

Senate Standing Committee on Economics
ANSWERS TO QUESTIONS ON NOTICE
Industry, Innovation, Science, Research and Tertiary Education Portfolio
Additional Estimates Hearing 2011-12
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AGENCY/DEPARTMENT: COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION

TOPIC: Rising Sea Levels

REFERENCE: Written Question –Senator Bernardi

QUESTION No.: AI-65

1. What is the CSIRO's response to the work by Phil Watson (published in the Journal of Coastal Research in 2011 and reported by The Australian on 22 July 2011), that finds that sea level rises are decelerating?
2. What does this research say about the CSIRO's predictions regarding sea-level rises?

ANSWER

1. . The observations of Mr Watson show an enhanced rate of rise since the mid 1980s, which is consistent with global observation data published by CSIRO. CSIRO observations published in 2011 in *Surveys in Geophysics* show global sea-level rise since 1993 has been between 2.8 and 3.2 mm/year. The recent observed rate of rise is nearly twice the average rate (1.7 mm per year) experienced from 1900 to 2000. The recent observed global sea-level rise is near the upper end of the Intergovernmental Panel on Climate Change Fourth Assessment projections.

It is a simple statistical model fitted to the data in Phil Watson's paper that shows a decelerating trend. However, over recent decades this deceleration is not evident in the underlying observations, which show increased rates of sea-level rise.

Sea level doesn't rise uniformly; it rises at different rates in different regions at different times, largely related to decadal variability (such as the Pacific Decadal Oscillation). Hence trends in one region cannot be extrapolated to the global scale. CSIRO observations show that average sea-level rise around the Australian coast between 1993 and early 2011 was 5-6 mm/year - substantially above the 20th Century average of 1.7 mm/year.

2. The paper by Mr Watson does not question the work of CSIRO, nor the projections of the Intergovernmental Panel on Climate Change.

Reference:

Church, J.A. and White, N.J. 2011. Sea-level rise from the late 19th to the early 21st Century. *Surveys in Geophysics* **32**, 585-602, DOI:10.1007/s10712-011-9119-1.