

Tabled: Senator Boswell  
24/5/11

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**Australian Mean Sea Level Survey 2009**  
**National Tidal Centre**  
**Bureau of Meteorology**



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**Summary**

- There are 39 Australian locations where relative sea levels have been measured for at least 25 years. The average length of these records is 42 years.
- 2 new locations (Wallaroo and Cape Ferguson) qualified in 2009 as long-term stations with more than 25 years of data.
- The average trend from all 39 stations is 0.9 mm/yr with a standard deviation of 1.9 mm/yr. Some of the stations exhibit unrealistic trends due to undocumented datum shifts. A more realistic average trend obtained from 29 stations within 1 standard deviation of the mean is 1.4 mm/yr with a standard deviation of 0.7 mm/yr.
- The geographical pattern of relative sea level trends around the Australian coastline is fairly uniform in general.
- The Australian average relative sea level rise is consistent with the global average sea level rise over the same period.
- Annual mean sea levels around the Australian coastline are strongly correlated with the El Niño – Southern Oscillation (ENSO) signal. Annual mean sea levels generally fluctuate in accordance with the Southern Oscillation Index (SOI).
- The longest sea level records show decadal sea-level oscillations with periods of around 20 years.

*The Australian Mean Sea Level Survey is updated annually and provides a synopsis of the annual mean sea levels and trends in longer-term relative sea level records archived at the National Tidal Centre of the Bureau of Meteorology. When interpreting the results it is important to consider the following information about the long-term sea level records, particularly issues relating to data quality, datum stability and land motion.*