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Private Bag 129 Hobart
Tasmania 7001 Australia
Phone + 61 3 6226 6379
www.imas.org.au

IMAS
INSTITUTE FOR MARINE AND ANTARCTIC STUDIES

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To: Parliament of Australia, House of Representatives

Inquiry into Australia's biodiversity in a changing climate

From: Institute for Marine and Antarctic Studies, University of Tasmania

The short points listed here constitute our submission:

1. IMAS has ~70 academic staff, ~65 professional staff, and ~100 Research Higher Degree students working in Australian temperate, polar and Antarctic waters, across the spectrum of climate science, marine ecology and conservation, fisheries, aquaculture, coastal studies, and local, national, and international policy. This constitutes one of the largest concentrations of expertise in marine matters in the nation.

2. Other IMAS staff presentations emphasize specific aspects of Australia's biodiversity in a changing climate, including Prof. Neil Holbrook on the knowledge on adaptation being developed and shared via the Marine Adaptation Network, Dr. Karen Miller on the role and concerns of the Australian Marine Sciences Association, Dr. Graham Edgar on the interactions of climate change with other stressors in the marine environment and the associated need for conservation zones, and Dr. Gretta Pecl on the REDMAP program to engage the community in reporting changes in the marine environment, especially the movement of marine species. In contrast, this submission emphasises more general aspects.

3. Limiting and adapting to the impact of climate change on marine biodiversity will be an ongoing process. We do not have sufficient knowledge of any aspects of the problem to foresee the details. Ongoing assessments, monitoring, and the production of rigourously trained,

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interdisciplinary aware, and socially adept scientists are essential. Targeted scholarships in this area should be a national priority

4. Impacts on marine biodiversity will depend not only on the trajectory of climate change, but how we react to it. Examples of indirect effects range from the construction of structures to resist sea level rise to geoengineering schemes to enhance ocean uptake of CO_2 via ocean fertilisation. Thus considering climate change and adaptation as a whole, and pro-active conservation are important.

5. Protecting Australian marine biodiversity requires a national approach with attention to all marine waters, including coastal waters, regional seas, the deep ocean, and the Australian Antarctic Territory.

Dr. Millard F. Coffin
IMAS Executive Director
Professor of Marine Geophysics

Professor of Marine Biogeochemisty
Director of the CSIRO – UTAS Quantitative Marine Sciences PhD Program

24 January 2012