

## Pacific eases further away from El Niño thresholds

Issued on Tuesday 9 October | Product Code IDCKGEW00

The chance of El Niño developing in 2012 has reduced over the past fortnight. The tropical Pacific continued its retreat from El Niño thresholds for the second consecutive fortnight (i.e., ocean temperatures cooled), remaining within the neutral range (neither El Niño nor La Niña). Other ENSO indicators such as the Southern Oscillation Index (SOI) and tropical cloud patterns have persisted at neutral levels since late July.

Given the rate of ocean cooling, and the continued neutral conditions in the atmosphere, the chance of an El Niño developing in 2012 has reduced further over the past fortnight. However, some risk still remains while the trade winds in the western Pacific continue to be weaker than normal. Climate models surveyed by the Bureau of Meteorology have increased their chances of sea surface temperatures in the tropical Pacific Ocean remaining at neutral levels, though still warmer than average, for the remainder of 2012.

The Indian Ocean Dipole (IOD) is likely to return to neutral values during the latter half of the southern spring, according to outlooks from the Bureau's climate model. The IOD index has been consistently above +0.4 °C since mid-July, indicative of a positive IOD event. A positive IOD is typically associated with decreased winter and spring rainfall over parts of southern, central and northern Australia.

Next update expected by 23 October 2012 | [print version](#)

## Further Details

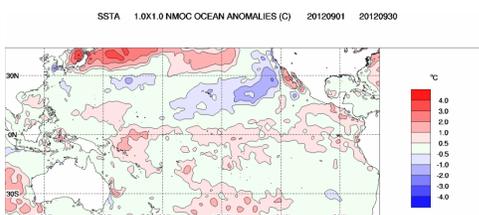
### Sea Surface Temperatures

#### Monthly sea surface temperatures:

The sea-surface temperature (SST) anomaly map for September shows the magnitude of warm SST anomalies in the tropical Pacific Ocean has lessened over the past month. SSTs are now slightly above average across most of the tropical Pacific east of 150°E. The warmest anomalies are west of the Date Line, where a small area of water is more than 1 °C warmer than usual.

<a href="#">Index</a>	August	September	Temperature change
<a href="#">NINO3</a>	+0.8	+0.6	0.2 °C cooler
<a href="#">NINO3.4</a>	+0.9	+0.6	0.3 °C cooler
<a href="#">NINO4</a>	+0.6	+0.6	no change

Baseline period 1961–1990.

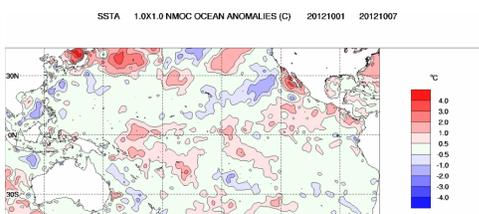


#### Weekly sea surface temperatures:

Sea-surface temperature (SST) anomalies in the central and eastern tropical Pacific have cooled further over the past two weeks. While the distribution of warm anomalies remains similar to last fortnight, the pattern is breaking down and no longer shows the organised tongue of warm anomalies along the central equatorial Pacific characteristic of an El Niño. The SST anomaly map for the week ending 7 October shows slightly warmer than average SSTs in much of the central equatorial Pacific.

<a href="#">Index</a>	Previous	Current	Temperature change (2 weeks)
<a href="#">NINO3</a>	+0.6	+0.3	0.3 °C cooler
<a href="#">NINO3.4</a>	+0.5	+0.3	0.2 °C cooler
<a href="#">NINO4</a>	+0.6	+0.6	no change

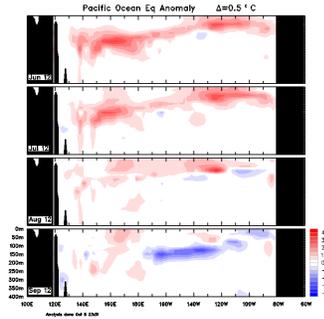
Baseline period 1961–1990.



## Pacific ocean sub-surface temperatures

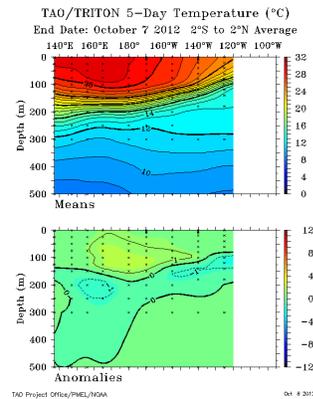
### Monthly sub-surface:

The four-month sequence (to September) of sub-surface temperature anomalies in the equatorial Pacific Ocean shows that cooling has occurred across most of the sub-surface of the equatorial Pacific. A tongue of below-average temperature water has emerged in sub-surface of the central to eastern Pacific; water here is more than 2 °C cooler than usual.



### Weekly sub-surface:

Sub-surface temperature anomalies in the equatorial Pacific have remained generally similar to those of two weeks ago. The map for the 5 days ending 7 October shows very weak warm anomalies 50 to 150 m beneath the surface of the central equatorial Pacific.



[Animation of recent sub-surface changes](#) | [Archive of sub-surface temperature charts](#)

### Southern Oscillation Index:

The Southern Oscillation Index (SOI) has remained within neutral values during the past fortnight, though falling slightly. The latest (7 October) 30-day SOI value is +0.7.

Sustained positive values of the SOI above +8 may indicate a La Niña event, while sustained negative values below -8 may indicate an El Niño event. Values of between about +8 and -8 generally indicate neutral conditions.

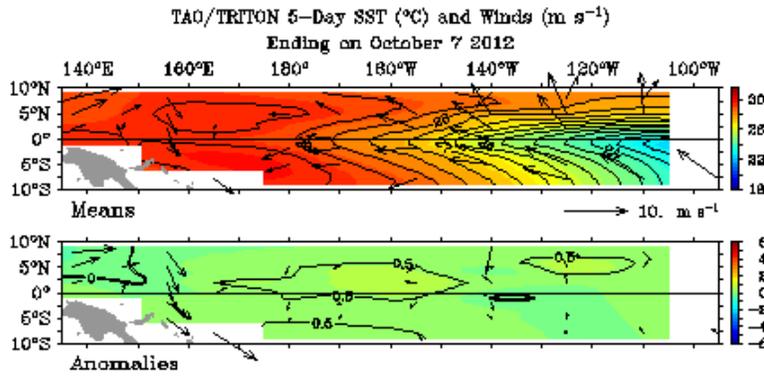


[Monthly graph](#) | [SOI table](#) | [SOI text](#)

### Trade winds:

Trade winds for the 5 days ending 7 October shows westerly wind anomalies (weaker than average trade winds) are present in the western tropical Pacific, while winds are near-average across the central and eastern tropical Pacific.

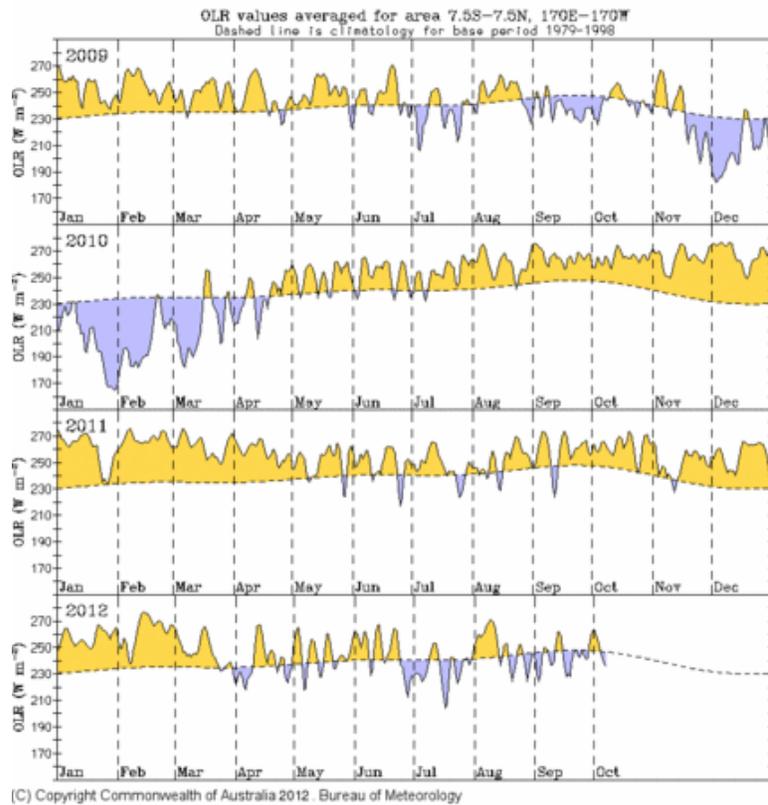
During La Niña events, there is a sustained strengthening of the trade winds across much of the tropical Pacific, while during El Niño events there is a sustained weakening of the trade winds.



**Cloudiness near the Date Line:**

Cloudiness near the Date Line has continued to fluctuate over the past two weeks, but has generally remained close to average values.

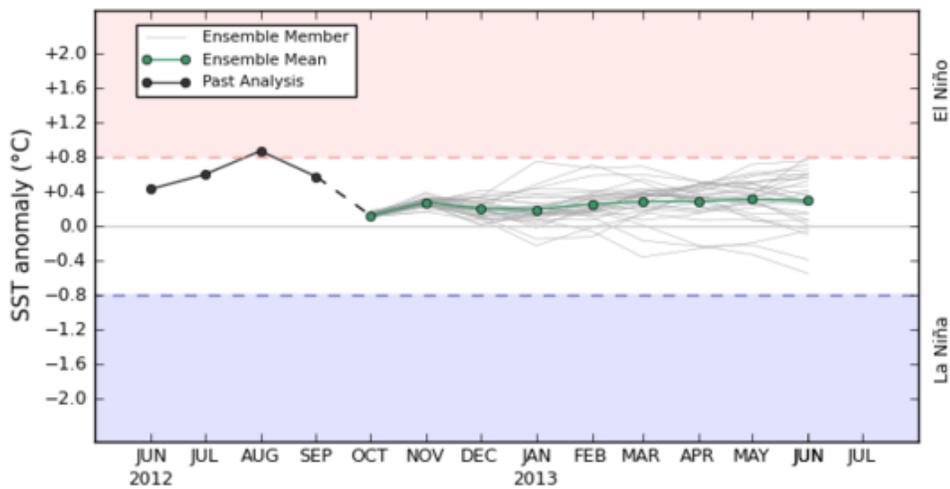
Cloudiness along the equator, near the Date Line, is an important indicator of ENSO conditions, as it typically increases (negative OLR anomalies) near and to the east of the Date Line during an El Niño event and decreases (positive OLR anomalies) during a La Niña event.



**Climate Models:**

The majority of international [climate models](#) surveyed by the Bureau indicate that SSTs in the equatorial Pacific Ocean are likely to remain in the neutral range for the remainder of 2012.

POAMA monthly mean NINO34 - Forecast Start: 1 OCT 2012



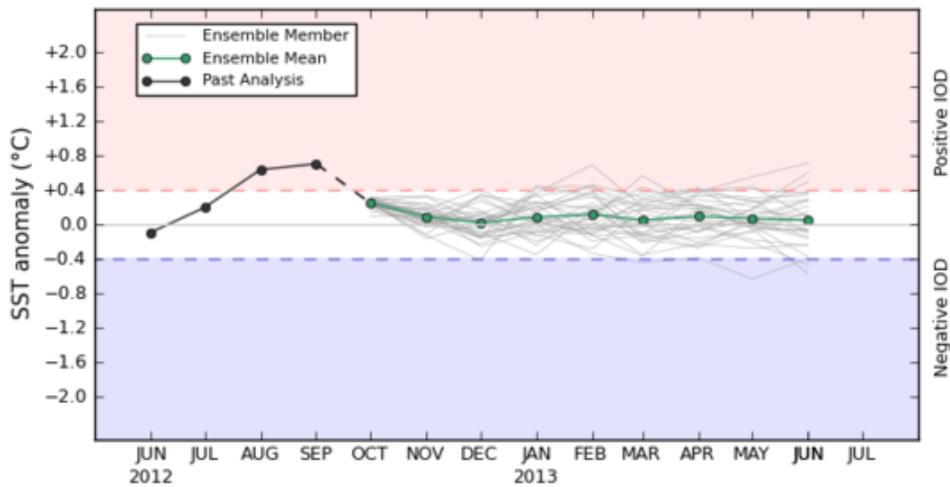
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**Indian Ocean Dipole:**

The Indian Ocean Dipole (IOD) has continued to show a pattern typical of a positive IOD event, with cooler-than-average water off the coast of Sumatra and warmer than average waters in the western Indian Ocean. Values of the IOD index have weakened recently, but remain above positive thresholds, with the latest value at +0.6 for the week ending 7 October. A positive IOD event favours reduced spring rainfall over parts of southern, central, and northern Australia.

Recent forecasts from the [POAMA model](#) indicate the positive IOD event will decay over the latter half of spring, which is fairly typical of its natural seasonal cycle.

POAMA monthly mean IOD - Forecast Start: 1 OCT 2012



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[IOD time series](#) [IOD map](#) [IOD forecasts](#) [DMI values](#)

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