



Garnaut Climate Change Review
Level 2, 1 Treasury Place
Melbourne
VIC 3002



17 April 2008

Dear Professor Garnaut

Climate Change Risk and Australia's Coastal Zone

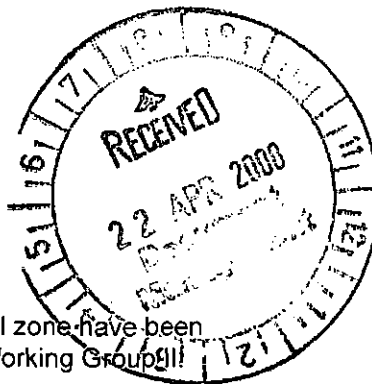
It was a pleasure to meet you briefly during your visit to Perth in February for the Transport, Planning and the Built Environment public forum. That meeting encouraged this submission to your Climate Change Review.

The purpose of this submission is two-fold:

- (i) to draw your attention to the lack of quantitative information for coastal climate change impact assessment; and
- (ii) to a number of unpublished works that may assist in filling the current gaps.

There is an urgent need for a coherent and comprehensive scientific, technical and policy response to climate change impacts in the coastal zone. Adequate attention to this issue has been lacking in recent years, despite growing international consensus on the potentially dire consequences¹. Consequently, Australia does not possess a comprehensive picture of the potential impacts of climate change on its coastal areas. Thus, approaches to adaptation are currently piecemeal and ad-hoc.

Further, the potential economic consequence of climate change on Australia's coastal zone is not known with any certainty. Therefore, assessing the probable economic impacts of potential future emission scenarios is severely hampered. Many scientists, coastal managers and policy advisors in Australia, ourselves included, are deeply concerned that we are unable to provide more definitive advice to assist the modelling of costs and benefits of various emission reduction scenarios, and how these scenarios translate into potential damage costs avoided in coastal areas.



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¹ Potential climate change impacts on the coastal zone have been recently summarised in Chapter 6 of the IPCC Working Group II

I believe that the current misalignment between the state of knowledge and the information required to make informed decisions regarding the economic value of climate change impacts in the coastal zone is a result of the lack of action by the previous Commonwealth Government. There was a very active programme addressing the coastal vulnerability component of climate change that made considerable progress during the mid-1990s² that abruptly stopped on election of the previous Commonwealth Government.

It was not until 2005 that the then Australian Greenhouse Office (AGO) was allowed to openly discuss climate change adaptation. At that time our Company was contracted by the AGO to undertake a detailed review of potential climate change impacts on the Australian coast with experts from the University of the Sunshine Coast and University of Wollongong as part of the study team. The project was entitled "*The Australian Coast: Assessing and Communicating Vulnerability to Climate Change*". Our mandate was to recommend a road-map for coastal impact assessment and adaptation activities. In doing so, the document set a framework and provided context for specific analysis to fill the current gaps in knowledge. As these reports were not published (with the permission of our project partners) we recommend that you contact the Department of Climate Change to obtain our reports entitled:

Kay, RC, Crossland, CJ, Gardner, S, Waterman, P and Woodroffe, CD
(unpublished). *The Australian Coast: Assessing and Communicating Vulnerability to Climate Change – Strategic Discussion Paper*. Australian Greenhouse Office, Canberra

Kay, RC, Crossland, CJ, Gardner, S, Waterman, P and Woodroffe, CD
(unpublished). *The Australian Coast: Assessing and Communicating Vulnerability to Climate Change - Supporting Technical Paper*. Australian Greenhouse Office, Canberra

The reasons for non-publication are not clear, although we are aware of at least one other report on potential coastal impacts of climate change commissioned by the AGO that also remains unpublished³.

Fortunately, the AGO project did stimulate a national workshop on December 2005 that discussed the report and provided stimulus for the important, but still limited, coastal vulnerability work undertaken in Australia during 2006-2007.

Despite the current shortfalls, the planned initiatives of the current Commonwealth Government to enhance the emphasis on coastal climate change impacts and adaptation planning are strongly supported.

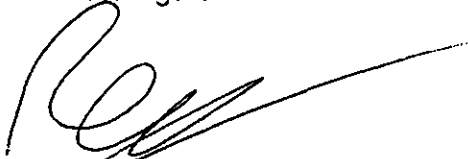
There is a wide range of urgent, in-depth analysis required to understand this issue and to ensure that this work is undertaken so as to be policy-relevant. Policy relevance is important both to develop implementable adaptation policies and also to ensure feedback into the emission-reduction debate. It is only when these two policy spheres are properly connected that meaningful policy responses will be developed.

² Numerous publications were produced during this period. For a summary see: Waterman P (1996), Australian coastal vulnerability assessment project report, Climate Change Program, Commonwealth Coastal Action Program, Report Series 4b, Department of Environment, Sport and Territories.

³ Eliot, I et al (2005) *Assessment and development of tools for assessing the vulnerability of wetlands and rivers in the Gulf of Carpentaria, Australia*, report prepared for the AGO, Canberra.

Finally, may I reiterate our strong support and offer of assistance for your important Climate Change Review to enhance the emphasis on coastal vulnerability impact and adaptation assessments for Australia. Our company *Coastal Zone Management* and its staff have a long involvement in climate change, coastal vulnerability assessments and adaptation studies⁴ and has worked on coastal climate change vulnerability issues for Australian local, State and Commonwealth governments and internationally⁵.

With best regards



Dr Robert Kay
Principal, Coastal Zone Management Pty Ltd

⁴ This involvement dates back to the first such study on the Australian mainland in 1992 and includes in-depth coastal climate change vulnerability case studies undertaken during the mid 1990s.

⁵ For example, various parts of the United Nations, including the Secretariat to the United Nations Framework Convention on Climate Change (UNFCCC)