

Senate Finance and Public Administration Legislation Committee
Additional Estimates Hearing – February 2010
ANSWER TO QUESTION ON NOTICE

Topic: Impacts from Climate Change on the Great Barrier Reef

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Question:

Senator IAN MACDONALD—... I refer the department to a report in the *Australian* dated 3 February this year, entitled ‘Report undercuts Kevin Rudd’s Great Barrier Reef wipeout’, where AIMS researcher Dr Sweatman is quoted. In view of Dr Sweatman’s results and findings, could the department correlate the Prime Minister’s question to that.

Answer:

Dr Sweatman from the Australian Institute of Marine Science surveyed the condition of 14 of the approximately 2,900 reefs that make up the Great Barrier Reef finding no evidence of bleaching at those 14 reefs this summer.

The Great Barrier Reef Marine Park Authority reports that seasonal conditions this past summer (extensive monsoonal cloud cover and rainfall) resulted in sea surface temperature remaining close to the long-term average in the region. This means that there was a low risk of broad-scale coral bleaching for the Great Barrier Reef this summer.

While natural climate variability effects the level and extent of coral bleaching in any given year, the long term projected trend is for a warmer ocean and more frequent and intense bleaching events with additional negative impacts likely to arise from increasing ocean acidity.

Research from the University of Queensland (Hoegh-Guldberg 2007) suggests that there are temperature and acidity thresholds beyond which reefs cannot survive. It suggests that, with 2 degrees Celsius of warming and atmospheric carbon dioxide levels of around 480 parts per million, reefs may be dominated by algae instead of corals. The waters of the Great Barrier Reef are already 0.4 degrees Celsius warmer than they were 30 years ago (Australian Institute of Marine Science, 2007).