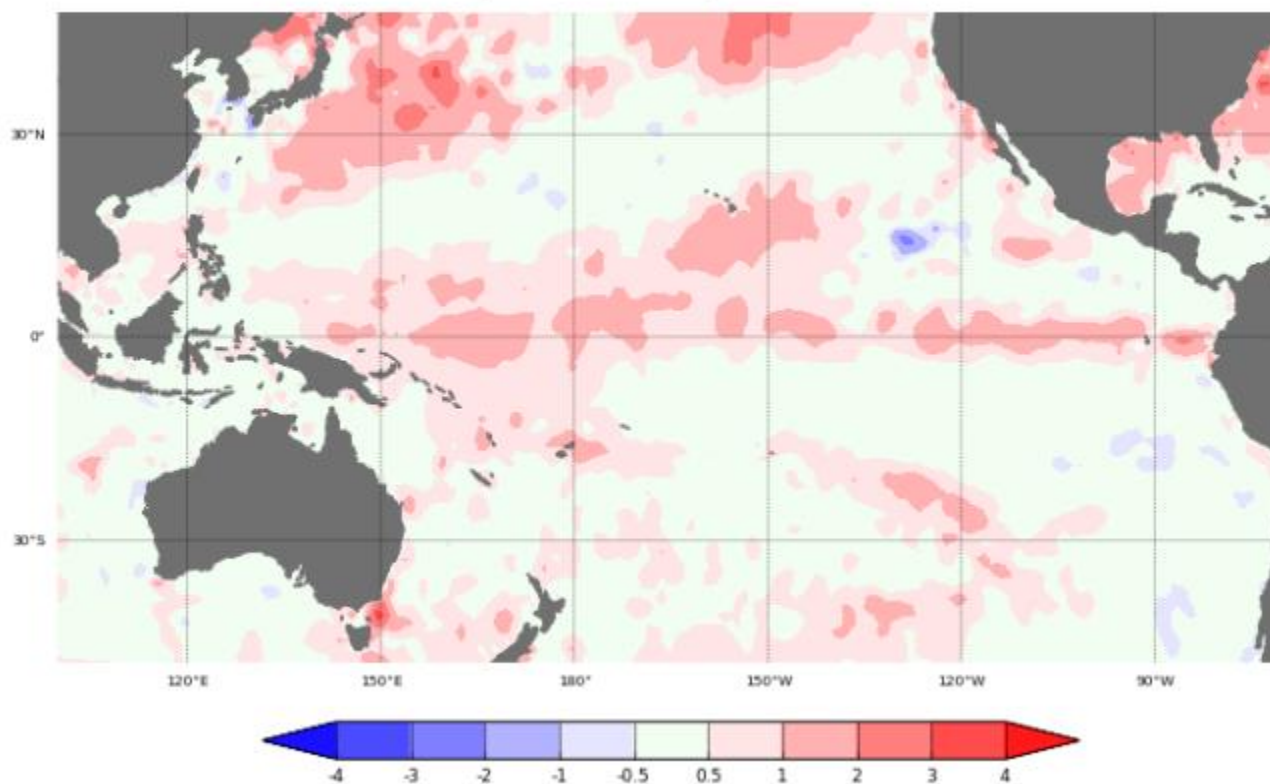


Sea surface temperatures are now above seasonal average throughout the equatorial Pacific

Weekly sea surface temperature anomalies in the tropical Pacific



Sea surface temperature anomaly: 15/10/2018 to 21/10/2018



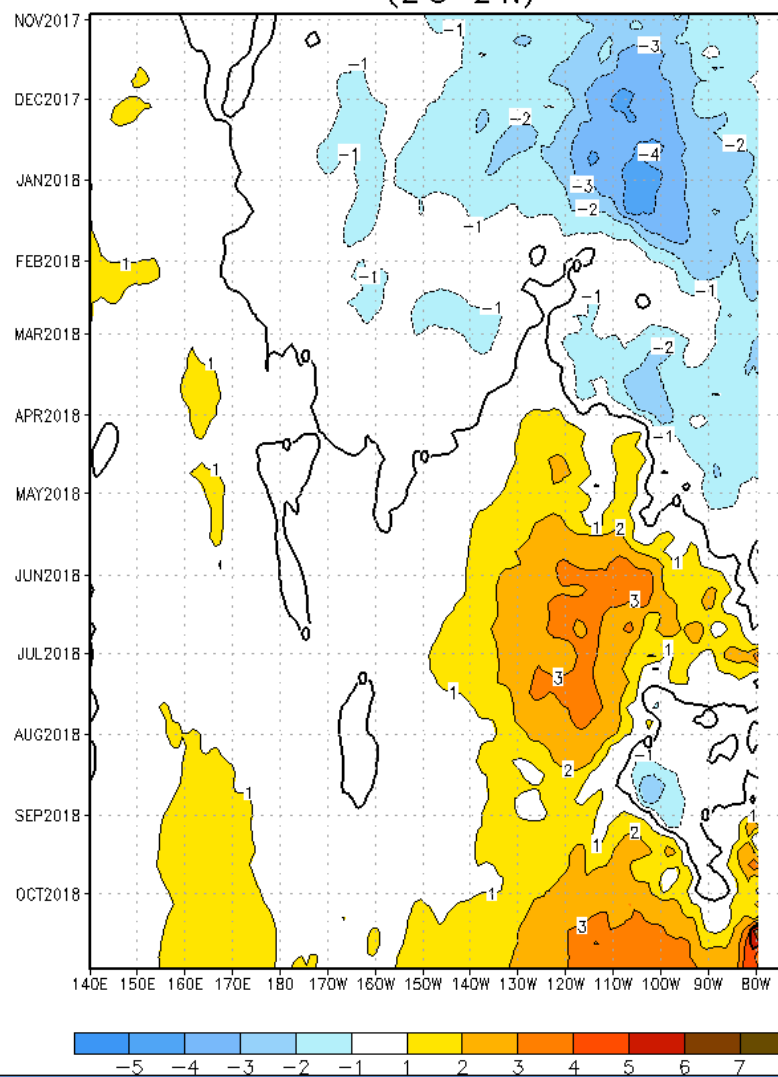
Data: ABOM BNO
Climatology baseline: 1961 to 1990
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<http://www.bom.gov.au/climate>

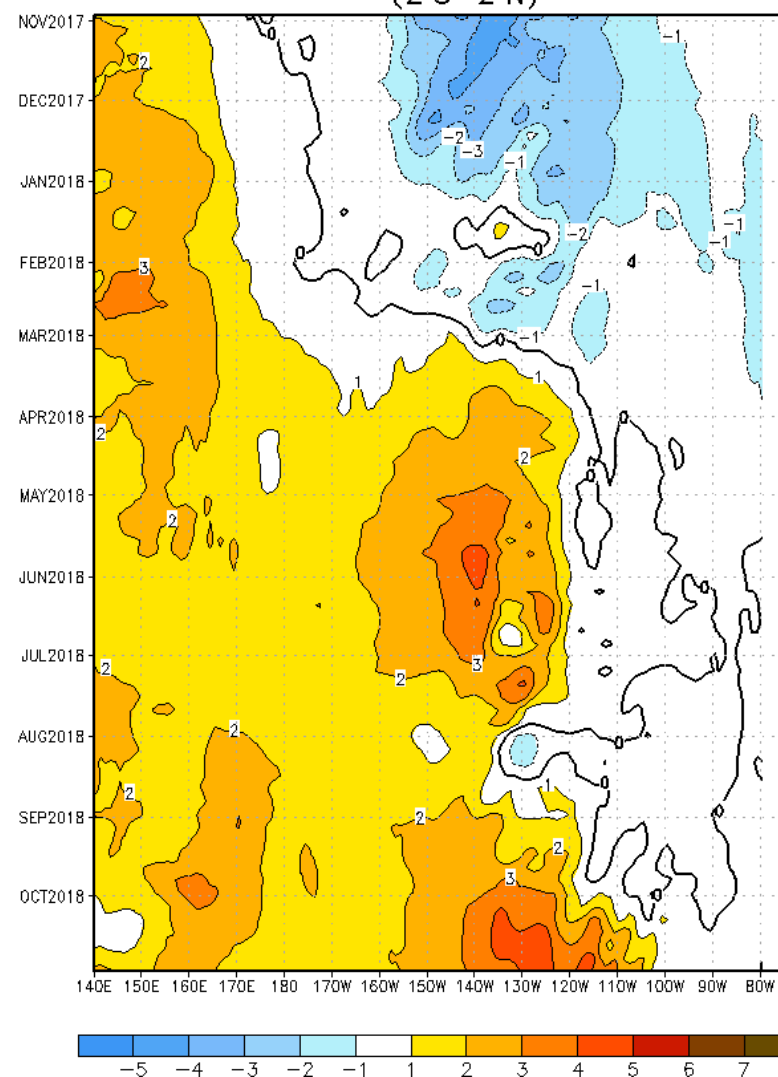
Week ending: 21/10/2018
Created: 22/10/2018

Sub-surface water temps are warmer than normal across much of the equatorial Pacific in a sign El Niño conditions will develop further

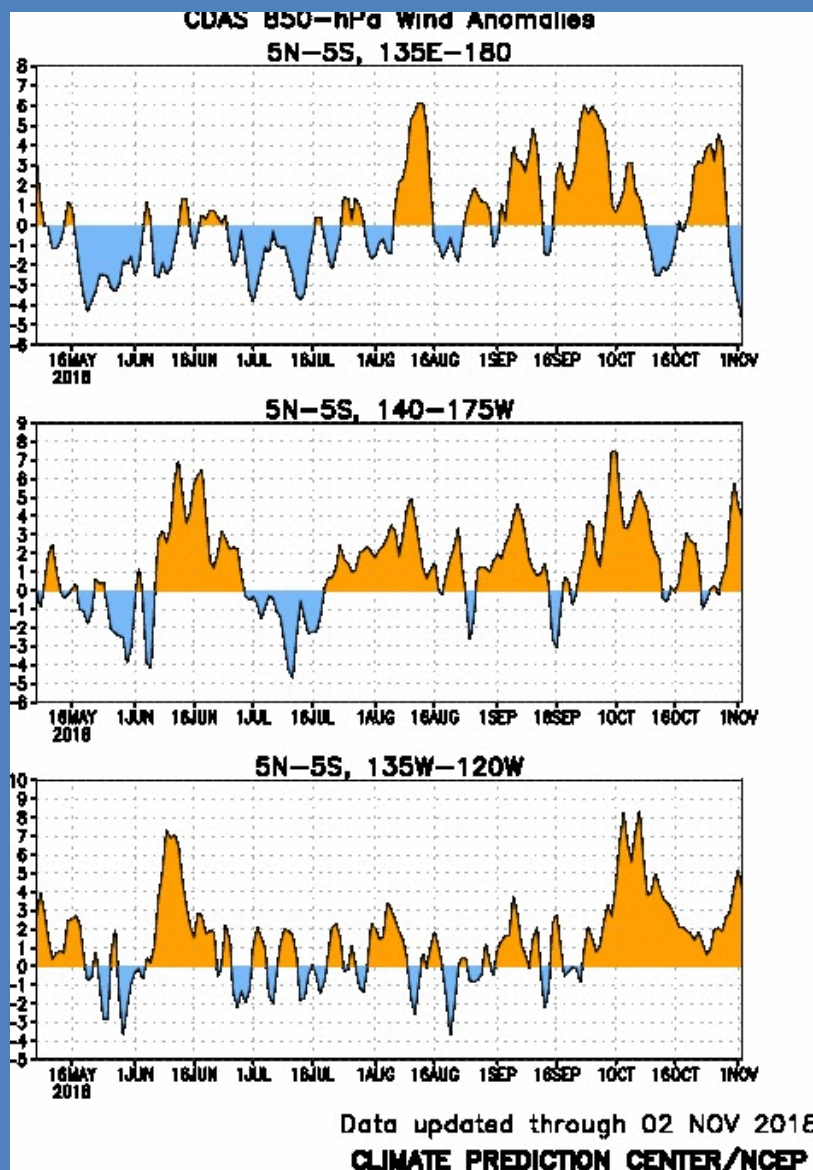
55M Temp Anom, ending Nov 01 2018
(2°S–2°N)



105M Temp Anom, ending Nov 01 2018
(2°S–2°N)



Trade winds are slack across the central and eastern Pacific (though not in the western ocean) which could help promote El Niño



U.S. government projection shows El Niño conditions persisting for the next few months

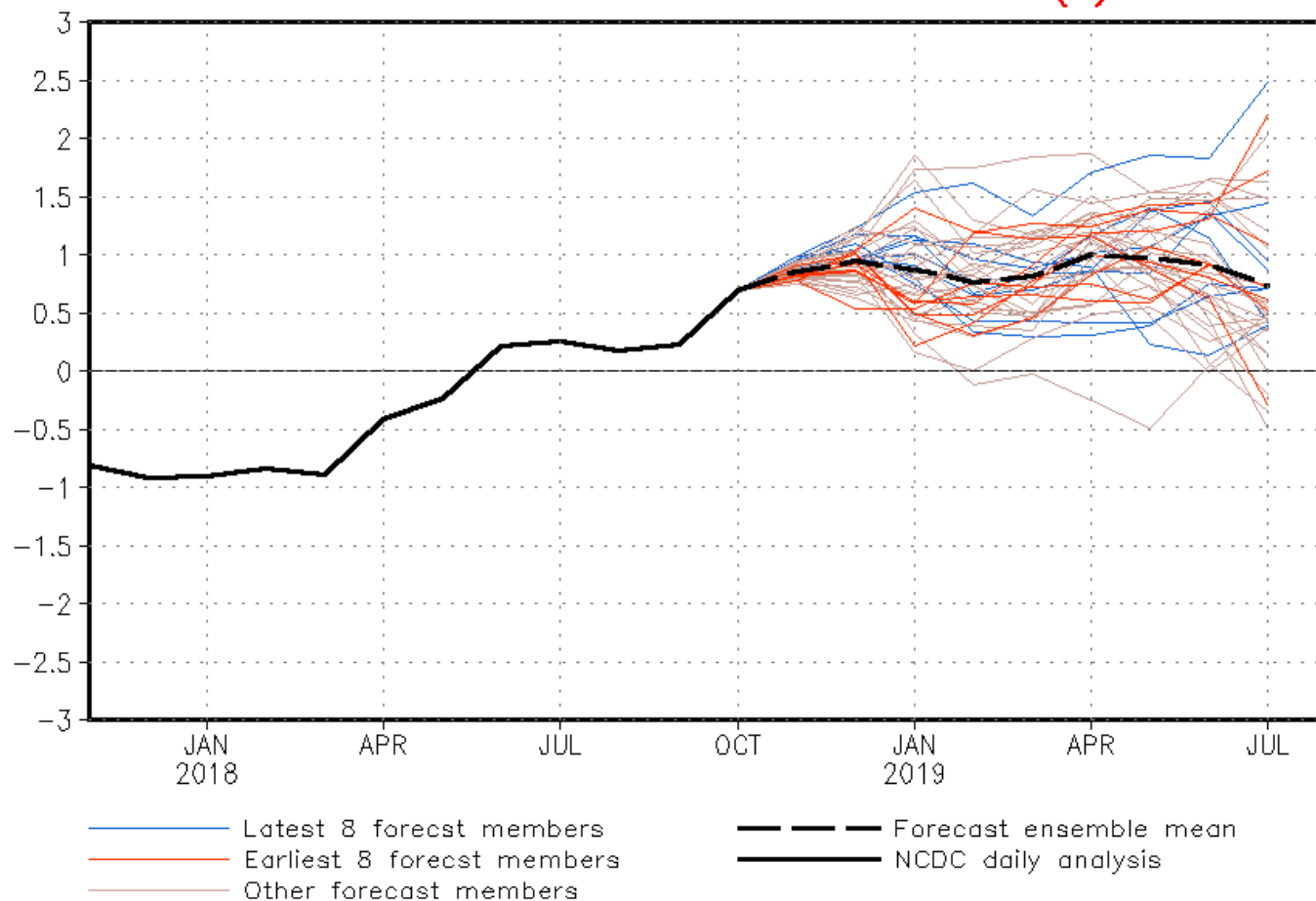


NWS/NCEP/CPC

Last update: Mon Nov 5 2018

Initial conditions: 26Oct2018–4Nov2018

CFSv2 forecast Nino3.4 SST anomalies (K)



(Model bias correct base period: 1999–2010; Climatology base period: 1982–2010)

Australia maintains El Niño Alert, puts chance of El Niño occurring before end of year at 70%, about triple the normal likelihood

El Niño ALERT; positive Indian Ocean Dipole may be underway

The Bureau's [ENSO Outlook](#) remains at El Niño ALERT, indicating there is approximately a 70% chance of El Niño occurring in 2018—around triple the normal likelihood. In the Indian Ocean there are signs that a positive [Indian Ocean Dipole](#) (IOD) is underway.

An El Niño and a positive IOD increase the likelihood of a dry and warm end to the year across most of Australia. They also raise the risk of heatwaves and bushfire weather in the south, while there are typically fewer tropical cyclones in the Australian region.

The surface of the tropical Pacific has warmed over the past month due to weakening of the trade winds. Sub-surface waters also remain warmer than average, increasing the potential for further warming at the surface. However, atmospheric indicators in the tropical Pacific such as the Southern Oscillation Index (SOI), cloudiness and trade winds, are yet to indicate that the ocean and atmosphere have coupled and hence are reinforcing each other. A positive feedback between the ocean and atmosphere is what defines and sustains an El Niño event.

International climate models suggest further warming of the tropical Pacific Ocean is likely, increasing the chance of coupling occurring in the coming months. Six of eight models predict El Niño thresholds will be met or exceeded in November.